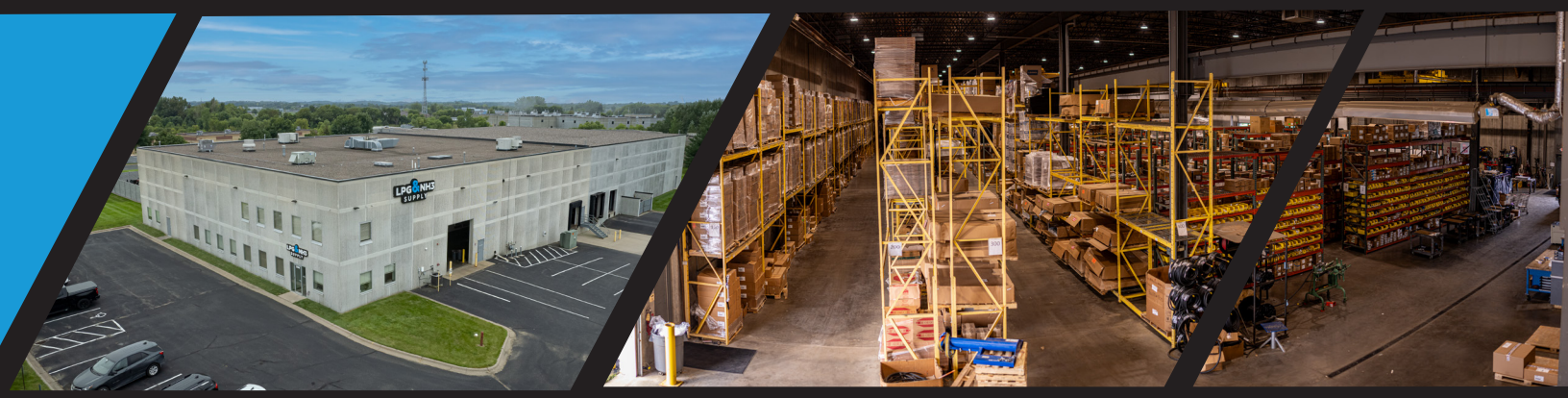


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REGO REGULATORS & ACCESSORIES

Pipe and Tubing Selection Guide

Table 4-Maximum Capacity of CSST In Thousands of BTU per hour of undiluted LP-Gases Pressure of 2 psi and a pressure drop of 1 psi (Based on a 1.52 Specific Gravity Gas)*

| Size | EHD** Flow Designation | Length of Tubing, Feet | | | | | | | | | | | | | |
|------|------------------------|------------------------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|
| | | 10 | 25 | 30 | 40 | 50 | 75 | 80 | 110 | 150 | 200 | 250 | 300 | 400 | 500 |
| 3/8 | 13 | 426 | 262 | 238 | 203 | 181 | 147 | 140 | 124 | 101 | 86 | 77 | 69 | 60 | 53 |
| | 15 | 558 | 347 | 316 | 271 | 243 | 196 | 189 | 169 | 137 | 118 | 105 | 96 | 82 | 72 |
| 1/2 | 18 | 927 | 591 | 540 | 469 | 420 | 344 | 333 | 298 | 245 | 213 | 191 | 173 | 151 | 135 |
| | 19 | 1106 | 701 | 640 | 554 | 496 | 406 | 393 | 350 | 287 | 248 | 222 | 203 | 175 | 158 |
| 3/4 | 23 | 1735 | 1120 | 1027 | 896 | 806 | 663 | 643 | 578 | 477 | 415 | 373 | 343 | 298 | 268 |
| | 25 | 2168 | 1384 | 1266 | 1100 | 986 | 809 | 768 | 703 | 575 | 501 | 448 | 411 | 355 | 319 |
| | 30 | 4097 | 2560 | 2331 | 2012 | 1794 | 1457 | 1410 | 1256 | 1021 | 880 | 785 | 716 | 616 | 550 |
| 1 | 31 | 4720 | 2954 | 2692 | 2323 | 2072 | 1685 | 1629 | 1454 | 1182 | 1019 | 910 | 829 | 716 | 638 |

Table does not include effect of pressure drop across the line regulator. If regulator loss exceeds 1/2 psi (based on 13 in. water column outlet pressure), **DO NOT USE THIS TABLE.** Consult with regulator manufacturer for pressure drops and capacity factors. Pressure drops across a regulator may vary with flow rate.

CAUTION: Capacities shown in table may exceed maximum capacity for a selected regulator. Consult with regulator or tubing manufacturer for guidance.

*Table includes losses for four 90-degree bends and two end fittings. Tubing runs with larger number of bends and/or fittings shall be increased by an equivalent length of tubing according to the following equation: L-1.3n where L is additional length (ft) of tubing and n is the number of additional fittings and/or bends.

**EHD — Equivalent Hydraulic Diameter — A measure of the relative hydraulic efficiency between different tubing sizes. The greater the value of EHD, the greater the gas capacity of the tubing.

Table 5-Maximum Capacity of CSST In Thousands of BTU per hour of undiluted LP-Gases Pressure of 11 Inch Water Column and a Pressure Drop of 0.5 Inch Water Column (Based on a 1.52 Specific Gravity Gas)*

| Size | EHD** Flow Designation | Length of Tubing, Feet | | | | | | | | | | | | | | | | |
|------|------------------------|------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 5 | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 150 | 200 | 250 | 300 |
| 3/8 | 13 | 72 | 50 | 39 | 34 | 30 | 28 | 23 | 20 | 19 | 17 | 15 | 15 | 14 | 11 | 9 | 8 | 8 |
| | 15 | 99 | 69 | 55 | 49 | 42 | 39 | 33 | 30 | 26 | 25 | 23 | 22 | 20 | 15 | 14 | 12 | 11 |
| 1/2 | 18 | 181 | 129 | 104 | 91 | 82 | 74 | 64 | 58 | 53 | 49 | 45 | 44 | 41 | 31 | 28 | 25 | 23 |
| | 19 | 211 | 150 | 121 | 106 | 94 | 87 | 74 | 66 | 60 | 57 | 52 | 50 | 47 | 36 | 33 | 30 | 26 |
| 3/4 | 23 | 355 | 254 | 208 | 183 | 164 | 151 | 131 | 118 | 107 | 99 | 94 | 90 | 85 | 66 | 60 | 53 | 50 |
| | 25 | 426 | 303 | 248 | 216 | 192 | 177 | 153 | 137 | 126 | 117 | 109 | 102 | 98 | 75 | 69 | 61 | 57 |
| | 30 | 744 | 521 | 422 | 365 | 325 | 297 | 256 | 227 | 207 | 191 | 178 | 169 | 159 | 123 | 112 | 99 | 90 |
| 1 | 31 | 863 | 605 | 490 | 425 | 379 | 344 | 297 | 265 | 241 | 222 | 208 | 197 | 186 | 143 | 129 | 117 | 107 |

*Table includes losses for four 90-degree bends and two end fittings. Tubing runs with larger number of bends and/or fittings shall be increased by an equivalent length of tubing according to the following equation: L = 1.3n where L is additional length (ft) of tubing and n is the number of additional fittings and/or bends. **EHD — Equivalent Hydraulic Diameter — A measure of the relative hydraulic efficiency between different tubing sizes. The greater the value of EHD, the greater the gas capacity of the tubing.

Table 6 – Copper Tube Sizing or Schedule 40 Pipe Sizing* In Thousands of BTU per hour of undiluted LP-Gases 2 PSIG inlet with a 1PSIG pressure drop (Between 2 PSIG service regulator & line pressure regulator).

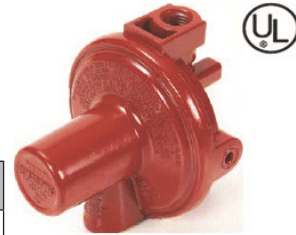
| Size of Pipe or Copper Tubing, Inches | | Length of Pipe or Tubing, Feet* | | | | | | | | | | | | | | | | | | |
|---------------------------------------|-------|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|
| | | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 150 | 200 | 300 | 350 | 400 | 450 | 500 | 600 | 700 |
| Copper Tubing (O.D.) | 3/8 | 451 | 310 | 249 | 213 | 189 | 171 | 157 | 146 | 137 | 130 | 104 | 89 | 79 | 72 | 61 | 58 | 54 | 49 | 45 |
| | 1/2 | 1020 | 701 | 563 | 482 | 427 | 387 | 356 | 331 | 311 | 294 | 236 | 202 | 179 | 162 | 139 | 130 | 123 | 111 | 102 |
| | 5/8 | 1900 | 1306 | 1049 | 898 | 795 | 721 | 663 | 617 | 579 | 547 | 439 | 376 | 333 | 302 | 258 | 242 | 229 | 207 | 191 |
| Pipe Size | 3/4 | 3215 | 2210 | 1774 | 1519 | 1346 | 1219 | 1122 | 1044 | 979 | 925 | 743 | 636 | 563 | 511 | 437 | 410 | 387 | 351 | 323 |
| | 1/2 | 2687 | 1847 | 1483 | 1269 | 1125 | 1019 | 938 | 872 | 819 | 773 | 621 | 531 | 471 | 427 | 365 | 343 | 324 | 293 | 270 |
| | 3/4 | 5619 | 3862 | 3101 | 2654 | 2352 | 2131 | 1961 | 1824 | 1712 | 1617 | 1298 | 1111 | 985 | 892 | 764 | 717 | 677 | 613 | 564 |
| | 1 | 10585 | 7275 | 5842 | 5000 | 4431 | 4015 | 3694 | 3436 | 3224 | 3046 | 2446 | 2093 | 1855 | 1681 | 1439 | 1350 | 1275 | 1155 | 1063 |
| | 1-1/4 | 21731 | 14936 | 11994 | 10265 | 9098 | 8243 | 7584 | 7055 | 6620 | 6253 | 5021 | 4298 | 3809 | 3451 | 2954 | 2771 | 2618 | 2372 | 2182 |
| | 1-1/2 | 32560 | 22378 | 17971 | 15381 | 13632 | 12351 | 11363 | 10571 | 9918 | 9369 | 7524 | 6439 | 5707 | 5171 | 4426 | 4152 | 3922 | 3554 | 3270 |
| | 2 | 62708 | 43099 | 34610 | 29621 | 26253 | 23787 | 21884 | 20359 | 19102 | 18043 | 14490 | 12401 | 10991 | 9959 | 8523 | 7997 | 7554 | 6844 | 6297 |

REGO REGULATORS & ACCESSORIES

REGO REGULATORS & ACCESSORIES

Compact High Pressure First Stage Regulator

Ideal for use as a first stage regulator on any domestic size ASME or DOT container in propane gas installations requiring no more than 1,500,000 BTUs/hour. These regulators are factory set to reduce tank pressure to an intermediate pressure of approximately 10 PSIG

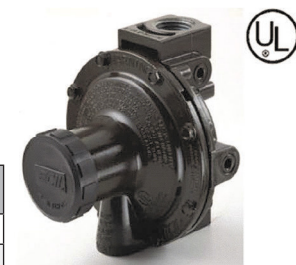


| Part Number | Inlet Connection | Outlet Connection | Orifice Size | Factory Delivery Pressure | Bonnet Vent Position | Vapor Capacity BTU/hr. Propane* |
|-------------|------------------|-------------------|--------------|---------------------------|----------------------|---------------------------------|
| LV3403TR | 1/4" F.NPT | 1/2" F.NPT | 1/4" | 10 PSIG | Over Outlet | 1,500,000 |
| LV3403TR9 | 1/4" F.NPT | 1/2" F.NPT | 1/4" | 10 PSIG | Over Outlet | 1,500,000 |

* Maximum flow based on 15 PSIG inlet pressure and 8 PSIG delivery

Compact Second Stage Regulator

The LV3403B4 is designed to reduce first stage pressure of 5-20 PSIG down to burner pressure normally 11" w.c. Designed as a second stage regulator for smaller applications with flow requirements up to 450,000 BTU's/hr, they are ideal for homes, mobile homes, and cottages.



| Part Number | Inlet Connection | Outlet Connection | Orifice Size | Factory Delivery Pressure | Adjustment Range | Bonnet Vent Position | Vapor Capacity BTU/hr * |
|-------------|------------------|-------------------|--------------|---------------------------|------------------|----------------------|-------------------------|
| LV3403B4 | 1/2" F.NPT | 1/2" F.NPT | 1/4" | 11" w.c. At 10 PSIG Inlet | 9" to 13" w.c. | Inlet | 450,000 |
| LV3403B4V3 | 1/2" F.NPT | 1/2" F.NPT | 1/4" | 11" w.c. At 10 PSIG Inlet | 9" to 13" w.c. | 3:00 | 450,000 |
| LV3403B4V0 | 1/2" F.NPT | 1/2" F.NPT | 1/4" | 11" w.c. At 10 PSIG Inlet | 9" to 13" w.c. | Outlet | 450,000 |
| LV3403B4V9 | 1/2" F.NPT | 1/2" F.NPT | 1/4" | 11" w.c. At 10 PSIG Inlet | 9" to 13" w.c. | 9:00 | 450,000 |

* Maximum flow based on 10 PSIG Inlet 9" w.c. delivery pressure

Compact Second Stage Back-Mount Regulator

The LV3403BR Back Mount Regulator is designed to reduce first stage pressure of 5-10 PSIG down to burner pressure normally 11" w.c. Designed as a second stage regulator for smaller applications with flow requirements up to 450,000 BTU/hr. and are ideal for homes, mobile homes, and cottages.



Features:

- Built in 1/8" F.NPT pressure taps on both regulator inlet and outlet side of the regulator. Plugs can be removed with a 3/16" hex Allen wrench.
- Large vent helps prevent vent blockage, it is tapped for 3/8" F.NPT for vent pipe away applications.
- With 15 PSIG inlet pressure, the regulator is designed to not pass more than 2 PSIG downstream with the seat disc removed per UL 144 specifications.
- Incorporates an integral relief valve per UL 144 specifications.
- Unique bonnet vent profile minimizes vent freeze over.
- Compact design saves space

Materials

Body..... Zinc
 Bonnet..... Zinc
 Spring..... Steel
 Seat Disc Resilient Rubber
 Diaphragm..... Integrated Fabric and Synthetic Rubber

| Part Number | Inlet Connection | Outlet Connection | Orifice Size | Factory Delivery Pressure | Adjustment Range | Bonnet Vent Position | Vapor Capacity BTU/hr * |
|-------------|------------------|-------------------|--------------|---------------------------|------------------|----------------------|-------------------------|
| LV3403B44R | 1/2" F.NPT | 1/2" F.NPT | 1/4" | 11" w.c. At 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 450,000 |
| LV3403B46R | 1/2" F.NPT | 3/4" F.NPT | 1/4" | 11" w.c. At 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 450,000 |

REGO REGULATORS & ACCESSORIES

REGO REGULATORS & ACCESSORIES

High Pressure First Stage Regulators

Provides accurate first stage regulation in two-stage bulk tank systems. These regulators handle vaporization of tanks up to 1200 gallons. Reduce tank pressure to an intermediate pressure of 5 to 10 PSIG. Also used to supply high pressure burners for applications like industrial furnaces or boilers. Also incorporated in multiple cylinder installations.



| Part Number | Inlet Connection | Outlet Connection | Orifice Size | Factory Delivery Pressure | Adjustment Range* (PSIG) | Bonnet Vent Position | Vapor Capacity BTU/hr Propane** |
|-------------|------------------|-------------------|--------------|---------------------------|--------------------------|----------------------|---------------------------------|
| LV4403SR4 | 1/2" F.NPT | 1/2" F.NPT | 1/4" | 5 | 1-5 | Yes | 2,500,000 |
| LV4403TR4 | 1/2" F.NPT | 1/2" F.NPT | 1/4" | 10 | 5-10 | Yes | 2,500,000 |
| LV4403SR9 | F. POL | 1/2" F.NPT | 1/4" | 5 | 1-5 | Yes | 2,500,000 |
| LV4403TR9 | F. POL | 1/2" F.NPT | 1/4" | 10 | 5-10 | Yes | 2,500,000 |
| LV4403SR96 | F. POL | 3/4" F.NPT | 1/4" | 5 | 1-5 | Yes | 2,500,000 |
| LV4403TR96 | F. POL | 3/4" F.NPT | 1/4" | 10 | 5-10 | Yes | 2,500,000 |

* When used for final stage pressure control, must either incorporate integral relief valve or separate relief valve should be specified in accordance with NFPA Pamphlet 58.

** Maximum flow based on inlet pressure 20 PSIG higher than the regulator setting and delivery pressure 20% lower than the setting.

Second Stage Regular For 2 PSIG Systems

Designed to reduce first stage pressure of 10 PSIG down to 2 PSIG. Systems that utilize this regulator use smaller than normal piping inside of the building. A special final stage regulator, not the appliance regulator, is required to reduce this intermediate 2 PSIG pressure down to 11" w.c.



LV4403Y Series

| Part Number | Inlet Connection | Outlet Connection | Orifice Size | Adjustment Range | Bonnet Vent Position | Vapor Capacity BTU/hr. Propane*** |
|-------------|------------------|-------------------|--------------|------------------------|----------------------|-----------------------------------|
| LV4403Y4 | 1/2" F.NPT | 1/2" F. NPT | 1/4" | 2 PSIG @ 10 PSIG Inlet | Over Inlet | 1,000,000 |
| LV4403Y46R | 1/2" F.NPT | 3/4" F. NPT | 1/4" | 2 PSIG @ 10 PSIG Inlet | Over Inlet | 1,000,000 |
| LV5503Y6 | 3/4" F.NPT | 3/4" F. NPT | 1/4" | 2 PSIG @ 10 PSIG Inlet | Over Inlet | 2,200,000 |
| LV5503Y8 | 3/4" F.NPT | 1" F. NPT | 9/32" | 2 PSIG @ 10 PSIG Inlet | Over Inlet | 2,200,000 |

REGO REGULATORS & ACCESSORIES

Low Pressure Second Stage Regulators

Designed to reduce first stage pressure of 5 to 20 PSIG down to burner pressure, normally 11" w.c. Ideal for medium commercial installations, multiple cylinder installations and normal domestic loads.



Backmount Design

Mounts directly to house line piping. Eliminates need for union joints, elbows, and mounting brackets. Quick and easy to install.



| Part Number | Inlet Connection | Outlet Connection | Orifice Size | Factory Delivery Pressure | Adjustment Range | Bonnet Vent Position | Vapor Capacity BTU/hr. Propane** |
|--------------|------------------|-------------------|--------------|---------------------------|------------------|----------------------|----------------------------------|
| LV4403B4 | 1/2" F.NPT | 1/2" F.NPT | #28 Drill | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 935,000 |
| LV4403B46 | 1/2" F.NPT | 3/4" F.NPT | #28 Drill | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 935,000 |
| LV4403B46R* | 1/2" F.NPT | 3/4" F.NPT | #28 Drill | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 935,000 |
| LV4403B66 | 3/4" F.NPT | 3/4" F.NPT | #28 Drill | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 935,000 |
| LV4403B66R* | 3/4" F.NPT | 3/4" F.NPT | #28 Drill | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 935,000 |
| LV4403B66RA | 3/4" F.NPT | 3/4" F.NPT | 3/16" | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 1,000,000 |
| LV4403B66RAB | 3/4" F.NPT | 3/4" F.NPT | 3/16" | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 1,000,000 |

* Backmount design

** Maximum flow based on 10 PSIG inlet and 9" w.c. delivery pressure.

REGO REGULATORS & ACCESSORIES

REGO REGULATORS & ACCESSORIES

Dielectric Second Stage Regulator

Application

RegO's Dielectric second stage regulators are designed to reduce first stage pressure normally 10PSIG down to burner pressure, normally 11" w.c. and are ideal for medium commercial installations, multiple cylinders installations and normal domestic loads.

RegO Dielectric second stage regulators are engineered to isolate potential electrical current from metallic piping before entering a building. The use of a separate dielectric union is not necessary because the regulator contains a dielectric union as part of the inlet assembly. Available in both SAE Flare and F.NPT inlet connection.

Features:

- F. NPT Dielectric Union is made of Brass with inlet Portion Made of Plated Steel
- M. SAE Flare inlet connection made of solid Brass
- All second stage features are the same as LV4403B Series

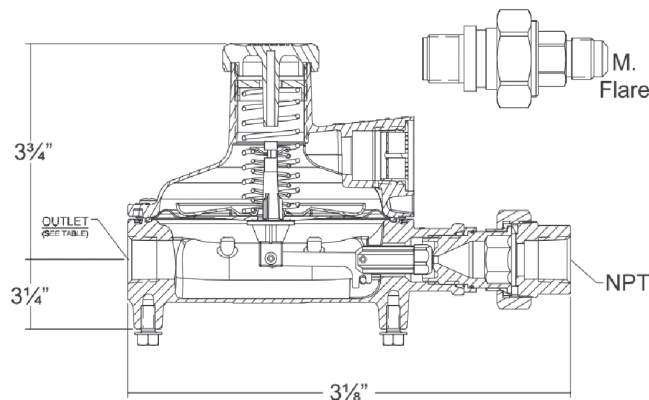


REGO REGULATORS & ACCESSORIES

| Part Number | Inlet Connection | Outlet Connection | Inlet Material | Orifice Size | Factory Delivery Pressure | Adjustment Range | Bonnet Vent Position | Vapor Capacity BTU/hr Propane |
|----------------|------------------|-------------------|----------------------|--------------|---------------------------|------------------|----------------------|-------------------------------|
| LV4403B3D | 3/8" M Flare | 1/2" F. NPT | | # 28 Drill | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 935,000 |
| LV4403B36D | 3/8" M Flare | 3/4" F.NPT | | # 28 Drill | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 935,000 |
| LV4403B3RD* | 3/8" M Flare | 1/2" F.NPT | | # 28 Drill | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 935,000 |
| LV4403B36RAD* | 3/8" M Flare | 3/4" F.NPT | | 3/16" | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 1,000,000 |
| LV4403B36RABD* | 3/8" M Flare | 3/4" F.NPT | | 3/16" | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 1,000,000 |
| LV4403B1D | 1/2" M Flare | 1/2" F.NPT | Brass | # 28 Drill | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 935,000 |
| LV4403B16D | 1/2" M Flare | 3/4" F.NPT | Brass | # 28 Drill | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 935,000 |
| LV4403B16RD | 1/2" M Flare | 3/4" F.NPT | Brass | # 28 Drill | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 935,000 |
| LV4403B16RAD* | 1/2" M Flare | 3/4" F.NPT | Brass | 3/16" | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 935,000 |
| LV4403B16RABD* | 1/2" M Flare | 3/4" F.NPT | Brass | # 28 Drill | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 1,000,000 |
| LV4403B5D | 5/8" M Flare | 1/2" F.NPT | Brass | # 28 Drill | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 935,000 |
| LV4403B56D | 5/8" M Flare | 3/4" F.NPT | Brass | # 28 Drill | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 935,000 |
| LV4403B56RD* | 5/8" M Flare | 3/4" F.NPT | Brass | # 28 Drill | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 935,000 |
| LV4403B56RAD* | 5/8" M Flare | 3/4" F.NPT | Brass | 3/16" | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 935,000 |
| LV4403B56RABD* | 5/8" M Flare | 3/4" F.NPT | Brass | 3/16" | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 1,000,000 |
| LV4403B4D | 1/2" F.NPT | 1/2" F.NPT | Brass & Plated Steel | # 28 Drill | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 935,000 |
| LV4403B46D | 1/2" F.NPT | 3/4" F.NPT | Brass & Plated Steel | # 28 Drill | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 935,000 |
| LV4403B66D | 3/4" F.NPT | 3/4" F.NPT | Brass & Plated Steel | # 28 Drill | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 935,000 |
| LV4403B46RD | 1/2" F.NPT | 3/4" F.NPT | Brass & Plated Steel | # 28 Drill | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 935,000 |
| LV4403B66RD | 3/4" F.NPT | 3/4" F.NPT | Brass & Plated Steel | # 28 Drill | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 935,000 |
| LV4403B66RAD | 3/4" F.NPT | 3/4" F.NPT | Brass & Plated Steel | 3/16" | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 1,000,000 |
| LV4403B66RABD* | 3/4" F.NPT | 3/4" F.NPT | Brass & Plated Steel | 3/16" | 11" w.c. at 10 PSIG Inlet | 9" to 13" w.c. | Over Inlet | 1,000,000 |

* Backmount Design.

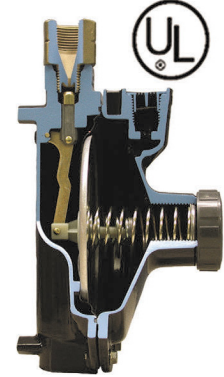
** Maximum flow based on 10 PSIG inlet and 9" w.c. delivery pressure.



REGO REGULATORS & ACCESSORIES

Low Pressure Second Stage Regulators

Designed to reduce first stage pressure of 5 to 20 PSIG down to burner pressure, normally 11" w.c. Ideal for larger commercial and industrial applications, multiple cylinder installations and large domestic systems



| Part Number | Inlet Connection | Outlet Connection | Orifice Size | Factory Delivery Pressure | Adjustment Range | Bonnet Vent Position | Vapor Capacity BTU/hr. Propane** |
|-------------|------------------|-------------------|--------------|---------------------------|------------------|----------------------|----------------------------------|
| LV5503B4 | 1/2" F.NPT | 3/4" F.NPT | 1/4" | 11" w.c. at 10 PSIG Inlet | 9" - 13" w.c. | Over Inlet | 1,600,000 |
| LV5503B6 | 3/4" F.NPT | 3/4" F.NPT | 1/4" | 11" w.c. at 10 PSIG Inlet | 9" - 13" w.c. | Over Inlet | 1,600,000 |
| LV5503B8 | 3/4" F.NPT | 1" F. NPT | " | 11" w.c. at 10 PSIG Inlet | 9" - 13" w.c. | Over Inlet | 2,300,000 |

Low Pressure Second Stage Tobacco Barn Regulator

Especially developed for drying barns in the tobacco industry. The 2503G regulator will supply a steady and constant flow of fuel to as many as 12 to 20 burners throughout the barn.



| Part Number | Inlet Connection | Outlet Connection | Orifice Size | Factory Delivery Pressure | Adjustment Range | Bonnet Vent Position | Vapor Capacity BTU/hr. Propane** |
|-------------|------------------|-------------------|--------------|---------------------------|------------------|----------------------|----------------------------------|
| LV5503G4 | 1/2" F.NPT | 3/4" F.NPT | 1/4" | 15" w.c. at 15 PSIG Inlet | 8" - 18" w.c. | Above Inlet | 1,750,000 |

* Maximum flow is based on 15 PSIG inlet and 12" w.c. delivery pressure.

Twin Stage Regulators

This compact two-stage regulator is designed to reduce container pressure down to 11" w.c. delivery pressure. It is ideal for "on-site" cylinder applications, mobile homes and average domestic service including small ASME and 100 to 420 pound DOT cylinders.



| Part Number | Inlet Connection | Outlet Connection | Orifice Size | Factory Delivery Pressure | Adjustment Range 2nd Stage | Bonnet Vent Position | | Capacity BTU/hr Propane* | Accessories 1st Stage Vent Pipe-Away |
|-------------|------------------|-------------------|--------------|----------------------------|----------------------------|----------------------|-------------|--------------------------|--------------------------------------|
| | | | | | | 1st Stage | 2nd Stage | | |
| LV404B4 | 1/4" F. NPT | 1/2" F. NPT | .219 | 11" w.c. at 100 PSIG Inlet | 9" - 13" w.c. | Down | Over Outlet | 525,000 | 404PE |
| LV404B4V9 | 1/4" F. NPT | 1/2" F. NPT | .219 | 11" w.c. at 100 PSIG Inlet | 9" - 13" w.c. | 9 o'clock | 9 o'clock | 525,000 | 404PE |
| LV404B46 | 1/4" F. NPT | 3/4" F. NPT | .219 | 11" w.c. at 100 PSIG Inlet | 9" - 13" w.c. | Down | Over Outlet | 525,000 | 404PE |
| LV404B46V9 | 1/4" F. NPT | 3/4" F. NPT | .219 | 11" w.c. at 100 PSIG Inlet | 9" - 13" w.c. | 9 o'clock | 9 o'clock | 525,000 | 404PE |
| LV404B9 | F. POL | 1/2" F. NPT | .219 | 11" w.c. at 100 PSIG Inlet | 9" - 13" w.c. | Down | Over Outlet | 525,000 | 404PE |
| LV404B9V9 | F. POL | 1/2" F. NPT | .219 | 11" w.c. at 100 PSIG Inlet | 9" - 13" w.c. | 9 o'clock | 9 o'clock | 525,000 | 404PE |
| LV404B96 | F. POL | 3/4" F. NPT | .219 | 11" w.c. at 100 PSIG Inlet | 9" - 13" w.c. | Down | Over Outlet | 525,000 | 404PE |
| LV404B96V9 | F. POL | 3/4" F. NPT | .219 | 11" w.c. at 100 PSIG Inlet | 9" - 13" w.c. | 9 o'clock | 9 o'clock | 525,000 | 404PE |

* Maximum flow based on 25 PSIG inlet pressure and 9" w.c. delivery pressure.

REGO REGULATORS & ACCESSORIES

REGO REGULATORS & ACCESSORIES

Compact Twin Stage Regulators

The compact twin-stage regulator is designed to reduce container pressure down to 11" w.c. delivery pressure. It is ideal for "on site" container applications such as homes, mobile homes and cottages for average domestic service; including small ASME tanks and 100-420 pound DOT cylinders.



LV404B39

LV404B34

| Part Number | Inlet Connection | Outlet Connection | Orifice Size | Factory Delivery Pressu | Adjustment Range 2nd Stage | Bonnet Vent Position 1st Stage | Bonnet Vent Position 2nd Stage** | Vapor Capacity BTU/hr * |
|-------------|------------------|-------------------|--------------|----------------------------|----------------------------|--------------------------------|----------------------------------|-------------------------|
| LV404B34 | 1/4" F.NPT | 1/2" F.NPT | .100 | 11" w.c. at 100 PSIG Inlet | 9" - 13" w.c. | Rear | Outlet | 450,000 |
| LV404B39 | F.POL | 1/2" F.NPT | .100 | 11" w.c. at 100 PSIG Inlet | 9" - 13" w.c. | Rear | Outlet | 450,000 |
| LV404B34V9 | 1/4" F.NPT | 1/2" F.NPT | .100 | 11" w.c. at 100 PSIG Inlet | 9" - 13" w.c. | Left | 9:00 | 450,000 |
| LV404B39V9 | F.POL | 1/2" F.NPT | .100 | 11" w.c. at 100 PSIG Inlet | 9" - 13" w.c. | Left | 9:00 | 450,000 |

* Maximum flow based on 10 PSIG Inlet 9" w.c. delivery pressure

** Other vent positions available upon request

REGO REGULATORS & ACCESSORIES

REGO REGULATORS & ACCESSORIES

Two PSIG Delivery Pressure Twin Stage Regulators

Application

SPECIAL 2 PSIG DELIVERY pressure twin stage regulator is designed to reduce container pressure down to 2 PSIG. A line pressure regulator is required downstream to reduce the 2 PSIG to a nominal 11" W.C.

Features:

- Incorporates an integral relief valve in the 2 PSIG stage portion of the regulator.
- Designed to pass no more than 5 PSIG with the seat disc removed.
- Large vent helps prevent blockage and is tapped with a FNPT thread for piping away.
- Compact Design
- Built in pressure taps. Plugs can be removed with a 3/16" hex allen wrench.
- Select Blue Finish to designate 2 PSIG delivery pressure for 2- pound systems.

Materials

Body (First Stage)..... Brass
 Body (2 PSIG Stage)..... Die Cast Zinc
 Bonnet, Second Stage Die Cast Zinc
 Diaphragms..... Integrated Fabric and Synthetic Rubber
 Springs..... Steel and Stainless Steel
 Valve Discs..... Resilient Rubber



LV404Y9

LV404Y39



| Part Number | Inlet Connection | Outlet Connection | Orifice Size | Factory Delivery Pressure (PSIG) | Adjustment Range (PSIG) | Bonnet Vent Position 1st Stage | 2 PSIG Bonnet Vent Position | Capacity BTU/hr * |
|-------------|------------------|-------------------|--------------|----------------------------------|-------------------------|--------------------------------|-----------------------------|-------------------|
| LV404Y9 | F.POL (CGA 510) | 1/2" F.NPT | .219 | 2 | 1.8 to 2.5 | Down | Outlet | 800,000 |
| LV404Y39 | F.POL (CGA 510) | 1/2" F.NPT | .219 | 2 | 1.8 to 2.5 | Down | Outlet | 650,000 |

*Maximum flow is based on 25 PSIG inlet pressure and 1.5 PSIG delivery pressure.

REGO REGULATORS & ACCESSORIES

REGO REGULATORS & ACCESSORIES

Twin Stage Automatic Changeover Regulators

These combination automatic changeover, two stage regulators are especially suitable for homes, mobile homes, cottages, construction and other portable two cylinder installations. Empty containers may be replaced without interrupting customer's gas service.



| Part Number | Service & Reserve Indicator | Inlet Connection | Outlet Connection | Orifice Size 2nd Stage | Factory Delivery Pressure | Adjustment Range | Bonnet Vent Position | Bracket Included | Capacity BTU/hr. Propane** |
|-------------|-----------------------------|---------------------|-------------------|------------------------|----------------------------|------------------|----------------------|------------------|----------------------------|
| 7525B34 | | 1/4" Inverted Flare | 1/2" F. NPT | .100 | 11" w.c. at 100 PSIG Inlet | 9"-13" w.c. | Outlet | | 200,000 |
| 7525B4 | Integral | 1/4" Inverted Flare | 1/2" F. NPT | | 11" w.c. at 100 PSIG Inlet | 9"-13" w.c. | over outlet | 2503-22A | 450,000 |

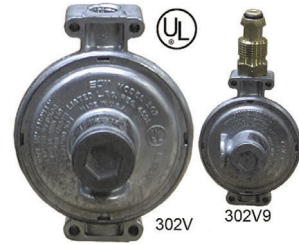
* Maximum flow based on 10 PSIG Inlet 9" w.c. delivery pressure

** Maximum flow based on 25 PSIG inlet pressure and 9" water column delivery pressure.

REGO REGULATORS & ACCESSORIES

Compact Regulators

These compact regulators are designed for smaller outdoor grills and fish cookers. It is intended for use on small portable appliances that use 100,000 BTU's/hr. or less. It may not be used on fixed pipe systems per NFPA 58, 1995 edition.



| Part Number | Type | Inlet Connection | Outlet Connection | Orifice Size | Factory Delivery Pressure | Adjustment Range | Bonnet Vent Position | Vapor Capacity BTU/hr. Propane* |
|-------------|--------------|----------------------|-------------------|--------------|----------------------------|------------------|------------------------|---------------------------------|
| 302 | Single Stage | 1/4" F. NPT | 3/8" F. NPT | No. 50 Drill | 11" w.c. at 100 PSIG inlet | 9-13" w.c. | Small Vent Above Inlet | 125,000 |
| 302V | Single Stage | 1/4" F. NPT | 3/8" F. NPT | No. 50 Drill | 11" w.c. at 100 PSIG inlet | 9-13" w.c. | Drip Lip Above Inlet | 125,000 |
| 302V9 | Single Stage | 1/4" F. NPT | 3/8" F. NPT | No. 50 Drill | 11" w.c. at 100 PSIG inlet | 9-13" w.c. | Drip Lip at 9 o'clock | 125,000 |
| 302V9LS | Single Stage | Soft POL w/o orifice | 3/8" F. NPT | No. 50 Drill | 11" w.c. at 100 PSIG inlet | 9-13" w.c. | Drip Lip at 9 o'clock | 125,000 |

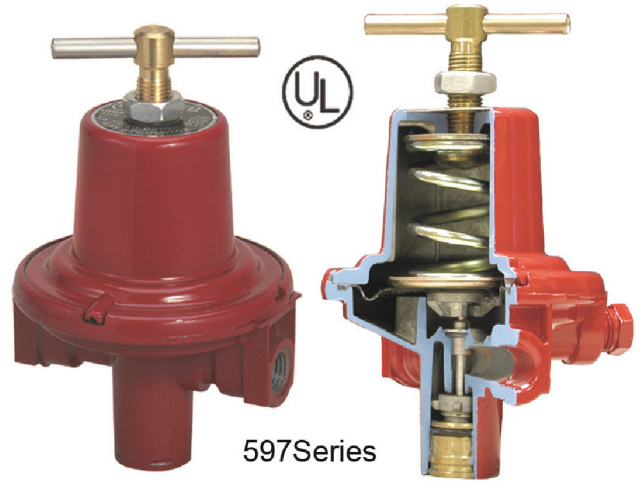
* Maximum flow based on 25 PSIG inlet and factory delivery pressure

REGO REGULATORS & ACCESSORIES

REGO REGULATORS & ACCESSORIES

High Pressure Industrial / Commercial Pounds-to-Pounds Regulators

Designed to reduce propane gas container pressure down to between 3 and 100 PSIG. Ideal for liquid or vapor service, they can be used in a variety of applications including salamander heaters, weed burning torches, fish cookers, tar pot heaters, and other industrial type services.



597Series

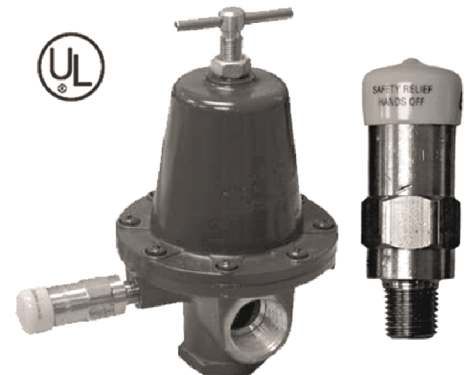
| Part Number | Adjustment Method | Inlet Connection | Outlet Connection | Recommended Delivery Pressure Range (PSIG) | Capacity Determined at Set Pressure of PSIG* | Capacity BTU/hr. Propane** |
|-------------|-------------------|------------------|-------------------|--|--|----------------------------|
| 597FA | Tee Handle | 1/4" NPT | 1/4" NPT | 1-15 | 10 | 1,750,000 |
| 597FB | Tee Handle | 1/4" NPT | 1/4" NPT | 10-30 | 20 | 3,000,000 |
| 597FC | Tee Handle | 1/4" NPT | 1/4" NPT | 20-45 | 30 | 3,500,000 |
| 597FD | Tee Handle | 1/4" NPT | 1/4" NPT | 40-100 | 40 | 4,500,000 |

* Set pressure established at 100 PSIG inlet and a flow of 250,000 BTU/hr.

** Capacity determined at actual delivery pressure 20% less than set pressure with inlet pressure 20 PSIG higher than the set pressure.

High Pressure Industrial / Commercial Pounds-to-Pounds Regulator Accessories

Designed for use as a relief valve on first stage regulators that comply with NFPA 58 2.5.7.5 exception: "first stage regulators with a rated capacity of more than 500,000 BTU/hr. shall be permitted to have a separate relief valve.



| Part Number | Set Pressure | Regulator Settings | Connection Size | Height | Width | Flow Capacity at 120% of Set Pressure (SCFH Propane) |
|-------------|--------------|--------------------|-----------------|----------|---------|--|
| 3139-18 | 18 PSIG | 10 PSIG | 1/4" M. NPT | 2 27/32" | 1 1/16" | 1357* |
| 3139-26 | 26 PSIG | 15 PSIG | 1/4" M. NPT | 2 27/32" | 1 1/16" | 1725** |
| 3139-38 | 38-PSIG | 20 PSIG | 1/4" M. NPT | 2 27/32" | 1 1/16" | 2304*** |

* Flow recorded at 21.6 PSI inlet pressure for this valve.

** Flow recorded at 31.2 PSI inlet pressure for this valve.

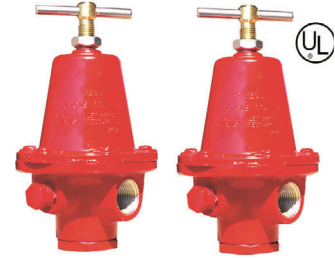
*** Flow recorded at 45.6 PSI inlet pressure for this valve.

REGO REGULATORS & ACCESSORIES

REGO REGULATORS & ACCESSORIES

High Pressure Industrial / Commercial Pounds-to-Pounds Regulators

Designed to reduce LP-Gas and anhydrous ammonia container pressures to between 3 and 125 PSIG. Precision-built with a multimillion BTU capacity, the 1580M series is perfect for such big, tough jobs as crop dryers, asphalt batch mixing plants, road building "tar wagons", heat treating and other large industrial and commercial loads. It's also ideal as a first stage regulator in large multiple operations. The AA1580M series is ideal for use in anhydrous ammonia applications such as blue print machines and heat treating.



| Part Number | Vent Position | Service | Adjustment Method | Inlet & Outlet Connections | Recommended Delivery Pressure Range (PSIG) | Width | Height (max.) | Capacity Determined at Set Pressure of PSIG** | Capacity*** |
|-------------|---------------|---------|-------------------|----------------------------|--|----------|---------------|---|------------------------|
| AA1582MW | N/A | NH3 | Tee Handle | 1/4" F. NPT | 3-25 | 2 3/16" | 4 1/8" | 20 | 2,100 CFH NH3 |
| AA1582MK | N/A | NH3 | Hex Head | 1/4" F. NPT | 3-25 | 2 3/16" | 4 1/8" | 20 | 2,100 CFH NH3 |
| AA1582ML | N/A | NH3 | Tee Handle | 1/4" F. NPT | 20-50 | 2 3/16" | 4 1/8" | 30 | 2,400 CFH NH3 |
| AA1582MH | N/A | NH3 | Tee Handle | 1/4" F. NPT | 45-125 | 2 3/16" | 4 1/8" | 60 | 2,600 CFH NH3 |
| 1584VN | Over Outlet* | LP-Gas | Tee Handle | 1/2" F. NPT | 3-30 | 2 15/16" | 4 7/8" | 20 | 7,000,000 BTU/hr. LPG |
| 1584VL | Over Outlet* | LP-Gas | Tee Handle | 1/2" F. NPT | 25-50 | 2 15/16" | 4 7/8" | 30 | 7,500,000 BTU/hr. LPG |
| 1584VH | Over Outlet* | LP-Gas | Tee Handle | 1/2" F. NPT | 45-125 | 2 15/16" | 4 7/8" | 60 | 8,000,000 BTU/hr. LPG |
| AA1584VW | Over Outlet* | NH3 | Tee Handle | 1/2" F. NPT | 3-25 | 2 15/16" | 4 7/8" | 20 | 4,500 CFH NH3 |
| AA1584VL | Over Outlet* | NH3 | Tee Handle | 1/2" F. NPT | 20-50 | 2 15/16" | 4 7/8" | 30 | 4,800 CFH NH3 |
| AA1584VH | Over Outlet* | NH3 | Tee Handle | 1/2" F. NPT | 45-125 | 2 15/16" | 4 7/8" | 60 | 5,100 CFH NH3 |
| 1586VN | Over Outlet* | LP-Gas | Tee Handle | 3/4" F. NPT | 3-30 | 3 1/2" | 7" | 20 | 11,000,000 BTU/hr. LPG |
| 1586VL | Over Outlet* | LP-Gas | Tee Handle | 3/4" F. NPT | 25-50 | 3 1/2" | 7" | 30 | 12,000,000 BTU/hr. LPG |
| 1586VH | Over Outlet* | LP-Gas | Tee Handle | 3/4" F. NPT | 45-125 | 3 1/2" | 7" | 60 | 14,000,000 BTU/hr. LPG |
| AA1586VW | Over Outlet* | NH3 | Tee Handle | 3/4" F. NPT | 3-25 | 3 1/2" | 7" | 20 | 7,000 CFH NH3 |
| AA1586VL | Over Outlet* | NH3 | Tee Handle | 3/4" F. NPT | 20-50 | 3 1/2" | 7" | 30 | 7,700 CFH NH3 |
| AA1586VH | Over Outlet* | NH3 | Tee Handle | 3/4" F. NPT | 45-125 | 3 1/2" | 7" | 60 | 8,900 CFH NH3 |
| 1588VN | Over Outlet* | LP-Gas | Tee Handle | 1" F. NPT | 3-30 | 3 1/2" | 7" | 20 | 11,000,000 BTU/hr. LPG |
| 1588VL | Over Outlet* | LP-Gas | Tee Handle | 1" F. NPT | 25-50 | 3 1/2" | 7" | 30 | 12,000,000 BTU/hr. LPG |
| 1588VH | Over Outlet* | LP-Gas | Tee Handle | 1" F. NPT | 45-125 | 3 1/2" | 7" | 60 | 14,000,000 BTU/hr. LPG |

* Vent positions can be ordered over the inlet (VI), 3:00 (V3), or 9:00 (V9) Example: 1584VLV9 = vent @ 9:00

** Set pressure is established with 100 PSIG inlet pressure and a flow of 500,000 BTU/hr. propane for 1580M Series, 90 CFH/hr. NH3 for AA1582M Series and 180 CFH/hr. NH3 for AA1584M and AA1586M Series.

*** Capacities determined at actual delivery pressure 20% less than set pressure with inlet pressure 20 PSIG higher than set pressure.

NOTE: Care must be taken to prevent re-liquefaction of propane at normal temperatures by heat tracing or other effective means. Use of a relief valve upstream or downstream of these regulators is recommended in accordance with NFPA 58.

High Pressure / High Temperature Industrial / Commercial Pounds-to-Pounds Regulators

Designed to reduce LP-Gas container pressures to between 3 and 50 PSIG. Ideal for crop drying, heat treating, asphalt batch mixing and other large industrial and commercial load application utilizing high temperature LP-Gas or high temperature atmosphere under conditions up to 300°F. Also ideal as a first stage regulator in large multiple operations.



| Part Number | Service | Vent Position | Adjustment Method | Inlet & Outlet Connections | Recommended Delivery Pressure Range (PSIG) | Capacity Determined at Set Pressure of PSIG** | Capacity BTU/ hr. Propane*** |
|-------------|---------|---------------|-------------------|----------------------------|--|---|------------------------------|
| X1584VN | LP-Gas | Over Outlet* | Tee Handle | 1/2" F. NPT | 3-30 | 20 | 7,000,000 |
| X1584VL | LP-Gas | Over Outlet* | Tee Handle | 1/2" F. NPT | 25-50 | 30 | 7,500,000 |
| X1586VN | LP-Gas | Over Outlet* | Tee Handle | 3/4" F. NPT | 3-30 | 20 | 11,000,000 |
| X1586VL | LP-Gas | Over Outlet* | Tee Handle | 3/4" F. NPT | 25-50 | 30 | 12,000,000 |

* Vent positions can be ordered over the inlet (VI), 3:00 (V3), or 9:00 (V9) Example: X1584VLV9 = vent @ 9:00

** Set pressure is established with 100 PSIG inlet pressure and a flow of 500,000 BTU/hr. propane.

*** Capacities determined at actual delivery pressure 20% less than set pressure with inlet pressure 20 PSIG higher than set pressure.

NOTE: Care must be taken to prevent re-liquefaction of propane at normal temperatures by heat tracing or other effective means.

Use of a relief valve upstream or downstream of these regulators is recommended in accordance with NFPA 58.

REGO REGULATORS & ACCESSORIES

REGO REGULATORS & ACCESSORIES

Accessories

Copper Pigtails



913PS12



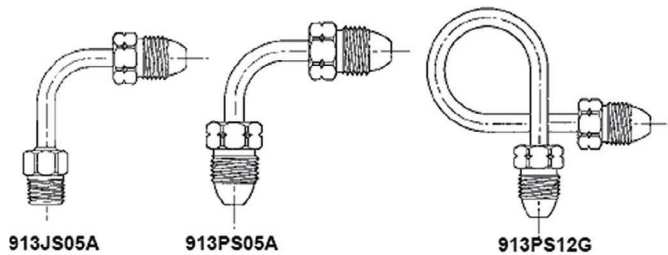
Pigtails are available in a variety of connections, sizes and styles. Care should always be taken in selecting the proper pigtail for a particular application.

Note: Engineered Controls International, Inc. recommends a new pigtail be installed with every new and replaced regulator.

Bent Pigtails Ordering Information

3/8" Tube, 7/8" Hex Short Nipple

| Part Number | Connections | Approximate Length | Type/Degree of Bend |
|-------------|-------------------|--------------------|---------------------|
| 913JS05A | M. POL x 1/4" MPT | 5" | 90° |
| 913PS05A | M. POL x M. POL | 5" | 90° |
| 913PS12G | M. POL x M. POL | 12" | 270° Right Hand |
| 913PS12H | M. POL x M. POL | 12" | 270° Left Hand |



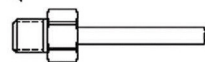
913JS05A

913PS05A

913PS12G

612J Series Gauge Tail

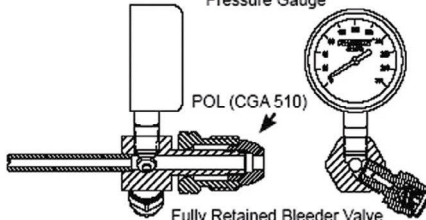
1/4" NPT



0-300 PSIG Pressure Gauge

POL (CGA 510)

Fully Retained Bleeder Valve Flat Blade Screw Slot



Straight Pigtails Ordering Information

1/4" Tube, 7/8" Hex Short Nipple

| Part Number | Connections | Approximate Length |
|-------------|-----------------------------|--------------------|
| 912PS12 | M.POL x M.POL | 12" |
| 912PS20 | M.POL x M.POL | 20" |
| 912PS36 | M.POL x M.POL | 36" |
| 912PS48 | M.POL x M.POL | 48" |
| 912FS12 | 1/4" Inverted Flare x M.POL | 12" |
| 912FS20 | 1/4" Inverted Flare x M.POL | 20" |
| 912FS30 | 1/4" Inverted Flare x M.POL | 30" |
| 912FS36 | 1/4" Inverted Flare x M.POL | 36" |
| 912JS12 | 1/4" M.NPT x M.POL | 12" |
| 912JS20 | 1/4" M.NPT x M.POL | 20" |
| 912JS36 | 1/4" M.NPT x M.POL | 36" |

1/4" Tube, 1 1/8" Hex Long Nipp

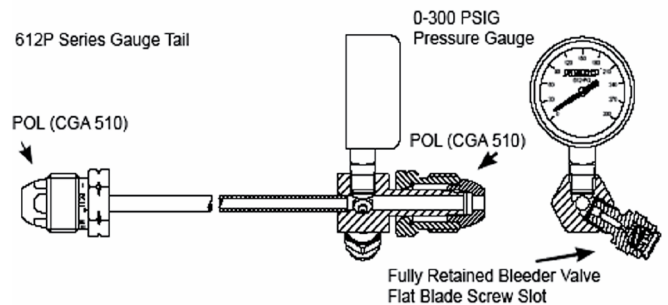
| Part Number | Connections | Approximate Length |
|-------------|-----------------------------|--------------------|
| 912PA20 | M.POL x M.POL | 20" |
| 912PA36 | M.POL x M.POL | 36" |
| 912PA48 | M.POL x M.POL | 48" |
| 912FA20 | 1/4" Inverted Flare x M.POL | 20" |

3/8" Tube, 7/8" Hex Short Nipple

| Part Number | Connections | Approximate Length |
|-------------|-------------------------|--------------------|
| 913JS05 | M.POL x 1/4" MPT | 5" |
| 913PS12 | M.POL x M.POL | 12" |
| 913PS20 | M.POL x M.POL | 20" |
| 913PS30 | M.POL x M.POL | 30" |
| 913PS36 | M.POL x M.POL | 36" |
| 913PS48 | M.POL x M.POL | 48" |
| 913PS05 | M.POL x M.POL | 5" |
| 913LS12 | 1/2" M.NPT x M.POL | 12" |
| 913KL12 | 1/2" M.NPT x 3/8" M.POL | 12" |

612P Series Gauge Tail

POL (CGA 510)



0-300 PSIG Pressure Gauge

Fully Retained Bleeder Valve Flat Blade Screw Slot

REGO REGULATORS & ACCESSORIES

Accessories

Inlet Fittings

These inlet fittings are available for assembly into either first stage of single stage regulators. All have 1/4" M. NPT connections and are machined from brass.



| Part Number | Description |
|-------------|---|
| 970 | Hard nose POL with wrench nut. |
| 970AX | Hard nose POL with wrench nut and excess flow. |
| 970AXS | Soft nose POL with wrench nut and excess flow. |
| 3199W | Heavy duty hard nose POL with wrench nut and excess flow. |
| 970AW | Soft nose POL with Handwheel. |
| 970HT | Soft nose POL with Handwheel and 60 DMS orifice. |
| 970AS | Soft nose POL x 1/4MPT |
| 970S | Soft nose POL with wrench nut and 60 DMS orifice. |

Brackets

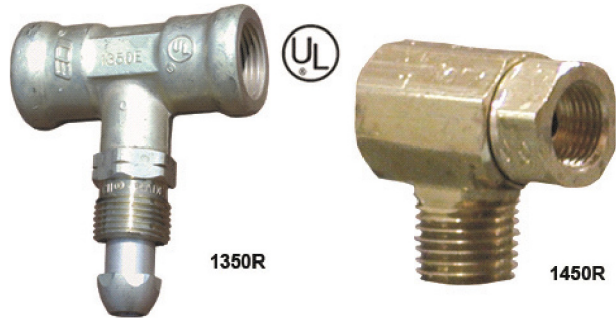
RegO® Brackets are especially designed for use in installing RegO® Regulators in applications requiring the use of a bracket.



| Part Number | Material | Description |
|-------------|----------------------|---|
| 2503-22 | Cadmium Plated Steel | 2302 Series/404B23 |
| 2503-19 | Aluminum | LV404 Series, 2503 Series LV4403 Series |

Tee Check Manifolds

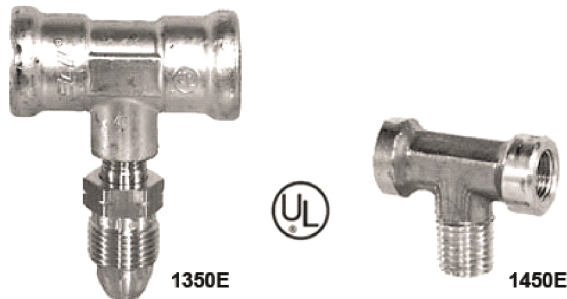
For use in systems that require uninterrupted gas service during cylinder exchange. Especially for summer cottages, mobile homes and single appliance loads. Floating disc check minimizes discharge of gas to the atmosphere when empty cylinder is being replaced.



| Part Number | Inlet Connections | Outlet Connections |
|-------------|---------------------|--------------------|
| 1350R | F. POL | M. POL |
| 1450R | 1/4" Inverted Flare | 1/4" M. NPT |

Multiple Cylinder Manifolds

Use with suitable pigtailed to connect multiple cylinders together. Ideal for loads that require more than one cylinder to be in service at a time. Provides a three-way tee function without an internal disc check.



| Part Number | Inlet Connections | Outlet Connections |
|-------------|---------------------|--------------------|
| 1350E | F. POL | M. POL |
| 1450E | 1/4" Inverted Flare | 1/4" M. NPT |

REGO REGULATORS & ACCESSORIES

Accessories

Low Pressure Test Set

This kit provides the equipment necessary for checking regulator delivery pressure (low pressure) at the appliances. The basic set contains a 2424A low pressure gauge and a 3 foot — 3/16" O.D. flexible synthetic rubber tube. Adapters are also available.



| Part Number | Material | Description |
|-------------|----------|------------------|
| 2434A | Test Kit | 1328, 1331, 1332 |



2434A

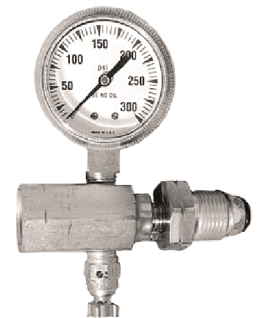
Adapter

High Pressure Gauge Adapter

Designed for testing high pressure lines. Adapter has 0 to 300 PSIG gauge. A bleeder valve allows you to bleed down to correct pressure during pressure tests.



| Part Number | Inlet Connections | Outlet Connections | Pressure Gauge Range (PSIG) |
|-------------|-------------------|--------------------|-----------------------------|
| 2962 | Soft Nose M. POL | F. POL | 0 - 300 |



Water Manometer Kit

The water manometer kit is especially suited for use with low pressure LP-Gas systems. It is ideal for pressure checks downstream of the low pressure regulator and at the appliances.



| Part Number | Description |
|-------------|-----------------------------------|
| 1212KIT | Flexible Tube Water Manometer Kit |



Adhesive Warning Labels

These adhesive warning labels are intended for application as close as possible to the LP Gas regulator once the regulator has been installed.



| Part Number | Inlet Connections |
|-------------|------------------------|
| LV4403-400 | Adhesive Warning Label |

DANGER WARNING

LP-GAS IS EXTREMELY FLAMMABLE AND EXPLOSIVE

AVOID SERIOUS INJURY AND PROPERTY DAMAGE. IF YOU SEE, SMELL, OR HEAR ESCAPING GAS... EVACUATE AREA IMMEDIATELY! CALL YOUR LOCAL FIRE DEPARTMENT! DO NOT ATTEMPT TO REPAIR. DO NOT STORE IN BUILDING OR ENCLOSED AREA. DO NOT USE ON HOT AIR BALLONS OR AIRCRAFT.

Insist that your LP-Gas dealer regularly inspect and maintain this installation and properly instruct you in safety matters.

Make sure ice, snow drifts, dirt, bugs and other foreign material do not obstruct vent passage-ways and openings. The vent opening must have a screen installed. If screen is missing, call your gas dealer for immediate examination and replacement.

DO NOT REMOVE, DEFACE OR OBLITERATE THIS LABEL. DO NOT FILL CONTAINER UNLESS THIS LABEL IS READABLE.

ADDITIONAL SAFETY INFORMATION IS AVAILABLE FROM

ECI Engineered Controls International, Inc. Printed in U.S.A. 04-0994-1189 Part Number LV4403-400
100 Rego Drive PO Box 242 Elon College, NC 27244 USA Phone (336) 416-2707 Fax (336) 419-6904 www.rego-products.com

REGO REGULATORS & ACCESSORIES

REGO CYLINDER & SERVICE VALVES

PT9102 Series Service Valves

Designed especially for vapor or liquid withdrawal service on DOT or ASME containers. Since none of these valves has an integral pressure relief valve, they may only be used as an accessory valve on containers that have an independent pressure relief valve sufficient for that container's capacity. When installed for liquid withdrawal, NFPA Pamphlet #58 requires 1/8" diameter restriction in the end of the inserted dip pipe



| Part Number | Bonnet Style | Container Connection | Service Connection | Fixed Liquid Level Vent Valve | Approximate Filling Rate Liquid Flow, GPM Pressure Drop Across Valve | | | |
|-------------|--------------|----------------------|--------------------|-------------------------------|--|---------|---------|----------|
| | | | | | 10 PSIG | 25 PSIG | 50 PSIG | 100 PSIG |
| PT9102R1 | Multibonnet | 3/4" M. NGT | F. POL CGA 510 | No | 7.6 | 11.7 | 15.2 | 20.6 |
| PT9102R11.1 | Multibonnet | 3/4" M. NGT | F. POL CGA 510 | Yes | 7.6 | 11.7 | 15.2 | 20.6 |
| PT9102R11.7 | Multibonnet | 3/4" M. NGT | F. POL CGA 510 | Yes | 7.6 | 11.7 | 15.2 | 20.6 |

Since these valves have no integral pressure relief valves, they can be used on any container with an independent relief device sufficient for the tanks capacity.

REGO CYLINDER & SERVICE VALVES

REGO CYLINDER & SERVICE VALVES

Heavy-Duty Cylinder Valves for Vapor Withdrawal

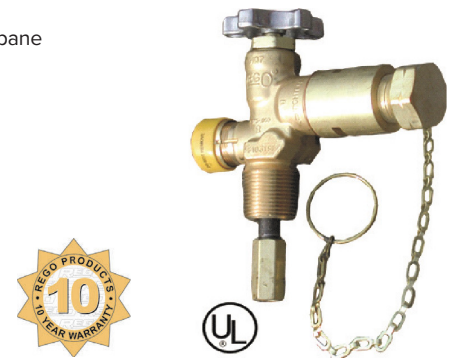
This heavy duty cylinder valve is designed for vapor withdrawal of DOT cylinders up to 100 lbs. propane capacity. It is used in domestic hook-ups, with RV's and as a heavy duty barbecue cylinder valve.



| Part Number | Container Connection | Service Connection | Fixed Liquid Level Vent Valve Style | Dip Tube Length w/ Deflector | Pressure Relief Valve Setting | For Use in Cylinders w/ Propane Capacity Up To: | Approximate Filling Rate Liquid Flow, GPM Pressure Drop Across Valv | | | | Accessories POL Plug |
|-------------|----------------------|--------------------|-------------------------------------|------------------------------|-------------------------------|---|---|---------|---------|----------|----------------------|
| | | | | | | | 10 PSIG | 25 PSIG | 50 PSIG | 100 PSIG | |
| 9103D10.6 | 3/4" M NGT | F. POL (CGA 510) | Knurled | 10.6" | 375 PSIG | 100 lbs. | 12.7 | 20.3 | 29.0 | 41.3 | N970P |
| 9103D11.6 | 3/4" M NGT | F. POL (CGA 510) | Knurled | 11.6" | 375 PSIG | 100 lbs. | 12.7 | 20.3 | 29.0 | 41.3 | N970P |

Tamper-Resistant Cylinder Valve with Outlet Check for Vapor Withdrawal

This valve is designed for vapor withdrawal from and protection of DOT cylinders up to 100 lbs. propane capacity. Ideal for cylinders used in the field by construction crews, utility repair men and plumbers.



| Part Number | Container Connection | Service Connection | Fixed Liquid Level Vent Valve Style | Pressure Relief Valve Setting | For Use in Cylinders w/ Propane Capacity Up To: | Approximate Filling Rate Liquid Flow, GPM Pressure Drop Across Valv | | | |
|-------------|----------------------|--------------------|-------------------------------------|-------------------------------|---|---|---------|---------|----------|
| | | | | | | 10 PSIG | 25 PSIG | 50 PSIG | 100 PSIG |
| 9103T9F | 1/4" M. NGT | F. POL (CGA 510) | None | 375 PSIG | 100 lbs. | 5.0 | 7.6 | 10.7 | 14.9 |

NOTE: These valves incorporate an excess flow valve. Refer to L-500/Section F, for complete information regarding selection, operation and testing of excess flow valves.

Cylinder Valve for RV and Small ASME System Vapor Withdrawal

Designed especially for vapor withdrawal service in small ASME containers with surface area up to 23.8 square feet. UL flow capacity is 645 CFM/air, per NFPA 58.



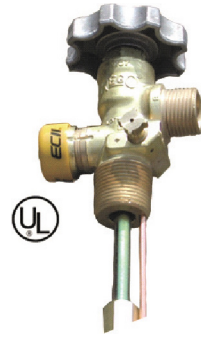
| Part Number | Container Connection | Service Connection | Fixed Liquid Level Vent Valve Style | Pressure Relief Valve Setting | For Use in Cylinders w/Propane Capacity Up To: | Flow Capacity SCFM/Air |
|-------------|----------------------|--------------------|-------------------------------------|-------------------------------|--|------------------------|
| 9106CO | 3/4" M. NGT | F. POL (CGA 510) | None | 312 PSIG | ASME Tanks* | 645 |

* Surface area up to 23.8 square feet.

REGO CYLINDER & SERVICE VALVES

Cylinder Valve for Liquid Withdrawal

Equipped with excess flow valves and liquid withdrawal tubes, they are designed for liquid withdrawal of DOT cylinders up to 100 lbs. propane capacity. They are most often used with heavy BTU loads found in industrial uses.



| Part Number | Container Connection | Service Connection | Fixed Liquid Level Vent Valve Style | Dip Tube Length w/ Deflector | Liquid Withdrawl Tube Length |
|-------------|----------------------|--------------------|-------------------------------------|------------------------------|------------------------------|
| 9107K8A | 3/4" M. NGT | CGA 555 | Knurled | 11.6" | 44" |

| Pressure Closing Flow Setting | For Use in Cylinders w/Propane Capacity Up To: | Approximate Filling Rate Liquid Flow, GPM Pressure Drop Across Valves | | | | Closing Flow (LP-Gas) * Vapor | | |
|-------------------------------|--|---|---------|---------|----------|-------------------------------|----------------|---------|
| | | 10 PSIG | 25 PSIG | 50 PSIG | 100 PSIG | 25 PSIG Inlet | 100 PSIG Inlet | Liquid |
| 375 PSIG | 100 lbs. | 3.3 | 5.4 | 7.7 | 11.1 | 525 SCFH | 1,000SCFH | 1.7 GPM |

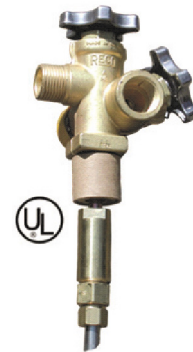
* Closing flows based on 3/8" O.D. withdrawal tube 44" long or less attached.

IMPORTANT: 1/4" O.D. pigtailed or POL connections for 1/4" O.D. pigtailed should not be used with these valves.

NOTES: To ensure proper functioning and maximum protection from excess flow valves, the cylinder valve should be fully opened and backseated when in use. These valves incorporate an excess flow valve. Refer to L-500 / Section F, for complete information regarding selection, operation and testing of excess flow valves.

"Dual" Cylinder Valve for Simultaneous Liquid and Vapor Withdrawal

This dual cylinder valve was designed especially for industrial uses. It increases the cylinder's flexibility by permitting DOT cylinders up to 100 lbs. propane capacity to be used interchangeably or simultaneously for either liquid or vapor withdrawal



| Part Number | Container Connection | Service Connection | | Fixed Liquid Level Vent Valve Style | Liquid Withdrawl Tube Length |
|-------------|----------------------|--------------------|---------|-------------------------------------|------------------------------|
| | | Vapor | Liquid | | |
| 8556 | 3/4" M. NGT | F. POL (CGA 510) | CGA 555 | None | 44" |

| Pressure Relief Valve Setting | For Use in Cylinders w/Propane Capacity Up To: | Approximate Filling Rate Liquid Flow, GPM Pressure Drop Across Valves | | | | Liquid Closing Flow* (LP-Gas) |
|-------------------------------|--|---|---------|---------|----------|-------------------------------|
| | | 10 PSIG | 25 PSIG | 50 PSIG | 100 PSIG | |
| 375 PSIG | 100 lbs. | 6.6 | 10.0 | 14.5 | 21.0 | 2.3 GPM |

* To ensure proper functioning and maximum protection from integral excess flow valves, the cylinder valve should be fully opened and backseated when in use.

NOTE: These valves incorporate an excess flow valve. Refer to L-500/Section F, for complete information regarding selection, operation and testing of excess flow valves.

REGO CYLINDER & SERVICE VALVES

REGO CYLINDER & SERVICE VALVES

Service Valves for ASME and DOT Containers or Fuel Line Applications



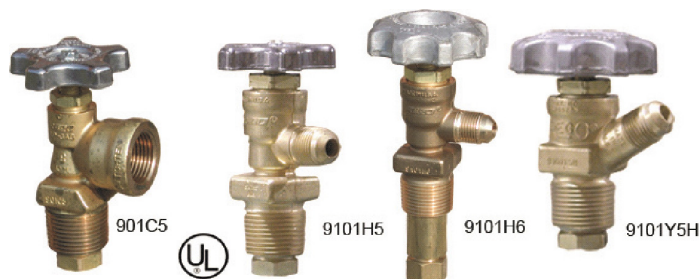
Designed especially for vapor withdrawal service on ASME and DOT containers or in fuel line applications. Since none of these valves have an integral pressure relief valve, they may only be used as an accessory valve on containers that have an independent pressure relief valve sufficient for that container's capacity



| Part Number | Bonnet Style | Container Connection | Service Connection | Fixed Liquid Level Vent Valve | Approximate Filling Rate Liquid Flow, GPM Pressure Drop Across Valve | | | |
|-------------|--------------|----------------------|--------------------|-------------------------------|--|---------|---------|----------|
| | | | | | 10 PSIG | 25 PSIG | 50 PSIG | 100 PSIG |
| 901C1 | Standard | 3/4" M. NGT | F. POL CGA 510 | No | 5.3 | 8.2 | 10.8 | 14.2 |
| 9101C1 | Standard | 3/4" M. NGT | F. POL CGA 510 | No | 8.8 | 12.4 | 15.8 | 21.7 |
| 9101D11.1 | Standard | 3/4" M. NGT | F. POL CGA 510 | Yes | 8.6 | 12.7 | 16.3 | 22.3 |
| 9101D11.7 | Standard | 3/4" M. NGT | F. POL CGA 510 | Yes | 8.6 | 12.7 | 16.3 | 22.3 |
| 9101R1 | MultiBonnet | 3/4" M. NGT | F. POL CGA 510 | No | 7.6 | 11.7 | 15.2 | 20.6 |
| 9101R11.1 | MultiBonnet | 3/4" M. NGT | F. POL CGA 510 | Yes | 7.6 | 11.7 | 15.2 | 20.6 |
| 9101R11.7 | MultiBonnet | 3/4" M. NGT | F. POL CGA 510 | Yes | 7.6 | 11.7 | 15.2 | 20.6 |

Note Since these valves have no integral pressure relief valve, they can be used on any container with an independent relief device sufficient for that tank's capacity.

Service Valves for ASME Motor Fuel Containers



Designed specifically for vapor or liquid withdrawal service on ASME motor fuel containers. Since none of these valves have an integral pressure relief valve, they may only be used as an accessory valve on containers that have an independent pressure relief valve sufficient for that container's capacity.

The integral excess flow valve found in all these service valves helps prevent excessive product loss in the event of fuel line rupture. When installed for liquid withdrawal, the 9101H6 has provisions for attachment of a liquid withdrawal tube. All other valves must be installed in containers that have provisions for a separate liquid withdrawal.

To insure proper functioning and maximum protection from integral excess flow valves, these service valves should be fully opened and backseated when in use.



| Part Number | Container Connection | Service Connection | Liquid Withdrawal Connection | Closing Flow (LP Gas) | | |
|-------------|----------------------|--------------------------|------------------------------|----------------------------|-----------------------------|------------|
| | | | | Vapor 25 PSIG Inlet (SCFH) | Vapor 100 PSIG Inlet (SCFH) | Liquid GPM |
| 901C3 | 3/4" M. NGT | F. POL CGA 510 | None | 350*** | 605*** | 2.6*** |
| 901C5 | 3/4" M. NGT | F. POL CGA 510 | None | 550*** | 1050*** | 2.6*** |
| 9101H5* | 3/4" M. NGT | 3/8" SAE Flare | None | 765** | 1300** | 3.6** |
| 9101H6* | 3/4" M. NGT | 3/8" SAE Flare | 1/4" NPT | 550**** | 1050**** | 2.6**** |
| 9101Y5H* | 3/4" M. NGT | 60° Angle 3/8" SAE Flare | None | 550** | 1050** | 3.6** |

* Heavy-duty models

** Based on 3/8" O.D. pigtail, 20" long or less, connected to valve outlet. For greater lengths, the pigtail must have a larger O.D.

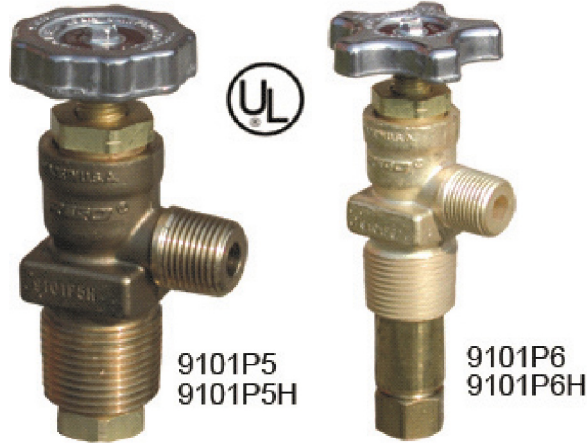
*** Same as (**). In addition, 1/4" O.D. pigtails or POL connections for 1/4" O.D. should not be used with this valve.

**** Based on 3/8" O.D. pigtail; 20" long or less, connected to valve outlet. Also based on 1/4" pipe size dip tube, 42" long or less, attached to special inlet connection. For longer pigtail lengths, the diameter of the pigtail must be increased.

NOTE: These valves incorporate an excess flow valve. Refer to L-500/Section F, for complete information regarding selection, operation and testing of excess flow valves.

REGO CYLINDER & SERVICE VALVES

Service Valves for DOT Fork Lift Containers



*Designed specifically for vapor or liquid withdrawal service on DOT fork lift containers. Valves with 1.5 GPM closing flow are for use in small and medium size lift truck applications, while those with 2.6 GPM closing flow are for large lift trucks and gantry crane type vehicles. Since none of these valves have an integral pressure relief valve, they may only be used as an accessory valve on containers that have an independent pressure relief valve sufficient for that cylinders capacity.

The integral excess flow valve found in all these service valves helps prevent excessive product loss in the event of fuel line rupture.

When installed for liquid withdrawal, the 9101P6 Series has provisions for attachment of a liquid withdrawal tube. The 9101P5 Series must be installed in containers that have provisions for a separate liquid withdrawal.

To insure proper functioning and maximum protection from integral excess flow valves, these service valves should be fully opened and backseated when in use.

| Part Number | Container Connection | Service Connection | Liquid Withdrawal Connection | Closing Flow (LP-Gas) | | | Approximate Filling Rate Liquid Flow, GPM Pressure Drop Across Valve | | | | Accessories ACME Check Connectors | | |
|-------------|----------------------|--------------------|------------------------------|----------------------------|-----------------------------|--------------|--|---------|---------|----------|-----------------------------------|--------|--------------------|
| | | | | Vapor 25 PSIG Inlet (SCFH) | Vapor 100 PSIG Inlet (SCFH) | Liquid (GPM) | 10 PSIG | 25 PSIG | 50 PSIG | 100 PSIG | Male | Female | Cap |
| 9101P5 | 3/4" M. NGT | 3/8" M. NPT | None | 430 | 900 | 1.5 | 5.0 | 7.6 | 10.7 | 14.9 | 7141M | 7141F | 7141M-40 or 7141FP |
| 9101P5H | 3/4" M. NGT | 3/8" M. NPT | None | 550 | 1050 | 2.6 | 5.0 | 7.6 | 10.7 | 14.9 | 7141M | 7141F | 7141M-40 or 7141FP |
| 9101P6 | 3/4" M. NGT | 3/8" M. NPT | 1/4" NPT | 430 | 900 | 1.5 | 4.5 | 7.2 | 10.3 | 14.8 | 7141M | 7141F | 7141M-40 or 7141FP |
| 9101P6H | 3/4" M. NGT | 3/8" M. NPT | 1/4" NPT | 550 | 1050 | 2.6 | 4.5 | 7.2 | 10.3 | 14.8 | 7141M | 7141F | 7141M-40 or 7141FP |

Note: These valves incorporate an excess flow valve. Refer to L-500/Section F, for complete information regarding selection, operation and testing of excess flow valves

REGO CYLINDER & SERVICE VALVES

REGO MULTIVALVE ASSEMBLIES

ASME Multivalves® for Vapor Withdrawal

These Multivalves® are designed for use in single opening ASME containers equipped with a 2 1/2" M. NPT riser. They can be used with underground ASME containers up to 639 sq. ft. surface area, and above ground ASME containers up to 192 sq. ft. surface area. A separate opening is required for liquid withdrawal. The MultiBonnet® is standard on this valve. The MultiBonnet® allows quick and easy repair of bonnet.

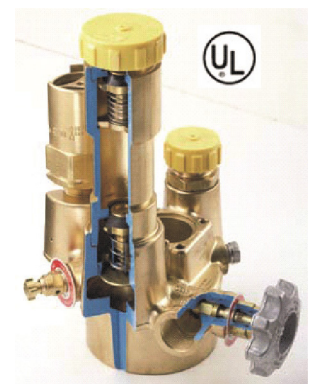


| Part Number | Approximate Filling Rate Liquid Flow, GPM Pressure Drop Across Valve | | | | Presto Tap Equipped |
|-----------------|--|---------|---------|----------|---------------------|
| | 10 PSIG | 25 PSIG | 50 PSIG | 100 PSIG | |
| G8475RL | 42 | 72 | 98 | 125 | No |
| G8475RLW | 42 | 72 | 98 | 125 | No |
| PG8475RV | 42 | 72 | 98 | 125 | Yes |
| PG8475RW | 42 | 72 | 98 | 125 | Yes |

| Part Number | Container Connection | Service Connection | Filling Connection | Vapor Equalizing Connection | | | | Fixed Liquid Level Vent Valve Style | Dip Tube Leng | Setting | Pressure Relief Valve | | For use in onatiners w/ surface are up to: |
|-----------------|----------------------|--------------------|--------------------|-----------------------------|----------------------------|--------------------|--------------------|-------------------------------------|---------------|----------------|-----------------------|----------------|--|
| | | | | Listed Closing Flow | Float Guage Flange Opening | Flow Capacity UL | Flow Capacity ASME | | | | | | |
| G8475RL | 2 1/2" F. NPT | F. POL (CGA 510) | 1 3/4" M. ACME | 1 1/4" M. ACME | 4200 CFH @ 100 PSIG | Fits "JUNIOR" size | Knurled | 30" | 250 PSIG | M3131G | 2020 SCFM, air | 1939 SCFM, air | 83 sq. ft. above ground 276 sq. ft. under ground |
| G8475RLW | | | | | | | | | | MV3132G | 3995 SCFM, air | n/a | 192 sq. ft. above ground 639 sq. ft. under ground |
| PG8475RV | | | | | | | | | | M3131G | 2020 SCFM, air | 1939 SCFM, air | 83 sq. ft. above ground 276 sq. ft. under ground |
| PG8475RW | | | | | | | | | | MV3132G | 3995 SCFM, air | n/a | 192 sq. ft. above ground 639 sq. ft. under ground |

8475-50L Extended Fill Adapter for G8475R Series Underground Multivalves®

For use with RegO Products GR8475R and Obsolete 8477 Series Underground Multivalves®. This product is designed to extend the filler valve section upward, when it is necessary to allow for an extended filler connection for certain underground containers



| Part Number | Description |
|-----------------|---|
| 8475-50L | Extended Fill Adapter for G8475R Series Underground Multivalves |

REGO MULTIVALVE ASSEMBLIES

ASME Multivalves® for Vapor Withdrawal

Features:

- Combines low emission double back check filler valve, vapor equalizing valve, service valve, fixed liquid level and a plugged pressure gauge opening.
- Double back check filler valve is low emission, 2.13cc at disconnection no reduction in fill rates.
- Includes plugged, 1/4" F. NPT gauge boss.
- "Y" shape configuration allows for ease of operation with all valves and gauges easily accessible at all times.
- Large 21/16" hex wrenching boss on center column provides ease of installation in tank coupling.
- MultiBonnet® allows quick and easy repair of bonnet.



| Part Number | Approximate Filling Rate Liquid Flow, GPM Pressure Drop Across Valve | | | |
|-------------|--|---------|---------|----------|
| | 10 PSIG | 25 PSIG | 50 PSIG | 100 PSIG |
| 8593AL16.0 | 42 | 72 | 98 | 125 |

| Part Number | Container Connection | Service Connection | Filling Connection | Vapor Equalizing Connection | | Fixed Liquid Level Vent Valve Style | Dip Tube Length | For Use In Containers w/ Surface Area Up To: |
|-------------|----------------------|--------------------|--------------------|-----------------------------|------------------------|-------------------------------------|-----------------|--|
| | | | | Connection Size | UL Listed Closing Flow | | | |
| 8593AL16.0 | 1 1/2" M. NPT | F. POL CGA 510) | 1 3/4" M. ACME | 1 1/4" M. ACME | 4200 CFH at 100 PSIG | Knurled | 16" | ** |

* Dip tube not installed, may be cut by customer to desired length.

** Since these Multivalves® have no integral pressure relief valves, they can be used on any ASME container with an independent relief device sufficient for that tank's capacity

DOT Multivalve® for Liquid Withdrawal

These Multivalves® permit liquid withdrawal from DOT cylinders with up to 100 lbs. propane capacity. They eliminate unnecessary cylinder handling when servicing high volume loads and allow on-site filling into the vapor space without interrupting gas service.



| Part Number | Approximate Filling Rate Liquid Flow, GPM Pressure Drop Across Valve | | | |
|-------------|--|---------|---------|----------|
| | 10 PSIG | 25 PSIG | 50 PSIG | 100 PSIG |
| 8555DL11.6 | 8 | 23 | 34 | 42 |

| Part Number | Container Connection | Service Connection | Filling Connection | Fixed Liquid Level Vent Valve Style | Dip Tube Length w/ Deflector | Liquid Withdrawal Tube Length | Pressure Relief Valve Setting | For Use In Cylinders w/Propane Capacity Up To: | Liquid Closing Flow (LP-Gas)*** |
|-------------|----------------------|--------------------|--------------------|-------------------------------------|------------------------------|-------------------------------|-------------------------------|--|---------------------------------|
| 8555DL11.6 | 3/4" M. NGT | CGA 555* | 1 3/4" M. ACME | Knurled | 1,-6" | 44" | 375 PSIG | 100 lbs. ** | 1.7 GPM |

* Use adapter 12982 to connect to pipe threads.

** Per CGA Pamphlet S-1.1.

*** To ensure proper functioning and maximum protection from integral excess flow valves, the cylinder valve should be fully opened and backseated when in use.

REGO MULTIVALVE ASSEMBLIES

REGO MULTIVALVE ASSEMBLIES

DOT Multivalve® for Vapor Withdrawal

These Multivalves® permit vapor withdrawal from DOT cylinders with up to 200 lbs. propane capacity. They allow on-site cylinder filling without interrupting gas service. The MultiBonnet® option allows quick and easy repair of bonnet.



| Part Number | Approximate Filling Rate Liquid Flow, GPM Pressure Drop Across Valve | | | |
|---------------------|--|---------|---------|----------|
| | 10 PSIG | 25 PSIG | 50 PSIG | 100 PSIG |
| 8555D Series | 8 | 23 | 34 | 42 |
| 8555R Series | 8 | 23 | 34 | 42 |

| Part Number | Bonnet Style | Application | For Use In Containers with Size Up To: | Dip Tube Length w/ Deflector | Container Connection | Service Connection | Filling Connection | Fixed Liquid Level Vent Valve Style | Pressure Relief Valve | | |
|------------------|--------------|-----------------|--|------------------------------|----------------------|--------------------|--------------------|-------------------------------------|-----------------------|---------------------------|---------------------|
| | | | | | | | | | Setting | Flow Capacity* UL Listing | Flow Capacity* ASME |
| 6555R10.6 | MultiBonnet® | ASME Containers | 25 ft ² surface area or 60 gallons water capacity | 10.6" | 3/4" M. NGT | F. POL (CGA 510) | 1 3/4" M. ACME | Knurled | 250 PSIG | 793 SCFM, air | 700 SCFM, air |
| 6555R11.6 | MultiBonnet® | ASME Containers | 25 ft ² surface area or 60 gallons water capacity | 11.6" | 3/4" M. NGT | F. POL (CGA 510) | 1 3/4" M. ACME | Knurled | 250 PSIG | 793 SCFM, air | 700 SCFM, air |
| 6555R12.0 | MultiBonnet® | ASME Containers | 25 ft ² surface area or 60 gallons water capacity | 12.0" | 3/4" M. NGT | F. POL (CGA 510) | 1 3/4" M. ACME | Knurled | 250 PSIG | 793 SCFM, air | 700 SCFM, air |
| 8555D10.6 | Standard | DOT Cylinders | 200 lbs. Propane ** | 10.6" | 3/4" M. NGT | F. POL (CGA 510) | 1 3/4" M. ACME | Knurled | 375 PSIG | n/a | n/a |
| 8555R10.6 | MultiBonnet® | DOT Cylinders | 200 lbs. Propane ** | 10.6" | 3/4" M. NGT | F. POL (CGA 510) | 1 3/4" M. ACME | Knurled | 375 PSIG | n/a | n/a |
| 8555D11.6 | Standard | DOT Cylinders | 200 lbs. Propane ** | 11.6" | 3/4" M. NGT | F. POL (CGA 510) | 1 3/4" M. ACME | Knurled | 375 PSIG | n/a | n/a |
| 8555R11.6 | MultiBonnet® | DOT Cylinders | 200 lbs. Propane ** | 11.6" | 3/4" M. NGT | F. POL (CGA 510) | 1 3/4" M. ACME | Knurled | 375 PSIG | n/a | n/a |

* Per CGA Pamphlet S-1.1.

REGO MULTIVALVE ASSEMBLIES

REGO MULTIVALVE ASSEMBLIES

DOT and ASME Multivalve® for Vapor Withdrawal

These Multivalves® permit vapor withdrawal from ASME containers up to 50 sq. ft. surface area and DOT containers up to 420 lbs. propane capacity. They allow on-site cylinder filling without interrupting gas service. The MultiBonnet® option allows quick and easy repair of bonnet.



| Part Number | Approximate Filling Rate -- Liquid Flow, GPM Pressure Drop Across Valve | | | |
|---------------------|---|---------|---------|----------|
| | 10 PSIG | 25 PSIG | 50 PSIG | 100 PSIG |
| 6532A12.0/6532R12.0 | 11 | 16 | 23 | 28 |
| 6542A12.0/6542R12.0 | 23 | 32 | 46 | 57 |
| 6533A10.5/6533R10.5 | 11 | 16 | 23 | 28 |
| 6533A11.7/6533R11.7 | 11 | 16 | 23 | 28 |
| 6543A11.1/6543R11.1 | 23 | 32 | 46 | 57 |
| 6543A11.7/6543R11.7 | 23 | 32 | 46 | 57 |

| Part Number | Bonnet Style | Application | Container Connection | Service Connection | Filling Connection | Fixed Liquid Level Vent Valve Style | Dip Tube Length with Deflector | Pressure Relief Valve Setting | For Use In Cylinders w/Propane Capacity Up To:** | For Use In Containers w/Surface Area Up To:*** |
|-------------|--------------|-------------|----------------------|--------------------|--------------------|-------------------------------------|--------------------------------|-------------------------------|--|--|
| 6532A12.0 | Standard | ASME* | 3/4" M. NGT | F. POL (CGA 510) | 13/4" M. ACME | Knurled | 12.0" | 250 PSIG | - | 43 sq. ft. |
| 6532R12.0 | MultiBonnet® | ASME* | 3/4" M. NGT | F. POL (CGA 510) | 13/4" M. ACME | Knurled | 12.0" | 250 PSIG | - | 43 sq. ft. |
| 6542A12.0 | Standard | ASME* | 1" M. NGT | F. POL (CGA 510) | 13/4" M. ACME | Knurled | 12.0" | 250 PSIG | - | 53 sq. ft. |
| 6542R12.0 | MultiBonnet® | ASME* | 1" M. NGT | F. POL (CGA 510) | 13/4" M. ACME | Knurled | 12.0" | 250 PSIG | - | 53 sq. ft. |
| 6533A10.5 | Standard | DOT | 3/4" M. NGT | F. POL (CGA 510) | 13/4" M. ACME | Knurled | 10.5" | 375 PSIG | 420 lbs. Propane | - |
| 6533R10.5 | MultiBonnet® | DOT | 3/4" M. NGT | F. POL (CGA 510) | 13/4" M. ACME | Knurled | 10.5" | 375 PSIG | 420 lbs. Propane | - |
| 6533A11.7 | Standard | DOT | 3/4" M. NGT | F. POL (CGA 510) | 13/4" M. ACME | Knurled | 11.7" | 375 PSIG | 420 lbs. Propane | - |
| 6533R11.7 | MultiBonnet® | DOT | 3/4" M. NGT | F. POL (CGA 510) | 13/4" M. ACME | Knurled | 11.7" | 375 PSIG | 420 lbs. Propane | - |
| 6543A11.1 | Standard | DOT | 1" M. NGT | F. POL (CGA 510) | 13/4" M. ACME | Knurled | 11.1" | 375 PSIG | 420 lbs. Propane | - |
| 6543R11.1 | MultiBonnet® | DOT | 1" M. NGT | F. POL (CGA 510) | 13/4" M. ACME | Knurled | 11.1" | 375 PSIG | 420 lbs. Propane | - |
| 6543A11.7 | Standard | DOT | 1" M. NGT | F. POL (CGA 510) | 13/4" M. ACME | Knurled | 11.7" | 375 PSIG | 420 lbs. Propane | - |
| 6543R11.7 | MultiBonnet® | DOT | 1" M. NGT | F. POL (CGA 510) | 13/4" M. ACME | Knurled | 11.7" | 375 PSIG | 420 lbs. Propane | - |

* UL rated flow capacities are: 6532A12.0-1180 SCFM/air, 6542A12.0-1530 SCFM/air.

** Per CGA Pamphlet S-11.

*** From NFPA, Appendix D.

REGO MULTIVALVE ASSEMBLIES

REGO MULTIVALVE ASSEMBLIES

DOT & ASME Vapor Valves W/Presto-Tap

Application

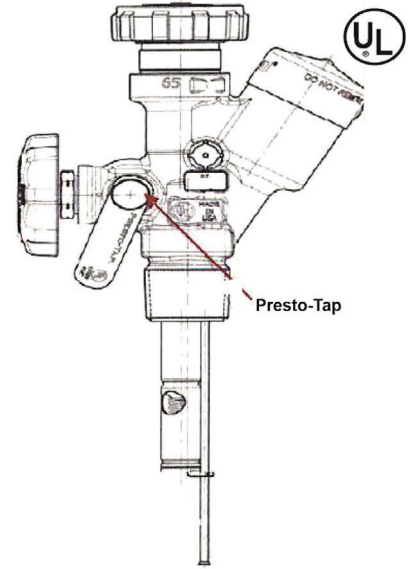
These Multivalves® permit vapor withdrawal from ASME containers up to 50 sq. ft. surface area and DOT containers up to 420 lbs. propane capacity. They allow on-site cylinder filling without interrupting gas service.

Features

- Incorporates high capacity filler valve with double back checks, service valve, fixed liquid level gauge, pressure relief valve and built-in baffle tube into one compact unit.
- Higher filling capacity is combined with back check protection by placing the secondary back check at the bottom of the baffle tube, creating a larger flow area through the body.
- Equipped with Presto-Tap adapter to allow for leak check of vapor piping system.

Materials

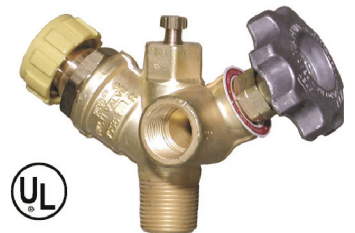
Body..... Forged Brass
 Handwheel..... Aluminum Die Cast
 Valve Stems..... Brass
 O-Rings..... Resilient Rubber
 Seat Disc (shut-off valve)..... Nylon
 Seat Disc (others)..... Resilient Rubber
 Relief Spring..... Stainless Steel
 Body (Presto-Tap)Brass
 Seat Disc (Presto-Tap)Resilient Rubber



| Part Number | Bonnet Style | Application | Container Connection | Service Connection | Filling Connection | Dip Tube Length with Deflector | Pressure Relief Valve Setting | Description |
|-------------|--------------|-------------|----------------------|--------------------|--------------------|--------------------------------|-------------------------------|--|
| PT6542A12.0 | Standard | ASME* | 1" M. NGT | F. POL (CGA 510) | 1-3/4" M. ACME | 12.0" | 250 PSIG | Multivalve 1"MNPT 250 ASME W/Presto TAP 12.0DT |
| PT6542R12.0 | MultiBonnet® | ASME* | 1" M. NGT | F. POL (CGA 510) | 1-3/4" M. ACME | 12.0" | 250 PSIG | Multivalve 1"MNPT 250 ASME W/Presto Tap 12.0DT MultiBonnet |
| PT6543A11.1 | Standard | DOT | 1" M. NGT | F. POL (CGA 510) | 1-3/4" M. ACME | 11.1" | 375 PSIG | Multivalve 1"MNPT 375 Dot W/Presto Tap 11.1DT |
| PT6543R11.1 | MultiBonnet® | DOT | 1" M. NGT | F. POL (CGA 510) | 1-3/4" M. ACME | 11.1" | 375 PSIG | Multivalve 1"MNPT 375 Dot W/Presto Tap 11.1DT MultiBonnet |
| PT6543A11.7 | Standard | DOT | 1" M. NGT | F. POL (CGA 510) | 1-3/4" M. ACME | 11.7" | 375 PSIG | Multivalve 1"MNPT 375 Dot W/Presto Tap 11.7DT |
| PT6543R11.7 | MultiBonnet® | DOT | 1" M. NGT | F. POL (CGA 510) | 1-3/4" M. ACME | 11.7" | 375 PSIG | Multivalve 1"MNPT 375 Dot W/Presto Tap 11.7DT MultiBonnet |

ASME Multivalves® for Vapor Withdrawal

These compact Multivalves® are especially suited for vapor withdrawal of ASME containers where compact groupings of components are necessary. Separate filler valves and pressure relief valves are required. MultiBonnet® allows quick and easy repair of bonnet.



| Part Number | Container Connection | Service Connection | Vapor Equalization | | Fixed Liquid Level Vent Valve Style | Dip Tube Length | For Use In Containers w/ Surface Area Up To: | Presto Tap Equipped |
|-------------|----------------------|--------------------|--------------------|---------------------|-------------------------------------|-----------------|--|---------------------|
| | | | Connection Size | Service Connection | | | | |
| 7556R12.0 | 3/4" M. NGT | F. POL (CGA 510) | 1 1/4" M. ACME | 4200 CFH @ 100 PSIG | Knurled | 12" | * | No |
| PT7556R12.0 | 3/4" M. NGT | F. POL (CGA 510) | 1 1/4" M. ACME | 4200 CFH @ 100 PSIG | Knurled | 12*** | * | Yes |

* Since these Multivalves® have no integral pressure relief valves, they can be used on any ASME container with an independent relief device sufficient for that tank's capacity.

REGO MULTIVALVE ASSEMBLIES

REGO PRESSURE RELIEF VALVES & RELIEF VALVE MANIFOLDS

Fully Internal “Pop-Action” Pressure Relief Valves for Transports and Delivery Trucks

Designed specifically for use as a primary relief valve in ASME transports and delivery trucks with 2” and 3” NPT couplings.



| Part Number | Start To Discharge Setting PSIG | Container Connection | Overall Height (Approx.) | Height Above Coupling (Approx.) | UL (At 120% of Set Pressure) | ASME (At 120% of Set Pressure) | Suitable for Tanks with Surface Area Up To:* | Protective Cap (Included) |
|-------------|---------------------------------|----------------------|--------------------------|---------------------------------|------------------------------|--------------------------------|--|---------------------------|
| A8434N | 265 | 2” M. NPT | 9 1/16” | 1/2” | 3700 | 3659 | 175 Sq. Ft. | A8434-11B |
| A8434G | 250 | 2” M. NPT | 9 1/16” | 1/2” | 3700 | 3456 | 175 Sq. Ft. | A8434-11B |
| A8436N | 265 | 3” M. NPT | 17 7/8” | 3/4” | 10210 | 9839 | 602 Sq. Ft. | A8436-11B |
| A8436G | 250 | 3” M. NPT | 17 7/8” | 3/4” | 10210 | 9598 | 602 Sq. Ft. | A8436-11B |

* Per NFPA Pamphlet #58, Appendix D. Area shown is for UL or ASME flow rating—whichever is larger.

REGO PRESSURE RELIEF VALVES & RELIEF VALVE MANIFOLDS

REGO PRESSURE RELIEF VALVES & RELIEF VALVE MANIFOLDS

Fully Internal "Pop-Action" Pressure Relief Valves for Motor Fuel Containers

8543 Series relief valves are designed for use as a primary relief valve in larger ASME motor fuel containers such as on buses, trucks and construction equipment.

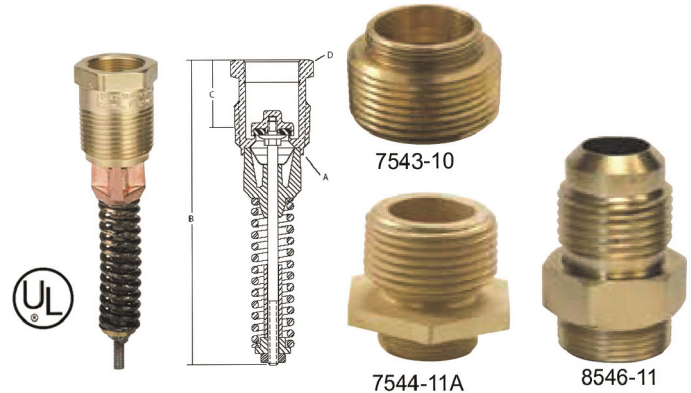
8544 Series relief valves are designed for use as a primary relief valve in smaller ASME and DOT motor fuel containers such as on tractors, lift trucks, cars and taxicabs.

Features

- Assure minimum product loss due to "pop-action" design.
- Recessed design minimizes possibility of damage and tampering.
- All are threaded to accept RegO® Pipeaway Adapters that permit the addition of a discharge hose or piping.
- ASME rated for use with LP-Gas (except 8544K which meets DOT requirements).
- Specify RegO® Relief Valves on all your original equipment motor fuel container purchases for reliable performance.

Materials

Body..... Brass
 Spring (8543)..... Stainless Steel
 Spring (8544)..... Coated Steel
 Seat Disc..... Resilient Rubber



| Part Number | Container Type | Start To Discharge Setting PSIG | Container Connection M. NPT | Overall Height (Approx.) | Height Above Coupling (Approx.) | Hex Wrenching Section | Flow Capacity SCFM/Air*** | | Protective Cap (Included) | Accessories Pipeaway Adapter |
|-------------|----------------|---------------------------------|-----------------------------|--------------------------|---------------------------------|-----------------------|------------------------------|------------------------------|---------------------------|------------------------------|
| | | | | | | | UL (At 120% of Set Pressure) | ASME At 120% of Set Pressure | | |
| 8544G | ASME | 250 | 1" | 5 7/16" | 7/8" | 1 5/16" | 1020 | 936 | 7544-41 | 7544-11A* |
| 8543G | ASME | 250 | 1 1/4" | 5 7/16" | 7/8" | 1 11/16" | 1465 | 1400 | 7543-40C | 7543-10** |
| 8544T | ASME | 312 | 1" | 5 7/16" | 7/8" | 1 5/16" | 1282 | 1158 | 7544-41 | 7544-11A |
| 8543T | ASME | 312 | 1 1/4" | 5 7/16" | 7/8" | 1 11/16" | 1990 | 1731 | 7543-40C | 7543-10** |
| 8544K | DOT/ASME | 375 | 1" | 5 7/16" | 7/8" | 1 5/16" | 1545*** | - | 7544-41 | 7544-11A |
| 8546G | ASME | 250 | 3/4" | 4 1/2" | 15/16" | 1 1/16" | 723 | 651 | 11565-26 | 8546-11 |
| 8546T | ASME | 312 | 3/4" | 4 1/2" | 15/16" | 1 1/16" | 880 | 792 | 11565-26 | 8546-11 |

* 1" M. NPT outlet connection.

** 1 1/4" M. NPT outlet connection.

*** Rating also applies to DOT requirements.

**** Flow rates shown are for bare relief valves. Adapters and pipeaway will reduce flow as discussed in forewording information.

REGO PRESSURE RELIEF VALVES & RELIEF VALVE MANIFOLDS

REGO PRESSURE RELIEF VALVES & RELIEF VALVE MANIFOLDS

Fully Internal "Pop-Action" Pressure Relief Valve for DOT Fork Lift Cylinders

General Information

Designed specifically for use as a primary relief valve on Forklift cylinders, the 8545AK reduces the possibility of improper functioning of the relief mechanism due to foreign material build up. All guides, springs, stem and adjusting components are located inside the cylinder – removed from the direct exposure of foreign materials and debris from the atmosphere.

NFPA Pamphlet #58 requires that:

"All containers used in industrial truck (including forklift truck cylinder) service shall have the container pressure relief valve replaced by a new or unused valve within 12 years of the date of manufacture of the container and each 10 years thereafter."



7545-12 90° Adapter



7545-14A 45° Adapter



| Part Number | Container Type | Start To Discharge Setting PSIG | Container Connection M. NPT | Flow Capacity SCFM/Air** (ECL® Rated at 480 PSIG) | Accessories (Order Separately) | | |
|-------------|----------------|---------------------------------|-----------------------------|---|--------------------------------|-------------------------|-------------------------|
| | | | | | Protective Cap | Deflectors*** 45° Elbow | Deflectors*** 90° Elbow |
| 8545AK | Dot | 375 | 3/4" | 400* | 7545-40 | 7545-14A | 7545-12 |

* Classified by U.L. in accordance with Compressed Gas Association Pamphlet S-1.1 Pressure Device Standards for Cylinders. Meets requirements for use on DOT containers with 262 pounds or less weight of water or 109 pounds or less of LP-Gas.

** Flow rates are shown for bare relief valves. Adapters and pipeways will reduce flow as discussed in forewording information.

*** Order protective cap #8545-41 or 7545-40.

Semi-Internal "Pop-Action" Pressure Relief Valves for ASME Containers

Designed for use as a primary relief valve on ASME containers such as 250, 500 and 1,000 gallon tanks. Underwriters' Laboratories lists containers systems on which these types of valves are mounted outside the hood without additional protection, if mounted near the hood and fitted with a protective cap.



| Part Number | Start To Discharge Setting PSIG | Container Connection M. NPT | Overall Height (Approx.) | Height Above Coupling (Approx.) | Wrench Hex Section | Flow Capacity SCFM/Air | | Suitable for Tanks with Surface Area Up To:* | Protective Cap (Included) |
|-------------|---------------------------------|-----------------------------|--------------------------|---------------------------------|--------------------|------------------------------|--------------------------------|--|---------------------------|
| | | | | | | UL (At 120% of Set Pressure) | ASME (At 120% of Set Pressure) | | |
| 7583G | 250 | 3/4" | 8 3/16" | 1 7/16" | 1 3/4" | 1980 | 1806 | 80 Sq. Ft. | 7583-40X |
| 8684G | 250 | 1" | 9 3/8" | 1 9/16" | 1 7/8" | 2620 | 2565 | 113 Sq. Ft. | 8684-40 |
| 8685G | 250 | 1 1/4" | 11 1/16" | 1 11/16" | 2 3/8" | 4385 | 4035 | 212 Sq. Ft. | 7585-40X |

* Per NFPA Pamphlet #58, Appendix D. Area shown is for UL or ASME flow rating—whichever is larger.

REGO PRESSURE RELIEF VALVES & RELIEF VALVE MANIFOLDS

REGO PRESSURE RELIEF VALVES & RELIEF VALVE MANIFOLDS

Semi-Internal “Pop-Action” Pressure Relief Valves for Large Storage Containers

Designed especially for use as a primary relief valve on large stationary storage containers, these low profile relief valves are generally mounted in half couplings. However, they are designed so that the inlet ports clear the bottom of a full 2” coupling. This assures that the relief valve should always be capable of maximum flow under emergency conditions.



| Part Number | Start To Discharge Setting PSIG | Container Connection M. NPT | Flow Capacity SCFM/Air* | | Suitable for Tanks w/ Surface Area Up To:** | Accessories | |
|-------------|---------------------------------|-----------------------------|------------------------------|--------------------------------|---|----------------|------------------|
| | | | UL (At 120% of Set Pressure) | ASME (At 120% of Set Pressure) | | Protective Cap | Pipeaway Adapter |
| 7534B | 125 | 2" | 6,025 | - | 319 Sq. Ft. | 7534-40 | 7534-20*** |
| 7534G | 250 | 2" | 11,675 | 10,422 | 708 Sq. Ft. | 7534-40 | 7534-20*** |

* Flow rates shown are for bare relief valves. Adapters and pipeaways will reduce flow as discussed in the forewording information.
 ** Per NFPA Pamphlet #58, Appendix D. Area shown is for UL or ASME—whichever is larger.
 *** 3” F. NPT outlet connection.

External “Pop-Action” Pressure Relief Valves for ASME Containers and Bulk Plant Installations

Designed for use as a primary relief valve on ASME above ground and underground containers, bulk plant installations and skid tanks. The 3131 Series may also be used as a primary or secondary relief valve on DOT cylinders, or as a hydrostatic relief valve. All working components of these relief valves are outside the container connection, so the valves must be protected from physical damage.



| Part Number | Start To Discharge Setting PSIG | Container Connection M. NPT | Overall Height (Approx.) | Wrench Hex Section | Flow Capacity SCFM/Air (a) | | Suitable for Tanks w/ Surface Area Up To: (e) | Accessories | | | |
|-------------|---------------------------------|-----------------------------|--------------------------|--------------------|------------------------------|--------------------------------|---|----------------|-------------|---------------|---------------------|
| | | | | | UL (At 120% of Set Pressure) | ASME (At 120% of Set Pressure) | | Protective Cap | Part Number | Outlet Size | Weep Hole Deflector |
| AA3126L030 | 30 | 1/2" | 2 3/8" | 7/8" | (b) | - | - | 7545-40 | AA3126-10 | 1/2" M. NPT | - |
| A3149L050 | 50 | 2 1/2" | 10 1/2" | 4 1/8" | 2600(c) | - | 113 Sq. Ft. | 3149-40 | (h) | (h) | Included (j) |
| A3149L200 | 200 | 2 1/2" | 10 1/2" | 4 1/8" | 8770 (c) | - | 500 Sq. Ft. | 3149-40 | (h) | (h) | Included (j) |
| AA3126L250 | 250 | 1/2" | 2 3/8" | 7/8" | 277 (c) | - | 23 Sq. Ft. (f) | 7545-40 | AA3126-10 | 1/2" M. NPT | - |
| 3131G | 250 | 3/4" | 3 7/16" | 1 3/4" | 2060 | 1939 | 85 Sq. Ft. | 3131-40 (g) | - | - | - |
| AA3130UA250 | 250 | 3/4" | 3 7/16" | 1 3/4" | 2045 | 1838 | 249 Sq. Ft. (f) | AA3130-40P | AA3131-10 | 1" F. NPT | - |
| W3132G | 250 | 1" | 6 1/32" | 2 3/8" | 3340 | - | 154 Sq. Ft. | 3132-54 (g) | 3132-10 | 1 1/4" F. NPT | 3133-1 |
| 3132G | 250 | 1 1/4" | 6 1/32" | 2 3/8" | 4130 | - | 200 Sq. Ft. | 3132-54 (g) | - | - | 3133-1 |
| T3132G | 250 | 1 1/4" | 6 1/32" | 2 3/8" | 3790 | - | 180 Sq. Ft. | 3132-54 (g) | 3132-10 | 1 1/4" F. NPT | 3133-1 |
| MV3132G | 250 | 1 1/4" | 6 1/32" | 2 3/8" | 3995 | - | 190 Sq. Ft. | 3132-54 (g) | - | - | 3133-1 |
| 3135G | 250 | 1 1/4" | 5 21/32" | 2 11/16" | 5770 | - | 300 Sq. Ft. | 3135-54 (g) | 3135-10 | 2" F. NPT | 3133-1 |
| AA3135UA250 | 250 | 1 1/4" | 6 13/32" | 2 11/16" | 6430 | 5080 (d) | 1010 Sq. Ft. (f) | AA3135-40PR | AA3135-10 | 2" F. NPT | 3133-1 |
| 3133G | 250 | 1 1/2" | 5 15/16" | 3 1/8" | 6080 | - | 320 Sq. Ft. | 3133-40 (g) | 3133-10 | 2" F. NPT | 3133-1 |
| A3149G | 250 | 2 1/2" | 10 1/2" | 4 1/8" | 10390 | 9153 | 613 Sq. Ft. | 3149-40 | (h) | (h) | Included (j) |
| AA3130UA265 | 265 | 3/4" | 3 7/16" | 1 3/4" | 2125 | 1912 | 261 Sq. Ft. (f) | AA3130-40P | AA3131-10 | 1" F. NPT | - |
| AA3135UA265 | 265 | 1 1/4" | 6 13/32" | 2 11/16" | 6615 | 5370 (d) | 1045 Sq. Ft. (f) | AA3135-40PR | AA3135-10 | 2" F. NPT | 3133-11 |
| AA3126L312 | 312 | 1/2" | 2 3/8" | 7/8" | 330 (c) | - | 27 Sq. Ft. (f) | 7545-40 | AA3126-10 | 1/2" M. NPT | - |

a) Flow rates shown are for bare relief valves. Adapters and pipeaways will reduce flow as discussed in forewording information.
 b) Not UL or ASME rated. .059 square inch effective area.
 c) Not UL or ASME rated. ECI® rated at 120% of set pressure.
 d) Rated at 110% of set pressure.
 e) Per NFPA Pamphlet #58, Appendix D. Area shown is for UL or ASME flow rating—whichever is larger.

f) Per ANSI K61.1-1972, Appendix A.
 g) Cap supplied with chain.
 h) Outlet 3 1/2-8N (F) thread, will accept 3” M. NPT pipe thread.
 i) Weep hole deflector is Part No. A3134-11B.

REGO PRESSURE RELIEF VALVES & RELIEF VALVE MANIFOLDS

External “Pop-Action” Supplementary Pressure Relief Valves for Small ASME Containers and DOT Cylinders

Designed for use as a supplementary relief valve on small ASME above ground and underground containers. They may also be used as a primary or secondary relief device on DOT cylinders, or as hydrostatic relief valves.

All working components of these relief valves are outside the container connection, so the valves must be protected from physical damage.



| Part Number | Container Type | Start To Discharge Setting PSIG | Container Connection M. NPT | Overall Height (Approx.) | Wrench Hex Section | Flow Capacity SCFM/Air | | Suitable for Tanks w/Surface Area Up To:* | Accessories | | |
|-------------|----------------|---------------------------------|-----------------------------|--------------------------|--------------------|------------------------------|-----------------------------|---|----------------|------------------------------|------------------------------|
| | | | | | | UL (At 120% of Set Pressure) | ECII® (Rated at 480 PSIG**) | | Protective Cap | Pipeaway Adapter Part Number | Pipeaway Adapter Outlet Size |
| 3127G | ASME | 250 | 1/4" | 1 31/32" | 7/8" | 295 | - | - | 7545-40 | - | - |
| 3129G | ASME | 250 | 1/2" | 2 19/32" | 1 1/8" | 465 | - | - | 7545-40 | 3129-10 | 1/2" F. NPT |
| 3127K | DOT | 375 | 1/4" | 1 31/32" | 7/8" | - | 450 | 100 lbs./Propane | 7545-40 | - | - |
| 3129K | DOT | 375 | 1/2" | 2 19/32" | 1 1/8" | - | 780 | 200 lbs./Propane | 7545-40 | 3129-10 | 1/2" F. NPT |

* Flow rates shown are for bare relief valves. Adapters and pipeaways will reduce flow as discussed in forewording information.

** Not UL or ASME rated. ECII® rated at 480 PSIG.

*** Meets DOT requirements.

REGO PRESSURE RELIEF VALVES & RELIEF VALVE MANIFOLDS

REGO PRESSURE RELIEF VALVES & RELIEF VALVE MANIFOLDS

External Hydrostatic Relief Valves

Designed especially for the protection of piping and shut-off valves where there is a possibility of trapping liquid LP-Gas or anhydrous ammonia. They may be installed in pipelines and hoses located between shut-off valves or in the side boss of RegO® shut-off valves..



3127G



SS8022G

| Part Number | Start To Discharge Setting PSIG | Valve Body Material | Container Connection M. NPT | Height (Approx.) | Wrench Hex Section | Accessories | |
|-------------|---------------------------------|---------------------|-----------------------------|------------------|--------------------|----------------|-----------------------------|
| | | | | | | Protective Cap | Pipeaway Adapter or Threads |
| SS8001G | | | | | | - | - |
| SS8002G | 250 | Stainless Steel | 1/2" | 7/8" | 7/8" | - | - |
| SS8021G | 250 | Stainless Steel | 1/4" | 1 3/8" | 11/16" | - | 1/4" NPSM Thrds |
| SS8022G | 250 | Stainless Steel | 1/2" | 1 3/8" | 7/8" | - | 3/8" NPT Thrds |
| 3127G | 250 | Brass | 1/4" | 1 31/32" | 7/8" | 7545-40 | - |
| 3129G | 250 | Brass | 1/2" | 2 19/32" | 1 1/8" | 7545-40 | 3129-10* |
| 3127H | 275 | Brass | 1/4" | 1 31/32" | 7/8" | 7545-40 | - |
| 3129H | 275 | Brass | 1/2" | 2 19/32" | 1 1/8" | 7545-40 | 3129-10* |
| 3127P | 300 | Brass | 1/4" | 1 31/32" | 1 1/8" | 7545-40 | - |
| 3129P | 300 | Brass | 1/2" | 2 19/32" | 1 1/8" | 7545-40 | 3129-10* |
| 3127J | 350 | Brass | 1/4" | 1 31/32" | 7/8" | 7545-40 | - |
| 3129J | 350 | Brass | 1/2" | 2 19/32" | 1 1/8" | 7545-40 | 3129-10* |
| SS8001J | 350 | Stainless Steel | 1/4" | 7/8" | 11/16" | - | - |
| SS8002J | 350 | Stainless Steel | 1/2" | 7/8" | 7/8" | - | - |
| SS8021J | 350 | Stainless Steel | 1/4" | 1 3/8" | 11/16" | - | 1/4" NPSM Thrds |
| SS8022J | 350 | Stainless Steel | 1/2" | 1 3/8" | 7/8" | - | 3/8" NPT Thrds |
| 3127K | 375 | Brass | 1/4" | 1 31/32" | 7/8" | 7545-40 | - |
| 3129K | 375 | Brass | 1/2" | 2 19/32" | 1 1/8" | 7545-40 | 3129-10* |
| 3125L | 400 | Brass | 1/4" | 1 9/16" | 5/8" | Included | - |
| 3127L | 400 | Brass | 1/4" | 1 31/32" | 7/8" | 7545-40 | - |
| 3129L | 400 | Brass | 1/2" | 2 19/32" | 1 1/8" | 3129-40P | 3129-10* |
| SS8001L | 400 | Stainless Steel | 1/4" | 7/8" | 11/16" | - | - |
| SS8002L | 400 | Stainless Steel | 1/2" | 7/8" | 7/8" | - | - |
| SS8021L | 400 | Stainless Steel | 1/4" | 1 3/8" | 11/16" | - | 1/4" NPSM Thrds |
| SS8022L | 400 | Stainless Steel | 1/2" | 1 3/8" | 7/8" | - | 3/8" NPT Thrds |
| 3127U | 450 | Brass | 1/4" | 1 31/32" | 7/8" | 7545-40 | - |
| 3129U | 450 | Brass | 1/2" | 2 19/32" | 1 1/8" | 7545-40 | 3129-10* |
| SS8001U | 450 | Stainless Steel | 1/4" | 7/8" | 11/16" | - | - |
| SS8002U | 450 | Stainless Steel | 1/2" | 7/8" | 7/8" | - | - |
| SS8021U | 450 | Stainless Steel | 1/4" | 1" | 11/16" | - | 1/4" NPSM Thrds |
| SS8022U | 450 | Stainless Steel | 1/2" | 1" | 7/8" | - | 3/8" NPT Thrds |

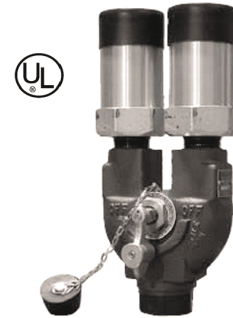
* 1/2" F. NPT outlet connection.

REGO PRESSURE RELIEF VALVES & RELIEF VALVE MANIFOLDS

REGO PRESSURE RELIEF VALVES & RELIEF VALVE MANIFOLDS

DuoPort® Pressure Relief Valve Manifolds for Small Storage Containers

Designed especially for use as a primary relief device on smaller stationary storage containers, with 2" NPT threaded couplings. These manifolds allow servicing or replacement of either of the two relief valves without evacuating the container or loss of service. The operating lever selectively closes off the entrance port to the relief valve being removed while the remaining valve provides protection for the container and its contents. The rating of each manifold is based on actual flow through the manifold and a single pressure relief valve, taking friction loss into account. It is not merely the rating of the relief valve alone.



Different settings available

| Part Number | Start To Discharge Setting PSIG | Application | | Container Conn ection M. NPT | Quantity | Relief Valve Included | | | Flow Capacity SCFM/ Air** (at 120% of set pressure) | |
|-------------|---------------------------------|-------------|-----------------|------------------------------|----------|-----------------------|-------------------------|-----------------------------|---|-------------|
| | | LP-Gas | NH ₃ | | | Part Number | Inlet Connection M. NPT | Accessory Pipeaway Adaptors | UL Rating | ASME Rating |
| 8542G | 250 | Yes | No | 2" | 2 | 3135MG | 1 1/4" | 3135-10* | 5250 (1) | NA |
| AA8542UA250 | 250 | No | Yes | 2" | 2 | AA3135MUA250 | 1 1/4" | AA3135-10* | 5865 (1) | 6514 (1) |
| AA8542UA265 | 265 | No | Yes | 2" | 2 | AA3135MUA265 | 1 1/4" | AA3135-10* | 5975 (1) | 6886 (1) |

* 2" F. NPT outlet connection.

** Flow rating based on number of relief valves indicated in parenthesis (). Flow rates shown are for bare relief valves. Adapters and pipeaways will reduce flow rates as discussed in forewording information

Delta Port Relief Valve Manifold

Designed especially for use as a primary relief device on large stationary pressurized storage containers the base is supplied with a two inch NPT threaded container connection. These manifolds incorporate an additional relief valve, not included in the flow rating, allowing for servicing or replacement of any one of the relief valves without evacuating the container. The handwheel on the manifold selectively closes off the entrance port to the relief valve being removed while the remaining relief valves provide protection for the container and its contents. All manifold flow ratings are based on flow through the relief valves after one has been removed for service or replacement



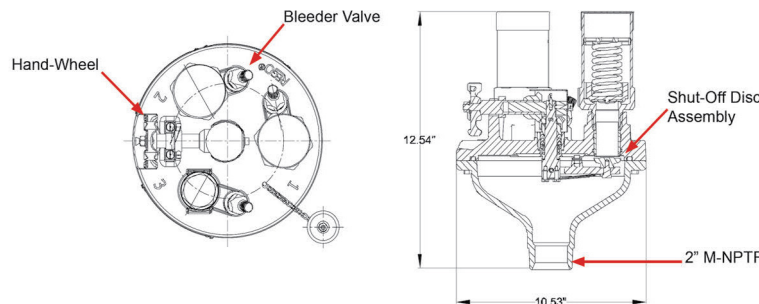
Relief Valve Materials

- Body (3135)Brass
- Spring Gide (3135)Brass
- Body (AA3135)..... Aluminum
- Spring Guide (AA3135) Aluminum
- Spring (3135 & AA3135) Stainless Steel
- Seat Disc (3135 & AA3135)Resilient Synthetic Rubber

| Part Number | Start To Discharge Setting PSIG | Application | | Container Conn ection M. NPT | Quantity | Relief Valve Included | | | ASME Flow Rating SCFM (air) @ 120% of Set Pressure* |
|-------------|---------------------------------|-------------|-----------------|------------------------------|----------|-----------------------|-------------------------|-----------------------------|---|
| | | LP-Gas | NH ₃ | | | Part Number | Inlet Connection M. NPT | Accessory Pipeaway Adaptors | |
| 8533AG | 250 | Yes | No | 2" | 3 | 3135MG | 1 1/4" | 3135-10 | 11,098 (2) |

* 2" F. NPT outlet connection

Flow rating based on number of relief valves indicated in parenthesis (). Flow rates shown are for bare relief valves. Adapters and pipe-aways will reduce flow rates as discussed in forwarding information in L-500 catalog.



REGO PRESSURE RELIEF VALVES & RELIEF VALVE MANIFOLDS

REGO PRESSURE RELIEF VALVES & RELIEF VALVE MANIFOLDS

Multiport™ Pressure Relief Valve Manifold Assemblies for Large Storage Containers

Designed especially for use as a primary relief device on large stationary pressurized storage containers with flanged openings. These manifolds incorporate an additional relief valve, not included in the flow rating, allowing for servicing or replacement of any one of the relief valves without evacuating the container. The handwheel on the manifold selectively closes off the entrance port to the relief valve being removed while the remaining relief valves provide protection for the container and its contents. All manifold flow ratings are based on flow through the relief valves after one has been removed for service or replacement.



A8560
A8570



| Part Number | Consists of | For Use With: | For Connection To: | Number Required |
|-------------|---------------------|----------------------|--|-----------------|
| 7560-55 | 1-Bolt Stud and Nut | All RegO Multiports™ | Modified 3" - 300# and 4"-ASA 300# Welding Neck Flange | 8 |
| 7560-56 | 1-Bolt Stud and Nut | All RegO Multiports™ | Manhold Cover Plate | 8 |

| Part Number | Start To Discharge Setting PSIG | Application | | | Container Conn ection M. NPT | Relief Valve Included | | | Flow Capacity SCFM/Air** At 120% of Set Pressure | |
|-------------|---------------------------------|-------------|-----------------|----------|------------------------------|-----------------------|-------------------------|-------------------------------|--|----------------|
| | | LP-Gas | NH ₃ | Quantity | | Part Number | Inlet Connection M. NPT | Accessories Pipeaway Adapters | UL Rating | ASME Rating |
| A8563G | 250 | Yes | Yes | 3"-300#* | 3 | A3149MG | 2 1/2" | **** | 18,500 (2) | Not Applicable |
| A8564G | 250 | Yes | Yes | 3"-300#* | 4 | A3149MG | 2 1/2" | **** | 27,750 (3) | Not Applicable |
| A8573G | 250 | Yes | Yes | 4"-300# | 3 | A3149MG | 2 1/2" | **** | 18,500 (2) | Not Applicable |
| A8574G | 250 | Yes | Yes | 4"-300# | 4 | A3149MG | 2 1/2" | **** | 27,750 (3) | Not Applicable |
| A8563AG | 250 | Yes | Yes | 3"-300#* | 3 | A3149G | 2 1/2" | **** | Not Applicable | 18,300 (2) |
| A8564AG | 250 | Yes | Yes | 3"-300#* | 4 | A3149G | 2 1/2" | **** | Not Applicable | 27,400 (3) |
| A8573AG | 250 | Yes | Yes | 4"-300# | 3 | A3149G | 2 1/2" | **** | Not Applicable | 18,300 (2) |
| A8574AG | 250 | Yes | Yes | 4"-300# | 4 | A3149G | 2 1/2" | **** | Not Applicable | 27,400 (3) |

* For use with modified 300# ANSI flange with 4" port.

**** Outlet 3 1/2-8N (F) thread, will accept 3" M. NPT pipe thread.

** Flow rating based on number of relief valves indicated in parenthesis (). Flow rates shown are for bare relief valves. Adapters and pipeaways will reduce flow rates as discussed in forewording information.

*** 2" F. NPT outlet connection.

REGO PRESSURE RELIEF VALVES & RELIEF VALVE MANIFOLDS

REGO GLOBE & ANGLE VALVES

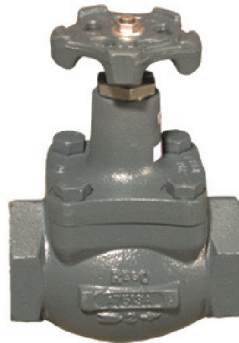
“V”-Ring Seal Globe and Angle Valves for Bulk Storage Containers, Transports, Bobtails and Plant Piping



TA7034



A7505AP



A7513AP



A7517FP



A7514AP



A7517AP



A7518FP



Specifically designed to assure positive shut-off and long, maintenance-free service life in liquid or vapor service on bulk storage containers, transports, bobtails, cylinder filling plants and plant piping. The high quality construction and wide variety of sizes make them highly suited for use with LP-Gas, anhydrous ammonia and in the chemical and petrochemical industries.

Buna N Seat Discs

Globe

| Part Number | Inlet and Outlet Connection | Port Diameter | Flow at 1 PSIG Pressure Drop (Cv) (GPM/ Propane)*** | Accessories | |
|-------------|-----------------------------|---------------|--|--------------------------|------------|
| | | | | Hydrostatic Relief Valve | Vent Valve |
| A7505AP | 3/4" F. NPT | 3/4" | 12.0 | SS8001U | TSS3169 |
| A7507AP | 1" F. NPT | 1" | 17.8 | SS8001U | TSS3169 |
| A7509BP | 1 1/4" F. NPT | 1 1/4" | 36.5 | SS8001U | TSS3169 |
| A7511AP | 1 1/2" F. NPT | 1 1/2" | 43.0 | SS8001U | TSS3169 |
| A7511FP | 1 1/2" Flange** | 1 1/2" | 46.0 | SS8001U | TSS3169 |
| A7513AP | 2" F. NPT | 2" | 75.0 | SS8001U | TSS3169 |
| A7513FP | 2" Flange** | 2" | 78.0 | SS8001U | TSS3169 |
| A7517AP | 3" F. NPT | 3 1/8" | 197.0 | SS8001U | TSS3169 |
| A7517FP | 3" Flange** | 3 1/8" | 197.0 | SS8001U | TSS3169 |

REGO GLOBE & ANGLE VALVES

REGO GLOBE & ANGLE VALVES

“V”-Ring Seal Globe and Angle Valves for Bulk Storage Containers, Transports, Bobtails and Plant Piping

Buna N Seat Discs

Angle

| Part Number | Inlet and Outlet Connection | Port Diameter | Flow at 1 PSIG Pressure Drop (Cv) (GPM/ Propane)*** | Accessories | |
|-------------|-----------------------------|---------------|---|--------------------------|------------|
| | | | | Hydrostatic Relief Valve | Vent Valve |
| A7506AP | 3/4" F. NPT | 3/4" | 17.7 | SS8001U | TSS3169 |
| A7508AP | 1" F. NPT | 1" | 22.0 | SS8001U | TSS3169 |
| A7510BP | 1 1/4" F. NPT | 1 1/4" | 54.0 | SS8001U | TSS3169 |
| A7512AP | 1 1/2" F. NPT | 1 1/2" | 55.5 | SS8001U | TSS3169 |
| A7514AP | 2" F. NPT | 2" | 88.5 | SS8001U | TSS3169 |
| A7514FP | 2" Flange** | 2" | 133.0 | SS8001U | TSS3169 |
| A7518AP | 3" F. NPT | 3 1/8" | 303.0 | SS8001U | TSS3169 |
| A7518FP | 3" Flange** | 3 1/8" | 303.0 | SS8001U | TSS3169 |

Teflon Seat Discs*

Globe

| Part Number | Inlet and Outlet Connection | Port Diameter | Flow at 1 PSIG Pressure Drop (Cv) (GPM/ Propane)*** | Accessories | |
|-------------|-----------------------------|---------------|---|--------------------------|------------|
| | | | | Hydrostatic Relief Valve | Vent Valve |
| TA7034P | 1/2" F. NPT | 3/4" | 10.0 | SS8001U | TSS3169 |
| TA7505AP | 3/4" F. NPT | 3/4" | 12.0 | SS8001U | TSS3169 |
| TA7507AP | 1" F. NPT | 1" | 17.8 | SS8001U | TSS3169 |
| TA7509BP | 1 1/4" F. NPT | 1 1/4" | 36.5 | SS8001U | TSS3169 |
| TA7511AP | 1 1/2" F. NPT | 1 1/2" | 43.0 | SS8001U | TSS3169 |
| TA7513AP | 2" F. NPT | 2" | 75.0 | SS8001U | TSS3169 |
| TA7513FP | 2" Flange** | 2" | 78.0 | SS8001U | TSS3169 |
| TA7517AP | 3" F. NPT | 3 1/8" | 197.0 | SS8001U | TSS3169 |
| TA7517FP | 3" Flange** | 3 1/8" | 197.0 | SS8001U | TSS3169 |

Angle

| Part Number | Inlet and Outlet Connection | Port Diameter | Flow at 1 PSIG Pressure Drop (Cv) (GPM/ Propane)*** | Accessories | |
|-------------|-----------------------------|---------------|---|--------------------------|------------|
| | | | | Hydrostatic Relief Valve | Vent Valve |
| TA7034LP | 1/2" F. NPT | 3/4" | 14.8 | SS8001U | TSS3169 |
| TA7506AP | 3/4" F. NPT | 3/4" | 17.7 | SS8001U | TSS3169 |
| TA7510BP | 1 1/4" F. NPT | 1 1/4" | 54.0 | SS8001U | TSS3169 |
| TA7512AP | 1 1/2" F. NPT | 1 1/2" | 55.5 | SS8001U | TSS3169 |
| TA7614FP | 2" Flange** | 2" | 133.0 | SS8001U | TSS3169 |
| TA7518AP | 3" F. NPT | 3 1/8" | 303.0 | SS8001U | TSS3169 |

* Teflon seat discs on valves built to order.

** 300# ANSI R.F. Flange.

*** To obtain approximate flow at other than 1 PSIG pressure drop, multiply flow in chart by square root of pressure drop.
Example: 7514FP @ 9 PSIG = 133 x 9 = 399 GPM/propane. For NH₃ flow, multiple propane flow by .90.

REGO GLOBE & ANGLE VALVES

REGO GLOBE & ANGLE VALVES

High Capacity Liquid Withdrawal Valve for NH₃

Application

The A8012 Series is designed especially for use as a high capacity liquid withdrawal valve on Anhydrous Ammonia nurse tanks or risers.

This valve incorporates an integral excess flow valve; when the valve is in operation the handwheel must be completely open and back-seated to allow the excess flow valve to function properly as explained in the excess flow section of our L-500 and L-102 catalogs.

Features

- Excess flow valve designed for high flow and low pressure drop.
- Excess flow seat fully contained in the container coupling for maximum protection in the event of external damage to the valve.
- Resilient disc assembly with swivel seat is fully contained for bubble-tight shut-off and long service life.
- "V"-ring spring loaded stem seal design requires no field adjustment.
- 1/4" F-NPT port that accommodates a vent valve or hydrostatic relief valve.
- UL Listed for LP-Gas and Anhydrous Ammonia.

Materials

Body Ductile Iron
 Bonnet Ductile Iron
 Stem Stainless Steel
 Seat Disc Nitrile
 "V"-Rings..... Teflon
 Excess Flow Valve Stainless Steel
 Springs Stainless Steel
 Excess Flow Valve Stainless Steel
 Springs Stainless Steel



| Part Number | Inlet Connection | Outlet Connection | Approximate Closing Flow GPM* | Accessories for NH3 Use | |
|---------------|------------------|-------------------|-------------------------------|--------------------------|------------|
| | | | | Hydrostatic Relief Valve | Vent Valve |
| A8012D | 1-1/2" M-NPT | 1-1/4" F-NPT | 72 GPM NH3* | SS8001J | TSS3169 |
| A8012C | 1-1/2" M-NPT | 1-1/4" F-NPT | 45 GPM NH3* | SS8001J | TSS3169 |

* When installed in a horizontally flowing system

REGO GLOBE & ANGLE VALVES

REGO GLOBE & ANGLE VALVES

Quick-Acting Minimum Loss Hose-End Valves for Bobtail Delivery Trucks and Dispensing Stations

Designed to vastly reduce the amount of product vented when disconnecting bobtail delivery trucks, dispensing systems and anhydrous ammonia nurse tanks.

These valves provide instant, full-on flow at the flip of a handle. Shutoff is instant and the handle locks for added protection.

This "top of the line" hose-end valve is a fully contained unit that does not require additional filling adapters or connectors.



| Part Number | Inlet Connection (F. NPT) | Outlet Connection (F. ACME) | Locking Handle | Flow at 1 PSIG (Cv) Pressure Drop* (GPM/ Propane) |
|---------------|---------------------------|-----------------------------|----------------|---|
| A7793A | 3/4" | 1 3/4" | Yes | 16.0 |
| A7797A | 1" | 1 3/4" | Yes | 16.0 |

* To obtain approximate flow at other than 1 PSIG pressure drop, multiply flow in table by square root of pressure drop.

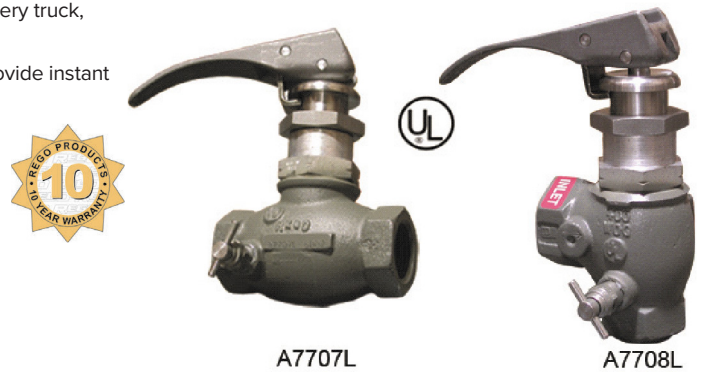
Example: A7797 @ 9 PSIG = 16.0 x $\sqrt{9}$ = 48.0 GPM/propane.

For NH₃ flow, multiply propane flow by .90.

Quick-Acting Hose-End Valves for Bobtail Delivery Trucks and Dispensing Stations

Designed especially for safe operator handling of LP-Gas in bobtail delivery truck, dispensing systems and anhydrous ammonia nurse tank service.

These valves provide instant, full-on flow at the flip of the handle and provide instant positive shut-off with a handle lock for added protection.



A7707L

A7708L

| Part Number | Body Design | Inlet & Outlet Connection (F. NPT) | Locking Handle | Flow at 1 PSIG (Cv) Pressure Drop* (GPM/ Propane) | Accessories Filling Connectors** | | |
|---------------|-------------|------------------------------------|----------------|---|----------------------------------|---------------|---------------|
| | | | | | Extended Steel | Compact Brass | Compact Steel |
| A7707L | Globe | 1" | Yes | 18.0 | A7575L4 | 3175A | A3175A |
| A7708L | Angle | 1" | Yes | 22.0 | A7575L4 | 3175A | A3175A |

* To obtain approximate flow at other than 1 PSIG pressure drop, multiply flow in table by square root of pressure drop.

Example: A7708L @ 9 PSIG = 22.0 x $\sqrt{9}$ = 66.0 GPM/propane. For NH₃ flow, multiply propane flow by .90.

** See appropriate catalog section for additional information.

REGO GLOBE & ANGLE VALVES

REGO GLOBE & ANGLE VALVES

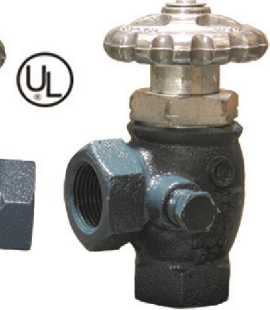
Flange Seal Globe and Angle Valves for Bulk Storage Containers, Filling Hoses and Plant Piping

Designed to assure positive shut-off and long maintenance-free service life in liquid or vapor service. Ideally suited for use on cylinder charging manifolds, truck filling hoses, bulk storage containers and plant piping.

The high quality construction and wide variety of sizes make them highly suited for use with LP-Gas, anhydrous ammonia and in the chemical and petrochemical industries.



A7704P



A7706 P

Globe

| Part Number | Inlet & Outlet Connection (F. NPT) | Flow at 1 PSIG Pressure Drop (Cv) (GPM/Propane)* | Accessories | |
|-------------|------------------------------------|--|--------------------------|------------|
| | | | Hydrostatic Relief Valve | Vent Valve |
| 7704P | 1/2" | 7.3 | SS8001J or SS8001L | TSS3169 |
| A7704P | 1/2" | 7.3 | SS8001J or SS8001L | TSS3169 |
| 7705P | 3/4" | 11.5 | SS8001J or SS8001L | TSS3169 |
| A7705P | 3/4" | 11.5 | SS8001J or SS8001L | TSS3169 |

Angle

| Part Number | Inlet & Outlet Connection (F. NPT) | Flow at 1 PSIG Pressure Drop (Cv) (GPM/Propane)* | Accessories | |
|-------------|------------------------------------|--|--------------------------|------------|
| | | | Hydrostatic Relief Valve | Vent Valve |
| 7704LP | 1/2" | 12.3 | SS8001J or SS8001L | TSS3169 |
| A7704LP | 1/2" | 12.3 | SS8001J or SS8001L | TSS3169 |
| 7706P | 3/4" | 17.7 | SS8001J or SS8001L | TSS3169 |
| A7706P | 3/4" | 17.7 | SS8001J or SS8001L | TSS3169 |

* To obtain approximate flow at other than 1 PSIG pressure drop, multiply flow in table by square root of pressure drop.
Example: A7704LP @ 9 PSIG = 12.3 x 3 = 36.9 GPM/ propane. For NH₃ flow, multiply propane flow by .90.

REGO GLOBE & ANGLE VALVES

REGO GLOBE & ANGLE VALVES

Flange Seal Liquid Transfer Angle Valves for Bulk Storage Containers

Designed especially for liquid transfer of LP-Gas from consumer bulk storage containers when used with a Chek-Lok® or equipped with an integral excess flow valve. May also be used for vapor LP-Gas service.

In NH3 applicator tanks they may be used as a vapor bleeder valve or as a liquid withdrawal valve when installed in a coupling with a dip pipe.

These liquid transfer valves are equipped with an integral excess flow valve for liquid transfer directly from the tank fitting, or without an integral excess flow for LP-Gas transfer through a Check-Lok®.

When equipped with an integral excess flow valve (7550PX), the valve should be mounted in a forged steel 3000 lb. half coupling. When mounted in a 1 1/4" x 3/4" NPT reducing coupling, the 3/4" female thread in this coupling must be full length — equivalent to a forged steel 3000 lb. half coupling.

The excess flow valve will not function properly if these specifications are not met.



7550P



A7550PX



| Part Number | Inlet Connection (F. NPT) | Outlet Connection (F. NPT) | Integral Excess Flow | Flow at 1 PSIG (Cv) Pressure Drop* (GPM/Propane) | Excess Flow Approximate Closing Flow** (GPM/Propane) | Accessories | |
|-------------|---------------------------|----------------------------|----------------------|--|--|--------------------------|------------|
| | | | | | | Hydrostatic Relief Valve | Vent Valve |
| 7550P | 3/4" | 3/4" | No | 13.3 | - | 3127U | 3165 |
| A7550P | 3/4" | 3/4" | No | 13.3 | - | SS8001J | TSS3169 |
| 7550PX | 3/4" | 3/4" | Yes | - | 16.0 | 3127U | 3165 |
| A7550PX | 3/4" | 3/4" | Yes | - | 16.0 | SS8001J | TSS3169 |
| 7551P | 3/4" | 1/2" | No | 8.9 | - | 3127U | 3165 |
| A7551P | 3/4" | 1/2" | No | 8.9 | - | SS8001J | TSS3169 |

* To obtain approximate flow at other than 1 PSIG pressure drop, multiply flow in table by square root of pressure drop. Example: 7550P @ 9 PSIG = 13.3 x 9 = 39.9 GPM/propane. For NH3 flow, multiple propane flow by .90.

** For NH3 flow, multiply propane flow by .90.

Quick-Acting Valves for Cylinder Charging Hoses

Designed primarily for use on cylinder charging hoses to provide fast, convenient shut-off and fast opening.

These valves must be installed so that flow through the valve is in the opposite direction to that of a conventional globe valve. This allows the inlet flow to assist in closing the valve, and even more important, helps prevent the valve from being forced open by high pump pressure.



A7553A



7901TA



| Part Number | Inlet Connection (F. NPT) | Outlet Connection (F. NPT) | Body Material | Flow at 1 PSIG (Cv) Pressure Drop* (GPM/Propane) |
|-------------|---------------------------|----------------------------|---------------|--|
| 7901T | 1/4" | 1/4" | Brass | 1.95 |
| 7901TA | 3/8" | 3/8" | Brass | 1.95 |
| 7901TB | 1/2" | 1/4" | Brass | 1.95 |
| 7901TC | 1/2" | 1/2" | Brass | 1.95 |
| 7053T | 1/2" | 1/2" | Brass | 1.95 |

* To obtain approximate flow at other than 1 PSIG pressure drop, multiply flow in table by square root of pressure drop. Example: 7901T @ 9 PSIG = 1.95 x 9 = 5.85 GPM/propane. For NH3 flow, multiply propane flow by .90.

REGO GLOBE & ANGLE VALVES

REGO GLOBE & ANGLE VALVES

Quick-Acting Valves for Dispensing Hoses

Application

Designed primarily for use on dispensing hoses to provide fast, convenient shut-off and fast opening. These valves feature a locking handle to prevent accidental opening of the handle if it were dropped.

Features

- Quick-acting design speeds transfer operations.
- Permits easy, one-handed opening and closing of the valve.
- O-ring stem seal design.
- Provides quick, positive shut-off.
- Safety lock prevents accidents.



Materials

Body Forged Brass
 O-Ring Resilient Synthetic Rubber
 Bonnet Assembly Brass
 Seat Disc Resilient Synthetic Rubber
 Handle Brass
 Springs Stainless Steel



| Part Number | Inlet Connection (F. NPT) | Outlet Connection (F. NPT) | Body Material | Flow at 1 PSIG (Cv) Pressure Drop* (GPM/Propane) |
|-------------|---------------------------|----------------------------|---------------|--|
| 7901TAL | 3/8" | 3/8" | Brass | 1.95 |
| 7901TBL | 1/2" | 1/4" | Brass | 1.95 |
| 7901TCL | 1/2" | 1/2" | Brass | 1.95 |

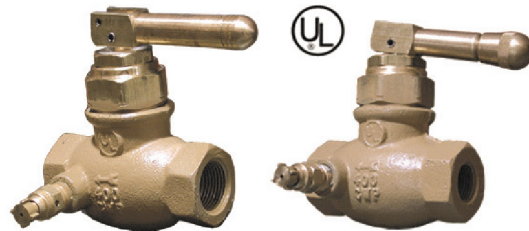
* To obtain approximate flow at other than 1 PSIG pressure drop, multiply flow in table by square root of pressure drop. Example: 7901T @ 9 PSIG = 1.95 x 3 = 5.85 GPM/propane. For NH3 flow, multiply propane flow by .90.

Quick-Acting Valves for Crop Driers and Charging Manifold Hoses

7554S Series valves provide instant shut-off and fast opening control on LPGas crop driers. They are also ideal for charging manifold hoses, stationary fuel transfer hoses and other applications requiring quick, positive shut-off. They are not for use with delivery truck hoses because the handle could snag on the ground and open the valve as the hose is reeled back to the truck.

7554L Series valves feature a locking handle device to help prevent accidental opening of the valve. It is ideal for all the same applications as the 7554S Series and may be used on delivery trucks as it incorporates the locking handle design.

Both valve series must be installed so that flow through the valve is opposite to that of a conventional globe valve. This allows the inlet flow to assist in closing the valve and prevents the valve from being opened by high pump pressures.



7554S

7554LV



| Part Number | Inlet & Outlet Connection (F. NPT) | Locking Handle | Flow at 1 PSIG (Cv) Pressure Drop* (GPM/Propane) |
|-------------|------------------------------------|----------------|--|
| 7554SAV | 1/2" | No | 7.3 |
| 7554LAV | 1/2" | Yes | 7.3 |
| 7554SV | 3/4" | No | 11.3 |
| 7554LV | 3/4" | Yes | 11.3 |

* To obtain approximate flow at other than 1 PSIG pressure drop, multiply flow in table by square root of pressure drop. Example: 7554LV @ 9 PSIG = 11.5 X 3 = 34.5 GPM/ propane.

REGO GLOBE & ANGLE VALVES

REGO GLOBE & ANGLE VALVES

Multipurpose Valve for Filling of NH₃ Containers

Designed specifically for use as a manual filler valve on anhydrous ammonia applicator and nurse tanks. This valve incorporates an integral back check valve.



A8016DBC



| Part Number | Inlet Connection | Outlet Connection | Flow at 1 PSIG (Cv) Pressure Drop* (GPM/Propane) | Accessories | |
|-------------|------------------|-------------------|--|--------------------------|------------|
| | | | | Hydrostatic Relief Valve | Vent Valve |
| A8016DBC | 1 1/4" | 1 3/4" | 95 | SS8001J | TSS3169 |

Multipurpose Valve for NH₃ Containers

Designed specifically for use on anhydrous ammonia applicator and nurse tanks. This valve incorporates an integral excess flow valve. When product is required, the valve must be completely open and backseated to allow the excess flow valve to function properly as explained in the excess flow valve section of this catalog.



A8016DP



| Part Number | Inlet Connection (M. NPT) | Filling Connection (M. ACME) | Filling Capacity at 20 PSIG Pressure Drop GPM/NH ₃ | Liquid* GPM/ NH ₃ | Vapor** CFH/ NH ₃ | Accessories | |
|-------------|---------------------------|------------------------------|---|------------------------------|------------------------------|--------------------------|------------|
| | | | | | | Hydrostatic Relief Valve | Vent Valve |
| A8016DP | 1 1/4" | 1 3/4" | 95 | 44 | 24,000 | SS8001J | TSS3169 |

* Determined at 9.5 to 12 PSIG differential.

** Determined at 100 PSIG inlet.

REGO GLOBE & ANGLE VALVES

Multipurpose Valves for Liquid Withdrawal of LP-Gas and NH₃ Containers

Designed especially for use as a high capacity liquid withdrawal valve on LP-Gas and anhydrous ammonia containers.

These valves incorporate an integral excess flow valve. When product is required, the valve must be completely open and backseated to allow the excess flow valve to function properly as explained in the excess flow valve section of this catalog.

The A8017DH is equipped with a soft seated automatic differential back pressure check valve in the seat disc assembly. This allows any pressure build up in the liquid transfer line in excess of 10-15 psig above the container pressure to flow back into the container. The transfer hose is protected against excessive liquid or vapor pressure entrapment, which adds materially to the useful life of flexible hose. In addition to increasing hose service life, the equalizing valve adds substantially to the operating safety of liquid transfer systems.



| Part Number | Inlet Connection (M. NPT) | Outlet Connection (F. NPT) | Approximate Excess Flow Liquid Closing Flow** (GPM/Propane) | Accessories | |
|-------------|---------------------------|----------------------------|---|--------------------------|------------|
| | | | | Hydrostatic Relief Valve | Vent Valve |
| A8017DH | 1 1/4" | 1" | 49 | Not Required | TSS3169 |
| A8017DP | 1 1/4" | 1" | 55 | SS8001J | TSS3169 |
| A8017DLP | 1 1/4" | 3/4" | 49 | SS8001J | TSS3169 |

* Built-in back pressure check valve incorporated into shut-off valve.

** Determined at 11.5 to 13.5 PSIG differential for 3/4" outlet and 9 to 12 PSIG differential for 1" outlet. For NH₃ flow, multiply by .90.

Multipurpose Valve for Filling and Liquid Transfer of NH₃ Containers

Designed primarily for use as a combination filler and liquid withdrawal valve on three-opening applicator tanks or on nurse tanks.

This valve incorporates an integral excess flow valve. When product is required, the valve must be completely open and backseated to allow the excess flow valve to function properly as explained in the excess flow valve section of this catalog.



| Part Number | Inlet Connection (M. NPT) | Outlet Connection (F. NPT) | Filling Connection (M. ACME) | Filling Capacity at 20 PSIG Pressure Drop GPM/NH ₃ | Approximate Excess Flow Liquid Closing Flow** GPM/NH ₃ | Accessories | |
|-------------|---------------------------|----------------------------|------------------------------|---|---|--------------------------|------------|
| | | | | | | Hydrostatic Relief Valve | Vent Valve |
| A8018DP | 1 1/4" | 1" | 1 3/4" | | | SS8001J | TSS3169 |

Multipurpose Right Angle Valve for Liquid or Vapor Service In LP-Gas and NH₃ Systems

Designed especially for use as a high capacity liquid withdrawal valve in LP-Gas and NH₃ systems.

Valve may be mounted directly in nurse tank load-out risers eliminating the need for a separate excess flow valve and angle valve.

This valve incorporates an integral excess flow valve. When product is required, the valve must be completely open and backseated to allow the excess flow valve to function properly as explained in the excess flow valve section of this catalog..



| Part Number | Inlet Connection (M. NPT) | Outlet Connection (F. NPT) | Approximate Excess Flow Liquid Closing Flow* | | Accessories | |
|-------------|---------------------------|----------------------------|--|---------------------|--------------------------|------------|
| | | | GPM/Propane | GPM/NH ₃ | Hydrostatic Relief Valve | Vent Valve |
| A8020D | 1 1/4" | 1" | 78 | 70 | SS8001J | TSS3169 |

* Determined at 13 PSIG differential.

REGO GLOBE & ANGLE VALVES

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

Excess Flow Valves for Liquid or Vapor Service

Designed for top mounting in storage tank manhole covers for liquid or vapor applications. The tapped inlet allows for an optional 1" NPT dip pipe connection to withdraw liquid from the top of the tank.

The 1519C4 is designed for installation in long line or branch piping applications.



1519C2



1519C4

| Part Number | Inlet Connection NPT | Filling Connection F. NPT | Wrench Hex Flats | Approximate Closing Flows | | |
|-------------|----------------------|---------------------------|------------------|---------------------------|------------------------------------|-------------------------------------|
| | | | | Liquid (GPM Propane) | Vapor SCFH (Propane) 25 PSIG Inlet | Vapor SCFH (Propane) 100 PSIG Inlet |
| 1519C2 | 1 1/2" Male* | 1" | 2 1/4" | 25 | 5,000 | 8,800 |
| 1519C4 | 2" Female | 2" | 3" | 170 | 28,590 | 48,600 |

* 1" Female Dip Pipe Connection

** Based on horizontal installation of excess flow valve.

Flows are slightly more when valves are installed with outlet up; slightly less when installed with outlet down.

NOTE: Multiply flow rate by .94 to determine liquid butane flow.

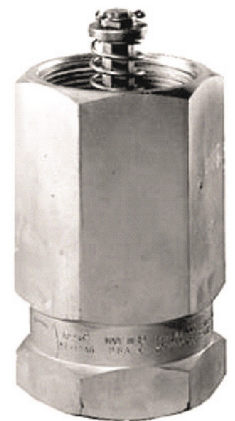
Excess Flow Valves for Liquid or Vapor Line Service

Designed for top installation, in any position, in liquid or vapor service lines.

They are intended for long lines or branch piping where tank mounted excess flow valves cannot suffice.



1519A2



A1519A6

| Part Number | Brass or Steel | Inlet Connection NPT | Outlet Connection F. NPT | Wrench Hex Flats | Approximate Closing Flows* | | |
|-------------|----------------|----------------------|--------------------------|------------------|----------------------------|------------------------------------|-------------------------------------|
| | | | | | Liquid (GPM Propane) | Vapor SCFH (Propane) 25 PSIG Inlet | Vapor SCFH (Propane) 100 PSIG Inlet |
| 1519A2 | Brass | 1" | 1" | 1 3/4" | 25 | 5,000 | 8,800 |
| A1519A2 | Steel | 1" | 1" | 1 3/4" | 25 | 5,000 | 8,800 |
| 1519A3 | Brass | 1 1/2" | 1 1/2" | 2 1/4" | 60 | 11,500 | 20,200 |
| 1519A4 | Brass | 2" | 2" | 3" | 100 | 19,000 | 34,500 |
| A1519A4 | Steel | 2" | 2" | 3" | 100 | 19,000 | 34,500 |
| 1519B4 | Brass | 2" | 2" | 3" | 133 | 27,700 | 50,300 |
| A1519B4 | Steel | 2" | 2" | 3" | 133 | 27,700 | 50,300 |
| A1519A6 | Steel | 3" | 3" | 4" | 225 | 45,000 | 82,000 |

* Based on horizontal installation of excess flow valve. Flows are slightly more when valves are installed with outlet up; slightly less when installed with outlet down.

NOTE: Multiply flow rate by .94 to determine liquid butane flow and by .90 to determine liquid anhydrous ammonia flow.

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

Excess Flow Valves for Liquid or Vapor

Designed for liquid or vapor use for filling, withdrawal and vapor equalizing in container or line applications. They are intended for long lines or branch piping where tank-mounted excess flow valves are inadequate.



| Part Number | Brass or Steel | A Inlet Connection (M. NPT) | B Outlet Connection F. NPT) | C Wrench Hex Flats | D Effective Length (Approx.) | Approximate Closing Flow* | | |
|-------------|----------------|-----------------------------|-----------------------------|--------------------|------------------------------|---------------------------|------------------------------------|-------------------------------------|
| | | | | | | Liquid (GPM Propane) | Vapor SCFH (Propane) 25 PSIG Inlet | Vapor SCFH (Propane) 100 PSIG Inlet |
| 12472 | Brass | 3/4" | 3/4" | 1 3/8" | 1 3/8" | 4 | 1,050 | 1,700 |
| 3272E | Brass | 3/4" | 3/4" | 1 3/8" | 1 3/8" | 10 | 2,100 | 3,700 |
| 3272F | Brass | 3/4" | 3/4" | 1 3/8" | 1 3/8" | 15 | 2,800 | 5,000 |
| 3272G | Brass | 3/4" | 3/4" | 1 3/8" | 1 3/8" | 20 | 3,700 | 6,900 |
| A3272G | Steel | 3/4" | 3/4" | 1 3/8" | 1 3/8" | 20 | 3,700 | 6,900 |
| 3282A | Brass | 1 1/4" | 1 1/4" | 2" | 1 15/16" | 30 | 5,850 | 10,000 |
| 3282B | Brass | 1 1/4" | 1 1/4" | 2" | 1 15/16" | 40 | 7,600 | 13,600 |
| 3282C | Brass | 1 1/4" | 1 1/4" | 2" | 1 15/16" | 50 | 9,000 | 16,300 |
| A3282C | Steel | 1 1/4" | 1 1/4" | 2" | 1 15/16" | 50 | 9,000 | 16,300 |
| 7574 | Brass | 1 1/2" | 1 1/2" | 2 1/4" | 1 3/4" | 90 | 15,200 | 28,100 |
| 7574L | Brass | 1 1/2" | 1 1/2" | 2 1/4" | 1 3/4" | 70 | 14,000 | 25,000 |
| 3292A | Brass | 2" | 2" | 2 7/8" | 1 7/8" | 75 | 14,200 | 24,800 |
| A3292A | Steel | 2" | 2" | 2 7/8" | 1 7/8" | 75 | 14,200 | 24,800 |
| 3292B | Brass | 2" | 2" | 2 7/8" | 1 7/8" | 100 | 18,100 | 32,700 |
| A3292B | Steel | 2" | 2" | 2 7/8" | 1 7/8" | 100 | 18,100 | 32,700 |
| A3292C | Steel | 2" | 2" | 2 7/8" | 1 7/8" | 122 | 22,100 | 37,600 |

* Based on horizontal installation of excess flow valve. Flows are slightly more when valves are installed with outlet up; slightly less when installed with outlet down. NOTE: Multiply flow rate by .94 to determine liquid butane flow and by .90 to determine liquid anhydrous ammonia flow.

Excess Flow Valve for Autogas Dispensing Stations

Application

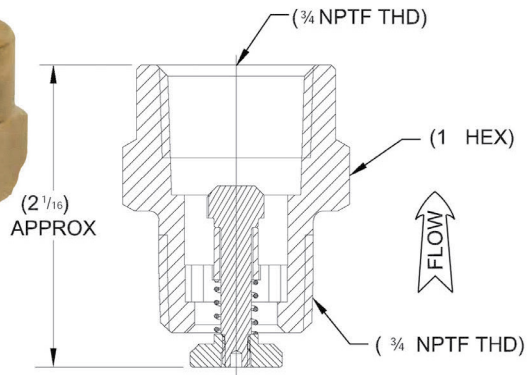
Especially designed for high flow/high differential dispensing systems. Can also be used for filling, liquid withdrawal, and vapor equalizing, in container or line applications.

Features

- Solid brass construction
- Stainless steel spring
- Meets UL requirements
- Highest flowing valve in the market.

Materials

BodyBrass
Spring Stainless Steel
SeatBrass



| Part Number | Inlet Connection | Outlet Connection | Wrench Hex Flats | Effective Length (Approx.) | Liquid (GPM Propane) |
|-------------|------------------|-------------------|------------------|----------------------------|----------------------|
| 3272H | 3/4" | 3/4" | 1-3/8" | 1-3/8" | 29 |

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

Excess Flow Valves for Container Service

Designed for mounting in threaded full or half couplings in container installations. They may be used for filling, withdrawal or vapor equalizing applications. The exceptionally low pressure drop makes them ideal for pump suction lines. If a riser pipe to the vapor space is used with these valves, the minimum inside diameter of the riser pipe must be at least two times the valve thread size in order not to restrict flow to the side inlet ports.



| Part Number | For Use With This Type Coupling | Inlet Connection M. NPT | Outlet Connection NPT | Wrench Hex Flats | Approximate Closing Flow* | | |
|-------------|---------------------------------|-------------------------|---------------------------|------------------|---------------------------|------------------------------------|-------------------------------------|
| | | | | | Liquid (GPM Propane) | Vapor SCFH (Propane) 25 PSIG Inlet | Vapor SCFH (Propane) 100 PSIG Inlet |
| A8523 | Half | 3/4" | 3/4" Male | 1 1/8" | 15 | 5,170 | 8,800 |
| A8525 | Half | 1 1/4" | 1 1/4" Male | 1 3/4" | 35 | 12,540 | 21,560 |
| A7537L4 | Half | 2" | 2" Male and 1 1/4" Female | 2 5/8" | 75 | 13,000 | 25,600 |
| A7537L4F | Full | 2" | 2" Male and 1 1/4" Female | 2 5/8" | 75 | 13,000 | 25,600 |
| A7537N4 | Half | 2" | 2" Male and 1 1/4" Female | 2 5/8" | 125 | 25,000 | 42,500 |
| A7537N4F | Full | 2" | 2" Male and 1 1/4" Female | 2 5/8" | 125 | 25,000 | 42,500 |
| A7537P4 | Half | 2" | 2" Male and 1 1/4" Female | 2 5/8" | 150 | 30,500 | 52,000 |
| A7537P4F | Full | 2" | 2" Male and 1 1/4" Female | 2 5/8" | 150 | 30,500 | 52,000 |
| A7539R6 | Half | 3" | 3" Male and 2" Female | 3 3/4" | 150 | 32,100 | 55,500 |
| A7539R6F | Full | 3" | 3" Male and 2" Female | 3 3/4" | 150 | 32,100 | 55,500 |
| A7539T6 | Half | 3" | 3" Male and 2" Female | 3 3/4" | 200 | 39,400 | 68,300 |
| A7539T6F | Full | 3" | 3" Male and 2" Female | 3 3/4" | 200 | 39,400 | 68,300 |
| A7539V6 | Half | 3" | 3" Male and 2" Female | 3 3/4" | 250 | 51,100 | 88,700 |
| A7539V6F | Full | 3" | 3" Male and 2" Female | 3 3/4" | 250 | 51,100 | 88,700 |

* Based on horizontal installation of excess flow valve. Flows are slightly more when valves are installed with outlet up; slightly less when installed with outlet down. NOTE: Multiply flow rate by .94 to determine liquid butane flow and by .90 to determine liquid anhydrous ammonia flow.

Excess Flow Valves for Vapor or Liquid

Designed especially for filling, withdrawing or vapor equalizing in half and full coupling installations. Ideal for container service where welded-in dip pipes are not provided. For vapor use, mount in the bottom opening with a threaded dip pipe. For liquid use, mount in the top opening with a threaded dip pipe. These may also be installed in pipe lines provided the connection is made to the male inlet thread and not the female dip pipe connection.



| Part Number | Inlet Connection NPT | Outlet Connection F. NPT | Wrench Hex Flats | Approximate Closing Flows*** | | |
|-------------|----------------------|---------------------------|------------------|------------------------------|------------------------------------|-------------------------------------|
| | | | | Liquid (GPM Propane) | Vapor SCFH (Propane) 25 PSIG Inlet | Vapor SCFH (Propane) 100 PSIG Inlet |
| A2137 | 2** | 2" Male and 1 1/4" Female | 2 7/16" | 50 | 10,000 | 17,000 |
| A2137A | 2** | 2" Male and 1 1/4" Female | 2 7/16" | 70 | 14,000 | 25,000 |
| 2139 | 3*** | 3" Male and 2" Female | 3 1/2" | 125 | 26,500 | 46,000 |
| 2139A | 3*** | 3" Male and 2" Female | 3 1/2" | 160 | 32,700 | 57,200 |

* 1 1/4" F. NPT Dip Pipe Connection

** 2" F. NPT Dip Pipe Connection

*** Based on horizontal installation of excess flow valve. Flows are slightly more when valves are installed with outlet up; slightly less when installed with outlet down.

NOTE: Multiply flow rate by .94 to determine liquid butane flow and by .90 to determine liquid anhydrous ammonia flow.

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

Excess Flow Valves for Flange Mounting in Container Service

Designed for mounting in flanged tank connections with internal threads in the bottom of a container. They may be used in filling, withdrawal or vapor equalizing application. They provide high flow capacity with low pressure drop to minimize pump inlet line cavitation.

If a riser pipe to the vapor space is used with these excess flow valves, the minimum inside diameter of the riser pipe must be at least two times the valve thread size in order not to restrict flow to the side inlet ports.

Flange mounted excess flow valves are readily accessible for servicing and completely enclosed and protected in event of fire. Because there is no direct connection between external piping and the valve, stresses imposed on piping will not affect the excess flow valve.



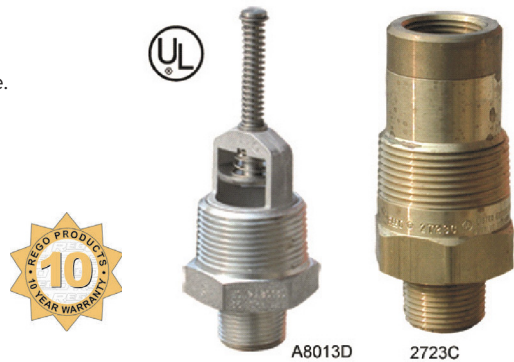
| Part Number | Inlet Connection NPT | For Installation | Approximate Closing Flows* ** | | |
|-------------|----------------------|------------------|-------------------------------|------------------------------------|-------------------------------------|
| | | | Liquid (GPM Propane) | Vapor SCFH (Propane) 25 PSIG Inlet | Vapor SCFH (Propane) 100 PSIG Inlet |
| A3500L4 | 2" | Slotted Body | 75 | 13,000 | 22,500 |
| A3500N4 | 2" | Slotted Body | 125 | 25,000 | 42,500 |
| A3500P4 | 2" | Slotted Body | 150 | 30,500 | 52,000 |
| A3500R6 | 3" | Slotted Body | 150 | 32,100 | 55,500 |
| A3500T6 | 3" | Slotted Body | 200 | 39,400 | 68,300 |
| A3500V6 | 3" | Slotted Body | 250 | 51,100 | 88,700 |
| A4500Y8 | 4" | Slotted Body | 500 | 89,000 | 154,000 |

* Based on horizontal installation of excess flow valve. Flows are slightly more when valves are installed with outlet up; slightly less when installed with outlet down.

NOTE: Multiply flow rate by .94 to determine liquid butane flow and by .90 to determine liquid anhydrous ammonia flow.

Excess Flow Valves for Liquid or Vapor Withdrawal

These valves are designed for bottom mounting in consumer storage tanks for liquid service. They may also be top mounted for vapor service. These valves are designed especially for use with RegO® globe and angle valves.



| Part Number | Inlet Connection M. NPT | Outlet Connection NPT | Wrench Hex Flats | Approximate Closing Flow** | | |
|-------------|-------------------------|-----------------------|------------------|----------------------------|------------------------------------|-------------------------------------|
| | | | | Liquid (GPM Propane) | Vapor SCFH (Propane) 25 PSIG Inlet | Vapor SCFH (Propane) 100 PSIG Inlet |
| A8013D | 1 1/4" | 3/4" | 1 7/8" | 39 | 8,700 | 14,700 |
| A8013DA | 1 1/4" | 1" | 1 7/8" | 44 | 8,700 | 14,700 |
| A8013DB | 1 1/4" | 1 1/4" | 1 7/8" | 55 | 10,900 | 19,300 |
| 2723C | 1 1/4" | 3/4" | 1 11/16" | 20 | 3,900 | 6,900 |

* 3/4" F. NPT Dip Pipe Connection

** Based on horizontal installation of excess flow valve. Flows are slightly more when valves are installed with outlet up; slightly less when installed with outlet down.

NOTE: Multiply flow rate by .94 to determine liquid butane flow and by .90 to determine liquid anhydrous ammonia flow.

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

Excess Flow Valve for Pressure Gauges

Designed for container use in pressure gauge installations to minimize excess gas discharge in the event the pressure gauge is sheared. A suitable shut-off valve should be installed between this valve and the pressure gauge to allow convenient gauge replacement.



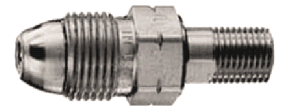
| Part Number | For Use With This Type Coupling | Inlet Connection M. NPT | Outlet Connection NPT | Approximate Closing Flow* | | |
|--------------|---------------------------------|-------------------------|-----------------------|---------------------------|------------------------------------|-------------------------------------|
| | | | | Liquid (GPM Propane) | Vapor SCFH (Propane) 25 PSIG Inlet | Vapor SCFH (Propane) 100 PSIG Inlet |
| A8523 | Half | 3/4" | 3/4" Male | 15 | 5,170 | 8,800 |

* Based on horizontal installation of excess flow valve. Flows are slightly more when valves are installed with outlet up; slightly less when installed with outlet down.

NOTE: Multiply flow rate by .94 to determine liquid butane flow.

Excess Flow Valve for DOT Cylinders

Designed for use on portable systems with vapor or liquid including torches, heaters, lead melting burners, tar and asphalt burners, wallpaper steamers and other applications involving portable DOT cylinders. The POL inlet attaches directly to the cylinder valve and the outlet mounts to the regulator.



| Part Number | Inlet Connection NPT | Outlet Connection F. NPT | Wrench Hex Flats | Approximate Closing Flows*** | | |
|--------------|----------------------|--------------------------|------------------|------------------------------|------------------------------------|-------------------------------------|
| | | | | Liquid (GPM Propane) | Vapor SCFH (Propane) 25 PSIG Inlet | Vapor SCFH (Propane) 100 PSIG Inlet |
| 3199W | Male POL | 1/4" | 7/8" | .95 | 265 | 500 |

* Based on horizontal installation of excess flow valve. Flows are slightly more when valves are installed with outlet up; slightly less when installed with outlet down.

NOTE: Multiply flow rate by .94 to determine liquid butane flow.

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

7590U and 7591U Chek-Lok® Valves

Designed with unique 1" NPS threads on both Chek-Lok outlet and adapter inlet. This helps prevent activation of the Chek-Lok® without use of the 7590U-10 adapter. Extra strength connection between body and adapter provides increased strength. An o-ring seal on adapter provides a gas tight seal before the adapter opens the equalizing stem.

These Chek-Loks® are also designed for use on permanent installations provided the excess flow valve is sized properly for the system and piping. NOTE: In some cases, it may be necessary to use an in-line excess flow valve to protect the downstream piping. This valve is not recommended for use as a liquid source for pumps.



7590U with Cap



7590U-10
Union Style Adapter



| Part Number | Inlet Connection | Outlet Connection | Body Wrench Hex Flex | Approximate Effective Length | Cap Wrench Hex Flats | Approximate Closing Flow, Liquid GPM (Propane)* |
|-------------|------------------|-------------------|----------------------|------------------------------|----------------------|---|
| 7590U | 3/4" M. NPT | 1 5/8" UNF | 1 5/8" | 17/16" | 1 5/16" | 20 |
| 7591U | 1 1/4" M. NPT | 1 5/8" UNF | 1 3/4" | 11 1/16" | 1 5/16" | 35 |

* Based on horizontal installation of excess flow valve. Flows are slightly more when valves are installed with outlet up, and slightly less when installed with outlet down.

Note: Multiply flow rate by .94 to determine liquid butane flow.

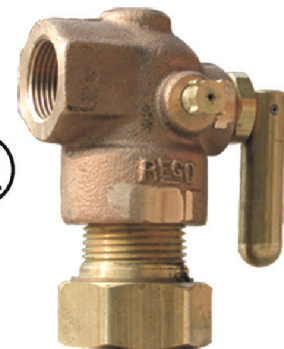
Union Style Adapters for 7590U and 7591U

The 7590U-10 adapter must be used to connect to the 7590U and 7591U Chek-Lok. This insures a proper connection to open the check mechanism. A built in nylon gasket provides a gas tight seal.

| Part Number | Inlet Connection | Outlet Connection | Wrench Hex Flats |
|-------------|------------------|-------------------|------------------|
| 7590U-10 | 1 5/8" UNF | 3/4" F. NPT | 1 3/4" |

Chek-Lok® Liquid Evacuation Adapter for 7590U and 7591U Valves

Designed specifically for use with RegO® 7590U and 7591U Chek-Lok® Excess Flow Valves. Adapter's operating handle opens and closes equalizing stem in the Chek-Lok® valve. Eliminates gas flow through Chek-Lok® valve when installing or removing adapter. Use of RegO® adapter ensures proper connections and opening of the check mechanism.



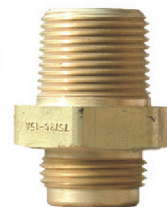
| Part Number | Inlet Connection | Outlet Connection | A Wrench Hex Flats | B Approximate Length |
|-------------|------------------|-------------------|--------------------|----------------------|
| 7590U-20 | 1 5/8" F. UNF | 3/4" F. NPT | 1 3/4" F. NPT | 4 1/8" F. NPT |

Adapters for the 7572FC and 7580FC

These adapters must be used to connect to the 7572FC and 7580FC Chek Loks to open the check mechanism properly. A built in nylon gasket provides a gas tight seal.



7572C-14A



7572C-15A

| Part Number | Inlet Connection | Outlet Connection | Wrench Hex Flats |
|-------------|------------------|-------------------|------------------|
| 7572C-14A | 3/4" M. NPT | 3/4" F. NPT | 1 3/8" |
| 7572C-15A | 3/4" M. NPT | 3/4" M. NPT | 1 3/8" |

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

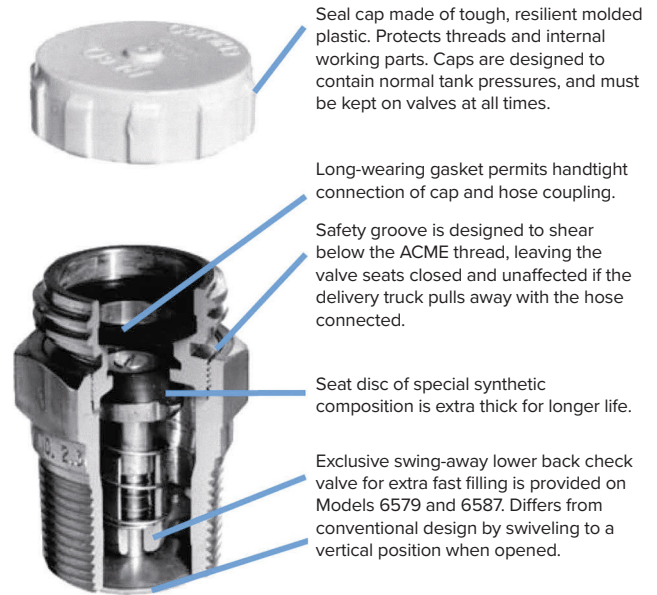
Double-Check Filler Valves

General Information

RegO® Double-Check Filler Valves incorporate a resilient upper check valve, normally designated as a filler valve, and a lower check valve, commonly called a back pressure check valve. Available in a range of sizes to cover virtually all LP-Gas storage containers, these valves are UL listed and meet NFPA standards, as well as other safety requirements.

Flow of liquid into the storage container opens both check valves. When flow stops, they both are designed to close automatically to permit the operator to disconnect the hose coupling. The automatic closing action also helps prevent the discharge of container contents in the event of hose failure. The lower back pressure check affords extra protection by restricting the discharge if the upper check fails to function properly due to accidents or other causes.

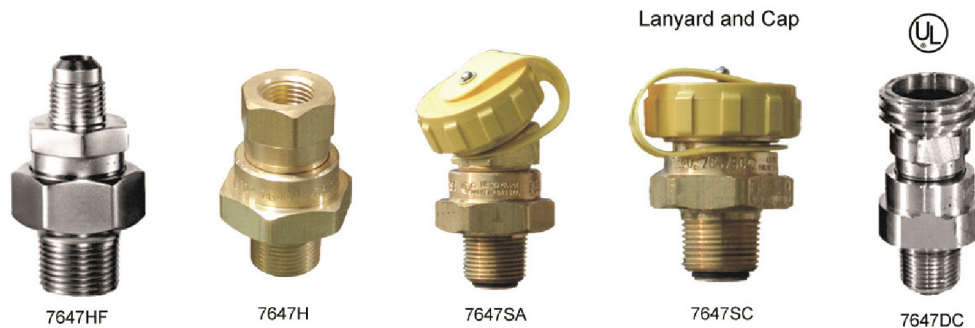
The double back check construction allows emergency inspection, repair, or replacement of the upper fill assembly without removing product from the container. When the upper filler valve body is removed, the lower back check valve provides a seal, permitting only some leakage, allowing a new upper filler valve body to be installed.



Spare Gasket Ordering Informat

| Part Number | ACME |
|-------------|--------|
| A2797-20R | 1 1/4" |
| A2697-20R | 1 3/4" |
| A3184-8R | 2 1/4" |
| A3194-8R | 3 1/4" |

Double Check Filler Valves for Forklift, Motor Fuel and RV Tanks



Designed to provide fast filling of forklift, motor fuel, and recreational vehicle tanks.

| Part Number | Type | A Hose Connection | B Tank Connection M. NPT | C Wrench Flats | D Effective Length (Approx.) | Propane Liquid Capacity at Various Differential Pressures (GPM)*** | | | | |
|-------------|--------------------|----------------------|-----------------------------|-------------------|---------------------------------|--|---------|---------|---------|---------|
| | | | | | | 10 PSIG | 20 PSIG | 30 PSIG | 40 PSIG | 50 PSIG |
| 7647H | Basic | 1/2" F. NPT | 3/4" | 1 1/2" | 2 7/16" | 14 | 20 | 24 | 27 | 50 |
| 7647HF | Basic | 1/2" SAE Flare | 3/4" | 1 1/2" | 2 5/8" | 14 | 20 | 24 | 27 | 50 |
| 7647DC | w/ Lanyard and Cap | 1 3/4" ACME & F. POL | 3/4" | 1 1/2" | 3" | 14 | 20 | 24 | 27 | 50 |
| 7647SA** | w/ Lanyard and Cap | 1 3/4" ACME & F. POL | 3/4" | 1 1/2" | 3 1/16" | 14 | 20 | 24 | 27 | 50 |
| 7647SC* | w/ Lanyard and Cap | 1 3/4" ACME | 3/4" | 1 3/4" | 2 1/4" | 14 | 20 | 24 | 27 | 50 |

* Large 1 3/4" hex wrench flats.

** 30° angle on 1 1/4" ACME hose connection.

*** Multiply flow rate by .94 to determine liquid butane capacity.

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

Double-Check Filler Valves for Large Motor Fuel and ASME Tanks

Designed to provide fast filling of large motor fuel and ASME domestic tanks. The 6579 Series incorporates a swing-away lower check which greatly reduces pressure drop across the valve. This lower pressure drop promotes faster filling rates and greater efficiency resulting in more profitable operations.



| Part Number | Type | ACME Hose Connection | Tank Connection M. NPT | Wrench Hex Flats | Propane Liquid Capacity at Various Differential Pressures (GPM) | | | | |
|-------------|---------------------|----------------------|------------------------|------------------|---|---------|---------|---------|---------|
| | | | | | 5 PSIG | 10 PSIG | 25 PSIG | 50 PSIG | 75 PSIG |
| L7579 | Cap Only | 1 3/4" | 1 1/4" | 1 7/8" | 50 | 70 | 111 | 157 | 192 |
| 7579P | Cap Only | 1 3/4" | 1 1/4" | 1 7/8" | 37 | 52 | 82 | 116 | 142 |
| L6579** | Cap Only | 1 3/4" | 1 1/4" | 1 7/8" | 78 | 110 | 174 | 246 | 301 |
| 7579C | Cap, Chain and Ring | 1 3/4" | 1 1/4" | 1 7/8" | 50 | 70 | 111 | 157 | 192 |
| 6579C** | Cap, Chain and Ring | 1 3/4" | 1 1/4" | 1 7/8" | 78 | 110 | 174 | 246 | 301 |

* Incorporates 3/4 F. NPT dip pipe connection
 ** Swing-away lower back check valve design for higher filling rate.
 NOTE: Multiply flow rate by .94 to determine liquid butane capacity

Low Emission Filler Valve with Manual Shutoff Feature

General Information

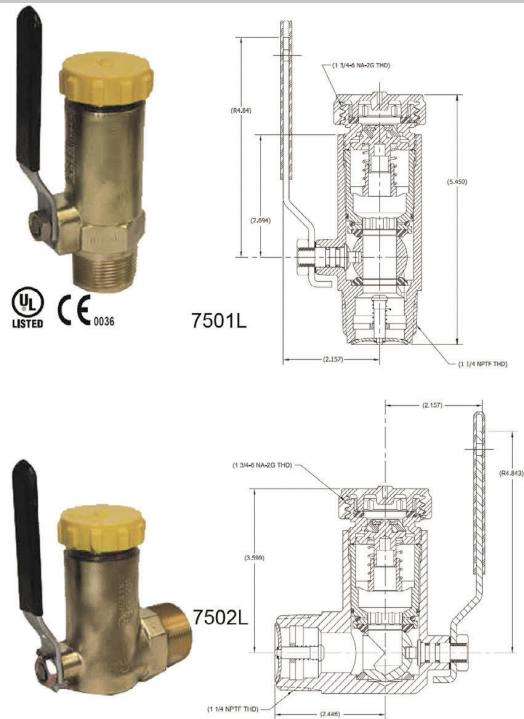
RegO Manual Double-Back Check filler valves that incorporate a resilient upper check and a manual shutoff feature. When filling a container from a delivery truck, this valve will allow flow into the container through the upper and lower check, when the manual lever is in the open position. When flow stops both the upper and lower checks will close; the lever is then turned to the closed position, the hose-end valve can be removed from the filler valve.

Application

Designed for fast filling of larger DOT cylinders and ASME domestic containers; the 7501L and 7502L feature a manual shutoff in addition to upper and lower back checks.

Features

- Low emission 2 cc or less at disconnect.
- Meets NFPA 58 and UL requirements.
- Double back check provides added system protection.
- Checks are spring activated for quick precise closure when flow stops.
- Manual shutoff valve is designed to provide additional system protection when disconnecting hose end valve from filler valve.
- Hose end valve cannot be removed from the 7501L or 7502L if the lever is in the open position.
- When manual shutoff valve is closed, an integral back check prevents liquid from being trapped between the shutoff and the upper check.



| Part Number | Container Connection | ACME Hose Connection | Propane Liquid Capacity at Various Differential Pressures | | |
|-------------|----------------------|----------------------|---|---------|-----------|
| | | | 15 PSIG | 25 PSIG | 50 PSIG |
| 7501L | 1-1/4" M-NPT | 1-3/4" M.ACME | 62 GPM | 90 GPM | 6125 GPM6 |
| 7502L | 1-1/4" M-NPT | 1-3/4" M.ACME | 62 GPM | 90 GPM | 6125 GPM6 |

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

Combination Filler & OPD

Application

This combined filler valve and overfill protection device is designed to provide fast filling and protection against overfilling of Vertical above ground small bulk type containers. The SF7647V Series offers good fill rates and an overfill prevention, device that will stop* the flow of product into the container when the liquid level reaches 80-83% of its capacity.

Features

- Large flow area for fast filling.
- Resilient seated upper check.
- Stable Overfill Protection Device that is integral to the filler valve.
- Overfill Protection Device will stop the flow of liquid when the 80-83% level is reached.

Materials

Upper body.....Brass
 Lower body.....Brass
 Springs..... Stainless Steel
 Washer and seat disc.....Synthetic Rubber
 Cap.....Plastic
 OPD check.....Nylon
 OPD lever and riser.....Nylon
 OPD float.....Closed Cell Nitrile



| Part Number | Description |
|--------------------|--|
| SF7647V11.0 | 3/4"MNPT Combination Filler Valve & Overfill Protection Device |
| SF7647V11.1 | 3/4"MNPT Combination Filler Valve & Overfill Protection Device |

Combination Low Emission Filler and Overfill Protection Device (OPD)

Application

The SFL7579V Series filler valve is for use on ASME containers. This combined filler valve and overfill protection device is designed to provide fast filling and protection against overfilling of vertical and horizontal above ground LPG containers. This is typically installed in the top of horizontal containers.

Features

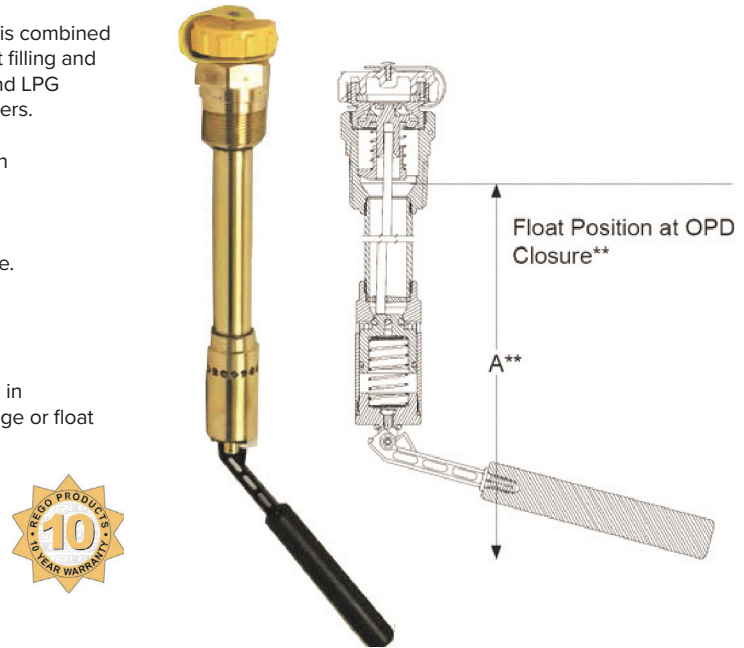
- Low emission filler valve, will not release more than 2.14cc when disconnected.
- Large flow area for fast filling.
- Resilient seated upper check.
- Stable Overfill Protection Device that is integral to the filler valve.
- Overfill Protection Device will stop the flow of liquid when the 80% level is reached.

Note:

- Must be installed in a vertical position.
- Depending on the application this valve is designed to be used in conjunction with another device such as a fixed liquid level gauge or float gauge in low emission transfer systems.

Materials

Upper bodyBrass
 Lower bodyBrass
 Springs Stainless Steel
 Washer and seat disc Synthetic Rubber
 CapResilient Molded Plastic
 OPD checkNitrile
 OPD lever and riserNylon
 OPD floatClosed Cell Nitrophenolic



| Part Number | ACME Hose Connection | Tank Connection M. NPT | Wrench Hex Flats | Length A* | Propane Liquid Capacity at Various Differential Pressures (GPM) | | | |
|---------------------|----------------------|------------------------|------------------|-----------|---|--------|--------|--------|
| | | | | | 1 PSI | 25 PSI | 50 PSI | 75 PSI |
| SFL7579V13.8 | 1-3/4" Male | 1-1/4" | 1-7/8" | 14.43" | 23 | 49 | 54 | 66 |
| SFL7579V13.0 | 1-3/4" Male | 1-1/4" | 1-7/8" | 13.63" | 23 | 49 | 54 | 66 |
| SFL7579V12.3 | 1-3/4" Male | 1-1/4" | 1-7/8" | 12.93" | 23 | 49 | 54 | 66 |
| SFL7579V11.1 | 1-3/4" Male | 1-1/4" | 1-7/8" | 11.73" | 23 | 49 | 54 | 66 |
| SFL7579V10.6 | 1-3/4" Male | 1-1/4" | 1-7/8" | 11.23" | 23 | 49 | 54 | 66 |

Distance from center thread to float at closure.

* Suffix number indicates dip tube length (Fixed liquid level gauge) different lengths available upon request.

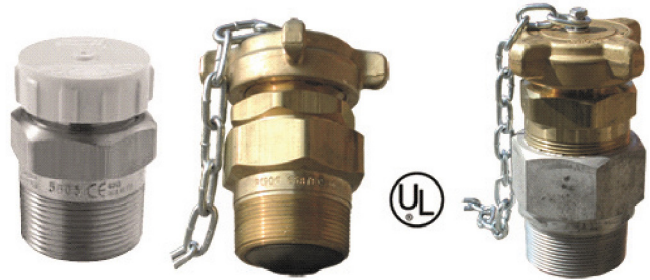
REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

Double Check Filler Valves for Delivery Truck Tanks and Large Storage Containers

Designed to provide fast filling of bobtails, transports and large bulk storage tanks.

The 6587CD incorporates a swing-away lower check which greatly reduces pressure drop across the valve. This lower pressure drop promotes faster filling rates and greater efficiency resulting in more profitable operations.



7579S

6587EC

3197C

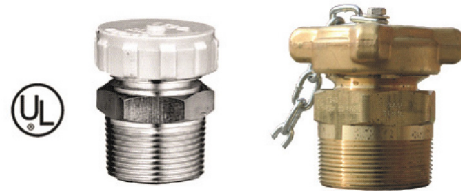
| Part Number | ACME Hose Connection | Tank Connection M. NPT | Wrench Hex Flats | Propane Liquid Capacity at Various Differential Pressures (GPM) | | | | |
|-------------|----------------------|------------------------|------------------|---|---------|---------|---------|---------|
| | | | | 5 PSIG | 10 PSIG | 25 PSIG | 50 PSIG | 75 PSIG |
| 7579S | 1 3/4" | 1 1/2" | 2" | 44 | 62 | 98 | 139 | 170 |
| 6587EC* | 2 1/4" | 2" | 2 7/8" | 92 | 130 | 206 | 291 | 356 |
| 3197C | 3 1/4" | 3" | 4" | 148 | 210 | 332 | 470 | 575 |

* Swing-away lower back check valve design for higher filling rates.
NOTE: Multiply flow rate by .94 to determine liquid butane capacity.

Single Check Filler Valves for Storage Tanks with Supplementary Back Check Valves

Designed for use with RegO® Back Check Valves to provide fast filling of bulk storage tanks. Also may be used as a spare or replacement part.

These single check filler valves must never be installed directly into container couplings. They must be used with the appropriate back check valve to comply with NFPA Pamphlet #58.



3174C

3194C, 6584C

| Part Number | ACME Hose Connection | Outlet Connection M. NPT | Wrench Hex Flats | Propane Liquid Capacity at Various Differential Pressures (GPM) | | | | For Use With Back Check Valve: |
|-------------|----------------------|--------------------------|------------------|---|---------|---------|---------|--------------------------------|
| | | | | 5 PSIG | 10 PSIG | 25 PSIG | 50 PSIG | |
| 3174C | 1 3/4" | 1 1/4" | 1 3/4" | 23 | 33 | 52 | 74 | 3176 |
| 6584C* | 2 1/4" | 2" | 2 3/8" | 156 | 220 | 348 | 492 | A3186 |
| 3194C | 3 1/4" | 3" | 3 1/2" | 147 | 208 | 329 | 465 | A3196 |

* Stem Assembly designed for higher filling rates.
NOTE: Multiply flow rate by .94 to determine liquid butane capacity.

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

Vapor Equalizing Valves

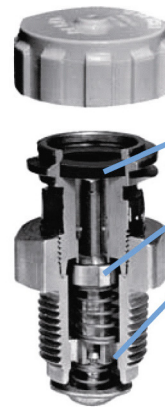
General Information

RegO® Vapor Equalizing Valves consist of an upper back check valve and lower excess flow valve. In the closed position, the attachment of a vapor hose coupling with its projecting nozzle, opens the back check valve to permit flow in either direction. The lower excess flow valve is designed to close automatically when flow out of the container being filled exceeds the rated capacity. The valve closes automatically when the coupling is removed. Like the double-check filler valves, the vapor equalizing valves utilize a two-piece body construction. The lower excess flow valve will permit some leakage when the upper back check valve is removed for emergency repairs or replacement.

RegO® Vapor Equalizing Valves are designed for use in both ASME and DOT containers.

Spare Gasket Ordering Information

| Part Number | ACME |
|-------------|--------|
| A2797-20R | 1 1/4" |
| A2697-20R | 1 3/4" |



- Seal cap made of tough, resilient molded plastic. Protects threads and internal working parts. Caps are designed to contain normal tank pressures, and must be kept on valves at all times.
- Long-wearing gasket permits hand-tight connection of cap and hose coupling.
- Seat disc of special synthetic composition is extra thick for longer life.
- Valve guide is precision machined to assure positive seal.

Double Check Vapor Equalizing Valves for ASME and DOT Containers

Designed to facilitate loading operations by providing equalization of pressures in the supply and storage containers. The supplementary excess flow valve closes when the flow from the container being filled exceeds a predetermined rate.

The 7573 Series is designed for use in bulk delivery systems and motor fuel containers. The 3183AC is designed for use in delivery trucks and other large containers.



| Part Number | Type | ACME Hose Connection | Tank Connection M. NPT | Wrench Hex Flats | Approx. Closing Flow at 100 PSIG Inlet Pressure (SCFH/Propane) |
|-------------|----------------|----------------------|------------------------|------------------|--|
| 7573D | Basic | 1 1/4" | 3/4" | 1 1/4" | 4,100 |
| 7573DC | w/ Chain & Cap | 1 1/4" | 3/4" | 1 1/4" | 4,100 |
| 3183AC | w/ Chain & Cap | 1 3/4" | 1 1/4" | 2" | 10,000 |

Single Check Vapor Equalizing Valves for ASME and DOT Containers with Supplementary Excess Flow Valves

Designed for use with RegO® Excess Flow Valves to facilitate loading operations by providing equalization of pressures in the supply and storage containers. Also may be used as a spare or replacement part.

These vapor equalizing valves must never be installed directly into container couplings. They must be used with the appropriate excess flow valve to comply with NFPA Pamphlet #58.



| Part Number | Type | Inlet Connection | Outlet Connection | Wrench Hex Flats | Approximate Closing Flow at 100 PSIG Inlet Pressure (SCFH/Propane Vapor) | For Use With Excess Flow Valve: |
|-------------|------------------|------------------|-------------------|------------------|--|---------------------------------|
| 3170 | Basic | 1 1/4" | 3/4" | 1 1/4" | 7,600 | 3272E |
| 3180C | With Cap & Chain | 1 3/4" | 1 1/4" | 1 3/4" | 10,000 | 3282A |

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

Back Pressure Valves for Container or Line Applications

Designed to provide protection of a container opening when desired flow is always into the vessel. May be used in line applications where flow must be limited to one direction.

When used with the appropriate single check filler valve, the combination forms a double check filler valve suitable for use in filling of bulk storage tanks.



A3176



A3187S



| Part Number | Brass & Steel | A Inlet Connection F. NPT | B Outlet Connection M. NPT | C Wrench Hex Flats | D Effective Length (approx.) | Propane Liquid Capacity at various differential pressures (GPM) | | | |
|-------------|---------------|------------------------------|-------------------------------|-----------------------|---------------------------------|---|---------|---------|---------|
| | | | | | | 5 PSIG | 10 PSIG | 25 PSIG | 50 PSIG |
| 3146 | Brass | 3/4" | 3/4" | 1 3/8" | 115/16" | 11 | 16 | 25 | 36 |
| 3146S* | Brass | 3/4" | 3/4" | 1 3/8" | 115/16" | 11 | 16 | 25 | 36 |
| 3176 | Brass | 1 1/4" | 1 1/4" | 2" | 1 3/8" | 28 | 40 | 63 | 89 |
| A3146 | Steel | 3/4" | 3/4" | 1 3/8" | 115/16" | 11 | 16 | 25 | 36 |
| A3176 | Steel | 1 1/4" | 1 1/4" | 2" | 1 3/8" | 28 | 40 | 63 | 89 |
| A3276BC | Steel | 1 1/4" | 1 1/4" | 2" | 2 1/2" | 32 | 45 | 73 | 103 |
| A3186 | Steel | 2" | 2" | 2 7/8" | 2 7/16" | 124 | 175 | 276 | 391 |
| A3187S* | Steel | 2" M & 1 1/4" F | 2" M & 1 1/4" F | 2 3/8" | 4 3/8" | 60 | 110 | 225 | 350 |
| A3196 | Steel | 3" | 3" | 4" | 3 15/16" | 297 | 420 | 664 | 939 |
| A3198S | Steel | 3" M & 2" F | 3" M & 2" F | 3 1/2" | 3 1/8" | 210 | 290 | 400 | |

*Soft seat version.

NOTE: Multiply flow rate by .94 to determine liquid butane capacity and by .90 to determine liquid anhydrous ammonia capacity.

Swing-Away Back Pressure Check Valves for Container or Line Applications

Designed to provide protection of a container opening when desired flow is always into the vessel. May also be used in the line applications where flow must be limited to one direction.

When used with the appropriate single check filler valve, the combination forms a double check filler valve suitable for use in filling of bulk storage tanks.

The swing-away check offers more efficient flow rates than conventional designs. It swivels open vertically to reduce pressure drop across the valve and improves flow rates.



| Part Number | Brass & Steel | Inlet Connection F. NPT | Outlet Connection M. NPT | Wrench Hex Flats | Propane Liquid Capacity at Various Differential Pressures (GPM) | | | |
|-------------|---------------|----------------------------|-----------------------------|------------------|---|---------|---------|---------|
| | | | | | 5 PSIG | 10 PSIG | 25 PSIG | 50 PSIG |
| 6586C | Brass | 2" | 2" | 2 7/8" | 190 | 270 | 420 | 600 |
| A6586C | Steel | 2" | 2" | 2 7/8" | 190 | 270 | 420 | 600 |

NOTE: Multiply flow rate by .94 to determine liquid butane capacity.

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

Back Pressure Check Valves for Flanged Installation

Designed to provide high flow capacity and allow more efficient tank filling than conventional designs. The unobstructed throat area reduces flow turbulence through the valve, thereby reducing pressure drop. Large flow channels and spacious side ports assure ample capacity for the most demanding high capacity filling operations.

The valve is designed for installation in internally threaded flanges in container bottoms.



A3400L6

| Part Number | Flange Connection M. NPT | Wrench Hex Flats | Overall Length | Propane Liquid Capacity at Various Differential Pressures (GPM) | | | |
|-------------|-----------------------------|------------------|----------------|---|---------|---------|---------|
| | | | | 5 PSIG | 10 PSIG | 25 PSIG | 50 PSIG |
| A3400L4 | 2" | Slotted | 5 1/4" | 223 | 316 | 500 | 707 |
| A3400L6 | 3" | Slotted | 5 9/32" | 424 | 600 | 949 | 1342 |

NOTE: For installation in flange tank connections with internal threads, see the "Flanged Installation in Container" section under "Excess Flow Valves." Multiply flow rate by .94 to determine liquid butane capacity and by .90 for liquid anhydrous ammonia capacity.

Chek-Lok® Adhesive Warning Labels

These adhesive warning labels are intended for application as close as possible to the Chek-Lok® once the Chek-Lok® is installed.



| Part Number | Description |
|-------------|------------------------|
| 7572-400 | Adhesive Warning Label |

DANGER

WARNING

LP-GAS IS EXTREMELY
FLAMMABLE AND EXPLOSIVE

AVOID SERIOUS INJURY AND PROPERTY DAMAGE. IF YOU SEE, SMELL, OR HEAR ESCAPING GAS... EVACUATE AREA IMMEDIATELY! CALL YOUR LOCAL FIRE DEPARTMENT! DO NOT ATTEMPT TO REPAIR. DO NOT STORE IN BUILDING OR ENCLOSED AREA. DO NOT USE ON HOT AIR BALLOONS OR AIRCRAFT.

CAUTION!

Use this CHECK-LOK® connection only for liquid evacuation before moving tank in accordance with NFPA Pamphlet 58, which is the law in many states. This publication is available from NFPA, Batterymarch Park, Quincy, MA 02269. Read and follow ECII® product instruction number 7572FA-301.

DO NOT REMOVE, DEFACE OR OBLITERATE THIS LABEL.
DO NOT FILL THIS CONTAINER UNLESS THIS LABEL IS READABLE.

ADDITIONAL SAFETY INFORMATION IS AVAILABLE FROM

ECII Engineered Controls
International, Inc.

Printed in U.S.A. 03-0994-1189
Part No. 7572-400

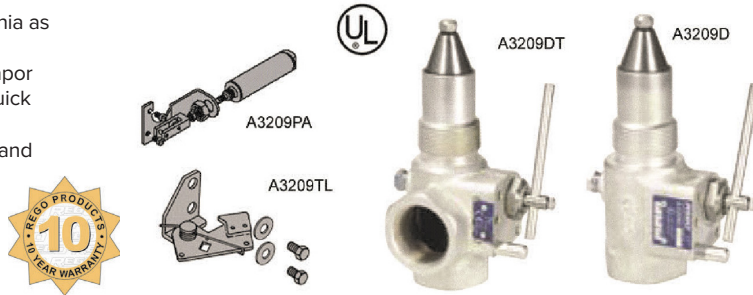
100 Rego Drive PO Box 247 Ebon College, NC 27244 USA Phone (336) 485-7707 Fax (336) 485-6954 www.regoproducts.com

REGO EXCESS FLOW, CHECK, FILLER & VAPOR EQUALIZING VALVES

REGO INTERNAL VALVES & ASSEMBLIES

1 1/4" Threaded Internal Valve for Small Capacity Pumping Systems and Bobtail Vapor Equalization

Designed primarily for use with LP-Gas and anhydrous ammonia as a main valve on small capacity pumping systems, NH₃ nurse tanks and in-line installations. It may also be installed in the vapor equalizing opening on bobtail delivery trucks. Installation is quick and easy, and it fits in both full and half couplings, as well as, in-line applications. The valve may be actuated manually by hand or cable.



| Part Number | Inlet Connection M. NPT | Outlet Connection F. NPT | Closing Flow | | LP-Gas Vapor Capacity** (SCFH/Propane) | | Accessories | |
|-------------|-------------------------|--------------------------|--------------|-----------------|--|----------|---------------|--------------------|
| | | | LP-Gas | NH ₃ | 25 PSIG | 100 PSIG | Thermal Latch | Pneumatic Actuator |
| A3209D050 | 1 1/4" | 1 1/4" | 50 | 45 | 13,300 | 22,900 | A3209TL | A3209PA |
| A3209D080 | 1 1/4" | 1 1/4" | 80 | 72 | 15,700 | 26,700 | A3209TL | A3209PA |
| A3209DT050 | 1 1/4" | 1 1/4" | 50 | 45 | 13,300 | 22,900 | A3209TL | A3209PA |
| A3209DT080 | 1 1/4" | 1 1/4" | 80 | 72 | 15,700 | 26,700 | A3209TL | A3209PA |

* Installs in full or half coupling.
** Data for flow in half coupling.

New A3209PAF Actuator

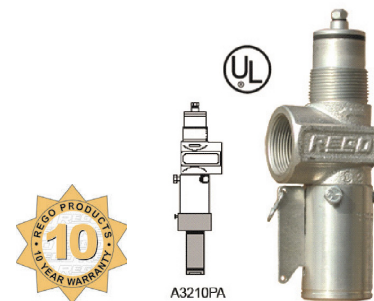
This actuator permits the A3209 internal valve to be opened and closed remotely. It can be used with the air brake system on a bobtail, or can be used at a dispenser or bulk plant.



| Part Number | Minimum Operating Pressure | Maximum Operating Pressure |
|-------------|----------------------------|----------------------------|
| A3209PAF | 40 PSIG | 125 PSIG |

1 1/4" Threaded Angle Internal Valve for Motor Fuel Dispensers and Small Capacity Pumping Systems

Designed primarily for use with LP-Gas and anhydrous ammonia as a main valve on pump systems with small capacity, such as motor fuel dispensers. It may also be installed in bottom liquid withdrawal openings in NH₃ nurse tanks or the vapor equalizing opening of bobtail delivery trucks. Installation is quick and easy, and must be installed in a modified half coupling or the equivalent. The valve may be actuated manually by cable or pneumatically.



| Part Number | Inlet Connection | Outlet Connection | Closing Flow (GPM) | | LP-Gas Vapor Capacity (SCFH/Propane) | | | | Accessories Pneumatic Actuator |
|-------------|------------------|-------------------|--------------------|-----------------|--------------------------------------|---------------|---------------|----------------|--------------------------------|
| | | | LP-Gas | NH ₃ | 25 PSIG Inlet | 50 PSIG Inlet | 75 PSIG Inlet | 100 PSIG Inlet | |
| A3210A065 | 1 1/4" | 1 1/4" | 65 | 58.5 | 17,000 | 22,250 | 26,500 | 30,000 | A3210PA-R1 |

For use in half coupling only, 1 1/2" diameter minimum bore. If welded-in dip pipe is required, use of 1 1/2" schedule 40 pipe is recommended –flow will be reduced by approximately 10%.

REGO INTERNAL VALVES & ASSEMBLIES

REGO INTERNAL VALVES & ASSEMBLIES

Straight Through 1 1/2" Internal Valve A3211D Series

Designed primarily for use with LP-Gas and anhydrous ammonia as a main valve on pumping systems, and in-line installations. Installation is quick and easy, and it fits in both full and half couplings, as well as, in-line applications. The valve may be opened manually by hand or pneumatic actuator.



A3211D

| Part Number | Inlet M-NPT | Outlet F-NPT | Closing Flow GPM | | | | LP-Gas Vapor Capacity (SCFH/Propane) | | Accessories | |
|-------------|-------------|--------------|----------------------|-------------------|----------------------|-------------------|--------------------------------------|----------------|---------------|--------------------|
| | | | Half Coupling LP-Gas | Half Coupling NH3 | Full Coupling LP-Gas | Full Coupling NH3 | 25 PSIG Inlet | 100 PSIG Inlet | Thermal Latch | Pneumatic Actuator |
| | | | | | | | | | | |
| A3211D080 | 1 1/2" | 1 1/2" | 80 | 72 | 63 | 67 | 15,700 | 26,700 | A3209TL | A3209PAF |
| A3211D110 | 1 1/2" | 1 1/2" | 110 | 99 | 84 | 76 | N/A | N/A | A3209TL | A3209PAF |

3" Flanged Internal Valve for Bobtail Delivery Trucks, Transports, and Large Stationary Storage Tanks

Designed primarily for LP-Gas and anhydrous ammonia filling and/or withdrawal on MC331 bobtail delivery trucks, transports and stationary storage tanks with flanged pumps or piping. Installation is quick and easy, and the valve may be operated manually by cable or pneumatically.

Lever available on right or left side to allow for installation without the use of an extra pulley.



Single Flange Body

| Part Number | Operating Lever Position | Inlet Connection | Outlet Connection | Closing Flow GPM | | Accessories Pneumatic Actuator |
|-------------|--------------------------|-----------------------------------|------------------------|------------------|-----|--------------------------------|
| | | | | LP-Gas | NH3 | |
| A3217AR160 | Right Side | 3" 300# ANSI RF Modified Flange** | 3" 300# ANSI RF Flange | 160 | 145 | A3217ARPA |
| A3217AL160 | Left Side | 3" 300# ANSI RF Modified Flange** | 3" 300# ANSI RF Flange | 160 | 145 | A3217ALPA |
| A3217AR210 | Right Side | 3" 300# ANSI RF Modified Flange** | 3" 300# ANSI RF Flange | 210 | 190 | A3217ARPA |
| A3217AL210 | Left Side | 3" 300# ANSI RF Modified Flange** | 3" 300# ANSI RF Flange | 210 | 190 | A3217ALPA |
| A3217AR260 | Right Side | 3" 300# ANSI RF Modified Flange** | 3" 300# ANSI RF Flange | 260 | 236 | A3217ARPA |
| A3217AL260 | Left Side | 3" 300# ANSI RF Modified Flange** | 3" 300# ANSI RF Flange | 260 | 236 | A3217ALPA |
| A3217AR410 | Right Side | 3" 300# ANSI RF Modified Flange** | 3" 300# ANSI RF Flange | 410 | 372 | A3217ARPA |
| A3217AL410 | Left Side | 3" 300# ANSI RF Modified Flange** | 3" 300# ANSI RF Flange | 410 | 372 | A3217ALPA |

Double Flange Body

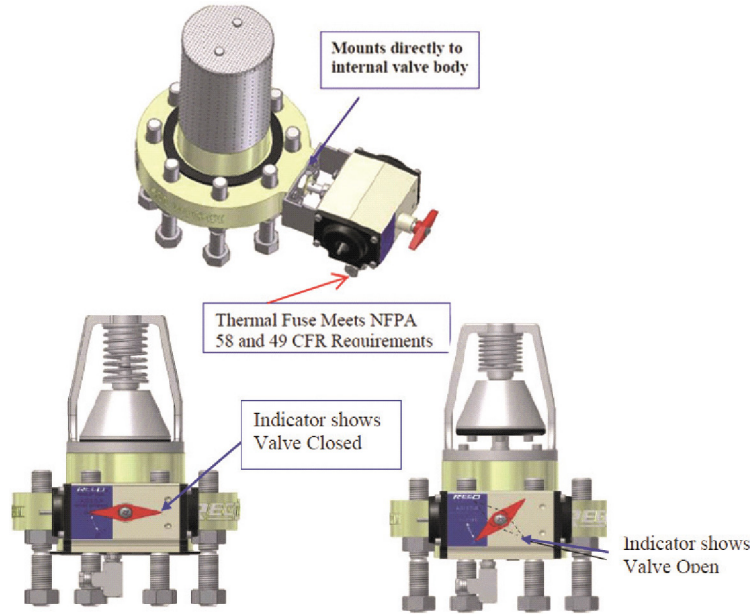
| Part Number | Operating Lever Position | Inlet Connection | Outlet Connection | Closing Flow GPM | | Accessories Pneumatic Actuator |
|-------------|--------------------------|-----------------------------------|------------------------|------------------|-----|--------------------------------|
| | | | | LP-Gas | NH3 | |
| A3217DAR160 | Right Side | 3" 300# ANSI RF Modified Flange** | 3" 300# ANSI RF Flange | 160 | 145 | A3217ARPA |
| A3217DAL160 | Left Side | 3" 300# ANSI RF Modified Flange** | 3" 300# ANSI RF Flange | 160 | 145 | A3217ALPA |
| A3217DAR210 | Right Side | 3" 300# ANSI RF Modified Flange** | 3" 300# ANSI RF Flange | 210 | 190 | A3217ARPA |
| A3217DAL210 | Left Side | 3" 300# ANSI RF Modified Flange** | 3" 300# ANSI RF Flange | 210 | 190 | A3217ALPA |
| A3217DAR260 | Right Side | 3" 300# ANSI RF Modified Flange** | 3" 300# ANSI RF Flange | 260 | 236 | A3217ARPA |
| A3217DAL260 | Left Side | 3" 300# ANSI RF Modified Flange** | 3" 300# ANSI RF Flange | 260 | 236 | A3217ALPA |
| A3217DAR410 | Right Side | 3" 300# ANSI RF Modified Flange** | 3" 300# ANSI RF Flange | 410 | 372 | A3217ARPA |
| A3217DAL410 | Left Side | 3" 300# ANSI RF Modified Flange** | 3" 300# ANSI RF Flange | 410 | 372 | A3217ALPA |

* Valve supplied with 16 nuts and 8 studs for mounting.

** Modified bore = 4 5/8" diameter with 5 3/4" diameter raised face.

REGO INTERNAL VALVES & ASSEMBLIES

Rotary Pneumatic Actuators



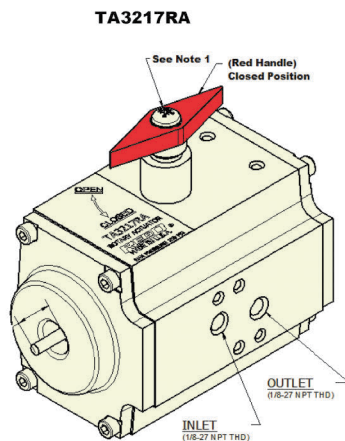
Application:

Designed primarily for use with A3217A & DA Series Internal Valves on MC331 bobtail delivery trucks and transports. The TA3217RA & LA Series Pneumatic Actuators operates on compressed air systems and has a higher operating pressure range of 90 PSI (MIN) to 150 PSI (MAX).

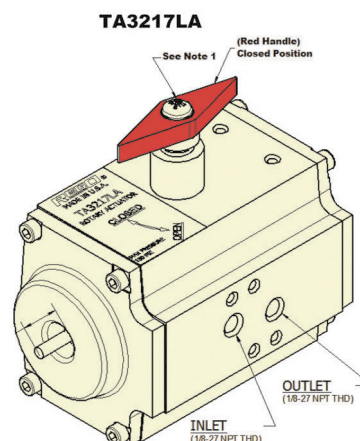
Features:

- Easy Installation
- Compact Design
- Factory preset for open/close operation -
- No field adjustment required
- Long Operation Life
- Open/Closed Indicator
- Operates on Compressed air or Nitrogen
- Operating pressure range 90 PSI (MIN) – 150 PSI (MAX)
- Thermal Fuse Included

| Part Number | For Use On | Description |
|-------------|---------------------------------|--|
| TA3217RA | A3217AR Series, A3217DAR Series | Right Hand High Pressure Rotary Actuator |
| TA3217LA | A3217AL Series, A3217DAL Series | Left Hand High Pressure Rotary Actuator |



1. Indicator button Shown in closed Position, Right Hand Version Rotates 45° clockwise to open



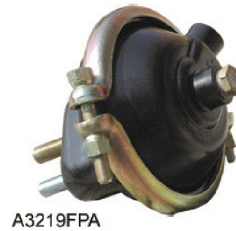
1. Indicator button Shown in closed Position, Right Hand Version Rotates 45° clockwise to open.

REGO INTERNAL VALVES & ASSEMBLIES

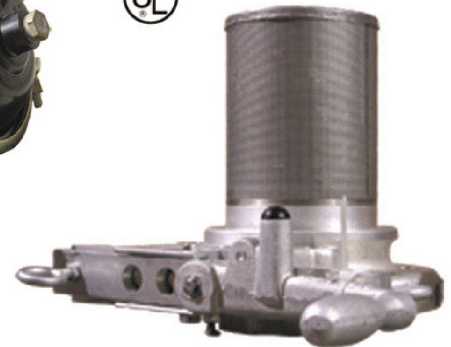
REGO INTERNAL VALVES & ASSEMBLIES

4" Flanged Internal Valve for Transports and Large Stationary Storage Tanks

Designed primarily for LP-Gas and anhydrous ammonia service on MC331 transport pressure vessels and large stationary storage tanks. Installation is quick and easy, and it fits in most existing tank flanges. The valve may be actuated manually or pneumatically. Use of the A3219RT Remote Thermal Release with this valve is suggested to provide a remote means of mechanical closure along with thermal protection, as required by DOT MC331.



A3219FPA

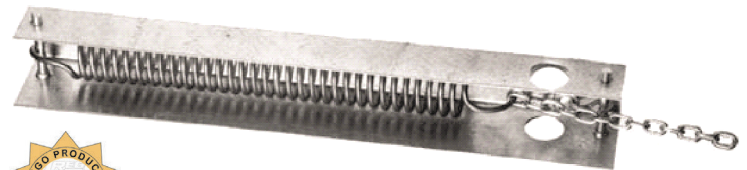


| Part Number | Inlet Connection | Outlet Connection | Closing Flow GPM | | Accessories | |
|---------------------|-----------------------------------|------------------------|------------------|-----|--------------------|------------------------|
| | | | LP-Gas | NH3 | Pneumatic Actuator | Remote Thermal Release |
| A3219FA600L* | 4" 300# ANSI RF Modified Flange** | 4" 300# ANSI RF Flange | 600 | 544 | A3219FPA | A3219RT (2) |
| A3219FA400L* | 4" 300# ANSI RF Modified Flange** | 4" 300# ANSI RF Flange | 400 | 360 | A3219FPA | A3219RT (2) |

* Valve supplied with 16 nuts and 8 studs for mounting.
** Modified bore = 5 7/8" diameter with 7" diameter raised face.

Remote Thermal Release for DOT MC331 Pressure Vessel

Designed especially for use with Internal Valves installed in DOT MC331 pressure vessels. The A3219RT provides a remote means of mechanical closure along with thermal protection, as required by DOT MC331. The A3219RT is connected by cable to the internal valve(s) on the vessel. In the event of extreme heat (over 212° F), the fuse link will melt, causing the spring to contract and pull the cable. When properly installed the cable will trip the internal valve release lever(s) allowing the connected handle(s) to move to the closed position.



| Part Number | For Use With | Release Temperature | Spring Load | | Minimum Number Required By MC331 |
|----------------|-----------------|---------------------|----------------|-----------------|----------------------------------|
| | | | Fully Extended | After 4" Travel | |
| A3219RT | Internal Valves | 212° F. | =100 lbs. | =50 lbs. | 2 |

Remote Cable Controls for Internal Valves

The 3200C Remote Cable Kit is designed especially for use with the 3200L Remote Operating Lever to operate internal valves from a remote location.

The internal valve is opened by pulling back the remote operation lever and closed by returning the lever to its original position. A remote release is provided to close the internal valve from a different remote location.



| Part Number | Contents | Description |
|--------------|---|------------------|
| 3200C | 100 Foot Cable, 6 Cable Clamps, Quick Link, Sign, Fuse Link, Steel Nut and Bolt | Remote Cable Kit |
| 3200L | Lever Assembly | Operating Lever |

REGO INTERNAL VALVES & ASSEMBLIES

REGO INTERNAL VALVES & ASSEMBLIES

Flomatic® Internal Valves for Bobtail Delivery Trucks, Transports and Large Stationary Storage Tanks

Designed primarily for LP-Gas and anhydrous ammonia liquid withdrawal on MC331 bobtail delivery trucks, transports and large stationary storage containers with flanged connections. The valve is fully automatic, opening and closing as the pump is turned on or off.



A7853A 1/4" Three-Way Quick-Acting Valve



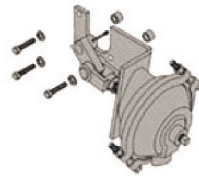
| Part Number | Inlet Connection ANSI Flange | Outlet Connection ANSI Flange | Strainer Width | Base Width | Overall Height (Approx.) | Height from Indicator to Base | Accessories (included with Flomatic®) | |
|-------------|------------------------------|-------------------------------|----------------|------------|--------------------------|-------------------------------|---------------------------------------|-------------|
| | | | | | | | Filter | 3-Way Valve |
| A7883FK | 3"-300#** | 3"-300# | 4 3/4" | 8 1/4" | 10 7/8" | 4 13/16" | A7884-201 | A7853A |
| A7884FK | 4"-300#*** | 4"-300# | 5 3/4" | 10" | 11 1/4" | 4 15/16" | A7884-201 | A7853A |

* Supplied with A7853A 3-way valve, A7884-201 filter, studs, nuts and gaskets.
 ** With 4 13/16" diameter bore.
 *** With 5 13/16" diameter bore.

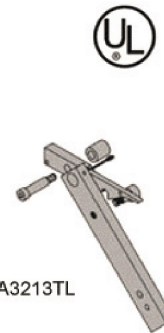
Threaded Internal Valves For Bobtail Delivery Trucks, Transports and Stationary Storage Tanks

Application

Designed primarily for use with LP-Gas and anhydrous ammonia for liquid withdrawal; vapor transfer or vapor equalization of bobtail delivery trucks, transports, stationary storage tanks, and in-line installations. The valve may be operated manually by cable or pneumatically.



A3213PA



A3213TL



| Part Number | Inlet Connection M. NPT | Outlet Connection F. NPT | Closing Flow (GPM) Half Coupling | | Closing Flow (GPM) Full Coupling | | apor Closing Flow (SCFH) | | A | B | C | D | E | F | Accessories | |
|-------------|-------------------------|--------------------------|----------------------------------|-----------------|----------------------------------|-----------------|--------------------------|----------------|---------|----------|--------|---|---|--------|---------------|--------------------|
| | | | LP-Gas | NH ₃ | LP-Gas | NH ₃ | 25 PSIG Inlet | 100 PSIG Inlet | | | | | | | Thermal Latch | Pneumatic Actuator |
| | | | A3212R105 | 2" | 2" | 105 | 95 | 65 | | | | | | | | |
| A3212R175 | 2" | 2" | 175 | 158 | 100 | 90 | - | - | 1 9/16" | 4 11/16" | 4 1/8" | - | - | - | A3213TL | A3213PA |
| A3212R250 | 2" | 2" | 250 | 225 | 130 | 117 | - | - | 1 9/16" | 4 11/16" | 4 1/8" | - | - | - | A3213TL | A3213PA |
| A3213D150 | 3" | 3" | 150 | 135 | 125 | 113 | 26,900 | 45,900 | 1 1/2" | 5 7/8" | 4 1/4" | - | - | 7 1/8" | A3213TL | A3213PA |
| A3213D200 | 3" | 3" | 200 | 180 | 160 | 144 | 32,300 | 55,100 | 1 1/2" | 5 7/8" | 4 1/4" | - | - | 7 1/8" | A3213TL | A3213PA |
| A3213D300 | 3" | 3" | 300 | 270 | 250 | 225 | 50,500 | 86,500 | 1 1/2" | 5 7/8" | 4 1/4" | - | - | 7 1/8" | A3213TL | A3213PA |
| A3213D400 | 3" | 3" | 400 | 360 | 325 | 293 | 71,400 | 121,300 | 1 1/2" | 5 7/8" | 4 1/4" | - | - | 7 1/8" | A3213TL | A3213PA |

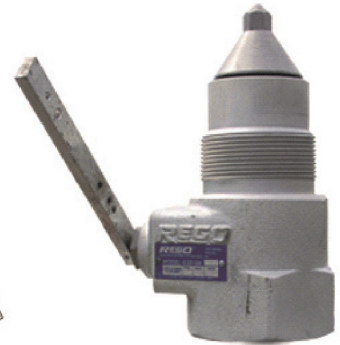
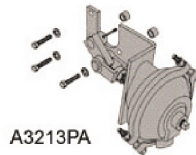
REGO INTERNAL VALVES & ASSEMBLIES

REGO INTERNAL VALVES & ASSEMBLIES

Threaded Internal Valves For Bobtail Delivery Trucks, Transports and Stationary Storage Tanks

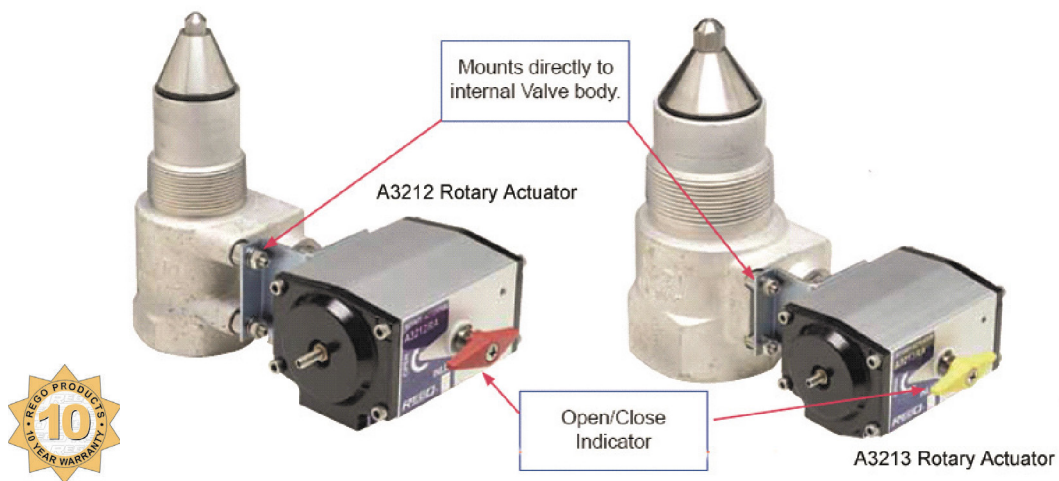
Application

Designed primarily for use with LP-Gas and anhydrous ammonia for liquid withdrawal; vapor transfer or vapor equalization of bobtail delivery trucks, transports, stationary storage tanks, and in-line installations. The valve may be operated manually by cable or pneumatically.



| Part Number | Inlet Connection M. NPT | Outlet Connection F. NPT | Closing Flow (GPM) Half Coupling | | Closing Flow (GPM) Full Coupling | | apor Closing Flow (SCFH) | | A | B | C | D | E | F | Accessories | |
|-------------|----------------------------|-----------------------------|----------------------------------|-----|----------------------------------|-----|--------------------------|----------------|---------|----------|--------|--------|--------|--------|---------------|--------------------|
| | | | LP-Gas | NH3 | LP-Gas | NH3 | 25 PSIG Inlet | 100 PSIG Inlet | | | | | | | Thermal Latch | Pneumatic Actuator |
| | | | A3212RT105 | 2" | 2" | 105 | 95 | 65 | | | | | | | 59 | - |
| A3212RT175 | 2" | 2" | 175 | 158 | 100 | 90 | - | - | 1 9/16" | 4 11/16" | 4 1/8" | - | - | - | A3213TL | A3213PA |
| A3212RT250 | 2" | 2" | 250 | 225 | 130 | 117 | - | - | 1 9/16" | 4 11/16" | 4 1/8" | - | - | - | A3213TL | A3213PA |
| A3213DT150 | 3" | 3" | 150 | 135 | 125 | 113 | 26,900 | 45,900 | 1 1/2" | 7 15/16" | 4 1/4" | 3 7/8" | 4 1/2" | 3 1/2" | A3213TL | A3213PA |
| A3213DT200 | 3" | 3" | 200 | 180 | 160 | 144 | 32,300 | 55,100 | 1 1/2" | 7 15/16" | 4 1/4" | 3 7/8" | 4 1/2" | 3 1/2" | A3213TL | A3213PA |
| A3213DT300 | 3" | 3" | 300 | 270 | 250 | 225 | 50,500 | 86,500 | 1 1/2" | 7 15/16" | 4 1/4" | 3 7/8" | 4 1/2" | 3 1/2" | A3213TL | A3213PA |
| A3213DT400 | 3" | 3" | 400 | 360 | 325 | 293 | 71,400 | 121,300 | 1 1/2" | 7 15/16" | 4 1/4" | 3 7/8" | 4 1/2" | 3 1/2" | A3213TL | A3213PA |

Rotary Actuator Kits A3212RA & A3213RA



| Part Number | Used On |
|-------------|---------------|
| A3212RA | A3212R Series |
| A3213RA | A3213R Series |

REGO INTERNAL VALVES & ASSEMBLIES

REGO ADAPTERS, CONNECTORS & FITTINGS

Extended Type Hose Couplings for Vapor and Liquid Service

Designed especially for liquid filling and vapor equalization of LP-Gas and anhydrous ammonia. The limited travel of the handle on the tailpiece minimizes spin-off, encouraging cautious removal to properly bleed off trapped product to assure closure of the filler valve and hose end valve. The ACME threads are machined on a rugged steel insert which is permanently cast in the aluminum handle, providing for durability under repeated use.



A7571 Series



A7575 Series

| Part Number | Type of Service | Hose Connection (M. NPT) | Coupling Connection (F. ACME) | Approx. Length |
|-------------|-----------------|--------------------------|-------------------------------|----------------|
| A7575L2* | Liquid | 1/2" | 1 3/4" | 7" |
| A7575L3 | Liquid | 3/4" | 1 3/4" | 7" |
| A7575L4 | Liquid | 1" | 1 3/4" | 7" |
| A7575L5** | Liquid | 1 1/4" | 1 3/4" | 7" |
| A7571LA | Vapor | 1/2" | 1 1/4" | 7" |
| A7571LB | Vapor | 3/4" | 1 1/4" | 7" |

* Includes 7199-33 adapter, shipped loose.

** Includes A7575L5-1 adapter, shipped loose.

Short Type Hose Couplings for Vapor and Liquid Service



Style A
For Liquid Filling



Style B
For Liquid Filling



Style C
For Vapor Equalizing



Style D
For Vapor Equalizing



| Part Number | Material | Style | Hose Connection (M. NPT) | Coupling Connection (F. ACME) | Tailpiece Bore | Hose End To Nut | Overall Length |
|-------------|--------------------------|-------|--------------------------|-------------------------------|----------------|-----------------|----------------|
| 3175B | Brass | A | 1/2" | 1 3/4" | 35/64" | 2" | 2 7/8" |
| 3175 | Brass | A | 3/4" | 1 3/4" | 3/4" | 2" | 2 7/8" |
| 3175A | Brass | A | 1" | 1 3/4" | 3/4" | 2" | 2 7/8" |
| 3185 | Brass | B | 1 1/4" | 2 1/4" | 13/16" | 2 1/16" | 3 1/8" |
| 3195 | Brass Nut & Steel Nipple | B | 2" | 3 1/4" | 113/16" | 2 1/8" | 3 5/8" |
| A3175 | Steel | A | 3/4" | 1 3/4" | 3/4" | 2" | 2 7/8" |
| A3175A | Steel | A | 1" | 1 3/4" | 3/4" | 2" | 2 7/8" |
| A3185 | Steel | B | 1 1/4" | 2 1/4" | 13/16" | 2 1/8" | 3 1/8" |
| A3195 | Steel | B | 2" | 3 1/4" | 113/16" | 2 1/8" | 3 5/8" |
| 3171 | Brass | C | 3/8" | 1 1/4" | 13/32" | 13/16" | 2 7/16" |
| 3171A | Brass | C | 1/2" | 1 1/4" | 17/32" | 13/16" | 2 7/16" |
| 3181 | Brass | C | 3/4" | 1 3/4" | 11/16" | 2" | 3 1/4" |
| 3181A | Brass | C | 1" | 1 3/4" | 15/16" | 17/8" | 3 1/8" |
| 3191 | Brass | D | 1 1/4" | 2 1/4" | 3/16" | 2 1/8" | 3 5/16" |

REGO ADAPTERS, CONNECTORS & FITTINGS

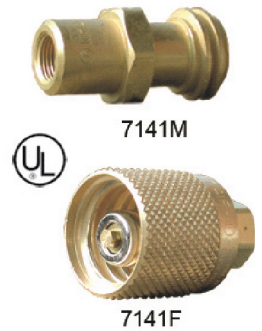
REGO ADAPTERS, CONNECTORS & FITTINGS

ACME Check Connectors for Lift Trucks

These brass connectors are especially designed to join the carburetor fuel line to the service valve on lift truck cylinders. Sturdy, long lasting ACME threads allow quick, hand-tight assembly that provides for quick and simple cylinder replacement. Back checks automatically close in each connector when disconnected.

The 7141M couples directly to the service valve. An integral O-ring is designed to seal before the internal check opens, aiding in product loss prevention. A gasket at the ACME thread is a secondary seal when the connectors are tightened together. The connector fits RegO® lift truck cylinder filling adapters for fast, convenient filling.

The 7141F accepts fuel line adapter and couples directly to the 7141M. The O-ring seal in the 7141M is designed to seal before the internal check opens to allow product to pass through the connection. The knurled coupling eases threading and the ACME threads provide rapid effortless make-up, even against LP-Gas pressure



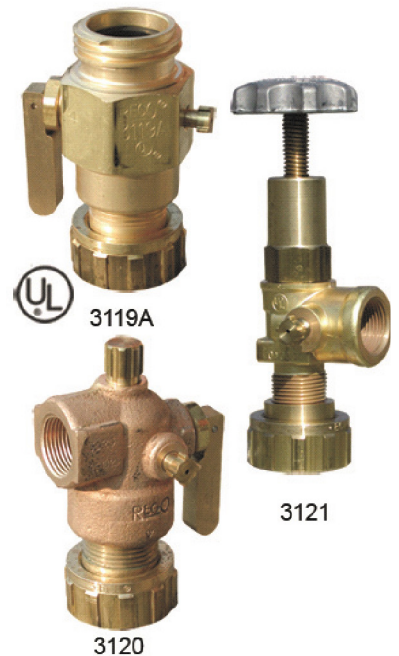
| Part Number | Application | Inlet | Outlet | Protective Cap* | |
|-------------|---------------|----------------|----------------|-----------------|--------|
| | | | | Rubber | Brass |
| 7141M | Service Valve | 3/8" F. NPT | 1 1/4" M. ACME | 7141M-40 | 7141FP |
| 7141F | Fuel Line | 1 1/4" F. ACME | 1/4" F. NPT | - | - |

* Recommended to minimize foreign material entering valves which could result in leakage

Unloading Adapters for Container Evacuation

Designed to provide an efficient means of evacuating an LP-Gas container for relocation or repair. They thread directly onto the 1 3/4" ACME male hose connection of RegO® Filler Valves used on RegO® Double Check Filler Valves and Multivalves®.

The unloading adapters can be used to withdraw liquid provided the container is equipped with a dip pipe extending from the filler valve to the bottom of the container.



| Part Number | Style | A Filler Valve Connection | B Hose Connection |
|-------------|---------|---------------------------|-------------------|
| 3119A | In-Line | 1 3/4" F. ACME | 1 3/4" M. ACME |
| 3120 | Angle | 1 3/4" F. ACME | 3/4" F. NPT |
| 3121 | Angle | 1 3/4" F. ACME | 3/4" F. NPT |

Hose End Valve Adapter 7576

Application

No gas flow is allowed when this adapter is not connected to the 1-3/4" ACME connection of a filler valve, it also acts as a back check.



| Part Number | Vent Valve | Filler Connection | Hose End Valve Connection | Propane Liquid Capacity @ 80 PSID |
|-------------|------------|-------------------|---------------------------|-----------------------------------|
| 7576 | Yes | 1 3/4" F. ACME | 1 3/4" M. ACME | 57 GPM |

REGO ADAPTERS, CONNECTORS & FITTINGS

Low Emission Acme Connector

Application

Designed to provide fast filling of bobtails, transports and large bulk storage tanks while providing for low emission of LPG when disconnecting.

Features:

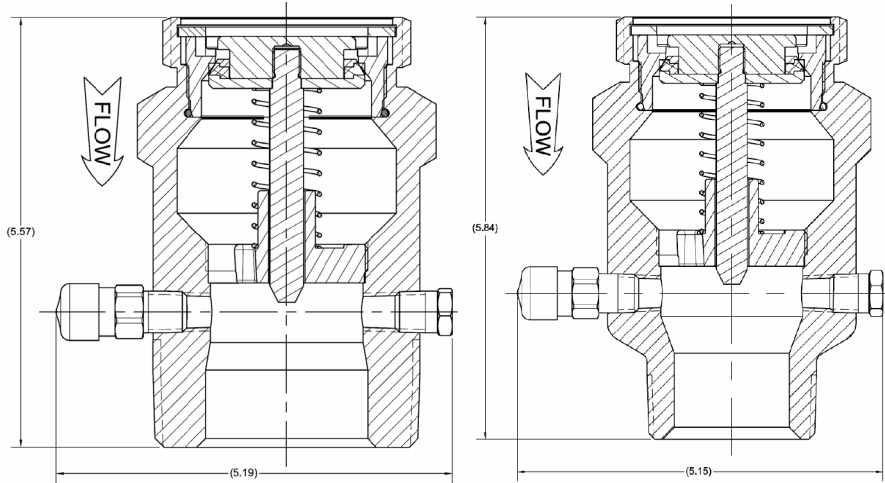
- 3-1/4" Male Acme Connector with reduced emissions, 90% less than current ECII ACME adapters.
- 10.5 cubic centimeters of liquid discharged at disconnect
- UL Listed as a Filler Valve.
- Safety groove is designed to shear below ACME threads leaving the valve seat closed and unaffected if the vehicle pulls away with the hose connected.
- Seat disc is made of synthetic composition and is mechanically held in place by a seat disc retainer.
- Stainless Steel return spring.
- One- piece poppet stem for smooth operation.
- Will connect to any standard female 3-1/4" ACME adapter.
- Hydrostatic relief valve included (3125L).

Materials

Upper Body..... Brass
 Lower Body..... Brass
 Poppet & Stem Assembly..... Brass
 Spring..... Stainless Steel
 Gasket..... Resilient Synthetic Rubber
 Seat Disc..... Resilient Synthetic Rubber



| Part Number | ACME Connection | Outlet Connection M.NPT | Wrench Flats | Hydrostatic Relief Valve | Propane Capacity at Various Differential Pressures (GPM) | | | Description |
|-------------|-----------------|-------------------------|--------------|--------------------------|--|---------|---------|--|
| | | | | | 5 PSIG | 10 PSIG | 25 PSIG | |
| 6588LE | 3-1/4 | 2" | 3-1/2" | 3125L | 138 | 223 | 349 | 3-1/4" ACME x 2"MNPT Low-Emission Connection |
| 6589LE | 3-1/4 | 3" | 3-1/2" | 3125L | 138 | 223 | 349 | 3-1/4" ACME x 3"MNPT Low-Emission Connection |



Filler Hose Adapters

These adapters are designed with minimal flow restriction and recommended for use on the outlet of the LP-Gas delivery truck filler hose. If the controlled bleed off of the connection indicates the filler valve on the tank being filled has failed to close, the hose adapter should be left in place on the filler valve and disconnection should be made at the regular filler hose coupling. (Repair of the filler valve must be made as soon as possible). An integral check valve in these adapters helps prevent further loss of product. The standard filler valve cap should be attached to these adapters when left on the container



3179B



7577V



| Part Number | Built-in Vent Valve | Filler Valve Connection | Hose Connectio |
|-------------|---------------------|-------------------------|----------------|
| 7577V | Yes | 1 3/4" F. ACME | 1 3/4" M. ACME |
| 3179B | No | 1 3/4" F. ACME | 1 3/4" M. ACME |

REGO ADAPTERS, CONNECTORS & FITTINGS

REGO ADAPTERS, CONNECTORS & FITTINGS

ACME Plugs

Specifically designed to withstand the everyday abuse given hose end valves on delivery trucks and hose end couplings on risers in bulk plants. These rugged plugs protect the coupling tip as well as prevent the entrance of dirt, dust, snow and rain. They also prevent possible gas contamination from these same sources. The heavily ribbed outer surface permits hand-tight make-up.



| Part Number | Material | (M. ACME) | Chain & Ring Fits Pipe Size Up To: |
|-------------|----------|-----------|------------------------------------|
| C5763N | Nylon | 1 1/4" | 3/4" |
| C5765N | Nylon | 1 3/4" | 1 1/4" |
| 5765PR | Brass | 1 3/4" | Not Applicable |
| C5767N | Nylon | 2 1/4" | 1 1/4" |
| C5769N | Nylon | 3 1/4" | 2" |

POL Plugs



Highly recommended for installation in LP-Gas cylinder valve POL outlets whenever the service line is disconnected or when the cylinder is being transported.

When properly installed, the POL plug is designed to prevent contamination of the valve outlet and guards against product leakage if the cylinder valve is accidentally opened.

| Part Number | Material | Connection |
|-------------|----------|------------------|
| N970P | Cyclac | M. POL (CGA 510) |
| 3705RC | Brass | M. POL (CGA 510) |

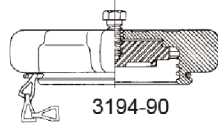
REGO ADAPTERS, CONNECTORS & FITTINGS

REGO ADAPTERS, CONNECTORS & FITTINGS

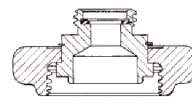
Caps and Reducers



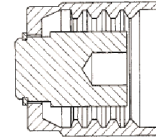
3144-91
Plastic Cap



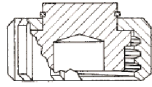
3194-90
Metal Cap



A5776
Reducer Coupling



7141FP Cap Plug



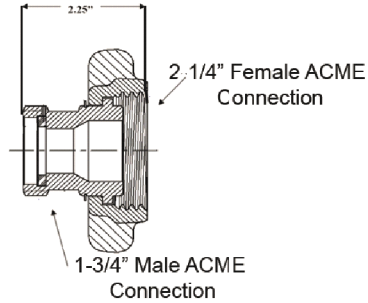
3175P Cap Plug



1708C POL Cap



907FP



Cap With Chain & Ring

| Part Number | Ring Fits Pipe Size Up To: | Material | Thread Connection |
|-------------|----------------------------|----------|-------------------|
| 3144-91 | 3/4" | Cyclac | 1 1/4" F. ACME |
| 3174-91 | 3/4" | Cyclac | 1 3/4" F. ACME |
| 3174-93 | 1 1/4" | Cyclac | 1 3/4" F. ACME |
| A8016-93 | 1 1/4" | Nylon | 1 3/4" F. ACME |
| 1708 | 3/4" | Brass | F. POL (CGA 510) |
| 7141FP | 1 1/4" | Brass | 1 1/4" F. ACME |
| 3175P | 1 1/4" | Brass | 1 3/4" F. ACME |
| 3184-90 | 2" | Brass | 2 1/4" F. ACME |
| 3194-90 | 3" | Brass | 3 1/4" F. ACME |
| A3184-90 | 2" | Steel | 2 1/4" F. ACME |
| A3194-90 | 3" | Steel | 3 1/4" F. ACME |
| 907FP | 1" | Brass | 1 15/16" F. ACME |

1 3/4" ACME Steel Cap for NH₃

Application

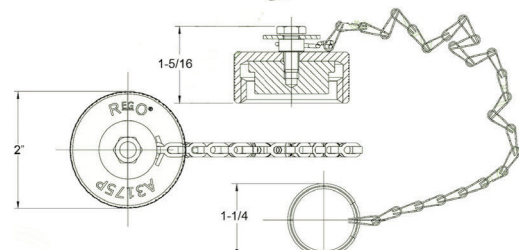
The A3175P is a 1-3/4" cap for use with 1-3/4" ACME connections for Anhydrous Ammonia service

Features:

- Adjustable plated steel ring fits any Pipe.
- Durable 17" plated steel chain.
- High quality stamping.
- Ships in protective plastic sleeve to prevent damage

Materials

BodySteel 1-3/4" F. ACME
Chain & RingPlated Steel



| Part Number | Thread Connection | Outside Diameter | Height | Material |
|-------------|-------------------|------------------|---------|----------|
| A3175P | 1-3/4" ACME | 2" | 1-5/16" | Steel |

REGO ADAPTERS, CONNECTORS & FITTINGS

REGO ADAPTERS, CONNECTORS & FITTINGS

Caps and Reducers

Cap Only

| Part Number | Material | Thread Connection |
|-------------|----------|---------------------------------|
| 3144-9P | Cycolac | 1 1/4" F. ACME |
| 3174-9P | Cycolac | 1 3/4" F. ACME |
| A8016-9P | Nylon | 1 3/4" F. ACME |
| 3194-9 | Brass | 3 1/4" F. ACME |
| 5776* | Brass | 3 1/4" F. ACME |
| A5776* | Steel | 3 1/4" F. ACME |
| 5774* | Brass | 2-1/4" F. ACME X 1 3/4" M. ACME |
| 5778** | Brass | 3-1/4" F-ACME X 2-1/4" M-ACME |

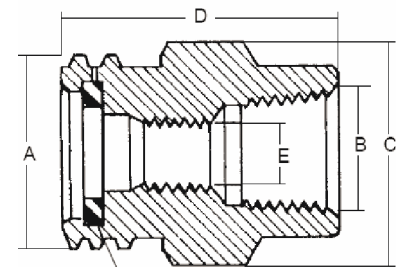
* Reduces to 1 3/4" M. ACME

** Reduces to 2-1/4" M. ACME

ACME Adapters

ACME x Female NPT

| Part Number | Material | A M. ACME | B FNPT | C Hex | D | E Diameter | For Spare Gasket Order Part No. |
|-------------|----------|-----------|--------|--------|---------|------------|------------------------------------|
| | | | | | | | |
| 5764A | Brass | 1 3/4" | 1/4" | 1 3/4" | 1 1/2" | 3/4" | A2697-20R |
| 5764B | Brass | 1 3/4" | 3/8" | 1 3/4" | 1 7/8" | 3/4" | A2697-20R |
| 5764C | Brass | 1 3/4" | 1/2" | 1 3/4" | 1 7/8" | 3/4" | A2697-20R |
| 5764D | Brass | 1 3/4" | 3/4" | 1 3/4" | 1 7/8" | 3/4" | A2697-20R |
| 5764E | Brass | 1 3/4" | 1" | 1 3/4" | 1 7/8" | 3/4" | A2697-20R |
| 5766E | Brass | 2 1/4" | 1" | 2 1/4" | 2 5/16" | 1 3/8" | A3184-8R |
| 5766F | Brass | 2 1/4" | 1 1/4" | 2 1/4" | 2 5/16" | 1 3/8" | A3184-8R |
| 5768G | Brass | 3 1/4" | 1 1/2" | 3 1/2" | 3 5/8" | 2 1/8" | A3194-8R |
| 5768H | Brass | 3 1/4" | 2" | 3 1/2" | 3 5/8" | 2 1/8" | A3194-8R |
| 5768J | Brass | 3 1/4" | 2 1/2" | 3 1/2" | 3 5/8" | 2 1/8" | A3194-8R |
| A5764D | Steel | 1 3/4" | 3/4" | 1 3/4" | 2 3/16" | 3/4" | A2697-20R |
| A5764E | Steel | 1 3/4" | 1" | 1 3/4" | 2 3/16" | 3/4" | A2697-20R |
| A5768H | Steel | 3 1/4" | 2" | 3 1/4" | 3 1/4" | 1 13/16" | A3194-8R |



Gasket (Furnished with adapter)
ACME x Female NPT

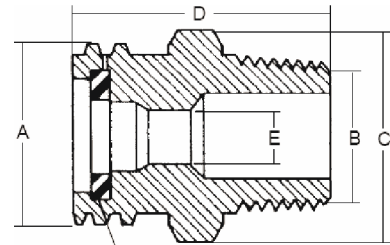


REGO ADAPTERS, CONNECTORS & FITTINGS

ACME Adapters

ACME x Male NPT

| Part Number | Material | A M. ACME | B MNPT | C Hex | D | E Diameter | For Spare Gasket Order Part No. |
|-------------|----------|-----------|--------|--------|---------|------------|---------------------------------|
| 5763D | Brass | 1 1/4" | 3/4" | 1 1/4" | 1 3/4" | 7/16" | A2797-20R |
| 5765D | Brass | 1 3/4" | 3/4" | 1 3/4" | 1 7/8" | 11/16" | A2697-20R |
| 5765E | Brass | 1 3/4" | 1" | 1 3/4" | 2 1/8" | 3/4" | A2697-20R |
| 5765F | Brass | 1 3/4" | 1 1/4" | 1 3/4" | 2 1/8" | 3/4" | A2697-20R |
| 5767F | Brass | 2 1/4" | 1 1/4" | 2 1/4" | 2 5/16" | 13/16" | A3184-8R |
| 5767G | Brass | 2 1/4" | 1 1/2" | 2 1/4" | 2 5/16" | 13/8" | A3184-8R |
| 5767H | Brass | 2 1/4" | 2" | 2 3/8" | 2 7/16" | 125/64" | A3184-8R |
| 5769H | Brass | 3 1/4" | 2" | 3 3/8" | 2 7/8" | 1 7/8" | A3194-8R |
| 5769J | Brass | 3 1/4" | 2 1/2" | 3 1/4" | 3 1/2" | 2 1/8" | A3194-8R |
| 5769K | Brass | 3 1/4" | 3" | 3 1/2" | 3 5/8" | 2 1/8" | A3194-8R |
| A5765C | Steel | 1 3/4" | 1/2" | 1 3/4" | 2 3/16" | 17/32" | A2697-20R |
| A5765D | Steel | 1 3/4" | 3/4" | 1 3/4" | 2 3/16" | 11/16" | A2697-20R |
| A5765E | Steel | 1 3/4" | 1" | 1 3/4" | 2 3/16" | 7/8" | A2697-20R |
| A5765F | Steel | 1 3/4" | 1 1/4" | 1 3/4" | 2 3/16" | 15/16" | A2697-20R |
| A5767F | Steel | 2 1/4" | 1 1/4" | 2 1/4" | 2 3/8" | 13/16" | A3184-8R |
| A5769H | Steel | 3 1/4" | 2" | 3 1/4" | 2 7/8" | 1 7/8" | A3194-8R |
| A5769K | Steel | 3 1/4" | 3" | 3 1/4" | 113/16" | 2 1/8" | A3194-8R |



Gasket (Furnished with adapter)
ACME x Male NPT



5769HVB

Application

Designed to prevent debris from impeding the action of valves and components of LPG piping systems at bulk plants and industrial plants.

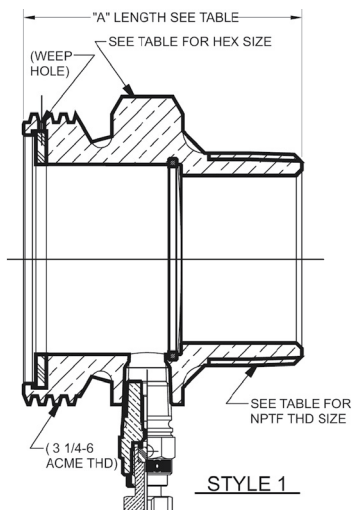
Features:

- Meets NFPA 58 requirements for liquid transfer
- Stainless steel screens
- Vent valve available in brass or stainless steel

Materials

Body..... Brass
Screen..... Stainless Steel
Gasket..... Resilient Rubber

| Part Number | Style | Gasket Qty | Material | Hex Size | Thread | "A" Length |
|-------------|-------|------------|----------|----------|---------|------------|
| 5769HVB | 1 | 1 | Brass | 3 1/4" | 2" NPTF | 3.150 |



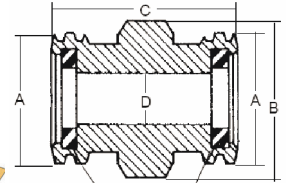
REGO ADAPTERS, CONNECTORS & FITTINGS

REGO ADAPTERS, CONNECTORS & FITTINGS

ACME Adapters

ACME x ACME

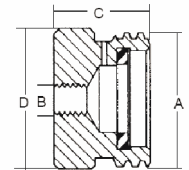
| Part Number | Material | A M. ACME | B F. NPT | C Hex | D Diameter | For Spare Gasket Order Part No. |
|-------------|----------|-----------|----------|---------|------------|---------------------------------|
| 5765M | Brass | 1 3/4" | 1 3/4" | 2 1/16" | 7/8" | A2697-20R |
| 5767M | Brass | 2 1/4" | 2 1/4" | 2 5/16" | 1 25/64" | A3184-8R |
| 5769M | Brass | 3 1/4" | 3 1/4" | 2 3/4" | 2 1/8" | A3194-8R |



Gasket (Furnished with adapter)
ACME x ACME

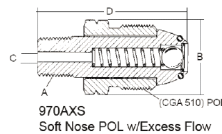
ACME x Miscellaneous

| Part Number | Material | A M. ACME | B F. NPT | C Hex | D Diameter | For Spare Gasket Order Part No. |
|-------------|----------|-----------|----------|--------|------------|---------------------------------|
| A5764W | Steel | 1 3/4" | 3/8" | 1 1/4" | 1 11/16" | 2697-20 |
| 5764W | Brass | 1 3/4" | 3/8" | 1 1/4" | 1 11/16" | 2697-20 |

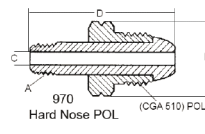


ACME x Miscellaneous
(Recommended for securing hose-end valve when not in use).

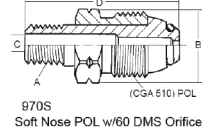
Male POL Swivel Adapters



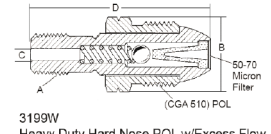
970AXS
Soft Nose POL w/Excess Flow



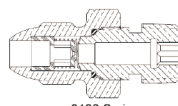
970
Hard Nose POL



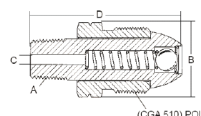
970S
Soft Nose POL w/60 DMS Orifice



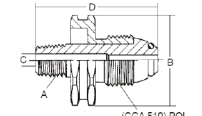
3199W
Heavy Duty Hard Nose POL w/Excess Flow



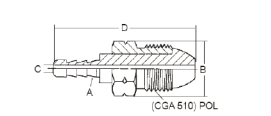
3188 Series



970AX
Hard Nose POL w/Excess Flow



970AW
970HT
Soft Nose POL w/Handwheel

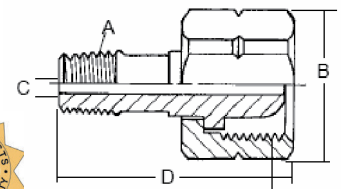


970JR
Hard Nose POL w/Hose Barb Connection

| Part Number | Material | A | B Hex | C Drill | D | Vapor at 100 PSIG Inlet (SCFH) | Liquid (GPM) |
|-------------|----------|----------------|--------|---------|---------|--------------------------------|--------------|
| 970 | Brass | 1/4" M. NPT | 7/8" | 5/16" | 2 3/8" | - | - |
| 970S | Brass | 1/4" M. NPT | 7/8" | 3/16" | 2 3/32" | - | - |
| 970AX | Brass | 1/4" M. NPT | 7/8" | 5/16" | 2 5/64" | 404 | 1.10 |
| 970AXS | Brass | 1/4" M. NPT | 7/8" | 5/16" | 2 5/64" | 404 | 1.10 |
| 3199W | Brass | 1/4" M. NPT | 7/8" | 5/16" | 2 7/16" | 450 | 0.95 |
| 970AW | Brass | 1/4" M. NPT | 1 3/8" | 5/16" | 2 2/32" | - | - |
| 970HT | Brass | 1/4" M. NPT | 1 3/8" | 3/16" | 2 2/32" | - | - |
| 970JR | Brass | 1/4" Hose Barb | 7/8" | 5/32" | 2 5/8" | - | - |
| 3188A | Brass | 1/2" M. NPT | 1 1/8" | 5/16" | 2 1/2" | 350 | .95 |
| 3188B | Brass | 1/2" M. NPT | 1 1/8" | 5/16" | 2 1/2" | 700 | 1.9 |
| 3188C | Brass | 1/2" M. NPT | 1 1/8" | 5/16" | 2 1/2" | 1180 | 2.9 |

CGA 555 Swivel Adapters

| Part Number | Material | A | B Hex | C Drill | D |
|-------------|----------|-------------|--------|---------|----------|
| 12982 | Brass | 1/4" M. NPT | 1 1/4" | 3/16" | 1 15/16" |
| 12982G | Brass | 9/16" -18NF | 1 1/4" | 3/16" | 1 15/16" |



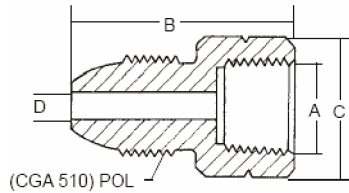
CGA 555

REGO ADAPTERS, CONNECTORS & FITTINGS

POL Adapters

Male POL x Female NPT

Ordering Information

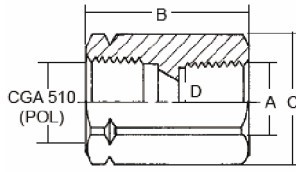


(CGA 510) POL
Male POL x Female NPT

| Part Number | Material | A FNPT | B | C Hex | D Diameter |
|-------------|----------|--------|--------|--------|------------|
| 2906A | Brass | 1/4" | 1 3/8" | 15/16" | 1/4" |
| 2906G | Brass | 1/2" | 2" | 1 1/8" | 1/4" |

Female POL x Female NPT and Female POL

Ordering Information



Female POL x Female NPT
and Female POL

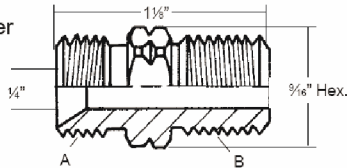
| Part Number | Material | A | B | C Hex | D Diameter |
|-------------|----------|---------------|--------|--------|------------|
| 5760Z | Brass | 1/8" | 1 5/8" | 1 1/8" | 5/16" |
| 5760A | Brass | 1/4" | 1 5/8" | 1 1/8" | 13/32" |
| 5760B | Brass | 3/8" | 1 5/8" | 1 1/8" | 35/64" |
| 5760C | Brass | 1/2" | 1 5/8" | 1 1/8" | 43/64" |
| 5760D | Brass | 3/4" | 1 7/8" | 1 3/8" | 13/32" |
| 5760S | Brass | POL (CGA 510) | 2 1/8" | 1 1/8" | 13/32" |

Hose Adapter For use with fuel gases (LP-Gas, Acetylene).

Ordering Information



Hose Adapter
For use with
fuel gases
(LP-Gas,
Acetylene).



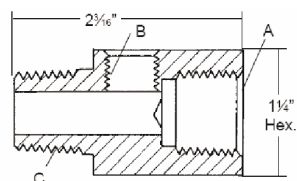
| Part Number | Material | A | B |
|-------------|----------|--------------------|-------------|
| 1300 | Brass | 9/16" -18NF (L.H.) | 1/4" M. NPT |

Pressure Gauge Adapter

Ordering Information



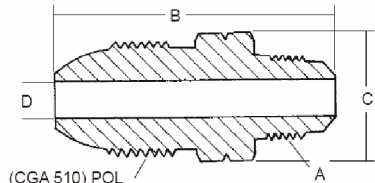
Pressure
Gauge Adapter



| Part Number | Material | A | B | C |
|-------------|----------|-------------|-------------|-------------|
| 1494-1 | Brass | 1/2" F. NPT | 1/4" F. NPT | 1/2" M. NPT |

Male POL x Male NPT and SAE Flare

Ordering Information

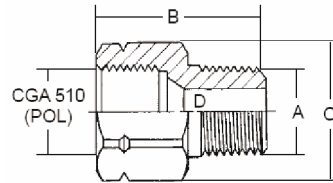


(CGA 510) POL
Male POL x Male NPT and SAE Flare

| Part Number | Material | A | B | C Hex | D Diameter |
|-------------|----------|----------------|---------|--------|------------|
| 2906D | Brass | 3/8" M. NPT | 2 1/16" | 15/16" | 11/32" |
| 2906F | Brass | 3/8" SAE Flare | 2 1/16" | 7/8" | 9/32" |
| 2906E | Brass | 1/2" SAE Flare | 2 1/4" | 7/8" | 9/32" |

Female POL x Male NPT

Ordering Information



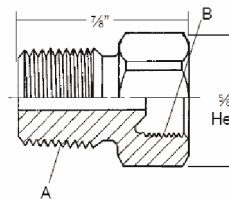
Female POL x
Male NPT

| Part Number | Material | A | B | C Hex | D Diameter |
|-------------|----------|------|--------|--------|------------|
| 5761A | Brass | 1/4" | 1 5/8" | 1 1/8" | 3/16" |
| 5761B | Brass | 3/8" | 1 5/8" | 1 1/8" | 3/32" |
| 5761C | Brass | 1/2" | 1 5/8" | 1 1/8" | 7/16" |
| 5761D | Brass | 3/4" | 1 5/8" | 1 1/8" | 7/16" |

Miscellaneous Adapters

Female Inverted Flare x Male NPT

Ordering Information

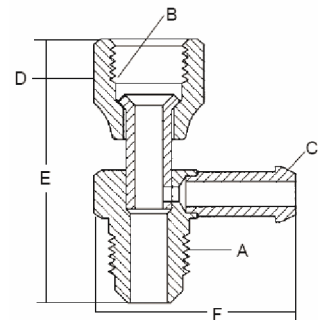


Female Inverted
Flare x Male NPT

| Part Number | Material | A | B |
|-------------|----------|-------------|-----------------------|
| 15774-1 | Brass | 1/4" M. NPT | Female Inverted Flare |

1/4" Hose Barb

Ordering Information



| Part Number | Material | A | B | C | D | E | F |
|-------------|----------|-------------|-------------|----------------|---------|--------|--------|
| 1328 | Brass | 5/8"-18 UNF | 5/8"-18 UNF | 1/4" Hose Barb | 13/16" | 2" | 1 1/2" |
| 1331 | Brass | 3/4"-16 UNF | 3/4"-16 UNF | 1/4" Hose Barb | 15/16" | 2 1/8" | 1 3/4" |
| 1332 | Brass | 7/8"-14 UNF | 7/8"-14 UNF | 1/4" Hose Barb | 1 1/16" | 2 1/2" | 1 3/4" |

REGO ADAPTERS, CONNECTORS & FITTINGS

REGO MISCELLANEOUS EQUIPMENT

1" Rotogages® for Large Mobile and Stationary Containers

Rotogages® are designed to provide an accurate determination of LP-Gas or anhydrous ammonia container contents. They mount in a standard 1" NPT coupling on large mobile or stationary containers.

To operate the Rotogages®, the vent valve is opened and the dip tube rotated slowly from the container vapor space to the liquid space. The difference in appearance of the discharge indicates when the liquid level is reached. Dial readings then indicate the percentage of product in the container.

Rotogage® Dials

| Part Number | Service | Container Size |
|-------------|---------|------------------------|
| A9091-18L | LP-Gas | All Sizes |
| A9091-18LX* | LP-Gas | Over 1200 U.S. gallons |
| A9091-18N | NH3 | All Sizes |

* Dial permits higher filling level, as per NFPA 58, (1983) Par. 4-5.2.1, Table 4-5.2.1

Rotogage® Ordering Information

For Use With LP-Gas

For Mobile or Stationary Containers

| Part Number | Ellipsoidal Heads | | Hemispherical Heads | |
|-------------|-------------------|-------------|---------------------|-------------|
| | Side Mounted | End Mounted | Side Mounted | End Mounted |
| 9091RM24 | 30" - 45" | 30" - 75" | 30" - 45" | 30" - 45" |
| 9092RM36 | 46" - 61" | 76" - 108" | 46" - 61" | 46" - 61" |
| 9093TSM48* | 62" - 79" | 109" - 147" | 62" - 79" | 62" - 79" |
| 9094TSM60* | 80" - 99" | - | 80" - 99" | 80" - 99" |
| 9095TSM72* | 100" - 147" | - | 100" - 147" | 100" - 147" |

For Mobile or Stationary Containers

| Part Number | Ellipsoidal Heads | | Hemispherical Heads | |
|-------------|-------------------|-------------|---------------------|-------------|
| | Side Mounted | End Mounted | Side Mounted | End Mounted |
| 9093RSM48 | 62" - 79" | 109" - 147" | 62" - 79" | 62" - 79" |
| 9094RSM60 | 80" - 99" | - | 80" - 99" | 80" - 99" |
| 9095RSM72 | 100" - 147" | - | 100" - 147" | 100" - 147" |

For Use With NH3

For Mobile or Stationary Containers

| Part Number | Ellipsoidal Heads | | Hemispherical Heads | |
|--------------|-------------------|-------------|---------------------|-------------|
| | Side Mounted | End Mounted | Side Mounted | End Mounted |
| AA9091RM24 | 30" - 45" | 30" - 75" | 30" - 45" | 30" - 45" |
| AA9092RM36 | 46" - 61" | 76" - 108" | 46" - 61" | 46" - 61" |
| AA9093TSM48* | 62" - 79" | 109" - 147" | 62" - 79" | 62" - 79" |
| AA9094TSM60* | 80" - 99" | - | 80" - 99" | 80" - 99" |
| AA9095TSM72* | 100" - 147" | - | 100" - 147" | 100" - 147" |

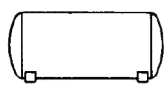
For Mobile or Stationary Containers

| Part Number | Ellipsoidal Heads | | Hemispherical Heads | |
|-------------|-------------------|-------------|---------------------|-------------|
| | Side Mounted | End Mounted | Side Mounted | End Mounted |
| AA9093RSM48 | 62" - 79" | 109" - 147" | 62" - 79" | 62" - 79" |
| AA9094RSM60 | 80" - 99" | - | 80" - 99" | 80" - 99" |
| AA9095RSM72 | 100" - 147" | - | 100" - 147" | 100" - 147" |

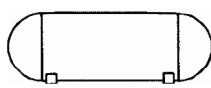
* Supported Design

NOTE: The dip tube must be cut to the required length (1/2" of container inside diameter minus 53/4").

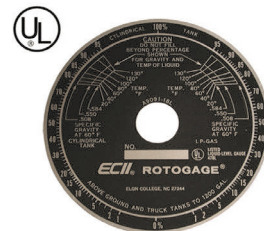
For Container Inside Diameter



Ellipsoidal Heads



Hemispherical Heads



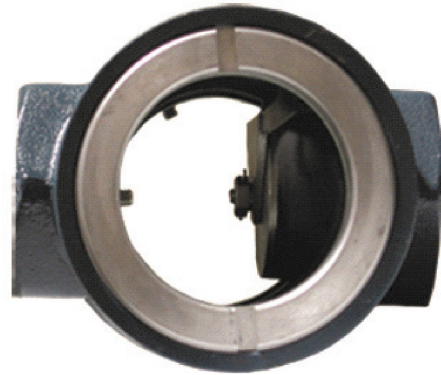
REGO MISCELLANEOUS EQUIPMENT

Sight Flow Indicators for Bulk Plants

Designed to promote maximum pump efficiency, these indicators enable bulk plant operators to visually inspect liquid flow conditions. With glass on both sides of the indicator, flow can be observed from either side, even under some poor light conditions. The integral swing check also serves as a back-check valve to prevent reverse flow and product loss if the hose fails in a loading operation.

By installing an indicator on the upstream side of the plant pump, suction conditions can be observed and the pump speed adjusted to obtain the maximum possible flow rate without cavitation. Additionally, if an indicator is installed in the piping at the loading rack, just ahead of the loading hose, the operator can maintain a constant check on pump conditions.

Both installations are designed to allow for observation to provide maximum pump efficiency and assure safe plant pump operation. In compressor operations a sight flow indicator installed in the liquid line will give a visual indication when the tank car or transport is emptied. Compressor operation can then be immediately reversed to start recovery of the vapor.



| Part Number | Inlet/Outlet Connections | Length |
|--------------|--------------------------|--------|
| A7794 | 2" F. NPT | 5 3/4" |
| A7796 | 3" F. NPT | 7 3/8" |

REGO MISCELLANEOUS EQUIPMENT

REGO MISCELLANEOUS EQUIPMENT

Low Emission Hose Valve

The A7914A Low Emission valve is designed to reduce the amount of product vented when disconnecting bobtail and transport loading hoses. This valve provides a full-on flow when pressing the release trigger and the lifting of an easy grip handle. Lowering the handle will immediately stop flow and lock the lever in the closed position. This valve can be used with any standard 3-1/4" Male ACME connector, or our 6588LE and 6589LE minimum loss filler valves.

Features:

- Minimizes product discharge at disconnect.
- Vents less than 2 cc of liquid when disconnected.
- California CARB Compliant for fugitive emissions.
- Contoured handle rotates 360° and large easy to turn ACME swivel connector.
- Self-locking handle is operator opened and closed, designed to prevent accidental opening of the valve.
- Bypass mechanism in the seat area allows the upstream pressure to quickly equalize when the handle is partially moved to the open position.
- Protective screen on inlet side prevents debris from entering.
- Spring loaded Teflon "V" packing for bonnet/stem assembly provides long service life

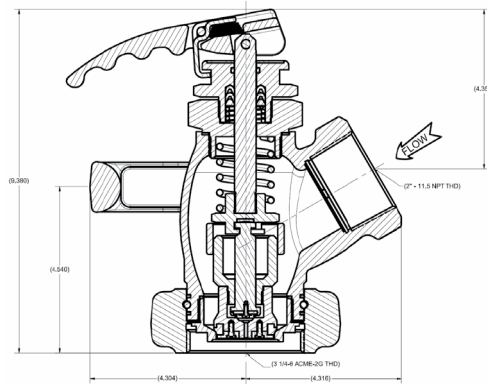
Materials

Body..... Ductile Iron
 "V" –Rings.....Teflon
 Stem..... Stainless Steel
 Acme Connector..... Plated Ductile Iron
 Seal Housing..... Stainless Steel
 Bonnet Plated Steel
 Lever..... Stainless Steel
 Seat DiscSynthetic Rubber



| Part Number | Inlet Connection | Outlet Connection | Locking Handle | Flow at (Cv) Pressure Drop GPM Propane | | Description |
|---------------|------------------|-------------------|----------------|--|---------|---|
| | | | | 1 PSIG | 10 PSIG | |
| A7914A | 2" FNPT | 3 1/4" M.Acme | Yes | 55 | 174 | 2" FNPT X 3-1/4" ACME Low Emission Hose Valve |

*To obtain approximate flow at other than 1 PSIG drop, multiply flow in table by square root of pressure drop. Example A7914 @ 9PSIG drop = 55 X 9 = 165 GPM /propane



REGO MISCELLANEOUS EQUIPMENT

REGO MISCELLANEOUS EQUIPMENT

Pull-Away Valves for Transfer Operations

Designed especially to provide pull-away protection for LP-Gas and anhydrous ammonia transfer operations including transport and delivery truck loading and unloading, engine fuel container filling and miscellaneous cylinder filling operations. When properly fastened to the inlet end of the discharge hose, the valve is designed to stop gas escape from both upstream and downstream lines in the event of a pullaway. An excessive tension pull causes the valve to automatically separate, closing two internal back pressure checks. Only a few cubic centimeters of gas escape at the instant of separation.

It is recommended that a convenient means be provided to safely remove the pressure from the line upstream of each coupling half to enable reassembly of the valve. To reassemble, simply push the male half firmly into the female half until the retaining balls slip into the retaining groove. Check for leaks after reassembly. NOTE: It is recommended that pull-away valves be safety-tested at least monthly to confirm that they will separate properly in the event of a pull-away. Dry nitrogen or other inert gas is suggested for a source of pressure during such tests.

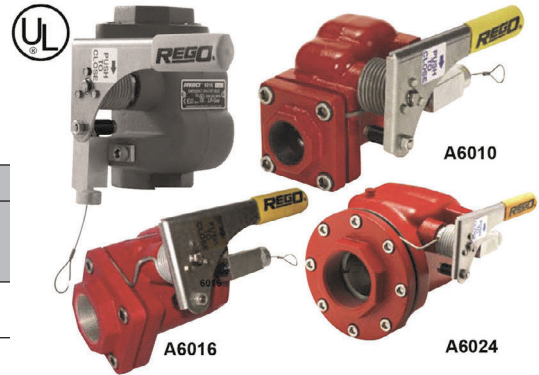


| Part Number | Inlet/Outlet Connections NPT F. | Disconnect Force Approx-lbs | Reconnect Force Approx-lbs | Length Of Valve | LP-Gas Liquid Flow Capacity at Various Differential Pressures (GPM)* | | | |
|-------------|---------------------------------|-----------------------------|----------------------------|-----------------|--|---------|---------|---------|
| | | | | | 5 PSIG | 10 PSIG | 25 PSIG | 50 PSIG |
| A2141A6 | 3/4" | 130 | 80 | 3 7/8" | 11 | 16 | 25 | 36 |
| A2141A6L** | 3/4" | 130 | 80 | 3 7/8" | 11 | 16 | 25 | 36 |
| A2141A8 | 1" | 75 | 50 | 4 9/16" | 21 | 30 | 47 | 67 |
| A2141A8L** | 1" | 75 | 50 | 4 9/16" | 21 | 30 | 47 | 67 |
| A2141A10 | 1 1/4" | 160 | 25 | 5 5/8" | 52 | 75 | 120 | 170 |
| A2141A16 | 2" | 300 | 50 | 14 5/16" | 250 | 350 | 550 | 750 |

* To Determine NH3 liquid flow capacity, multiply by .90.

“Swing-Chek” ESVs for Bulk Plants

Especially designed for installation in liquid transfer lines at LP-Gas or anhydrous ammonia bulk plants to provide for quick shut-off of liquid or vapor flow in the event of an accidental pull-away or hose rupture, both of which can cause a fire.



| Part Number | For Use Only With | Inlet and Outlet Connections | Liquid Flow Capacity at 10 PSIG Pressure Drop (GPM) | Accessories | |
|-------------|-------------------|------------------------------|---|------------------------|-----------------------------|
| | | | | Remote Pneumatic Close | Remote Pneumatic Open/Close |
| A6010 | LPG or NH3 | 1 1/4" F. NPT | 259 (LP-Gas) 233 (NH3) | 6016-60D | 6016-60C |
| A6016 | LPG or NH3 | 2" F. NPT | 711 (LP-Gas) 640 (NH3) | 6016-60D | 6016-60C |
| A6024 | LPG or NH3 | 3" F-NPT | 1325 (LP-Gas) 1173 (NH3) | 6016-60D | 6016-60C |

ESV Remote Cable Controls

| Part Number | Description |
|-------------|---|
| 7606RM | Remote manual cable release kit. Permits manual closing of one or more ESVs from remote location. |
| 7606RT | Remote thermal cable release kit. Provides high temperature closing of ESV. Required is ESV is more than 5 feet from nearest end of hose. |
| 7606RM-1 | 100' roll of extra cable. |
| 6016-60D | Pneumatic remote kit for 6016 and AA6016 ESV |
| 6016-60C | Pneumatic remote open / remote close actuator |



REGO MISCELLANEOUS EQUIPMENT

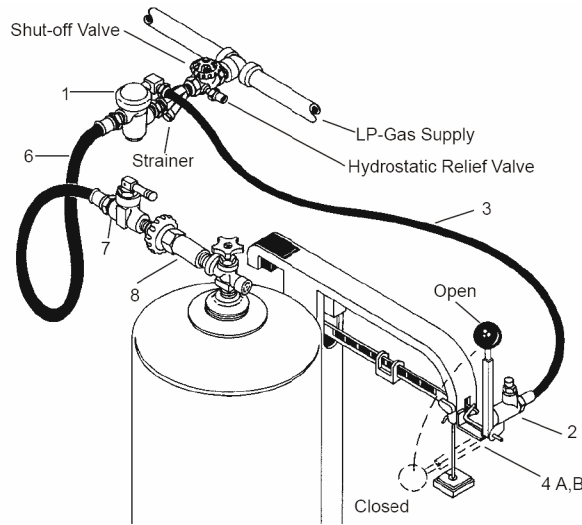
REGO MISCELLANEOUS EQUIPMENT

ESV Pneumatic Controls

| Part Number | Description |
|-------------|--|
| 7781AFPN-1 | Cylinder assembly kit to convert 7781AF ESVs to pneumatic shutdown. |
| 7605APN-1 | Cylinder assembly kit to convert 7605B ESVs to pneumatic shutdown. |
| 7605PN-50 | Pneumatic remote shutdown system kit, complete with 100' of tubing, fittings, 1 charging valve assembly and 1 remote shutdown valve assembly |
| 7605APN-8A | Extra shutdown valve assembly |
| 7605A-BT | 100' roll of 1/4" pneumatic tubing. |
| 7605AP-16 | 1/4" tubing tee, with nuts. |
| 7605AP-15 | 1/8" NPT x 1/4" tubing, straight connector. |



Hydraulic Automatic Cylinder Filling System



Designed to provide accurate, economical filling of LP-Gas DOT and fork lift cylinders by weight. Filling stops automatically as the total weight of the cylinder reaches the amount pre-set on the scale. One individual can efficiently handle up to four cylinder filling operations simultaneously, to maximize profits, increase efficiency and allow servicing of more customers.

| Part Number | Key No. | Size | Description |
|-------------|---------|--|--|
| 7194MD | | | Assembly for Fairbanks-Morse. Includes items 1 thru 8 below. |
| 7194HD | | | Assembly for Howe. Includes items 1 thru 8 |
| 7177 | 1 | 1/2" NPT Female, with 1/8" NPT Female Hydraulic Connection | Propane Control Valve |
| 7188 | 2 | 1/8" NPT Hydraulic Connection | Master Cylinder, with Actuator Lever |
| 7194-1 | 3 | 3/16" I.D. with 1/8" NPT Male Ends, 43 1/2" Overall Length | Hydraulic Hose Assembly |
| 7188MS | 1-3 | - | Valve, Cylinder and Hose Assembly for Fairbanks-Morse Scales |
| 7188HS | 1-3 | - | Valve, Cylinder and Hose Assembly for Howe Scales |
| 7194M-3K | 4A | - | Bracket Kit for Fairbanks Morse Scales, Complete with Screws, Washers, Nuts and Instructions |
| 7194H-3K | 4B | - | Bracket Kit for Howe Scales, Complete with Screws, Washers, Nuts and Instructions |
| 7188-21 | 5 | 1 1/2 ounce | Can of Hydraulic Fluid, Complete with Filling Spout |
| 7193-4 | 6 | 1/2" I.D., with 1/2" NPT Male Ends. 50 1/2" Overall Length | Propane Filling Hose Assembly |
| 7901TB | 7 | 1/2" NPT INlet X 1/4" NPT Outlet | Quick-acting Shut Off Valve |
| 7193D-10 | 8* | 1/4" NPT Male X POL Male | Soft Nose Cylinder Connector |

* Any of the Rego® hose end adapters for cylinder filling may be used with these systems. See the "Hose End Adapters for Cylinder Filling" sections of this catalog for ordering information. NOTE: Part No. 7188HS contains items 1, 2, 3, 4B and 5. Part No. 7188MS contains items 1, 2, 3, 4A and 5.

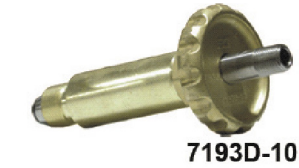
REGO MISCELLANEOUS EQUIPMENT

REGO MISCELLANEOUS EQUIPMENT

Hose End Adapters for DOT Cylinder Filling

Designed to provide quick and easy filling of DOT cylinders with POL or Type I connections. This adapter may be used with hydraulic and electric automatic systems or with manual systems in conjunction with a RegO® 7901TB Quick Acting Shut-Off Valve.

These filling connectors have an extended connection on the handwheel, which makes it possible to connect the loading hose to valves on cylinders with fixed collars. The handwheel is well outside the collar for easy operation.



7193D-10



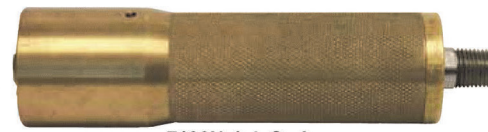
7193U-10

| Part Number | Applications | Inlet Connection | | Materials |
|-------------|--|------------------|--------------------------------|-------------------------|
| | | Inlet Connection | Outlet Connection | |
| 7193D-10 | Filling of DOT Cylinders with POL Connections | 1/4" M. NPT | M. POL (CGA 510) | Brass & Stainless Steel |
| 7193U-10 | Filling of DOT Cylinders with Type I Connections | 1/4" M. NPT | Type 1 Connection (1" M. ACME) | Brass |

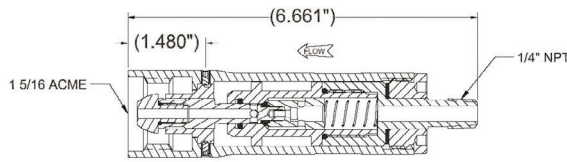
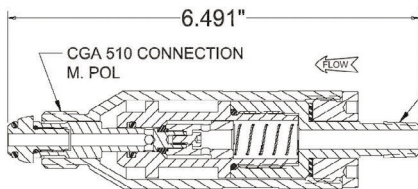
Patented Low Emission Hose End Safety Adapters



7193D-10L Series



7193U-1 L Series



Application

Low Emission Adapter (1.18 cc at disconnect) designed to provide quick and easy filling of DOT cylinders with POL (7193D-10L) and Type 1 (7193U-10L) connections with minimal release of product on disconnect. This adapter may be used with dispensing systems in conjunction with RegO 7901T Series Quick Acting Shut-Off Valve. Balanced, light weight design for filling into 20 # - 200 # cylinders.

Features

- Meets CARB Low Emission Standards.
- Light weight, easy to use.
- Soft Nose M.POL connection.
- Redundant Safety Feature – Will Only Open when connected to valve

Materials

Body Brass – Knurled
 Shaft .. Stainless Steel – 1/4" M.NPT x M.POL (CGA 510)
 Shaft .. Stainless Steel – 1/4" M.NPT x Type 1 (1-5/16" M. ACME)
 O-Ring Synthetic Rubber



| Part Number | Applications | Inlet Connection | Outlet Connection | Materials |
|-------------|---|------------------|-------------------|-------------------------|
| 7193D-10L | Filling of DOT cylinders with POL Connections | 1/4" M. NPT | M. POL (CGA 510) | Brass & Stainless Steel |

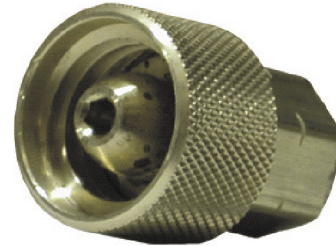
REGO MISCELLANEOUS EQUIPMENT

Connector for DOT Cylinder Filling Adapter

The 7193T-10 is designed for use on the 7193D-10 Filling Adapters. Connector allows adapter to be used on the 15/16 M. ACME & F. POL connections of Type 1 valves.



| Part Number | Applications | Inlet Connection | Outlet Connection | Materials |
|-----------------|--|------------------|--------------------------------|-----------|
| 7193T-10 | Converts 7193D-10 Adapters from POL to a Type 1 Connection | M. POL CGA 510 | Type 1 Connection (1" M. ACME) | Brass |



7193T-10

Hydraulic Automatic Cylinder Filling System

The 7193L-10A is designed to provide quick and easy attachment of the filling hose to DOT cylinders equipped with RegO® 7141M check connectors.



| Part Number | Application | Inlet Connection | Outlet Connection | Body Material | Accessories Adapter |
|------------------|---------------------------------|------------------|-------------------|---------------|---------------------|
| 7193L-10A | Filling of Fork Lift Cylinders* | 1/4" M. NPT | 1 1/4" F. ACME | Brass | 5760A |



* The 7193L-10A is intended to be permanently attached to the filling hose. A 5760A adapter enables the 7193L-10A to be attached to the POL connection on the 7193D-10 at regulator cylinder filling stations to allow for occasional filling of fork lift cylinders.

Vent Valves

Especially designed to bleed off liquid or vapor pressures trapped in transfer lines. When installed in the downstream boss of RegO® globe and angle valves used at the end of a liquid transfer hose, the bleeder valve allows for the controlled venting of the product and indicates to the operator that the valves are closed and he can disconnect the coupling. They may also be used as a fixed liquid level gauge where the dip tube is part of the container.



| Part Number | Service | Connection | Actuation | Accessories Warning Plate Kit |
|----------------|--------------------------|-------------|------------|-------------------------------|
| 3165C | LP-Gas Only | 1/4" M. NPT | Knurled | 2550-40P |
| TSS3169 | LP-Gas & NH ₃ | 1/4" M. NPT | Tee Handle | 2550-40P |



3165C



3165S

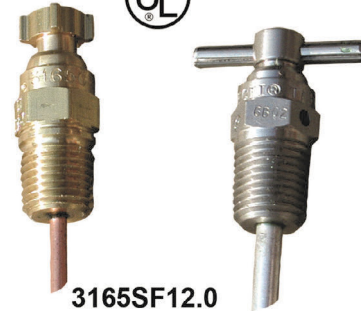


TSS3169

REGO MISCELLANEOUS EQUIPMENT

Fixed Liquid Level Gauges

Especially designed to provide a visible warning when containers are filled to the maximum permitted filling level. At the start of the filling operation, with the vent stem opened, the valve discharges vapor. When the maximum permitted filling level is reached, the valve discharges liquid. These valves are normally furnished with a 12", 3/16" O.D. dip tube and incorporate a No. 54 drill size orifice. An optional instruction plate with "Stop Filling When Liquid Appears" may be ordered for use with these valves.



3165SF12.0

TA3169F12.0

| Part Number | Service | Connection | Actuation | Dip Tube Length | Accessories Warning Plate Kit |
|-------------|--------------|-------------|------------|-----------------|-------------------------------|
| 3165CF* | LP-Gas Only | 1/4" M. NPT | Knurled | * | 2550-40P |
| 3165CF12.0 | LP-Gas Only | 1/4" M. NPT | Knurled | 12" | 2550-40P |
| TA3169F12.0 | LP-Gas & NH3 | 1/4" M. NPT | Tee Handle | 12" | 2550-40P |

* Dip tube must be ordered separately. Add to suffix. Example: 11" Dip Tube = 3165F11.0.

Spanner Wrench for ACME Connectors

This aluminum spanner wrench is especially designed for use with 2 1/4" and 3 1/4" ACME couplings, adapters and caps.



| Part Number | For Use With ACME Connector Size |
|-------------|----------------------------------|
| 3195-50 | 2 1/4" & 3 1/4" |

Combination Valve for Bulk Storage Containers

Designed for installation on bulk storage containers, this valve combines a pressure gauge mounting and provision for a fixed tube liquid level gauge. The shut-off valve prevents the pressure gauge from being subjected to constant pressure, thereby prolonging its life and accuracy. The valve may be closed, and the vent valve opened to vent pressure from the gauge to permit replacement. For fixed liquid level gauging, the valve can be mounted at the maximum permitted filling level. When equipped with a dip tube threaded 1/8" M.NPT, it can be installed at any convenient level.



| Part Number | Container Connection | Service Connection | Liquid Level Vent |
|-------------|----------------------|--------------------------------|-------------------|
| A2805C | 3/4" M. NPT | 1/4" F. NPT for Gauge Mounting | Knurled* |

* Has 1/8" F. NPT opening for installing separate dip tube.

Gritrol® Fuel Line Filters

Designed especially for use in liquid motor fuel lines to trap foreign material which otherwise may damage precision components in the LPGas carburetion system. These filters incorporate an integral sintered metal filter element in a straight through design.



| Part Number | Inlet Connection | Outlet Connection |
|-------------|------------------|-------------------|
| 12802 | 1/4" F. NPT | 1/4" M. NPT |

REGO MISCELLANEOUS EQUIPMENT

REGO MISCELLANEOUS EQUIPMENT

Pressure Gauges

Especially designed in a variety of sizes and construction for the LPGas and anhydrous ammonia industry. All RegO® pressure gauges have a 1/4" M. NPT connection unless otherwise noted.



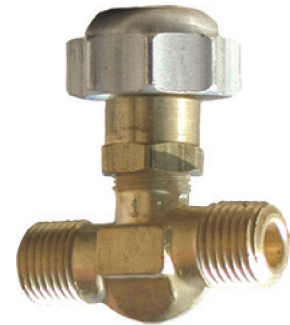
| Part Number | Service | Case Material | Maximum Pressure | Case Size | Increment Divisions |
|-------------|----------------------------|---------------|----------------------------|-----------|---------------------|
| 2434A-2* | LP-Gas Only | Steel | 35" w.c. and 20 oz. (Dual) | 2 1/2" | 1" w.c. and 1 oz. |
| 2434-2** | LP-Gas Only | Steel | 35" w.c. and 20 oz. (Dual) | 2 1/2" | 1" w.c. and 1 oz. |
| 3226A-3 | LP-Gas Only | Steel | 30 PSIG | 2" | 1/2 PSI |
| 2411 | LP-Gas Only | Brass | 30 PSIG | 2" | 1/2 PSI |
| 5575 | LP-Gas Only | Brass | 60 PSIG | 2" | 1 PSI |
| 5547 | LP-Gas Only | Steel | 60 PSIG | 2" | 1 PSI |
| 5576 | LP-Gas Only | Brass | 100 PSIG | 2" | 2 PSI |
| 1286 | LP-Gas Only | Steel | 100 PSIG | 2" | 2 PSI |
| 1178 | LP-Gas Only | Brass | 100 PSIG | 2 1/2" | 2 PSI |
| 948 | LP-Gas Only | Brass | 300 PSIG | 2" | 5 PSI |
| 948B | LP-Gas Only | Steel | 300 PSIG | 2" | 5 PSI |
| 1183 | LP-Gas Only | Brass | 500 PSIG | 2 1/2" | 20 PSI |
| A8060 | NH ₃ and LP-Gas | Steel | 60 PSIG | 2 1/2" | 5 lb. |
| A8150 | NH ₃ and LP-Gas | Steel | 150 PSIG | 2 1/2" | 5 lb. |
| A8400 | NH ₃ and LP-Gas | Steel | 400 PSIG | 2 1/2" | 5 lb. |

* 1/4" Hose Connection

** 1/8" M. NPT Connection

Needle Valves

These valves are high quality, "true" throttling valves. Unlike most so-called needle valves, both the body seat and stem are tapered to provide fine, precise control over a wide range of adjustment without stem galling. The 1224 may be used as a small, inexpensive shut-off valve between a pressure gauge and bulk storage container to allow for convenient gauge replacement. The 1314, 1316 and 1318 provide taper pipe thread by left hand hose connection threads and are useful in a wide range of torch and fuel burner applications where an accurate throttling action is required.

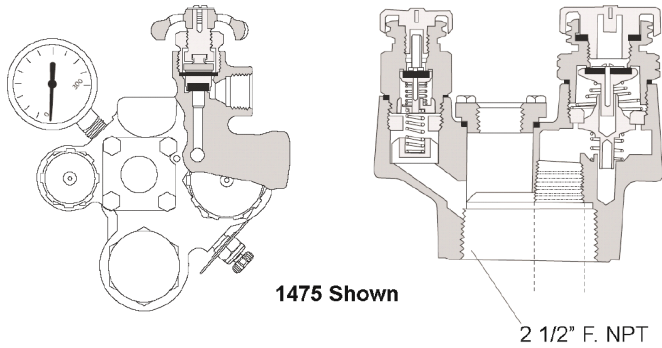


| Part Number | Inlet Connection | Outlet Connection | Height | Length |
|-------------|------------------|-------------------|---------|--------|
| | | | | |
| 1224WA | 1/4" M. NPT | 1/4" M. NPT | 1 9/16" | 1 3/4" |
| 1314WA | 9/16" -18 L.H. | 1/2" M. NPT | 1 9/16" | 1 3/4" |
| 1316WA | 9/16" -18 L.H. | 1/4" M. NPT | 1 9/16" | 1 3/4" |

REGO REPAIR KITS

Rego Multivalves

1470 Series Valves



(Valve Nos. 1470, 1475, 1476, 1477, 1478, 1479, 1480, 1481)

| Valve Number | Filler Kit | Vapor Return Kit | Shutoff Kit |
|--------------|------------|------------------|-------------|
| 1470 | 1475-80 | 2418-51 | 3100-81K |

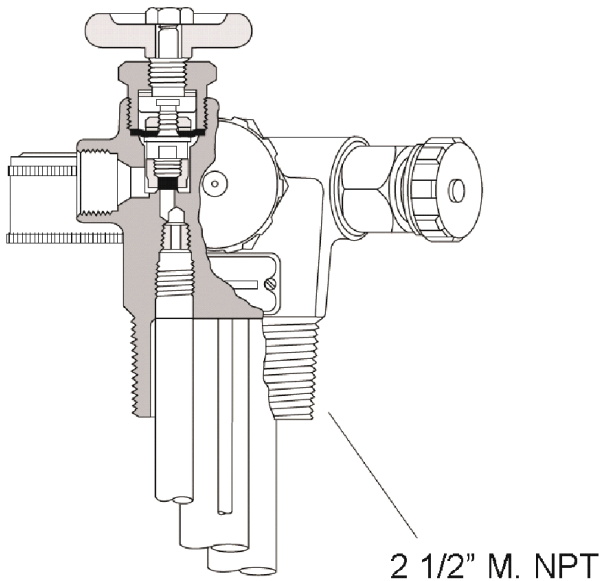
2418 Valve

| Valve Number | Filler Kit | Vapor Return Kit | Shutoff Kit |
|--------------|------------|------------------|-------------|
| 2418 | NLA | 2418-51 | NLA |

6303 Valve (No Float Gauge Port)

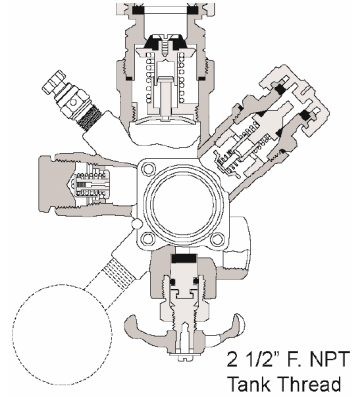
| Valve Number | Filler Kit | Vapor Return Kit | Shutoff Kit |
|--------------|------------|------------------|-------------|
| 6303 | 8475-80 | 2418-51 | 3100-81K |

2550 Valve



| Valve Number | Filler Kit | Vapor Return Kit | Shutoff Kit |
|--------------|------------|------------------|-------------|
| 2550 | NLA | 2418-51 | NLA |

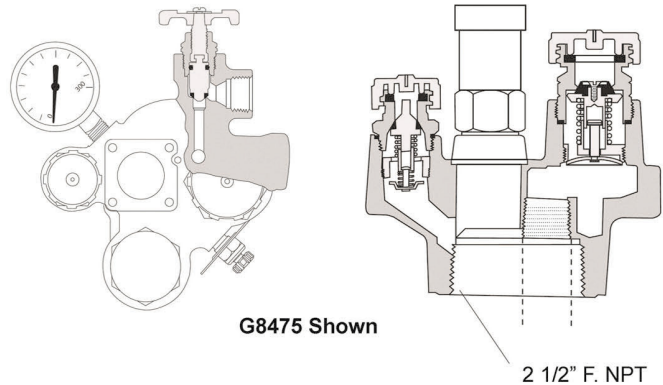
6477 Series Valve



(Valve Nos. 6477, 6477A)

| Valve Number | Filler Kit | Vapor Return Kit | Shutoff Kit |
|--------------|------------|------------------|--------------------------------------|
| 6477 | 8475-80 | 8475-51A | 3100-81K for 6477, 8100-50 for 6477A |

8475 Series Valves (pre 1962)



(Valve Nos. 8475, 8477, 8575, 8577, G8475, G8477)

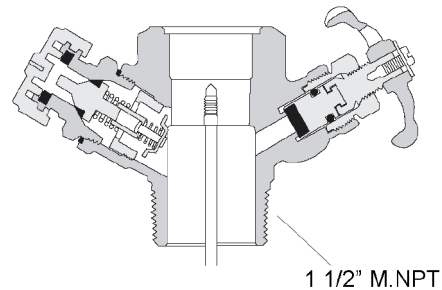
| Valve Number | Filler Kit | Vapor Return Kit | Shutoff Kit |
|--------------|------------|------------------|-------------|
| 8475 | 8475-80 | 8475-51A | 8100-50 |

G8475 Series Valves (post 1962)

(Valve Nos. G8475, G8477)

| Valve Number | Filler Kit | Vapor Return Kit | Shutoff Kit |
|--------------|------------|------------------|-------------|
| G8475 | 8475-80 | 8475-81 | 19104-50 |

8484 Series Valves



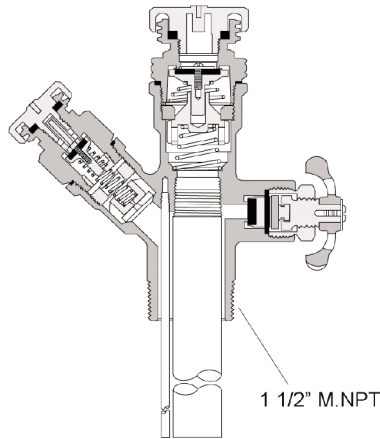
(Valve Nos. 8484, 8484A)

| Valve Number | Vapor Return Kit | Shutoff Kit |
|--------------|---------------------------------------|--------------------------------------|
| 8484 | 8475-51A for 8484, 8475-81A for 8484A | 8100-50 for 8484, 19104-50 for 8484A |

REGO REPAIR KITS

Rego Multivalves

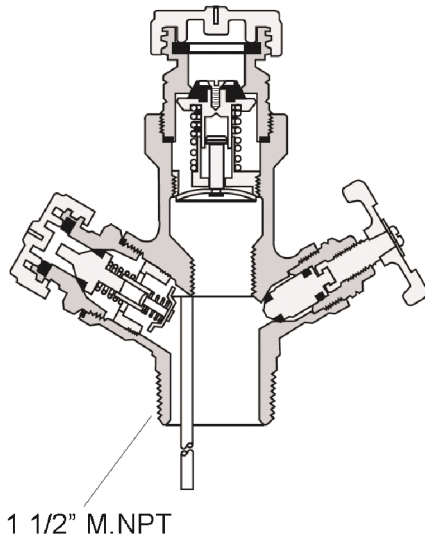
2593 Series Valves



(Valve Nos. 2593, 2593K, 2594, 2594K)

| Valve Number | Filler Kit | Vapor Return Kit | Shutoff Kit |
|--------------|------------|------------------|-------------|
| 2593 | 1475-80 | 2418-51 | 3100-81K |

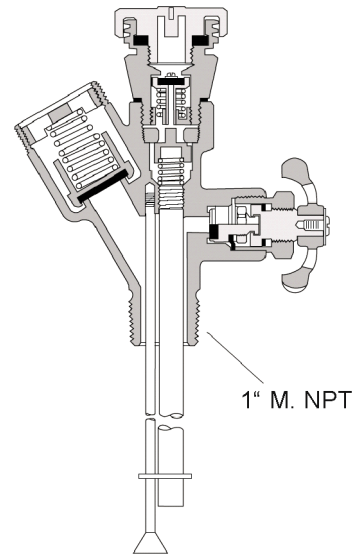
8593 Series Valves



(Valve Nos. 8593, 8593A, 8593AR, 8593K, 8594, 8594A, 8594K)

| Valve Number | Filler Kit | Vapor Return Kit | Shutoff Kit |
|--------------|------------|--|--|
| 8593 | 8475-80 | 8475-51A for 8593, 8593K 8594, 8594K, 8475-81A for 8593A, 8593AR | 8100-50 for 8593, 8593K, 8594, 8594K, 19104-50 for 8593A, 8593AR |

2555 Series Valves



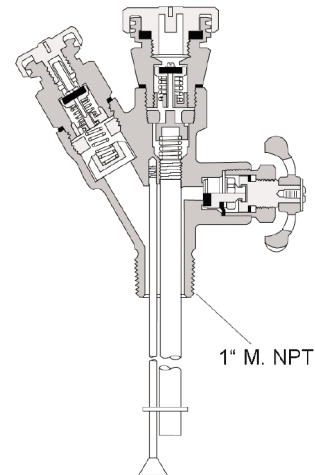
(Valve Nos. 2555, 2555A)

| Valve Number | Filler Kit | Shutoff Kit |
|--------------|------------|-------------|
| 2555 | NLA | 3100-81K |
| 2555A | 8555-80 | 8100-50 |

Note:

2555 suffix "R" had 1-1/4" Filler
2555 suffix "W" had POL Filler

2557 Series Valves



(Valve Nos. 2557, 2557A)

| Valve Number | Filler Kit | Vapor Return Kit | Shutoff Kit |
|--------------|------------|------------------|-------------|
| 2557 | NLA | 2418-51 | 3100-81K |

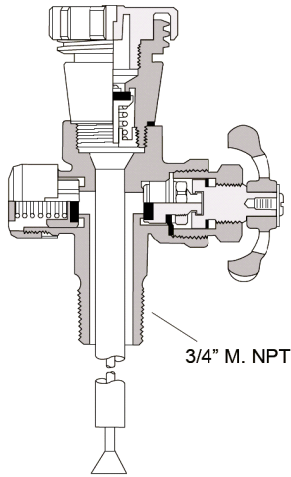
Note:

2557 suffix "R" had 1-1/4" Filler
2557 suffix "W" had POL Filler

REGO REPAIR KITS

Rego Multivalves

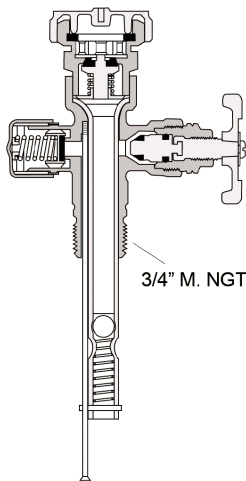
7555 Series Valves



| Valve Number | Filler Kit | Shutoff Kit |
|--------------|------------|-------------|
| 7555 | NLA | 3100-81K |

Note:
7555 suffix "R" had 1-1/4" Filler
7555 suffix "W" had POL Filler

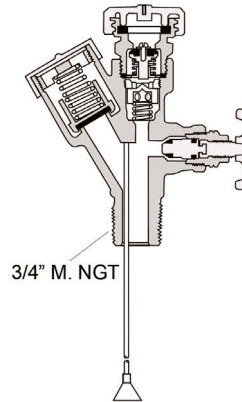
8555 Series Valves



(Valve Nos. 8555, 8555D, 8555R, 8555S)

| Valve Number | Filler Kit | Shutoff Kit |
|--------------|---|--|
| 8555 | Pre-1962 Not Available, 6542B-80 (1962 - Oct 1990), 8555-80 (Post Oct 1990) | Pre-1962 Not Available, 903-51 for 8555S, 19100 Series for 8555D, 8555R |

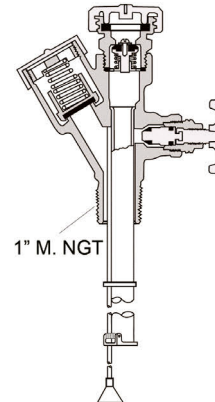
6530 Series Valves



(Valve Nos. 6532, 6532A, 6533, 6533A,
(Valve Nos. 6532D 6533D)

| Valve Number | Filler Kit | Shutoff Kit |
|--------------|------------|-------------|
| 6540 | 6542B-80 | 19104-50 |
| | 6542B-80 | 903-51 |

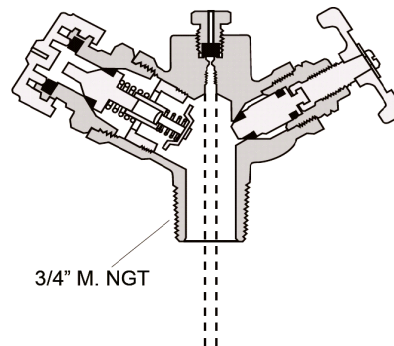
6540 Series Valves



(Valve Nos. 6542, 6542A, 6543, 6543A)
(Valve Nos. 6542D 6543D)

| Valve Number | Filler Kit | Shutoff Kit |
|--------------|------------|-------------|
| 6540 | 6542B-80 | 19104-50 |
| | 6542B-80 | 903-51 |

7556 Series Valves



(Valve Nos. 7556, 7556VR, 7556R)

| Valve Number | Vapor Return Kit | Shutoff Kit |
|--------------|------------------|--|
| 7556 | 8475-51A | 8100-50 Series for Pre - 1962, 19104-50 Series for Post 1962 |

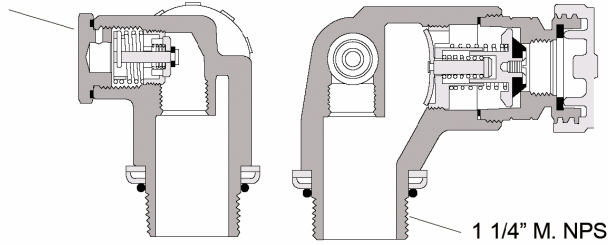
REGO REPAIR KITS

REGO REPAIR KITS

Rego Filler Valves

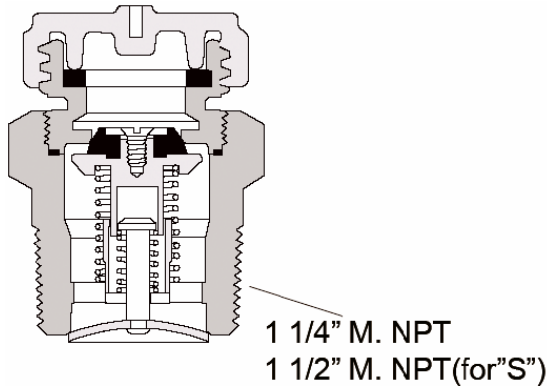
6179 Filler

Chek-Lok



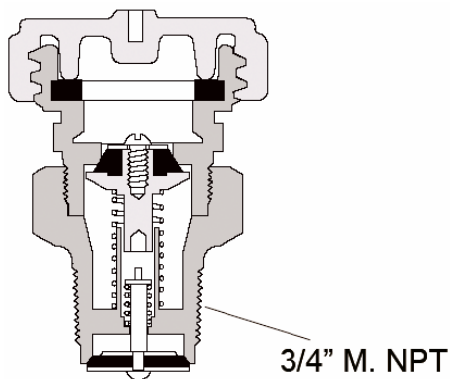
| Valve Number | Filler Kit |
|--------------|------------|
| 6179 | 7579-80 |

1 1/4" Filler



| Valve Number | Filler Kit |
|--------------|--|
| 7579 | 7579-80 Standard Kit, 7579-50 Kit w/Upper Body |

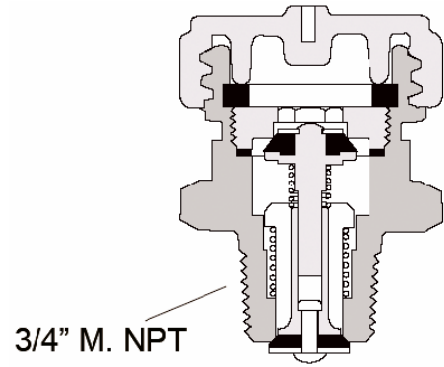
3/4" Filler



(Valve Nos. 7547, 7747)

| Valve Number | Filler Kit |
|--------------|--|
| 7547 | 7547B-80 Standard Kit, 7547B-50 Kit w/Upper Body |

7647 Filler

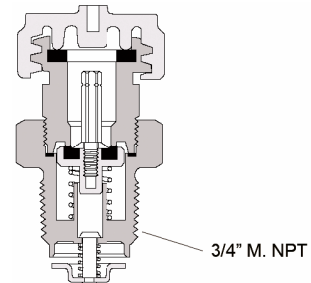


(Valve Nos. 7647, 7647D)

| Valve Number | Filler Kit |
|--------------|-----------------------|
| 7647 | 7647B-80 Standard Kit |

Rego Vapor Return Valves

7573A Vapor Return

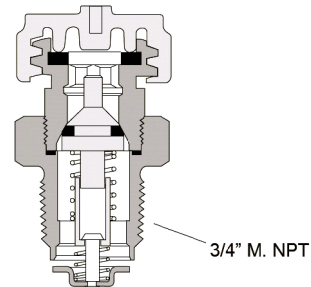


7573 Identification Note

7573A has flat seat and 13/16" wrench flats on upper body.

| Valve Number | Vapor Return Kit |
|--------------|------------------|
| 7573A | 7573A-81 |

7573D Vapor Return



7573 Identification Note

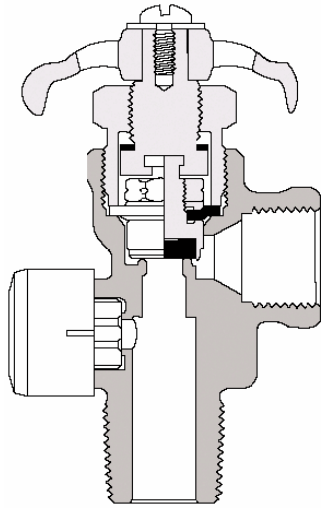
7573D has tapered seat and internal 1/2" hex on upper body.

| Valve Number | Vapor Return Kit |
|--------------|------------------|
| 7573D | 7573D-81 |

REGO REPAIR KITS

Rego Cylinder Valves

3100 & 7100 Series Valves

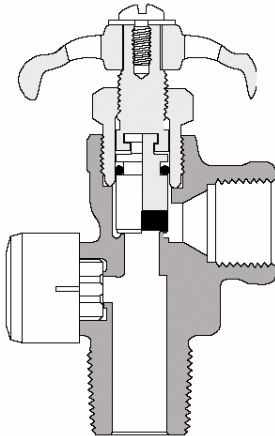


(Valve Nos. 3101, 3102, 3103, 3109, 3115, 7103, 7104, 7112, 7133, 7139, 7140, 7146, 7149, 7153, 7183)

Diaphragm style stem seal. Flat seat.

| Part Number | Repair Kits |
|-------------|--|
| 3100-80A | Complete bonnet assembly. Renews valve to original assembly. |
| 3100-80B | Diaphragm assembly. |
| 3100-81K | Complete bonnet assembly. Converts valve to Oring stem seal. |

8100 Series Valves

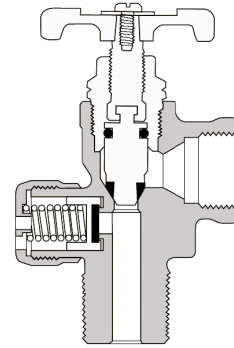


(Valve Nos. 8103, 8115, 8180)

Oring style stem seal. Flat seat

| Part Number | Repair Kits |
|-------------|---------------------------|
| 8100-50 | Complete bonnet assembly. |

900 Series Valves



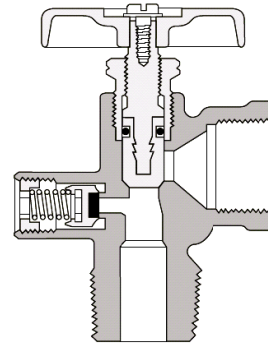
(Valve Nos. 901, 903, 906, 9061)

Compact style bonnet assembly.

Oring style stem seal. Nylon "push-on" tapered seat.

| Part Number | Repair Kits |
|-------------|---------------------------|
| 903-51 | Complete bonnet assembly. |

9100 Series Valves



(Valve Nos. 9101, 9103, 9105, 9106, 9107, 9115)

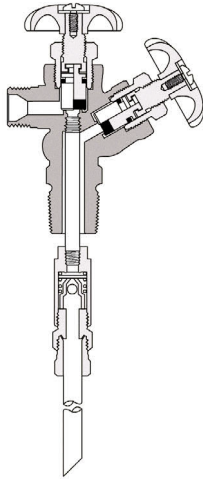
Oring style stem seal. Tapered seat.

| Part Number | Repair Kits |
|-------------|--|
| 19100-50B | Complete bonnet assembly. Renews valve to original assembly. |
| 19104-50 | Converts valve to MultiBonnet. |

REGO REPAIR KITS

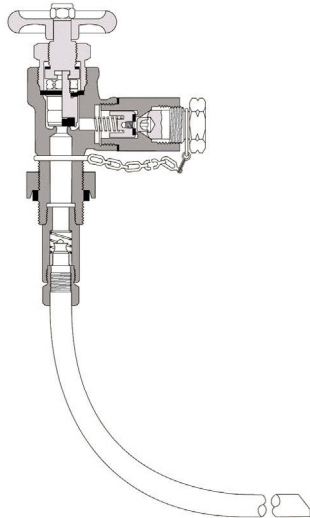
Rego Cylinder Valves

8556 Dual Service Valve



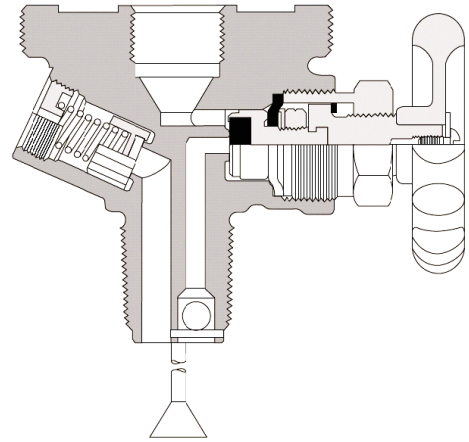
| Part Number | Bonnet Assemblies |
|-----------------|-----------------------------|
| 8100-50 | 8100-50 (pre-1962 valves) |
| 19100-50 | 19100-50 (post 1962 valves) |

7128 Railroad Valve



| Part Number | Diaphragm Assembly |
|-------------|--------------------|
| 7128 | 7128-50 |

2547 & 8547 Plumbers Pot Valve



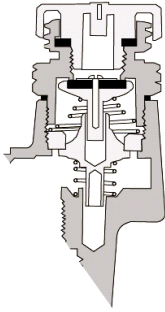
| Part Number | Repair Kits |
|-----------------|--------------------------|
| 3100-80A | Bonnet Assembly for 2547 |
| 3100-80B | Diaphragm for 2547 |
| 8100-50 | Bonnet Assembly for 8547 |

REGO REPAIR KITS

REGO REPAIR KITS

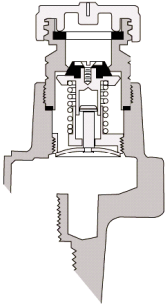
Filler Repair Kits & Contents

1475-80



| Part Number | Description |
|-------------|--|
| 1475-80 | Seat disc & stem Assy; Spring; Washer. |

8475-50

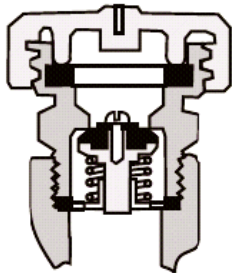


| Part Number | Description |
|-------------|---|
| 8475L-50 | Body; Gaskets; Seat disc & stem Assy; Spring; Washer. |

8475-50

| Part Number | Description |
|-------------|---|
| 8475-80 | Gaskets; Seat disc & stem Assy; Spring; Washer. |

6542B-50

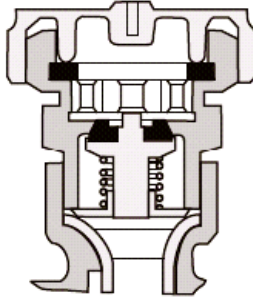


| Part Number | Description |
|-------------|---|
| 6542B-50 | Body; Gaskets; Seat disc & stem Assy; Spring; Stem. |

6542B-80

| Part Number | Description |
|-------------|---|
| 6542B-80 | Gaskets; Seat disc & stem Assy; Spring; Stem. |

8555-50

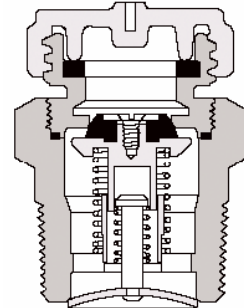


| Part Number | Description |
|-------------|---|
| 8555-50 | Body; Gaskets; Seat disc & stem Assy; Spring; Stem. |

8555-80

| Part Number | Description |
|-------------|---|
| 8555-80 | Gaskets; Seat disc & stem Assy; Spring; Stem. |

7579-50

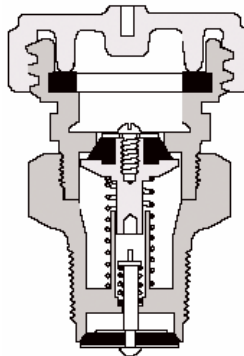


| Part Number | Description |
|-------------|---|
| 7579-50 | Body; Gaskets; Seat disc & stem Assy; Spring. |

7579-80

| Part Number | Description |
|-------------|---|
| 7579-80 | Gaskets; Seat disc & stem Assy; Spring. |

7547B-50

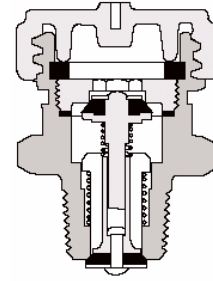


| Part Number | Description |
|-------------|---|
| 7547B-50 | Body; Gaskets; Seat disc & stem Assy; Spring. |

7547B-80

| Part Number | Description |
|-------------|---|
| 7547B-80 | Body; Gaskets; Seat disc & stem Assy; Spring. |

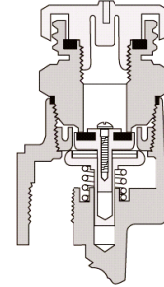
7647B-80A



| Part Number | Description |
|-------------|---|
| 7647B-80A | Gaskets; Seat disc & stem Assy; Spring. |

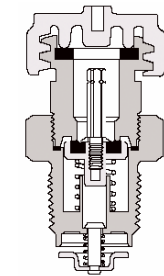
Vapor Return Repair Kits & Contents

2418-51



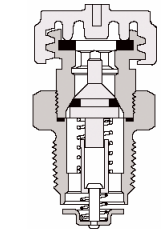
| Part Number | Description |
|-------------|--|
| 2418-51 | Body; Gasket; Seat disc & stem Assy; Spring; Washer. |

7573A-81



| Part Number | Description |
|-------------|--|
| 7573A-81 | Note flat seat. Gaskets; Seat disc Assy. |

7573D-81



| Part Number | Description |
|-------------|---|
| 7573D-81 | Note tapered seat. Gaskets; Seat disc Assy. |

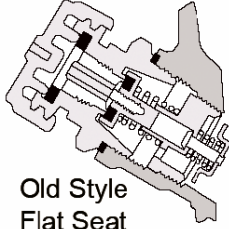
REGO REPAIR KITS

REGO REPAIR KITS

Vapor Return Repair Kits & Contents

8475-51A, 8475-81A

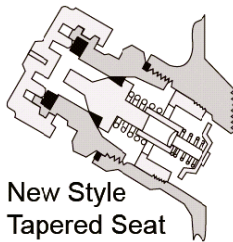
Old Style Flat Seat



Old Style Flat Seat

| Part Number | Description |
|-------------|--|
| 8475-51A | Old style flat seated valves require 8475-51A with body. |

New Style Tapered Seat



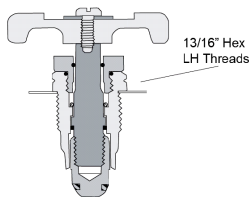
New Style Tapered Seat

| Part Number | Description |
|-------------|----------------------------------|
| 8475-51A | Body, Gaskets, Seat assy, Spring |
| 8475-81A | Gaskets, Seat assy, Spring |

Shutoff Repair Kits & Contents

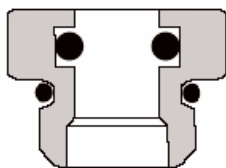
19100 Series Repair Options

19104-50



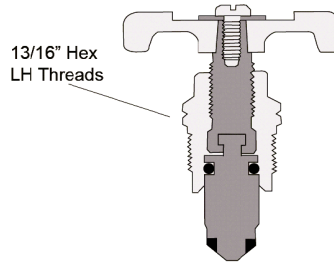
| Part Number | Description |
|-------------|---------------------------------|
| 19104-50 | MultiBonnet Assembly, Handwheel |

19104-50



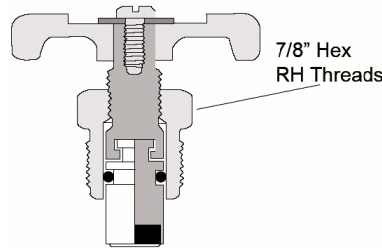
| Part Number | Description |
|-------------|-------------------------------|
| 19104-80 | Upper Packing for MultiBonnet |

19100-50B



| Part Number | Description |
|-------------|----------------------------|
| 19100-50B | Bonnet Assembly, Handwheel |

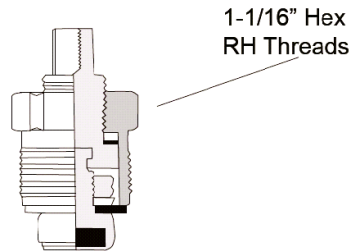
8100 Series



| Part Number | Description |
|-------------|----------------------------|
| 8100-50 | Bonnet Assembly, Handwheel |

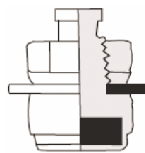
3100 Series Repair Options

3100-80A



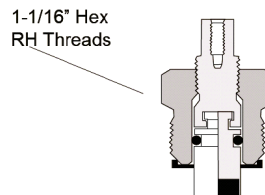
| Part Number | Description |
|-------------|------------------------------|
| 3100-80A | Bonnet, Diaphragm Assy, Stem |

3100-80B



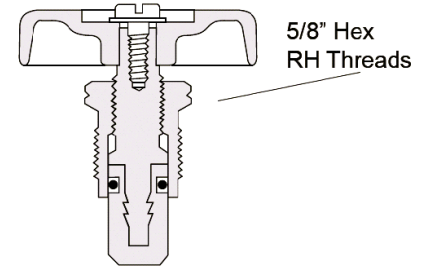
| Part Number | Description |
|-------------|----------------|
| 3100-80B | Diaphragm Assy |

3100-81K



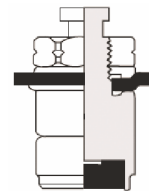
| Part Number | Description |
|-------------|--|
| 3100-81K | Conversion Kit: Bonnet & Stem Assembly |

903 Series



| Part Number | Description |
|-------------|----------------------------|
| 903-51 | Bonnet Assembly, Handwheel |

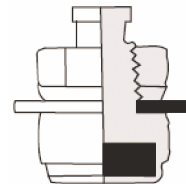
7128-5



| Part Number | Description |
|-------------|--|
| 7128-5 | Repairs the 7128 Horizontal Railroad Valve |

7130BR Repair Options

3100-80B

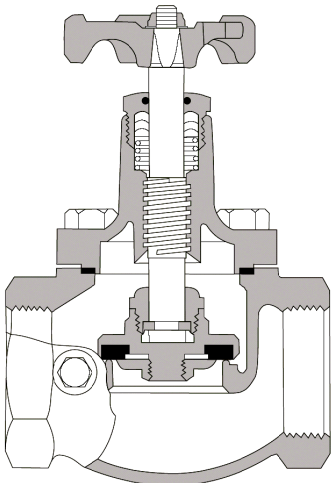


| Part Number | Description |
|-------------|----------------|
| 3100-80B | Diaphragm Assy |

REGO REPAIR KITS

REGO REPAIR KITS

STD Globe and Angle Valve Repair Kits

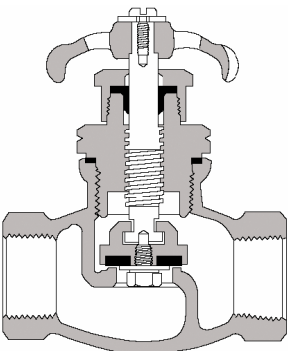


A7513AP

| Valve Number | Valve Size | Kit Number |
|--------------|------------|--------------------|
| A7505AP | 3/4" | A7505-50, 7505A-20 |
| A7507AP | 1" | A7507-50, 7507A-20 |
| A7508AP | 1" | A7507-50, 7507A-20 |
| A7509BP | 1-1/4" | A7509-50, 7509B-20 |
| A7510BP | 1-1/4" | A7509-50, 7509B-20 |
| A7511AP | 1-1/2" | A7511-50, 7511A-20 |
| A7511FP | 1-1/2" | A7511-50, 7511A-20 |
| A7512AP | 1-1/2" | A7511-50, 7511A-20 |
| A7512FP | 1-1/2" | A7511-50, 7511A-20 |
| A7513AP | 2" | A7513-50, 7513A-20 |
| A7513FP | 2" | A7513-50, 7513A-20 |
| A7514AP | 2" | A7513-50, 7513A-20 |
| A7514FP | 2" | A7513-50, 7513A-20 |
| A7517AP | 3" | A7515-50, A7515-20 |
| A7517FP | 3" | A7515-50, A7515-20 |
| A7518AP | 3" | A7515-50, A7515-20 |
| A7518FP | 3" | A7515-50, A7515-20 |

| Kit Number | Kit Contents |
|------------|---|
| A7505-50 | Gaskets; jam ring; O-ring; pressure seal rings; seat disc; washer |
| 7505A-20 | Complete bonnet assembly |
| A7507-50 | Gaskets; jam ring; O-ring; pressure seal rings; seat disc; washer |
| A7509-50 | Gaskets; jam ring; O-ring; pressure seal rings; seat disc; washer |
| 7509B-20 | Complete bonnet assembly |
| A7511-50 | Gaskets; jam ring; O-ring; pressure seal rings; seat disc; washer |
| 7511A-20 | Complete bonnet assembly |
| A7513-50 | Gaskets; jam ring; O-ring; pressure seal rings; seat disc; washer |
| 7513A-20 | Complete bonnet assembly |
| A7515-50 | Gaskets; jam ring; O-ring; pressure seal rings; seat disc; washer |
| A7515-20 | Complete bonnet assembly |

Compact Globe and Angle Valve Repair Kits

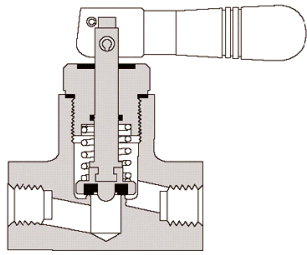


A7705P

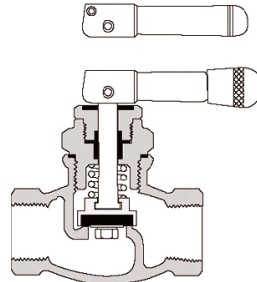
| Valve Number | Valve Size | Kit Number | Kit Contents |
|--------------|------------|------------|---|
| 7704LP | 1/2" | A7705-50 | Gaskets; flange packing; friction washer; seat disc |
| 7704P | 1/2" | A7705-50 | Gaskets; flange packing; friction washer; seat disc |
| A7704LP | 1/2" | A7705-50 | Gaskets; flange packing; friction washer; seat disc |
| A7704P | 1/2" | A7705-50 | Gaskets; flange packing; friction washer; seat disc |
| 7705P | 3/4" | A7705-50 | Gaskets; flange packing; friction washer; seat disc |
| 7706P | 3/4" | A7705-50 | Gaskets; flange packing; friction washer; seat disc |
| A7705P | 3/4" | A7705-50 | Gaskets; flange packing; friction washer; seat disc |
| A7706P | 3/4" | A7705-50 | Gaskets; flange packing; friction washer; seat disc |

REGO REPAIR KITS

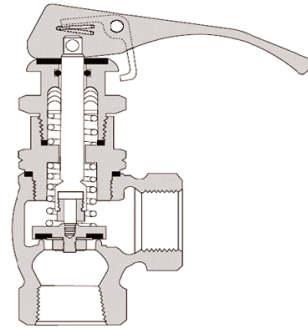
Quick Acting Valve Repair Kits



7901T



7554L(S)

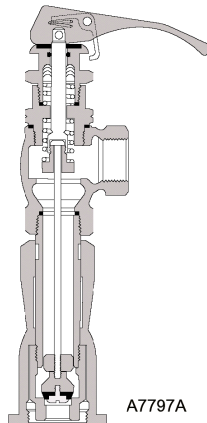


A7708L

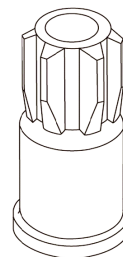
| Valve Number | Valve Size | Kit Number |
|---------------------|-------------|--------------------|
| 7901T | 1/2" | 7901T-80, 7901T-50 |
| 7901TA | 1/2" | 7901T-80, 7901T-50 |
| 7901TB | 1/2" | 7901T-80, 7901T-50 |
| 7901TC | 1/2" | 7901T-80, 7901T-50 |
| 7554L Series | 1/2" & 3/4" | A7705-50, 7554L-20 |
| 7554S Series | 1/2" & 3/4" | A7705-50, 7554S-20 |
| A7707L | 1" | A7707-50, A7707-75 |
| A7708L | 1" | A7707-50, A7707-75 |

| Kit Number | Kit Contents |
|-----------------|---|
| 7901T-80 | Gasket; O-ring; seat retainer assembly |
| 7901T-50 | Bonnet assembly; gasket; lever |
| A7705-50 | Gaskets; flange packing; friction washer; seat disc |
| 7554L-20 | Bonnet assembly |
| A7705-50 | Gaskets; flange packing; friction washer; seat disc |
| 7554S-20 | Bonnet assembly |
| A7707-50 | Gasket; groove pin; jam ring |
| A7707-75 | Bonnet assembly |

Minimum Loss Quick Acting Valve Repair Kits



A7797A



A7797-10M

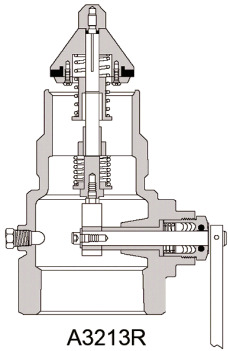
| Valve Number | Valve Size | Kit Number |
|---------------|------------|-------------------------------|
| A7797 | 1" | A7797-50, A7797-75, A7797-10M |
| A7797A | 1" | A7797-50, A7797A-4, A7797-10M |

| Kit Number | Kit Contents |
|------------------|---|
| A7797-50 | Gaskets; jam ring; O-ring; pressure seal rings; seat disc; washer |
| A7797-75 | Bonnet assembly; gasket; lever |
| A7797-10M | Lower ACME handle assembly |
| A7797-50 | Gaskets; jam ring; O-ring; pressure seal rings; seat disc; washer |
| A7797A-4 | Bonnet assembly; gasket; lever |
| A7797-10M | Lower ACME handle assembly |

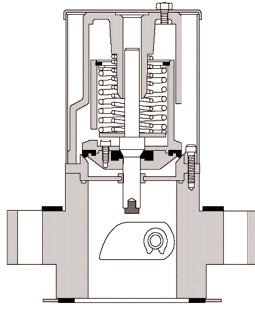
REGO REPAIR KITS

REGO REPAIR KITS

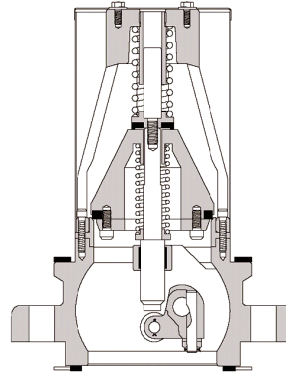
Internal Valve Repair Kits



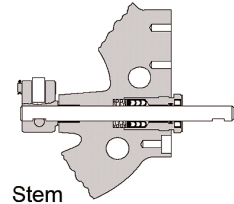
A3213R



A3217FR



A3219FA



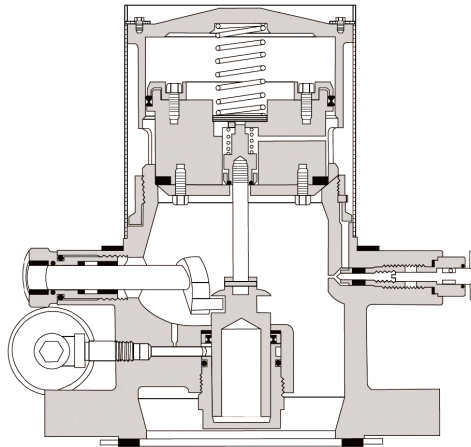
Stem Packing

| Valve Number | Valve Size | Kit Number |
|---------------|------------|---------------------------------------|
| A3209A | 1-1/4" | A3209A-50 |
| A3209D050 | 1-1/4" | A3209D-50 |
| A3209D080 | 1-1/4" | A3209D-50 |
| A3209R050 | 1-1/4" | A3209R-50 |
| A3209R080 | 1-1/4" | A3209R-50 |
| A3210A065 | 1-1/4" | A3210A-50 |
| A3212A Series | 2" | A3212A-50 |
| A3212R Series | 2" | 2"A3212R-50 |
| A3212T Series | 2" | 2"A3212R-50 |
| A3213A Series | 3" | A3213A-50 |
| A3213T Series | 3" | A3213A-50 |
| A3217F Series | 3" | A3217F-50, A3217F-80G (Gasket flange) |
| A3219F Series | 4" | A3219F-80G (Gasket flange) |
| A3219FA | 4" | A3219FA-80G (Gasket flange) |

| Kit Number | Kit Contents |
|-----------------------------|---|
| A3209A-50 | Bearing; cam; gasket; main seat disc assembly; retaining ring; seal O-ring; seat disc |
| A3209D-50 | Bearing; cam; gasket; main seat disc assembly; retaining ring; seal O-ring; seat disc |
| A3209R-50 | Bearing; cam; gasket; main seat disc assembly; retaining ring; seal O-ring; seat disc |
| A3210A-50 | Bushing; gasket; jam ring; main set disc assembly; upper and lower retaining rings; O-ring; seal rings; seat disc |
| A3212A-50 | Bearing; cam; gasket; O-rings; seat disc; stem packing |
| A3212R-50 | Bearing; cam; gasket; O-rings; seat disc; stem packing |
| A3217F-80G (Gasket flange) | Dust seal; inner stem bearing; jam ring; lower flange seal gasket; main seat disc; outer stem bearing; pilot seat disc; poppet seal O-ring; retaining ring; roll pin; seat O-ring; stem O-ring; stem seals; upper flange seal gasket; wear button |
| A3219F-80G (Gasket flange) | Bumper; cotter pins; dirt seal; inner and outer stem bearings; lever release spring; main seat disc; poppet seat disc; pivot pin locknut; poppet |
| A3219FA-80G (Gasket flange) | bearing; seal gland gasket; seat seal O-ring; stem jam ring; stem O-ring; stem O-ring; stem seal rings; stop screw; upper and lower flange seal gaskets |

REGO REPAIR KITS

Flomatic Valve Repair Kits

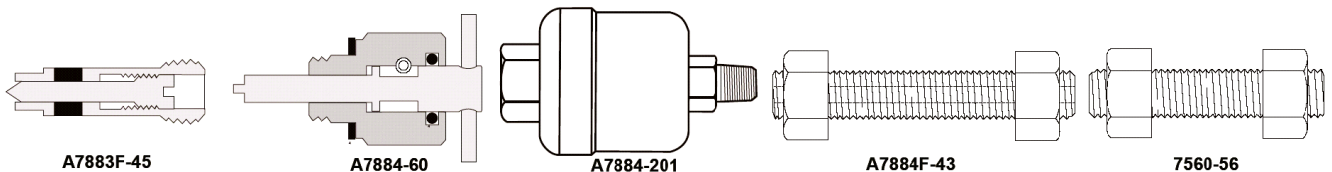


A7884FK

| Valve Number | Valve Size | Kit Number |
|--------------|------------|--------------------------------|
| A7883F | 3" & 4" | A7883F-50 (Rebuilding kit) |
| A7884 | 3" & 4" | A7883F-50 (Rebuilding kit) |
| A7884F | 3" & 4" | A7883F-50 (Rebuilding kit) |
| A7883F | 3" | A7883F-80 (Soft parts kit) |
| A7884F | 4" | A7884F-80 (Soft parts kit) |
| A7883F | 3" | A7883F-150 (Gasket & Seal Kit) |
| A7884F | 4" | A7884F-150 (Gasket & Seal Kit) |

| Kit Number | Kit Contents |
|--------------------------------|--|
| A7883F-50 (Rebuilding kit) | Stem assembly kit; bleeder assembly; cylinder cap screws; upper and lower piston cap screws; lock washers; filters; springs; block vee packing; X-seal; gaskets; O-rings; retaining ring; insert roll pin; screw seal; cap |
| A7883F-80 (Soft parts kit) | Retaining ring; set disc; insert; block vee packing; filters; X-seals; cylinder cap screws; O-rings; gaskets |
| A7884F-80 (Soft parts kit) | Retaining ring; set disc; insert; block vee packing; filters; X-seals; cylinder cap screws; O-rings; gaskets |
| A7883F-150 (Gasket & Seal Kit) | X-seal, seat disc; gaskets |
| A7884F-150 (Gasket & Seal Kit) | X-seal, seat disc; gaskets |

Flomatic Valve Spare Parts

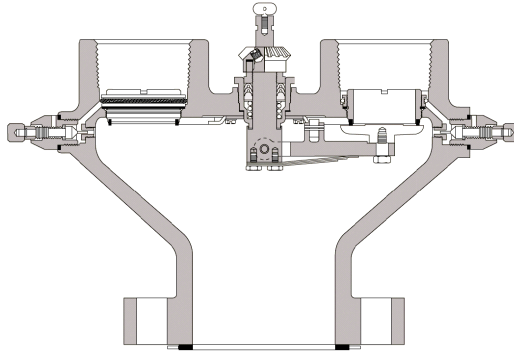


| Valve Number | Valve Size | Kit Number |
|--------------|------------|--|
| A7883F | 3" | A7883-29, A7883-30 |
| A7884F | 4" | 7884-29, 7565-48 |
| A7883F | 3" & 4" | A7883F-45, 7560-56, A7884F-43, A7884-201 |
| A7884F | 3" & 4" | A7883F-45, 7560-56, A7884F-43, A7884-201 |

| Kit Number | Description |
|------------|---------------------------------|
| A7883-29 | Upper flange gasket |
| A7883-30 | Lower flange gasket |
| 7884-29 | Upper flange gasket |
| 7565-48 | Lower flange gasket |
| A7883F-45 | Bleeder assembly |
| 7560-56 | Studs, solid, flomatic to tank |
| A7884F-43 | Studs, hollow, flomatic to pump |
| A7884-201 | Filter |

REGO REPAIR KITS

Duoport & Multiport Kits



A8564G

| Valve Number | Valve Size | Kit Number |
|----------------------|------------|------------|
| 8542 Series | 2" | 8540-50 |
| AA8542 Series | 2" | 8540-50 |
| A8560 Series | 3" & 4" | 8560-50 |
| A8570 Series | 3" & 4" | 8560-50 |
| A8560 Series | 3" | 7564-48 |
| A8570 Series | 4" | 7565-48 |
| ALL | All | 8560-26TP |

| Kit Number | Kit Contents |
|------------------|--|
| 8540-50 | Bleeder valve assemblies; packing gland; set screw; washer; gasket; key |
| 8560-50 | Bleeder valve assemblies; seat ring assemblies; pressure seal rings; packing gland; jam ring; washer; gasket |
| 7564-48 | Flange gasket |
| 7565-48 | Flange gasket |
| 8560-26TP | Bleeder valve assembly |

REGO REPAIR KITS

MEC

Marshall Excelsior Regulators & Accessories



Features:

- Heavy duty brass construction
- Convenient male NPT x male SAE flare connection to minimize potential piping
- Compact size for tight spaces
- Wide wrench flats for easy installation
- Will not conduct an electrical charge from one side of the union to the other

Application:

The ME690 series dielectric unions are intended to isolate metallic piping from help prevent galvanic corrosion. The ME690 dielectric union would typically downstream of the first stage regulator but prior to underground piping and/or at above ground at the dwelling there by protecting the underground metallic piping

| Part Number | Description |
|-------------|--|
| 240-32 | Marshall Z-Bracket |
| 254-00 | Auto Change Marshall Reg. w/2 Screws |
| 299-00 | Marshall Twin-Stage Reg. 160,000BTU Cap. 9:00 Vent |
| 351-00 | Marshall 0-10Psi 1/4"FNPT x Pol Regulator |
| 40403-20 | 20"Rub Pigtail Polx1/4"INV |
| 40403-30 | 30" Rubber Pigtail Pol x 1/4" INV. Flare |
| 40403-36 | 36" Rub Pigtail Pol x 1/4"INV |
| 40403-48 | 48" Rub Pigtail Pol x 1/4"INV |
| 40403-60 | 60" Rub Pigtail Pol x 1/4"INV |
| 40405-20 | Rubber Pigtail Pol x 1/4 MPT |
| 40407-144 | CYL Adt Hose / Pol x 1"20 |
| 40407-48 | Cylinder Adt. Hose |
| 40407-60 | CYL Adt Hose/ Pol x 1"20 |
| 40407-72 | CYL Adt Hose / Pol x 1"20 |
| 40408-60 | 60" Rubber Pigtail Type 1 ACME x 1/4" INV. Flare |
| 40410-20 | 20" Rubber Pigtail Type 1 ACME x 1/4" INV. Flare |
| 42421-144 | 144" Extend-A-Flow Hose |
| 42421-60 | 60" Extend-A-Flow Hose |
| ME690-4-6 | 1/2" MNPT x 3/8" MFL MEC Dielectric Union |
| ME690-4-8 | 1/2"MNPT x 1/2"MFL MEC Dielectric Union |
| ME690-4-10 | 1/2"MNPT x 5/8" MFL MEC Dielectric Union |
| ME690-6-6 | 3/4"MNPT x 3/8"MFL MEC Dielectric Union |
| ME690-6-8 | 3/4"MNPT x 1/2"MFL MEC Dielectric Union |
| ME690-6-10 | 3/4"MNPT x 5/8"MFL MEC Dielectric Union |
| ME270 | 1-1/4" M. ACME x 1-1/4" M. ACME Adapter |
| ME570 | Solid - 1-3/4"F ACME x 1-3/4" M.ACME-Single PC |
| ME393-1 | 1-5/16" M. Acme x 1/4" FPT Adaptor- Full Flow |
| 130-05 | Compact High Pressure Fixed Reg 5 PSI - 1/4" FNPT Inlet/Outlet |
| ME1664-03 | Pigtail Pol x Pol 1/4" x 3" |
| ME806-16 | Flo-Max Le Low Emission Transfer Valve |

MEC

MEC

EXCELA-WYND™ HOSE REEL

| Part No. | Description |
|-----------------------|--|
| ME9000LH-17/25 | Excelsa-Wynd™ Hose Reel with LH Type "D" Excelsa-Flange™ Inlet |
| Accessories | Description |
| VSC9000* | MEC/BASE Engineering Variable Speed Control System |
| ME9000WSDA** | Weather Shield - Diamond Plate Aluminum Bright Polished Finish |
| ME9000WSSA** | Weather Shield - Smooth Aluminum Silver Powder Coat Finish |

* Required (included with hose reel purchase)

** Optional



VSC9000



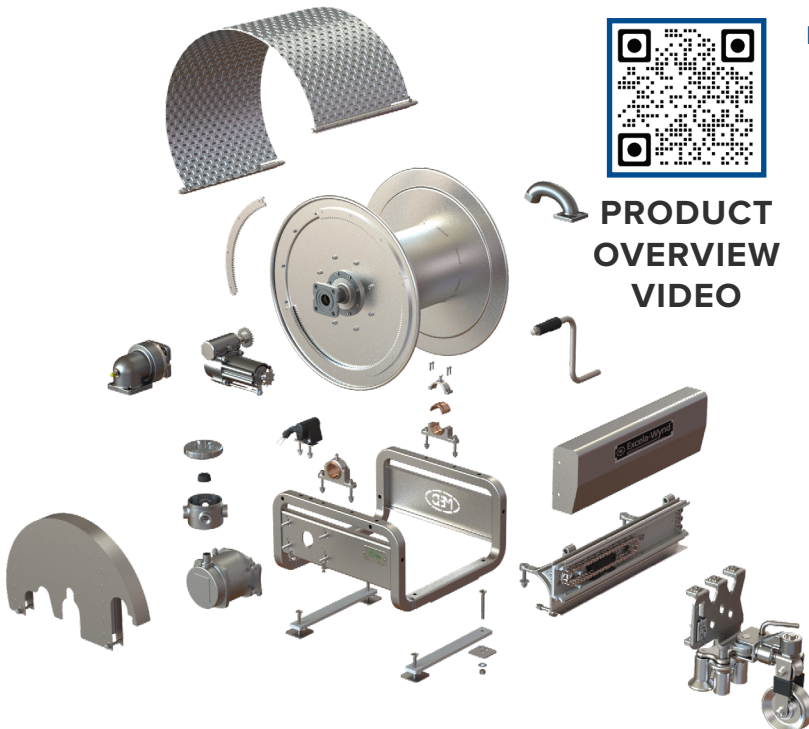
ME9000WSDA

Diamond Plate Aluminum - Bright Polished Finish



ME9000WSSA

Smooth Aluminum - Silver Powder Coat Finish



**PRODUCT
OVERVIEW
VIDEO**

FEATURES

- 17" w x 25" dia. spool
- Holds up to 150' - 1" hose
- Auto-wind hose return system
- Variable Speed Controller - maintains consistent walking speed
- Adjustable speed to suit driver preference or seasonal conditions
- Auto-push feature takes the starting hose pull effort off the driver
- Premium construction & materials for increased service life and minimal downtime
- Gimbal roller assembly significantly reduces pulling effort, even on hard 90° side pulls
- Internal gear drive eliminates chain
- Designed for minimal maintenance & ease of serviceability
- Integrated design makes your truck look great!

MEC

HIGH FLOW GLOBE & ANGLE VALVES

Marshall Excelsior offers three types of globe and angle valves (standard, integrated pilot feature (P) or integrated back check feature (IBC)) depending on the intended application. All Marshall Excelsior globe and angle valves are designed to withstand extreme temperatures and can **increase flow up to 70 percent** over a standard globe valve. The 35 degree seat angle on the 1-1/4" and larger globe valves make them ergonomically designed for bobtail, transport and bulk plant applications. This 35 degree seat angle also allows up to 70 percent more flow. The 1-1/4" and larger globe and angle valves have an optional 360 degree rotating ME829 E-ZTurn knob

To increase the longevity of the seal, all Marshall Excelsior globe and angle valves have a 360 degree rotating seal that stops rotating when it contacts the sealing surface while the valve continues to be tightened. The 1-1/4" and larger models feature ball bearings to facilitate increased seal life.

All 1-1/4" and larger globe and angle valves come with an upstream and downstream plugged port. The boss of these ports are large enough to drill and tap a 3/4" FNPT hole for a jumper line or standard by-pass valve.

These valves are mainly used in piping systems to control liquid or vapor flow in bulk plants, bobtails, transports, pumps or compressors. Globe valves are designed to be installed in a straight section of piping and angle valves are designed to be installed when a 90 degree directional change is needed in the piping.

Change the sealing compound and Marshall Excelsior's globe and angle valves can be used in numerous industries including, but not limited to LP-Gas, anhydrous ammonia, petrochemical and chemical applications. The standard seal compound is Nitrile with PTFE or FKM also available. Contact us if you have a need for a different seal compound.

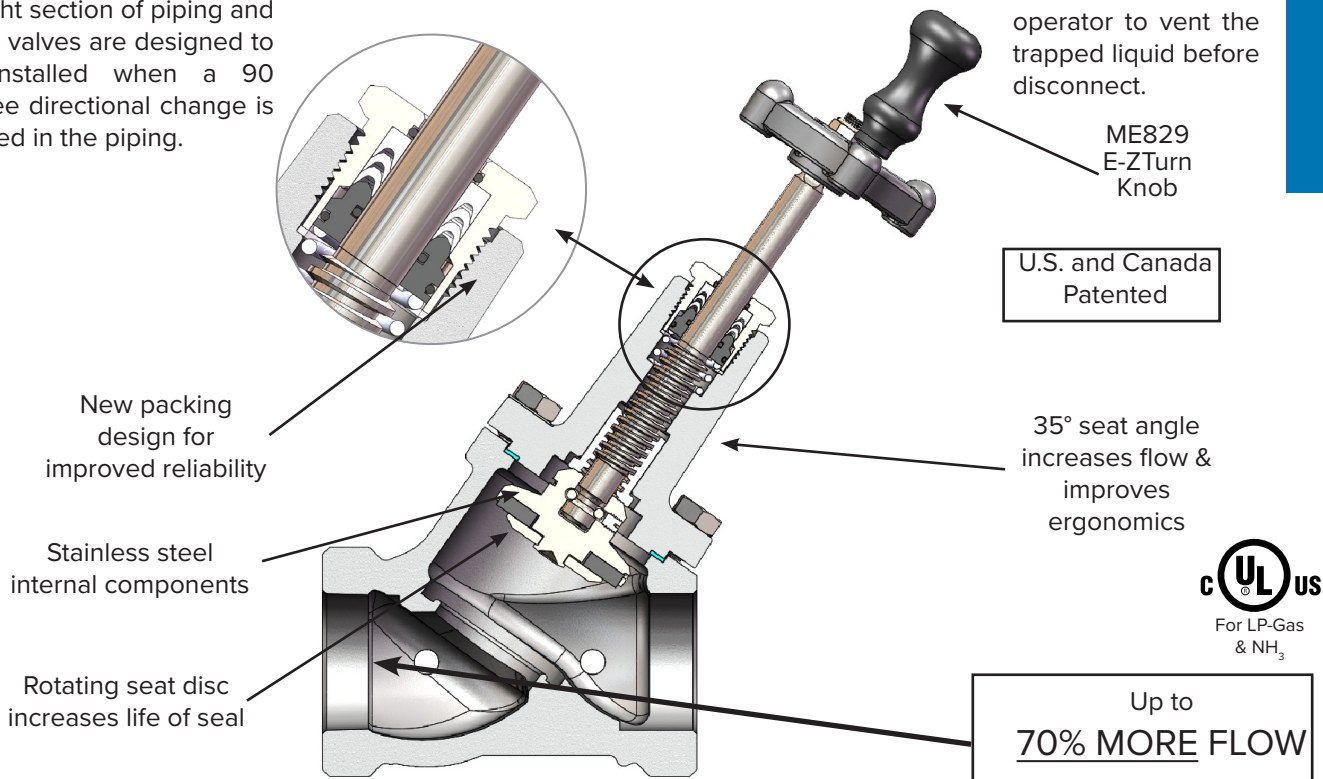
Marshall Excelsior valves are designed to be hand tightened. Using wrenches or excess force to open or close the valve can cause damage to the seal, decreasing the valve's life.

Installation Note: Before installing a globe or angle valve, the piping system and container must be free of dirt, debris, foreign matter and other particles, large or small, that could damage the sealing surface or seal of the valve. A minimal amount of pipe sealant should be used on the mating part. Excess pipe sealant can also cause damage to the seal surface or seal. Damage to the sealing surface or the seal will cause the valve to leak.

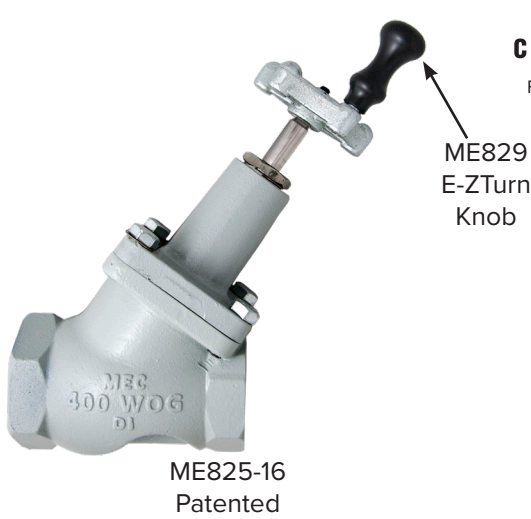
To avoid damage to the valve or piping, due to pressure build-up from temperature changes, a hydrostatic relief valve should be installed where liquid can be trapped between two shutoff valves.

A vent valve should be installed on the downstream side of the globe or angle valve if the angle valve is used as a shutoff valve at the end of a loading hose.

This allows the operator to vent the trapped liquid before disconnect.



HIGH FLOW GLOBE & ANGLE VALVES



MEP449S-101
Replacement Protective
Weather Boot

FEATURES

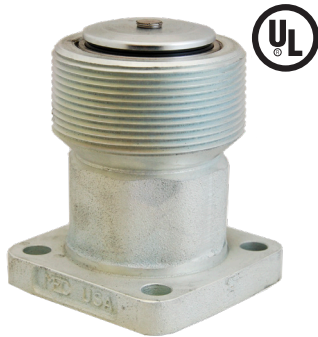
- All stainless steel internal components with rotating seat disc design & V-cup PTFE packing stem seals
- Double stem seal design ensures leak free operation
- Double lead stem thread ensures quick and efficient operation
- Durable ductile iron valve body with automotive grade powder coat finish
- 1-1/4" & larger globe valves have 35° seat angle for maximum product flow
- 1-1/4" & larger globe valve designed ergonomically correct for bobtail transport and bulk plant applications
- 1-3/4", 2-1/4" & 3-1/4" Acme threads available on globe valves
- Rated for 400 WOG
- Operating temperature -40° to +212° Fahrenheit

| Part No. | | Inlet (FNPT) | Outlet | Side Port (FNPT) | No. of Side Ports | Flange Style Bonnet | Accessories | | | |
|----------|----------|------------------|------------------|------------------|-------------------|---------------------|---------------|------------------------------------|---------------------------------|-------------------------------|
| Angle | Globe | | | | | | E-Z Turn Knob | Push-To-Turn Locking Handwheel Kit | Hydrostatic Relief Valves | Vent Valves |
| ME815-4 | ME825-4 | 1/2" | 1/2" FNPT | 1/4" | 2 | No | — | — | | |
| ME815-6 | ME825-6 | 3/4" | 3/4" FNPT | 1/4" | 2 | No | — | — | | |
| ME815-8 | ME825-8 | 1" | 1" FNPT | 1/4" | 2 | No | — | — | MEH225 MEH225SS MEH25/450 | MEJ400 MEJ400SC MEJ402S |
| ME815-10 | ME825-10 | 1-1/4" | 1-1/4" FNPT | 1/4" | 2 | Yes | ME829 | ME815-16LHK | | |
| ME815-12 | ME825-12 | 1-1/2" | 1-1/2" FNPT | 1/4" | 2 | Yes | ME829 | ME815-16LHK | | |
| ME815-16 | ME825-16 | 2" | 2" FNPT | 1/4" | 2 | Yes | ME829 | ME815-16LHK | | |
| --- | ME824-16 | 2" | 2" FNPT | 1/2" | 2 | Yes | ME829 | ME815-16LHK | MEH50/460 | --- |
| ME815-2F | ME825-2F | 2"-300LB Flanged | 2"-300LB Flanged | 1/4" | 2 | Yes | ME829 | ME815-16LHK | MEH225 MEH225SS MEH25/450 | MEJ400 MEJ400SC MEJ402S |
| ME815-24 | ME825-24 | 3" | 3" FNPT | 1/4" | 2 | Yes | included | --- | | |
| ME815-3F | --- | 3"-300LB Flanged | 3"-300LB Flanged | 1/4" | 2 | Yes | included | --- | | |

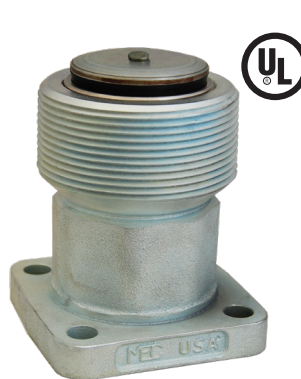
To order FKM seal add "V" after the prefix part number. For PTFE Seal add "T" after the prefix part number i.e. ME815T-10 or ME815V-10

EXCELA-FLANGE™ HIGH FLOW BACK CHECK VALVES

The ME873S Series valves feature our new modular Excela-Flange™ 4 bolt inlet flange design that can be easily adapted to both NPT thread or socket weld type B companion flanges ranging from 1-1/4" to 2" in diameter making it universal to piping sizes within this range. This innovative system allows installers the ability to eliminate unnecessary extra connections as well as possible leak points by integrating a convenient 4 bolt flange union at the valve inlet. Marshall Excelsior High Flow back check valves provide back flow protection to container openings or liquid lines where flow is intended for one direction. The valve is normally held closed until pressure activates the valve when flow is directed into piping or containers causing the back check to open. When flow stops or reverses, the check returns to the closed position. All MEC High Flow Back Check valves are supplied with o-ring soft seats, which can be removed for metal to metal seating. Also available with permanently bonded on main valve seals (SBN).



ME873S-24



ME873SBN -24
(SBN - BONDED SEAT)



ME873SS-16

FEATURES

- Universal seat - Remove O-ring seal to create metal to metal seating surface or (SBN) bonded seat
- Up to **20% MORE FLOW** than nearest competitor
- Maximum product flow achieved by full port and stem travel design
- All models feature stainless steel stem, spring and valve guide
- Valve body: Ductile Iron / Shutoff poppet assy: steel & stainless steel
- Available in 1-1/4" NPT, 2" NPT and 3" NPT x 4 Bolt Type A Flange
- All models can be used with LP Gas or NH₃
- Universal 4 bolt flange inlet type A
- **All models now available with CF8M Stainless Steel body & bonnet**

| Part No. * | | Description | Propane Flow @ 10 PSIG Pressure Differential | Mating Flange Type | Weight (lbs.) | |
|--------------------|----------------------|--|--|--------------------|---------------|-----------------|
| Ductile Iron | CF8M Stainless Steel | | | | Standard | Stainless Steel |
| ME873S-10 | ME873SS-10 | 1-1/4" MNPT x 4 Bolt Type A Flange BCV | 61 | B | 4.1 | 3.5 |
| ME873SBN-10 | ME873SSBN-10 | 1-1/4" MNPT x 4 Bolt Type A Flange BCV (SBN) Bonded Seat | | | | |
| ME873S-16 | ME873SS-16 | 2" MNPT x 4 Bolt Type A Flange BCV | 187 | B | 4.2 | 4.0 |
| ME873SBN-16 | ME873SSBN-16 | 2" MNPT x 4 Bolt Type A Flange BCV (SBN) Bonded Seat | | | | |
| ME873S-24 | ME873SS-24 | 3" MNPT x 4 Bolt Type A Flange BCV | 449 | B | 7.0 | 7.0 |
| ME873SBN-24 | ME873SSBN-24 | 3" MNPT x 4 Bolt Type A Flange BCV (SBN) Bonded Seat | | | 7.1 | |

* Replacements o-rings available upon request. See Replacement Parts section.

NOTE: Liquid Butane Capacity = Flow Rate x .94

Liquid Anhydrous Ammonia Capacity = Flow Rate x .90

MEC

HIGH FLOW BACK CHECK VALVES

These back check flow valves lead the industry with up to 20% More Flow than the nearest competitor. Back check valves provide flow protection to container openings or liquid lines where flow is intended for one direction. The valve is normally closed until pressure activates the valve when flow is directed into piping or containers causing the back check to open. When flow stops or reverses, the check returns to the closed position.

These valves come with dual seating capabilities or an optional bonded soft seat on 2 and 3" models. With the dual seating capabilities, the factory installed O-ring provides a leak-free, soft seat seal which enables repair and maintenance to be done on depressurized plumbing. Remove the O-ring to allow metal-to-metal seating with a minimal leak seal to restrict flow in case of a break in the line.

NOTE: Leaving the O-ring soft seat installed on the valve will require a minimum of 15 psig pressure differential between the transfer line and container to unseat the valve and allow it to fully open.

FEATURES

- Up to **20% More Flow** than nearest competitor
- Maximum flow achieved by full port and increased stem travel—design
- Integral breakaway feature leaves valve assembly intact with internal hex broach for easy removal
- All stainless steel internal components
- Dual purpose seat reduces inventory from 2 to 1



ME870 Series
Shown with
O-Ring Soft Seat



ME870S Series
Shown with O-Ring
Removed for
Metal-to-Metal Seat



ME872S-16



ME870SBN-24
Shown with Bonded
Soft Seat

| High Flow Back Check Valves | | | | | |
|-----------------------------|----------------------|---------------------|------------------|----------------|--|
| Part No. | | | Inlet FNPT | Outlet MNPT | Propane Flow at 10 PSIG Pressure Differential |
| Brass | Steel* | Stainless Steel* | | | |
| ME870-6 | ME870S-6 | ME870SS-6 | 3/4" | 3/4" | 24 |
| ME870-10 | ME870S-10 | ME870SS-10 | 1-1/4" | 1-1/4" | 61 |
| ME870-12 | — | — | 1-1/2" | 1/2" | 112 |
| ME870-16 | ME870S-16 | ME870SS-16 | 2" | 2" | 187 |
| — | ME872S-16 | — | 2" MNPT | 2" | 187 |
| — | ME870S-24 | — | 3" | 3" | 449 |
| — | ME872S-24 | — | 2" FNPT/ 3" MNPT | 3" | 449 |
| — | ME872S-24SP** | — | 2" FNPT | 3" | 449 |

* Rated for LP-Gas & NH₃
** Includes removable o-ring

| High Flow Back Check Valves w/ Bonded Soft Seat | | | | | |
|---|----------------------|---------------------|------------------|----------------|--|
| Part No. | | | Inlet FNPT | Outlet MNPT | Propane Flow at 10 PSIG Pressure Differential |
| Brass | Steel* | Stainless Steel* | | | |
| — | ME870SBN-10 | — | 1-1/4" | 1-1/4" | 61 |
| — | ME870SBN-16 | — | 2" | 2" | 187 |
| — | ME872SBN-16 | — | 2" MNPT | 2" | 187 |
| — | ME870SBN-24** | — | 3" | 3" | 449 |
| — | ME872SBN-24 | — | 2" FNPT/ 3" MNPT | 3" | 449 |
| — | ME872SBN-24SP | — | 2" FNPT | 3" | 449 |

* Rated for LP-Gas & NH₃
** Use for high flow transport applications

Liquid Butane Capacity = Flow Rate x .94
Liquid Anhydrous Ammonia Capacity = Flow Rate x .90

MEC

EXCELERATOR™ INTERNAL VALVES 1-1/4" THREADED

Intended for use on bobtail trucks and storage tanks with 1-1/4" threaded connections in directional or bi-directional flow applications. Provides both manual shut-down as well as excess flow closing in the event of the piping being separated from the valve. Can be equipped with manual latch, pneumatic or rotary actuator, open/ closing devices. All valve models are equipped with a break-away feature in the cast body which permits the piping to shear off in the event of side impact, leaving the valve poppet intact and protecting the tank from catastrophic product loss.

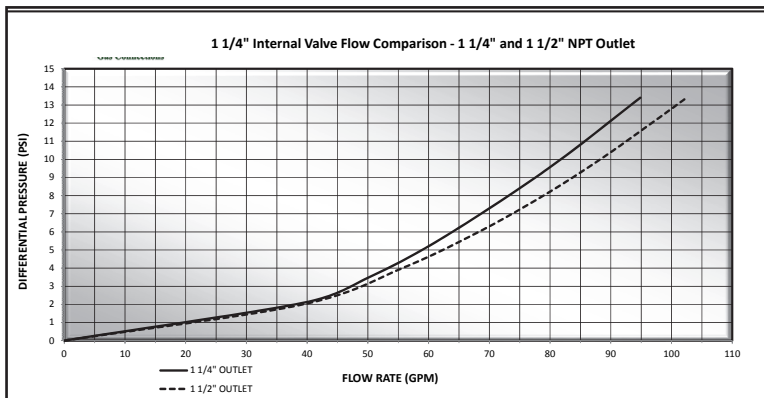
FOR LIQUID OR VAPOR SERVICE APPLICATIONS.

FEATURES

- Durable 316 CF8M stainless steel cast body
- All stainless internal component construction
- Hexagonal installation flats to fit standard 2-3/8" hex socket wrench
- Precision machined hard coated stem
- Fully retained Nitrile seat disc
- Large variety of excess flow closing values
- Roller cam actuation
- Industry's fastest bleed time
- Removable data plate
- Industry's easiest valve to service
- Standard construction utilizes Nitrile seals
- Also available with FKM or FFKM seals
- **UL** LISTED for LPG & NH₃ service (ME990-10 SERIES ONLY)
- Rulon™ bearing on stub shaft



ME990-10 Series



| "X" | 1-1/4" Valve Liquid Closing Flow Values |
|-----|---|
| 55 | 55 GPM LPG Closing Flow |
| 85 | 85 GPM LPG Closing Flow |

NOTE: For NH₃ multiply GPM by .90

| Part No. * | Description |
|-------------------|--|
| ME990-10-"X" | 1-1/4" MNPT x 1-1/4" FNPT Internal Valve |
| ME990-10/12-"X" | 1-1/4" MNPT x 1-1/2" FNPT Internal Valve |
| ME990A-10-"X" | 1-1/4" MNPT x 1-1/4" FNPT Internal Valve - with Pneumatic Actuator |
| ME990A-10/12-"X" | 1-1/4" MNPT x 1-1/2" FNPT Internal Valve - with Pneumatic Actuator |
| ME990AR-10-"X" | 1-1/4" MNPT x 1-1/4" FNPT Internal Valve - with Rotary Actuator |
| ME990AR-10/12-"X" | 1-1/4" MNPT x 1-1/2" FNPT Internal Valve - with Rotary Actuator |
| ME990M-10-"X" | 1-1/4" MNPT x 1-1/4" FNPT Internal Valve - with Manual Latch |
| ME990M-10/12-"X" | 1-1/4" MNPT x 1-1/2" FNPT Internal Valve - with Manual Latch |

* Indicate desired excess flow closing value when ordering - see chart for values - i.e. ME990-10-85 (85 GPM)
To order FFKM add "K" after the prefix part number i.e. ME990K-10-85
To order FKM add "V" after the prefix part number i.e. ME990V-10-85

2" - 300 LB SINGLE AND DOUBLE FLANGED

Intended for use on bobtail delivery trucks, transport trucks and large storage tanks with 2" flanged connections in directional or bi-directional flow applications. Provides both manual shut-down and excess flow closing in the event of the piping being separated from the valve. Can be equipped with manual latch, pneumatic or rotary actuator open/ closing devices. All valve models are equipped with a break-away feature in the cast body which permits the pump or piping to shear off in the event of side impact, leaving the valve poppet intact and protecting the tank from catastrophic product loss.

FOR LIQUID OR VAPOR SERVICE APPLICATIONS.

NOTE: See pages 109-111 for flanged dimensions and installation torque values.

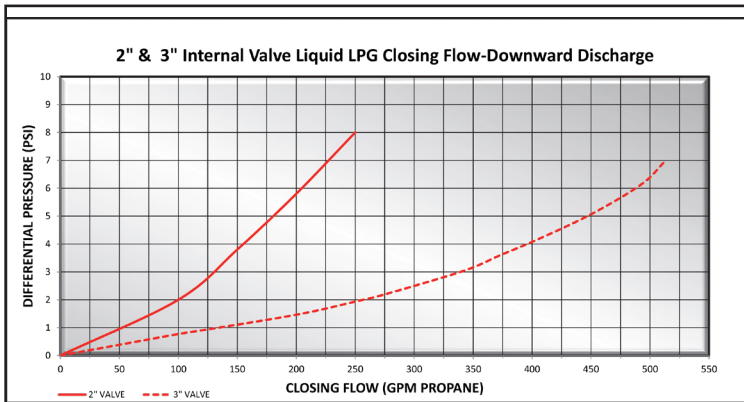
FEATURES

- Durable steel body with cadmium surface plating
- All stainless internal component construction
- One piece threaded packing gland
- Precision machined hard coated stem & stem guide
- Fully retained Nitrile seat disc
- Largest variety of excess flow closing values
- Corrosion resistant sleeved flange bolt holes
- Xylan coated corrosion resistant mounting studs
- Roller cam actuation
- Industry's fastest bleed time
- Removable data plate
- Industry's easiest valve to service
- Standard construction utilizes Nitrile seals
- Available with PTFE, FKM, or FFKM seals
- Available with 316 Stainless Steel bodies
- UL LISTED for LPG & NH₃ service
- Rulon™ bearings on stem and stub shafts

ME990S-2F-16 Series
2"-300LB x 2" FNPT



ME990S-2DFM Series
2"-300LB Double Flanged Internal Valve



| X | 2" Valve Liquid Closing Flow Values |
|-----|-------------------------------------|
| 110 | 110 GPM LPG Closing Flow |
| 160 | 160 GPM LPG Closing Flow |
| 260 | 260 GPM LPG Closing Flow |

NOTE: For NH₃ multiply GPM by .90

| Part No. * | | Description |
|--------------------|----------------------|--|
| WCC A216 Steel | CF8M Stainless Steel | |
| ME990S-2F-16-"X" | ME990SS-2F-16-"X" | 2"-300 lb. Modified Single Flange x 2" FNPT Internal Valve |
| ME990SA-2F-16-"X" | — | 2"-300 lb. Modified Single Flange x 2" FNPT Internal Valve - with Pneumatic Actuator |
| ME990SAR-2F-16-"X" | — | 2"-300 lb. Modified Single Flange x 2" FNPT Internal Valve - with Rotary Actuator |
| ME990S-2DFM-"X" | ME990SS-2DFM-"X" | 2"-300 lb. Modified Double Flange Internal Valve |
| ME990SA-2DFM-"X" | — | 2"-300 lb. Modified Double Flange Internal Valve - with Pneumatic Actuator |
| ME990SAR-2DFM-"X" | — | 2"-300 lb. Modified Double Flange Internal Valve - with Rotary Actuator |

* Indicate desired excess flow closing value when ordering - see chart for values i.e. ME990S-2F-16-260 (260 GPM)
 To order PTFE add "T" after the prefix part number i.e. ME990ST-2F-16-260
 To order FFKM add "K" after the prefix part number i.e. ME990SK-2F-16-260
 To order FKM add "V" after the prefix part number i.e. ME990SV-2F-16-260

EXCELA-FLANGE™ INTERNAL VALVES

2"- 300 LB X 2" - 8 BOLT COMPANION FLANGE

The ME994S-2F series valves feature our new modular Excelsa-Flange™ 2"-8 bolt outlet flange design that can be easily adapted to either 2" NPT or socket weld companion flanges (MEP994S-2F-2SW) making it universal to either piping construction.

FOR LIQUID OR VAPOR SERVICE APPLICATIONS.

NOTE: See pages 109-111 for flanged dimensions and installation torque values.

FEATURES

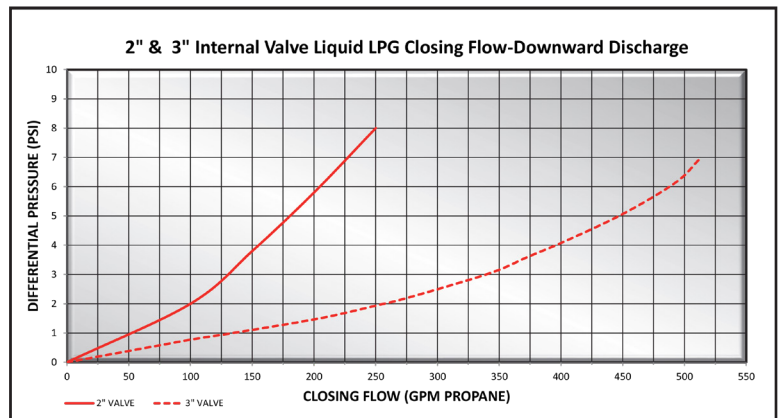
- Durable steel body with cadmium surface plating
- Universal 2"-8 bolt outlet flange connection for threaded or welded piping
- Universal 2" -8 bolt outlet flange provides a built-in union joint for easy serviceability
- All stainless internal component construction
- One piece threaded packing gland
- Precision machined hard coated stem & stem guide
- Fully retained nitrile seat disc
- Largest variety of excess flow closing values
- Corrosion resistant sleeved flange bolt holes
- Xylan coated corrosion resistant mounting studs
- Roller cam actuation
- Industry's fastest bleed time
- Removable data plate
- Industry's easiest valve to service
- Standard construction utilizes nitrile seals
- Available with PTFE, FKM, or FFKM seals
- Available with 316 Stainless Steel bodies
- UL LISTED for LPG & NH₃ service
- Rulon™ bearings on stem and stub shafts
- Fits standard 2" - 300# flanged tank openings

ME994S-2F-16 Series



| X | 2" Valve Liquid Closing Flow Values |
|-----|-------------------------------------|
| 110 | 110 GPM LPG Closing Flow |
| 160 | 160 GPM LPG Closing Flow |
| 260 | 260 GPM LPG Closing Flow |

NOTE: For NH₃ Multiply GPM by .90



| Part No. * | | Description | Weight (lbs.) |
|--------------------|----------------------|---|---------------|
| WCC A216 Steel | CF8M Stainless Steel | | |
| ME994S-2F-16-"X" | ME994SS-2F-16-"X" | 2"-300 lb. Modified Single Flange x 2"-8 Bolt Flange Internal Valve | 21.6 |
| ME994SA-2F-16-"X" | — | 2"-300 lb. Modified Single Flange x 2"-8 Bolt Flange Internal Valve w/ Pneumatic Actuator | 35.5 |
| ME994SAR-2F-16-"X" | — | 2"-300 lb. Modified Single Flange x 2"-8 Bolt Flange Internal Valve w/ Rotary Actuator | 28.9 |

* Indicate desired excess flow closing value when ordering - see chart for values i.e. ME994S-2F-16-260 (260 GPM)
 To order PTFE add "T" after the prefix part number i.e. ME994ST-2F-16-260
 To order FFKM add "K" after the prefix part number i.e. ME994SK-2F-16-260
 To order FKM add "V" for after the prefix part number i.e. ME994SV-2F-16-260

| Companion Flange Kits | | | |
|-----------------------|----------------------|---|---------------|
| Part No. | CF8M Stainless Steel | Description | Weight (lbs.) |
| MEP994-2F-16 | MEP994SS-2F-16 | 2" -8 Bolt x 2" FNPT Excelsa-Flange Companion Flange Kit w/ Bolts and O-Ring | 3.5 |
| MEP994-2F-2SW | MEP994SS-2F-2SW | 2" -8 Bolt x 2" Socket Weld Excelsa-Flange Companion Flange Kit w/ Bolts & O-Ring | 3.6 |

EXCELA-FLANGE™ INTERNAL VALVES

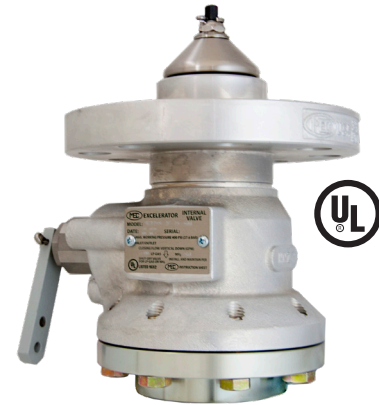
3"- 300 LB X 3" - 8 BOLT UNIVERSAL COMPANION FLANGE SERIES

The ME994S-3F series valves feature our new modular Excelsa-Flange™ 3"-8 bolt outlet flange design that can be easily adapted to either 3" NPT or socket weld companion flanges (MEP994S-3F-3SW) making it universal to either piping construction. FOR LIQUID OR VAPOR SERVICE APPLICATIONS.

NOTE: See pages 109-111 for flanged dimensions and installation torque values.

FEATURES

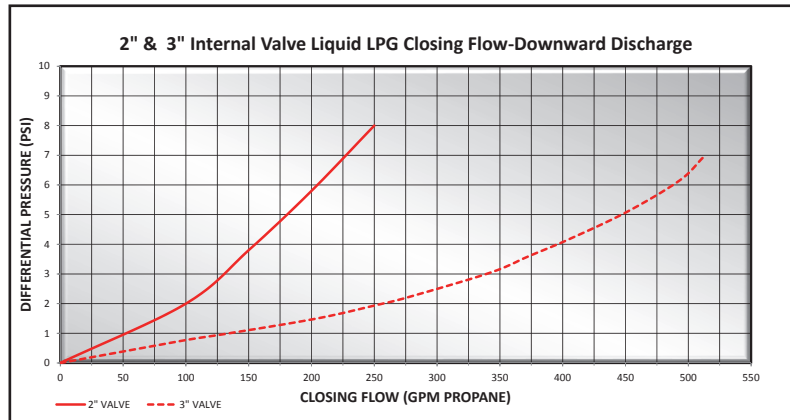
- Durable steel body with cadmium surface plating
- Universal 3"-8 bolt outlet flange connection for threaded or welded piping
- Universal 3"-8 bolt outlet flange provides a built-in union joint for easy serviceability
- All stainless internal component construction
- One piece threaded packing gland
- Precision machined hard coated stem & stem guide
- Fully retained nitrile seat disc
- Largest variety of excess flow closing values
- Corrosion resistant sleeved flange bolt holes
- Xylan coated corrosion resistant mounting studs
- Standard construction utilizes nitrile seals
- Available with 316 Stainless Steel bodies
- UL LISTED for LPG & NH₃ service
- Rulon™ bearings on stem and stub shafts
- Fits standard 3" - 300# flanged tank openings
- Roller cam actuation
- Industry's fastest bleed time
- Removable data plate
- Industry's easiest valve to service
- Available with PTFE, FKM, or FFKM seals



ME994S-3F-24 Series
(Companion Flange not included)

| X | 3" Valve Liquid Closing Flow Values |
|-----|-------------------------------------|
| 175 | 175 GPM LPG Closing Flow |
| 250 | 250 GPM LPG Closing Flow |
| 300 | 300 GPM LPG Closing Flow |
| 375 | 375 GPM LPG Closing Flow |
| 400 | 400 GPM LPG Closing Flow |
| 475 | 475 GPM LPG Closing Flow |
| 500 | 500 GPM LPG Closing Flow |

NOTE: For NH₃ multiply GPM by .90



| Part No. * | | Description | Weight (lbs.) |
|---------------------------|--------------------------|---|---------------|
| WCC A216 Steel | CF8M Stainless Steel | | |
| ME994S-3F-24-"X" | ME994SS-3F-24-"X" | 3"-300 lb. Modified Single Flange x 3"-8 Bolt Companion Flange Internal Valve | 38.3 |
| ME994SA-3F-24-"X" | — | 3"-300 lb. Modified Single Flange x 3"-8 Bolt Companion Flange Internal Valve - w/ Pneumatic Actuator | 52.8 |
| ME994SAR-3F-24-"X" | — | 3"-300 lb. Modified Single Flange x 3"-8 Bolt Companion Flange Internal Valve - w/ Rotary Actuator | 45.9 |

* Indicate desired excess flow closing value when ordering - see chart for values i.e. ME994S-3F-24-260 (260 GPM)
To order PTFE add "T" after the prefix part number i.e. ME994ST-3F-24-260
To order FFKM add "K" after the prefix part number i.e. ME994SK-3F-24-260
To order FKM add "V" after the prefix part number i.e. ME994SV-3F-24-260

| Companion Flange Kits | | |
|-----------------------|--|---------------|
| Part No. * | Description | Weight (lbs.) |
| MEP994-3F-24 | 3" -8 Bolt x 3" FNPT Excelsa-Flange™ Companion Flange Kit w/ Bolts and O-Ring | 4.8 |
| MEP994-3F-3SW | 3" -8 Bolt x 3" Socket Weld Excelsa-Flange™ Companion Flange Kit w/ Bolts and O-Ring | 4.9 |


3"- FLANGED INTERNAL VALVES

Intended for use on bobtail delivery trucks, transport trucks and large storage tanks with 3" flanged connections in directional or bi-directional flow applications. Provides both manual shut-down and excess flow closing in the event of the piping being separated from the valve. Can be equipped with manual latch, pneumatic or rotary actuator open/ closing devices. All valve models are equipped with a break-away feature in the cast body which permits the pump or piping to shear off in the event of side impact, leaving the valve poppet intact and protecting the tank from catastrophic product loss.

FOR LIQUID OR VAPOR SERVICE APPLICATIONS.

NOTE: See pages 109-111 for flanged dimensions and installation torque values.

FEATURES

- Durable steel body with cadmium surface plating
- All stainless internal component construction
- One piece threaded packing gland
- Precision machined hard coated stem & stem guide
- Fully retained Nitrile seat disc
- Largest variety of excess flow closing values
- Corrosion resistant sleeved flange bolt holes
- Xylan coated corrosion resistant mounting studs
- Roller cam actuation
- Industry's fastest bleed time
- Removable data plate
- Industry's easiest valve to service
- Standard construction utilizes Nitrile seals
- Available with PTFE, FKM, or FFKM seals
- Available with 316 Stainless Steel bodies
-  LISTED for LPG & NH₃ service
- Rulon™ bearings on stem and stub shafts



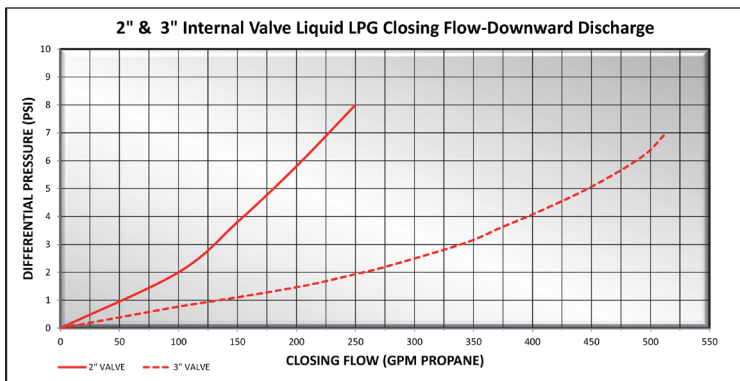
ME990S-3F-24
Modified Single
Flange Series



ME990S-3DF
Standard Double Flange Series



ME990S-3DFM
Modified Double
Flange Series



| "X" | 3" Valve Liquid Closing Flow Values |
|-----|-------------------------------------|
| 175 | 175 GPM LPG Closing Flow |
| 250 | 250 GPM LPG Closing Flow |
| 300 | 300 GPM LPG Closing Flow |
| 375 | 375 GPM LPG Closing Flow |
| 400 | 400 GPM LPG Closing Flow |
| 475 | 475 GPM LPG Closing Flow |
| 500 | 500 GPM LPG Closing Flow |

NOTE: For NH₃ multiply GPM by .90 PM by .90

| Part No. * | | Description | Actuator Type |
|---------------------------|--------------------------|---|---------------|
| WCC A216 Steel | CF8M Stainless Steel | | |
| ME990S-3DF-"X" | ME990SS-SDF-"X" | 3" Double Flange Bobtail Internal Valve | — |
| ME990SA-3DF-"X" | — | | Pneumatic |
| ME990SAR-3DF-"X" | — | | Rotary |
| ME990S-3DFM-"X" | ME990SS-3DFM-"X" | 3"-300 lb. Modified Double Flange Internal Valve | — |
| ME990SA-3DFM-"X" | — | | Pneumatic |
| ME990SAR-3DFM-"X" | — | | Rotary |
| ME990S-3F-24-"X" | ME990SS-3F-24-"X" | 3"-300 lb. Modified Single Flange x 3" FNPT Internal Valve | — |
| ME990SA-3F-24-"X" | — | | Pneumatic |
| ME990SAR-3F-24-"X" | — | | Rotary |

* Indicate desired excess flow closing value when ordering - see chart for values i.e. ME990S-3DF-250 (250 GPM)
 To order PTFE add "T" after the prefix part number i.e. ME990ST-3DF-300
 To order FFKM add "K" after the prefix part number i.e. ME990SK-3DF-300
 To order FKM add "V" after the prefix part number i.e. ME990SV-3DF-300

MEC

INTERNAL VALVE ACTUATORS POWERTORQ SERIES

These direct drive actuators are designed to maximize the life of the internal valve by eliminating side pressure on the valve's packing stem. These actuators are intended to be used at remote locations or operated directly off the air brake system in bobtail or transport applications.

The low temperature factory installed seals allow these actuators to be used with air, nitrogen, carbon dioxide or LP-Gas vapor. In case of a fire the factory provided thermal plug melts at 212° Fahrenheit releasing pressure allowing the internal valve to close. The factory set rotation of these actuators require no modification, can be oriented in any direction and all hardware needed for installation is provided.

FEATURES

- Stainless steel all weather mounting hardware
- Field repairable under full tank pressure
- Anodized aluminum actuator body with easy to see open/close indicator
- No pinch points for operator safety
- Includes mounting bracket for ME707 Quick Release Valve
Note: ME707 is not required for operation



Actuator Operating Pressure Limits:

Minimum = 25 PSIG
Maximum = 125 PSIG
Recommended = 40-60 PSIG

| Part No. | Actuator Type | Fits MEC* | Fits Fisher* | Internal Valve |
|--------------|---------------|---|--------------------------------------|------------------|
| ME225 | Direct Drive | ME990-10, ME991-10, ME992-10, ME992-12 | Fisher® C407 | 1-1/4" Threaded |
| ME226 | Direct Drive | ME990-16, ME990-24, ME992-24, ME990S-3F-24, ME990S-2DFM, ME991-16, ME991-24, ME992-16, ME992-24, ME993S-16, ME993S-24, ME994S | Fisher® C402, C421, C427, C471, C477 | 2" & 3" Threaded |
| ME227 | Direct Drive | ME990S-3DF & ME990S-3DFM | Fisher® C403-24 & C483-24 Series | 3" Double Flange |
| ME228 | Direct Drive | ME990-4F | Fisher® C404-32 | 4" Single Flange |

* Also fits Cavagna 6902900 Series internal valves

Fisher® and Fisher® Internal Valves are the trademarks of Emerson Process Management; Cavagna is the trademark of Cavagna Group

PowerTorq Actuators



ACCESSORIES

ME707 - The quick release valve is used in conjunction with Marshall Excelsior's air actuators to decrease the response time when closing actuators. They are particularly effective when long distances (75 feet or more) exist between the actuator and the actuator control valve.

ME708 - The 0-150 psig air pressure regulator prolongs the life of the air actuator and air system by allowing the air pressure to be set and regulated at the minimum required operating pressure for each individual system.

ME709 - The gas/air filter is used to filter foreign materials and/or particles from LP-Gas systems such as motor fuel/carburetion systems. Also designed to be used to filter air supply lines for internal and emergency shutoff valve actuator systems.

MEGR-130-50 - Pressure reducing regulator - Maximum 250 inlet, 50 PSI outlet set point



Universal Mounting Bracket Included

| Part No. | Inlet | Outlet |
|-------------|-----------|---------------------|
| ME707 | 3/8" FNPT | 3/8" FNPT (2 Ports) |
| ME708 | 1/4" FNPT | 1/4" FNPT |
| ME709 | 1/4" FNPT | 1/4" MNPT |
| MEGR-130-50 | 1/4" FNPT | 1/4" FNPT |



MEC

MEC

POWERSTROKE AND FASTROKE SERIES

Designed with a heavy duty stainless steel frame to withstand the toughest conditions. These actuators are intended to be used at remote locations or operated directly off the air brake system in bobtail or transport applications.

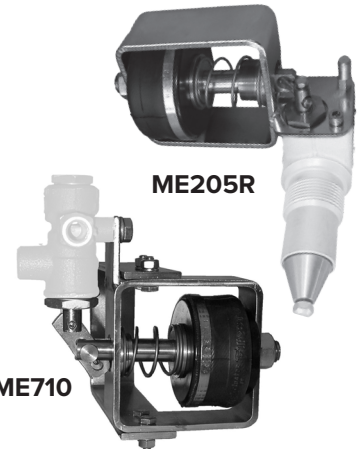
The actuator's smooth acting cam opens the internal valve lever when air, nitrogen, or carbon dioxide is applied to the line. When pressure to the line is released, the internal valve automatically closes. In case of a fire the factory provided thermal plug melts at 212° Fahrenheit releasing pressure allowing the internal valve to close. These actuators require no modification and all hardware needed for installation is provided.

| Part No. | Actuator Type | Fits MEC* | Fits* | Internal Valve |
|----------------|-------------------------|---|--------------------------------------|------------------|
| ME205 | Airstroke™ by Firestone | ME990-10, ME991-10, ME992-10, ME992-12 | Fisher® C407 | 1-1/4" Threaded |
| ME205R | Airstroke™ by Firestone | — | RegO® A3209R & A3209D | 1-1/4" Threaded |
| ME206 | #9 Chamber | ME990-16, ME990-24, ME990S-3F-24, ME990S-2DFM, ME991-16, ME991-24, ME992-16, ME992-24, ME993S-16, ME993S-24, ME994S | Fisher® C402, C421, C471, C427, C477 | 2" & 3" Threaded |
| ME207 | #9 Chamber | ME990S-3DF & ME990S-3DFM | Fisher® C403-24 & C483-24 Series | 3" Double Flange |
| ME207SF | #9 Chamber | ME990-3F | Fisher® C484-24 Series | 3" Single Flange |
| ME208SF | #24 Chamber | ME990-4F | Fisher® C404-32 | 4" Single Flange |
| ME710 | Airstroke™ by Firestone | — | RegO® Flowmatic® Three-Way Valve | |

* Also fits Cavagna 6902900 Series internal valves



FaStroke Actuators



FEATURES

- Stainless steel all weather bracket
- Field repairable without complete disconnect from internal valve
- Repairable with common automotive brake chamber
- High gloss automotive grade black epoxy coating

ACTUATOR OPERATING PRESSURE LIMITS:

Minimum = 20 PSIG
Maximum = 125 PSIG
Recommended = 20-25 PSIG

PowerStroke Actuators



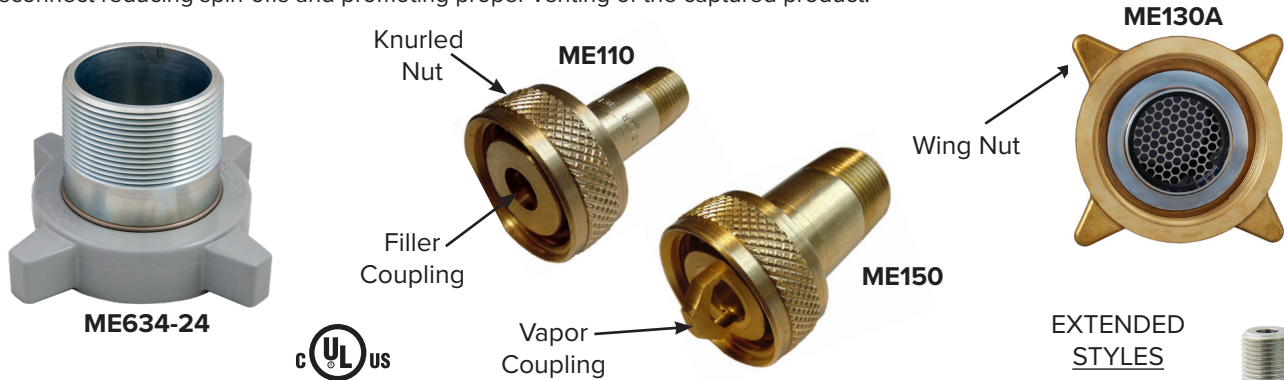
Airstroke™ is a trademark of Firestone Industrial Products Company, Fisher® and Fisher® Internal Valves are the trademarks of Emerson Process Management; RegO® and Flowmatic® Internal Valves are the trademarks of Engineered Controls International, Inc. and Cavagna is the trademark of Cavagna Group

MEC

FILLER & VAPOR COUPLINGS

These couplings are used as connections between the hose and transfer valve. The filler coupling is designed to provide different connections for the end of a hose (inlet) or an angle, globe or quick acting valve (outlet) when transferring liquid. The vapor coupling is designed to be used with valves having an upper check mechanism. The nose piece on the vapor coupling opens the check valve allowing vapor equalization.

The extended style has a stainless steel female Acme nut insert cast into the heavy duty aluminum handle. All filler and vapor couplings come with a factory installed retaining ring unless noted. The retaining ring limits the travel of the handle or nut during disconnect reducing spin-offs and promoting proper venting of the captured product.



EXTENDED
STYLES

| Service Type | Part No. | | | | | | | F. Acme | MNPT |
|--------------|-------------|----------------------------|---------------------------------|-------------|----------------------|-----------------|-----------|---------|--------------|
| | Brass | | Brass Wing Nut/Steel Nipple | Steel* | | | | | |
| | Knurled Nut | Wing Nut | | Knurled Nut | Wing Nut | Extended Handle | | | |
| | | | | | Standard | Fluted | | | |
| Liquid | ME100 | — | — | — | — | — | — | 1-1/4" | 3/8" |
| | ME101 | — | — | — | — | — | — | 1-1/4" | 1/2" |
| | ME110 | ME110C | — | — | — | ME635-4 | ME635G-4 | 1-3/4" | 1/2" |
| | ME111 | ME111C | — | ME111S | ME111SC | ME635-6 | ME635G-6 | 1-3/4" | 3/4" |
| | — | — | — | — | ME113SC | — | — | 1-3/4" | 3/4" FNPT |
| | ME112 | ME112C | — | ME112S | ME112SC | ME635-8 | ME635G-8 | 1-3/4" | 1" |
| | — | — | — | — | — | ME635-10 | ME635G-10 | 1-3/4" | 1-1/4" |
| | — | ME120** ME120WR | ME120S** | — | ME121S** ME121SWR | — | — | 2-1/4" | 1-1/4" |
| | — | ME130B** ME130BWR | ME130** ME130A*** ME130WR | — | ME130S** ME130SWR | — | — | 3-1/4" | 2" |
| — | — | ME664-24 (Bronze/Steel) | — | ME634-24 | — | — | 4-1/4" | 3" | |
| Vapor | ME140 | — | — | — | — | — | — | 1-1/4" | 3/8" |
| | ME141 | — | — | ME141S | — | — | ME645G-4 | 1-1/4" | 1/2" |
| | — | — | — | — | — | — | ME645G-6 | 1-1/4" | 3/4" |
| | — | — | — | — | — | ME646-4 | ME646G-4 | 1-3/4" | 1/2" |
| | ME150 | — | — | — | ME150SC | ME646-6 | ME646G-6 | 1-3/4" | 3/4" |
| | ME151 | ME151C | — | ME151S | ME151SC | ME646-8 | ME646G-8 | 1-3/4" | 1" |
| | — | — | — | — | — | ME646-10 | ME646G-10 | 1-3/4" | 1-1/4" |
| | — | — | ME160 | — | ME160S | — | — | 2-1/4" | 1-1/4" |



* Rated for LP-Gas & NH₃
 ** Does not include a factory installed retaining ring
 *** Includes factory installed filter screen

NOTE: Pressure rated for 400 WOG
 ME634-24 & ME664-24 Non-UL Rated

MEC

3-1/4" EXTENDED ACME ADAPTER

W/ EXTENDED RELIEF AND BLOWDOWN PORTS

The **ME503JT Series Acme adapters** (available in brass or steel construction) feature an extended body designed to allow blowdown line and hydrostatic relief installation directly from the fitting in transport inlet/outlet plumbing installations.

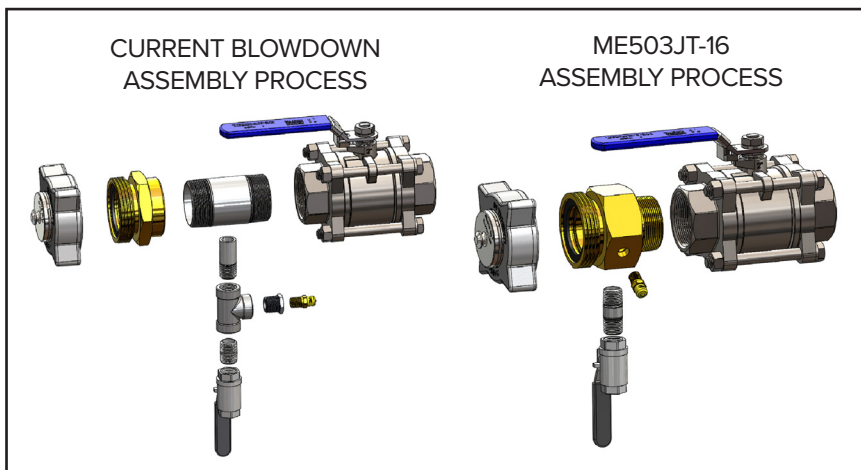
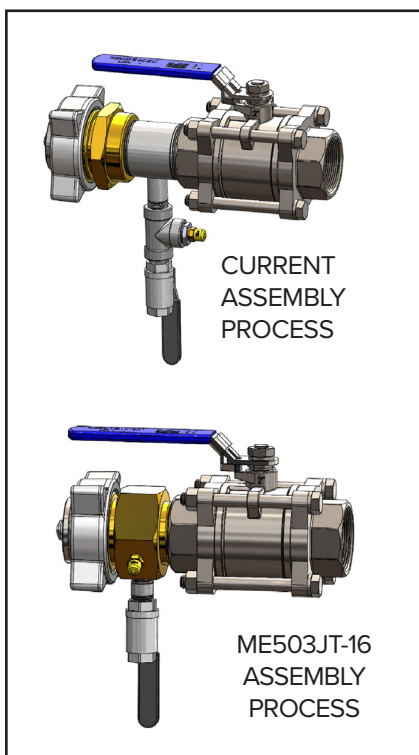
The Extended Acme Adapter is 2" MNPT x 3-1/4" Male Acme, featuring both 1/4" FNPT and 1/2" FNPT side auxiliary ports, allowing direct connection of the blowdown line and installation of a hydrostatic pressure relief valve (MEH225 Series) or bleed valve (MEJ400 Series).

ME503JT-16



FEATURES

- Durable brass or steel construction
- Adapters include Nitrile Acme gasket
- Rated 400 WOG
- Reduces amount of components for the blowdown line set-up
- Reduces potential leak points
- Eliminates the need for welding
- Reduced assembly time
- Reduces weight on the transport truck



| Part No. | Description | Aux. Hole #1 | Aux. Hole #2 | Material | Application | |
|--------------------|---|--------------|--------------|----------|-------------|-----|
| | | | | | LPG | NH3 |
| ME503JT-16 | 3-1/4" M. Acme x 2" MNPT Adapter w/ extended body | 1/4" NPT | 1/2" NPT | Brass | Y | N |
| ME503SJT-16 | | | | Steel | Y | Y |

| Accessories | |
|-------------|--|
| Part No. | Description |
| MEH225 | Hydrostatic Relief Valve - Brass |
| MEH225SS | Hydrostatic Relief Valve - Stainless Steel |
| MEJ400 | Liquid Level Vent Valve - Brass |
| MEJ400/72 | Low Emission Liquid Level Vent Valve #72 Orifice - Brass |
| MEJ400SC | Self Cleaning Liquid Level Vent Valve - Brass |
| MEJ402S | Liquid Level Vent Valve w/ T-Handle - Stainless Steel |



MEC

ACME ADAPTERS

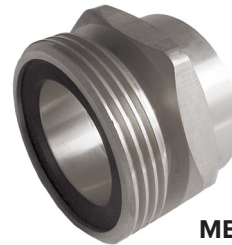
| Part No. | | | M. Acme | FNPT | MNPT |
|-------------|--------------------------|--------------|---------|--------|-----------|
| Brass | | Steel* | | | |
| No Screen | Factory Installed Screen | | | | |
| ME498-4/2 | — | — | 1-1/4" | 1/4" | 1/2" ** |
| ME498-6/3 | — | — | 1-1/4" | 3/8" | 3/4" ** |
| ME192 | — | — | 1-1/4" | 1/2" | — |
| ME193 | — | — | 1-1/4" | 3/4" | — |
| ME210 | — | — | 1-3/4" | 1/4" | — |
| ME211 | — | — | 1-3/4" | 3/8" | — |
| ME212 | — | — | 1-3/4" | 1/2" | — |
| ME213 | — | ME213S | 1-3/4" | 3/4" | — |
| ME214 | — | ME214S | 1-3/4" | 1" | — |
| ME502-12/8 | — | — | 2-1/4" | 1" | 1-1/2" ** |
| ME502-16/10 | — | ME502S-16/10 | 2-1/4" | 1-1/4" | 2" ** |
| ME502-16/12 | — | — | 2-1/4" | 1-1/2" | 2" ** |
| ME250 | ME250A | — | 3-1/4" | 1-1/4" | — |
| ME251 | ME251A | — | 3-1/4" | 1-1/2" | — |
| ME252-16 | ME252A-16 | ME252S-16 | 3-1/4" | 2" | — |
| ME508-24 | ME508A-24 | ME508S-24 | 3-1/4" | 3" | — |



ME192



ME212

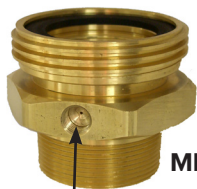


ME252S-16

* Rated for LP-Gas & NH₃

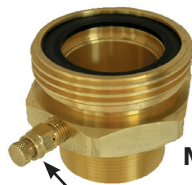
** Male Thread Outside & Female Thread Inside

NOTE: Pressure rated for 400 WOG



ME503J-16

1/4" FNPT with Vent Hole & #54 Orifice



ME503JB-16

Brass Vent Valve



ME503JS-16

Stainless Steel Vent Valve

| Part No. | | | | | | M. Acme | FNPT/ MNPT |
|---|------------------------------------|--|---|------------------------------------|--|---------|---------------|
| Brass | | | Steel* | | | | |
| Factory Machined 1/4" FNPT with Vent Hole | Factory Installed Brass Vent Valve | Factory Installed Stainless Steel Vent Valve | Factory Machined 1/4" FNPT with Vent Hole | Factory Installed Brass Vent Valve | Factory Installed Stainless Steel Vent Valve | | |
| ME252J-16 | ME252JB-16 | ME252JS-16 | ME252SJ-16 | ME252SJB-16 | ME252SJS-16 | 3-1/4" | 2" FNPT |
| ME503J-16 | ME503JB-16 | ME503JS-16 | ME503SJ-16 | ME503SJB-16 | ME503SJS-16 | 3-1/4" | 2" MNPT |

NOTE: To add a factory installed screen use an "A" after the prefix number i.e. ME252AJB-16

Pressure rated for 400 WOG

* Rated for LP-Gas & NH₃



| Part No. | Description |
|----------|----------------------------------|
| MEW1 | REPLACEMENT SEAL ACME GASKET KIT |



| Part No. | | M. Acme | Female UNC Thread |
|----------|--------|---------|-------------------|
| Brass | Steel* | | |
| ME209 | ME209S | 1-3/4" | 3/8"-16 |

To hold hose end valve secure when not in use
* Rated for LP-Gas & NH₃

MEC

MEC

ACME ADAPTERS

| Part No. | | | | | M. Acme | MNPT | FNPT |
|-------------------------|---------------------|--------------------------|---------------------|---------|---------|---------------------|------|
| Brass | | Steel ⁽¹⁾ | | | | | |
| No Screen | 1/8" FNPT Side Port | Factory Installed Screen | 1/8" FNPT Side Port | | | | |
| ME498-4/2 | — | — | — | 1-1/4" | 1/2" | 1/4" ⁽²⁾ | |
| ME498-6/3 | — | — | — | 1-1/4" | 3/4" | 3/8" ⁽²⁾ | |
| — | — | — | ME520S-8 | 1-1/4" | 1" | — | |
| — | — | — | ME521S-4 | 1-3/4" | 1/2" | — | |
| ME215 | — | — | ME215S | 1-3/4" | 3/4" | — | |
| ME216 | — | — | ME216S | 1-3/4" | 1" | — | |
| ME217 | ME217J | ME217A | ME217S | ME217SJ | 1-3/4" | 1-1/4" | |
| ME233 | ME233J | — | ME233S | ME233SJ | 2-1/4" | 1-1/4" | |
| ME502-12/8 | — | — | — | — | 2-1/4" | 1-1/2" | |
| ME502-16/10 | — | — | ME502S-16/10 | — | 2-1/4" | 2" | |
| ME502-16/12 | — | — | — | — | 2-1/4" | 2" | |
| ME503-16 | — | ME503A-16 | ME503S-16 | — | 3-1/4" | 2" | |
| ME503-20 | — | ME503A-20 | — | — | 3-1/4" | 2-1/2" | |
| ME262 | — | ME262A | ME262S | — | 3-1/4" | 3" | |
| ME504-24 ⁽³⁾ | — | — | — | — | 4-1/4" | 3" | |

- (1) Rated for LP-Gas & NH₃
- (2) Male thread outside & female thread inside
- (3) Not a UL listed configuration
- (4) "SS" indicates stainless steel

NOTE: Pressure rated for 400 WOG



MEP503K Installed
(ME503-16 not included)

| Part No. | Description |
|----------|---|
| MEP502 | 1-3/4" M. Acme x 1-3/4" F. Acme Conical Filter Adapter |
| MEP503 | Conical Filter Screen only for 3-1/4" M Acme Adapters 30 Mesh - Stainless Steel |
| MEP503K | Conical Filter Screen and Retainer for 3-1/4" M Acme Adapters - 30 Mesh - Stainless Steel |
| ME868-16 | Flo-Max Le ACME Adapter |

| Part No. | | M. Acme | M. Acme |
|----------|---------|---------|---------|
| Brass | Steel * | | |
| ME270 | — | 1-1/4" | 1-1/4" |
| ME273 | ME273S | 1-3/4" | 1-3/4" |
| ME275 | ME275S | 2-1/4" | 2-1/4" |
| ME277 | ME277S | 3-1/4" | 3-1/4" |

* Rated for LP-Gas & NH₃

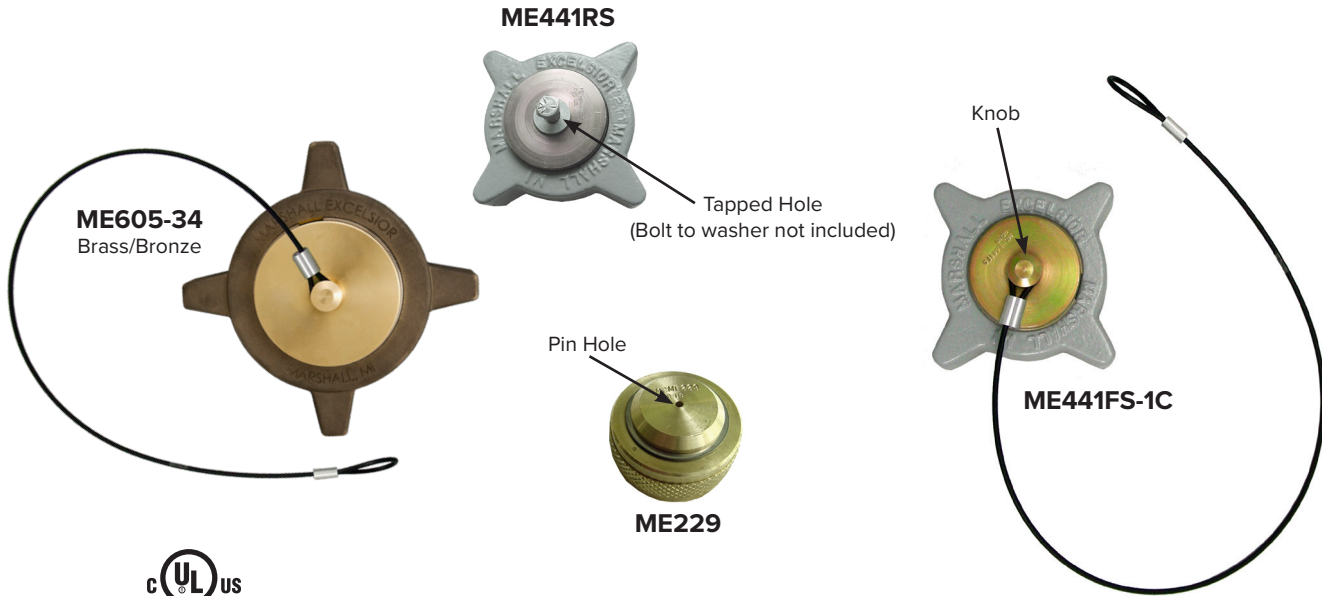
ACME REDUCER COUPLINGS



| Part No. | | F. Acme | M. Acme |
|----------|---------|---------|-------------|
| Brass | Steel * | | |
| ME611 | ME611S | 2-1/4" | 1-3/4" |
| ME612 | ME612S | 3-1/4" | 1-3/4" |
| ME614 | ME614S | 3-1/4" | 2-1/4" |
| ME442 | ME442S | 3-1/4" | 1-1/4" FNPT |
| ME613** | ME623** | 4-1/4" | 3-1/4" |

* Rated for LP-Gas & NH₃
** Not a UL Listed Configuration
NOTE: Pressure rated for 400 WOG

ACME CAPS



| Part No. | | | | F. Acme | Style | Cable Only |
|----------|----------------|----------|----------------|---------|----------|------------|
| Brass | | Steel * | | | | |
| Cap Only | Cap with Cable | Cap Only | Cap with Cable | | | |
| ME229 | — | ME229S | — | 1-3/4" | Pin Hole | — |
| ME229F | ME229F-1C | ME229FS | ME229FS-1C | 1-3/4" | Knob | MEP168 |
| ME431F | ME431F-1C | ME431FS | ME431FS-1C | 2-1/4" | Knob | MEP168 |
| ME441F | ME441F-1C | ME441FS | ME441FS-1C | 3-1/4" | Knob | MEP168 |
| — | ME605-34 ** | — | — | 4-1/4" | Knob | MEP168 |

NOTE: Red and Yellow versions available upon request
Pressure rated for 400 WOG

* Rated for LP-Gas & NH₃
** Not a UL Listed Configuration



ME106

| Part No. | | | | F. Acme | Style | Accessory |
|----------|----------------|---------|--------------|---------|----------|--------------|
| Plastic | | | | | | Chain Only** |
| Cap Only | Cap with Chain | | | | | |
| ME108 | ME108-1 | | | 1-1/4" | Pin Hole | MEP147 |
| ME109 | ME109-NH3* | ME109-1 | ME109-NH3-1* | 1-3/4" | Pin Hole | MEP148 |
| ME106 | ME106-1 | | | 3-1/4" | Pin Hole | — |

* Rated for NH₃
** MEP147 ring fits over 3/4" MNPT—MEP148 ring fits over 1-1/4" MNPT

NOTE: Plastic caps are not for pressure - containing applications



ME109-NH3

ACME CAPS WITH FLANGE

The flange allows for easy operation of pneumatic or proximity interlock switches which control the safety systems of transport vehicles. The stainless steel flange is flush mounted to the Acme cap.



| Part No. | | | | F. Acme | Style | Flange Diameter | Cable Only |
|-----------------|-------------------------|-----------------|-------------------------|---------|-------|-----------------|------------|
| Brass | | Steel * | | | | | |
| Cap with Flange | Cap with Flange & Cable | Cap with Flange | Cap with Flange & Cable | | | | |
| ME229F5 | ME229F5-1C | ME229FS5 | ME229FS5-1C | 1-3/4" | Knob | 5" | MEP168 |
| ME441F8 | ME441F8-1C | ME441FS8 | ME441FS8-1C | 3-1/4" | Knob | 8" | MEP168 |

* Rated for LP-Gas & NH₃

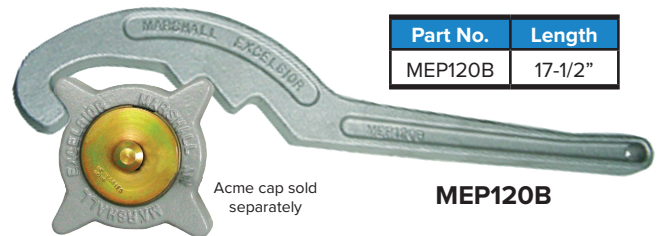
NOTE: Pressure rated for 400 WOG

HEAVY DUTY ACME SPANNER WRENCHES

E-ZTurn Ergonomic Aluminum Acme spanner wrench for 3-1/4" female Acme caps.



Aluminum Acme spanner wrench for 1-3/4", 2-1/4", 3-1/4" and 4-1/4" female Acme caps.



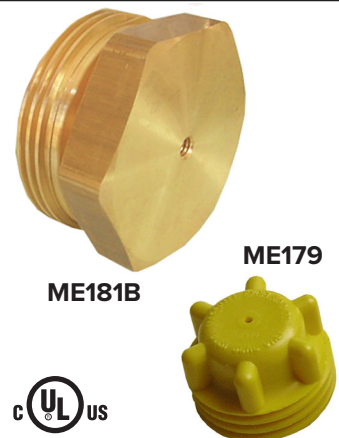
ACME DUST PLUGS

| Part No. | | | | | | | | | M. Acme |
|-----------|-------------|-----------------|-----------|-------------|-----------------|-------------|-------------|-----------------|---------|
| Aluminum | | | Brass ** | | | Plastic *** | | | |
| Plug Only | Chain Only* | Plug with Chain | Plug Only | Chain Only* | Plug with Chain | Plug Only | Chain Only* | Plug with Chain | |
| — | — | — | ME178B | MEP148 | ME178B-1 | ME178 | MEP147 | ME178-1 | 1-1/4" |
| ME239 | MEP148 | ME239-1 | ME179B | MEP148 | ME179B-1 | ME179 | MEP148 | ME179-1 | 1-3/4" |
| — | — | — | ME180B | — | ME180B-1 | ME180 | MEP148 | ME180-1 | 2-1/4" |
| — | — | — | ME181B | — | ME181B-1 | ME181 | MEP183 | ME181-1 | 3-1/4" |

* MEP147 ring fits over 3/4" MNPT—MEP148 ring fits over 1-1/4" MNPT

** Brass plugs pressure rated for 400 WOG

*** Plastic plugs are not for pressure rated applications



WHEEL CHOCK

Designed with a "Double Grip" handle for easy carrying and dual traction grips for the road and tire. The cast aluminum construction makes the wheel chock lightweight while still able to withstand the toughest environments. Turn the wheel chock upside down and the points on top of the wheel chock will dig into the snow, ice and mud to prevent sliding. Durable safety yellow powder coat finish.

| Part No. | Height | Length | Width |
|----------|--------|--------|-------|
| ME200 | 7" | 10" | 7" |



WHEEL CHOCK BRACKET

Designed to provide a durable and convenient receptacle to store wheel chocks during over-the-road transit. Durable aluminum construction and molded inserts prevent damage to wheel chocks. For installations that require additional mounting clearance a standoff extension kit is available.



ME200BK

| Part No. | Height | Length | Depth | Wheel Chocks Included | Accessory |
|----------|--------|--------|-------|-----------------------|------------------------|
| | | | | | Standoff Extension Kit |
| ME200B | 7-3/4" | 20" | 7" | No | |
| ME200BK | 9-3/4" | 20" | 8" | Yes | ME200EXT |

UNIVERSAL UTILITY BRACKET

Provides a safe and secure method to mount and retain hand tools such as shovels, picks, brooms or other equipment for bobtail or utility vehicles during over the road transit.

FEATURES

- Cast aluminum body for maximum durability
- Vinyl coated for maximum security
- All stainless steel spring and mounting hardware

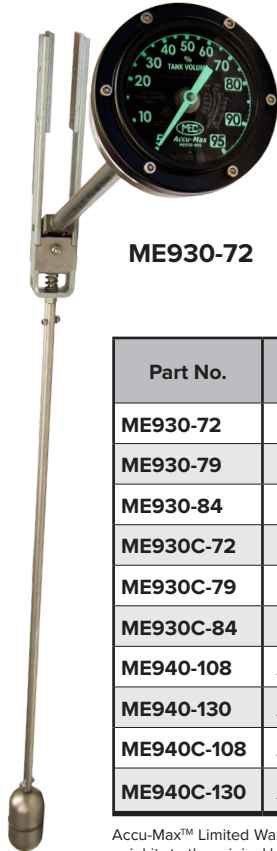
| Part No. | Description |
|----------|---|
| MEP082 | Universal Spring Loaded Utility Bracket |



MEP082

ACCU-MAX™ FLOAT GAUGES

HORIZONTAL MOUNT SERIES



ME930-72

Designed to measure liquid levels within horizontal DOT and Stationary ASME Tanks with fluid capacities above 2,300 gallons. For maximum gauge life, the float arm features an integral spring loaded shock absorber for harsh over-the-road applications. The standard dial face features a black background for reduced glare with glow technology providing an easy to read “glow in the dark” dial face, perfect for low light situations. An optional classical style dial face is available. These gauges are suitable for use in bobtail, transport, railcar and bulk storage applications.

NOTE: These gauges must be installed on the centerline of the tank’s side or end for accurate readings.

| Part No. | Type | Style | Dial Face | Dial Size | Tank Diameter |
|------------|------|----------|--------------|-----------|---------------|
| ME930-72 | DOT | Standard | Glow/Black | 4” | 72” |
| ME930-79 | DOT | Standard | Glow/Black | 4” | 79” |
| ME930-84 | DOT | Standard | Glow/Black | 4” | 84” |
| ME930C-72 | DOT | Classic | Silver/Black | 4” | 72” |
| ME930C-79 | DOT | Classic | Silver/Black | 4” | 79” |
| ME930C-84 | DOT | Classic | Silver/Black | 4” | 84” |
| ME940-108 | ASME | Standard | Glow/Black | 8” | 108” |
| ME940-130 | ASME | Standard | Glow/Black | 8” | 130” |
| ME940C-108 | ASME | Classic | Silver/Black | 8” | 108” |
| ME940C-130 | ASME | Classic | Silver/Black | 8” | 130” |

Accu-Max™ Limited Warranty: Marshall Excelsior warrants Accu-Max™ float gauges and repair kits to the original buyer to be free of defects in material and workmanship under normal service and use for two years from manufactured date.

FEATURES

- All stainless steel construction
- Welded tube to coupling design for maximum strength and durability
- Dial face 100% sealed and argon filled to prevent moisture build-up & fogging
- Factory set and precision tuned for superb accuracy
- Dial face and mounting hardware universal with other industry standard gauges
- Mounts to all standard 8 bolt tank flange adapters
- Custom length tank configurations available upon request for 30” to 300” I.D. tank

PATENT
#D671,022
#D666,933



For LP-Gas & NH₃



“Glow” Technology
Standard Dial



ME940 ASME Series / 8” Dial
Shown as Standard “Glow” Dial



ME930C DOT Series / 4” Dial
Shown as Classic Dial

MEC

LIQUID TRANSFER VALVES & ADAPTERS

Designed to provide a safe means to transfer liquid or vapor from a storage container. ME449 Series valves can be directly installed for full time use in the liquid or vapor port of the storage container when configured with an integral excess flow check (ME449EXS Series, ME449X/19.5), or when utilized in conjunction with a Liquid Withdrawal Tank Valve with integral excess flow protection (ME460 or ME462 Series) and the appropriate Liquid Withdrawal Adapter (ME458 Series).

These valves can also be used for temporary liquid withdrawal applications such as emergency evacuations or container relocation, when utilized in conjunction with a Liquid Withdrawal Tank Valve featuring integral excess flow protection (ME460 or ME462 Series) installed directly into a container liquid withdrawal port and the appropriate Liquid Withdrawal Adapter (ME458 Series) installed onto the ME449 Series Liquid Withdrawal Transfer Valve connected to the delivery truck or service truck transfer hose.

Additionally, these valves can be used for a wide variety of other applications, including in-line use, as they meet the requirements of UL 125 – Flow Control Valves.



ME459
3/4" FNPT x 1-5/8" thread



ME450

LIQUID TRANSFER VALVE FEATURES

- Double O-ring stem seal design ensures leak free operation
- Double lead stem thread ensures quick and efficient operation
- 3/4" MNPT inlet x 3/4" FNPT outlet
- Additional features for steel transfer valves
 - All stainless steel internal components
 - Durable ductile iron valve body with automotive grade powder coat finish
 - Equipped with convenient upstream and downstream 1/4" FNPT plugged ports for optional accessories



ME462S

TANK VALVE FEATURES

- Provides excess flow protection in the event of a downstream connection or line failure
- Safety breakaway feature leaves valve seals intact in the event of truck roll-away
- 6-14 psig closing flow pressure differential for maximum product transfer
- Fully interchangeable with all existing valve models and adapters
- Additional features for steel and stainless steel tank valves
 - Meets requirements for installation into DOT storage containers like bobtails and transports
 - Steel model features a rust inhibitor compound between the cap and body threads to prevent corrosion



ME449X-110-KIT

| Part No. | Material | Excess Flow | Closing Flow/ GPM | Accessories | | | | | | Hydrostatic Relief Valve | Vent Valve | Excess Flow Check Valve |
|-----------------------------|--------------------------------|-------------|-------------------|--|----------------------|--|----------------------|-----------------------|------------------------|-----------------------------|--|-------------------------|
| | | | | Liquid Withdrawal Adapter 3/4" FNPT x 1-5/8" UNF | | Liquid Withdrawal Tank Valve 1-5/8" UNF Male | | | | | | |
| | | | | Brass | Steel ⁽¹⁾ | 3/4" MNPT | 1-1/4" MNPT | | | | | |
| | | | | Brass | Steel ⁽¹⁾ | Stainless Steel ⁽¹⁾ | | | | | | |
| ME449 ⁽⁴⁾ | Brass | No | — | ME458 | ME458S | ME460 ⁽³⁾ | ME462 ⁽³⁾ | — | — | MEH225 MEH25/450 | ME449X-110-KIT | |
| ME449H ⁽⁴⁾ | Brass | No | — | ME458 | ME458S | — | — | — | — | Factory Installed MEH225 | | |
| ME449S ⁽⁴⁾ | Ductile Iron ⁽¹⁾ | No | — | — | ME458S | — | — | ME462S ⁽³⁾ | ME462SS ⁽³⁾ | — | — | |
| ME449EXS/22 ⁽⁴⁾ | Ductile Iron ⁽¹⁾ | Yes | 22 | — | — | — | — | — | — | — | — | |
| ME449EXSS/22 ⁽⁴⁾ | Stainless Steel ⁽¹⁾ | Yes | 22 | — | — | — | — | — | — | — | MEJ400 MEJ400SC MEJ400/72 MEJ402S | |
| ME449EXS/28 ⁽⁴⁾ | Ductile Iron ⁽¹⁾ | Yes | 28 | — | — | — | — | — | — | — | — | |
| ME449EXSS/28 ⁽⁴⁾ | Stainless Steel ⁽¹⁾ | Yes | 28 | — | — | — | — | — | — | — | — | |
| ME449X/19.5 | Brass | Yes | 19.5 | — | — | — | — | — | — | — | ME449X-110-KIT | |
| ME450 ⁽²⁾ | Brass | No | — | — | — | ME601-6 | ME601-10 | — | — | — | — | |
| ME459 | Brass | No | — | Yes | — | — | — | — | — | — | — | |

(1) Rated for LP-Gas & NH₃ (2) MEJ400 Vent Valve Factory Installed (3) Includes an excess flow feature (ME460 = 21 GPM / ME462 = 36 GPM)

(4) UL Listed for US and Canada

WARNING: An excess flow valve will not activate if there is a break or leak downstream of the valve that does not equal or exceed the closing flow of the valve or if the excess flow valve installed exceeds the flow capacity of the system. See the Excess Flow Warning page for more information regarding the use of excess flow devices.

LIQUID TRANSFER VALVES

Designed to provide a safe means to transfer liquid or vapor from a storage container. ME449 Series valves can be directly installed for full time use in the liquid or vapor port of the storage container when configured with an integral excess flow check (ME449EXS Series, ME449X/19.5), or when utilized in conjunction with a Liquid Withdrawal Tank Valve with integral excess flow protection (ME460 or ME462 Series) and the appropriate Liquid Withdrawal Adapter (ME458 Series).

These valves can also be used for temporary liquid withdrawal applications such as emergency evacuations or container relocation, when utilized in conjunction with a Liquid Withdrawal Tank Valve featuring integral excess flow protection (ME460 or ME462 Series) installed directly into a container liquid withdrawal port and the appropriate Liquid Withdrawal Adapter (ME458 Series) installed onto the ME449 Series Liquid Withdrawal Transfer Valve connected to the delivery truck or service truck transfer hose.

Additionally, these valves can be used for a wide variety of other applications, including in-line use, as they meet the requirements of UL 125 – Flow Control Valves.

Opening Liquid Withdrawal Tank Valve

1. Slowly loosen cap to release any trapped LP-Gas thru relief hole. Remove the cap when venting stops. In case of a leak and venting does not stop, retighten the cap and use another approved method to withdraw the liquid. When loosening the cap make sure the valve is not unthreading from the tank. Use two wrenches, if necessary, to secure the valve to the tank.
2. The Liquid Transfer Shutoff Valve must be in the open position and securely attached to the Liquid Withdrawal Adapter before connecting to the Liquid Withdrawal Tank Valve.
3. Once the Shutoff Valve Assembly is tightly attached to the Tank Valve, close the Shutoff Valve Assembly. A popping sound actuating the Tank Valve will occur while closing the Shutoff Valve Assembly allowing the flow to be controlled by the Shutoff Assembly. If the Tank Valve does not open after following steps 1-3, increase pressure downstream (Shutoff Valve side) to equalize pressure in the Tank Valve.
4. Use Marshall Excelsior Leak Detector to check for leaks between each connection.

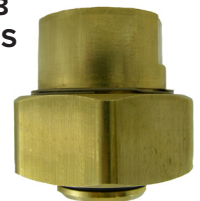
Closing Liquid Withdrawal Tank Valve

1. To shut the Tank Valve pressure in the tank must exceed 35 psig. Close the Shutoff Valve Assembly and disconnect the hose or piping.
2. Slowly open the Shutoff Valve Assembly to release any LP-Gas in the valve. If the tank pressure exceeds 35 psig the LP-Gas released to the air will cause the excess flow feature to close on the Tank Valve. If the Tank Valve does not completely shut, close the Shutoff Valve Assembly immediately. The Shutoff Valve Assembly must remain connected until all the LP-Gas can be removed and the container repaired.
3. After the Tank Valve excess flow feature has closed remove the Shutoff Valve Assembly. When disconnecting the assembly make sure the Tank Valve is not unthreading from the tank. Use two wrenches, if necessary, to secure the valve to the tank. Note: A small amount of bypass may occur through the excess flow check. Use caution when removing the Shutoff Valve Assembly.
4. Clean the top surface of the Tank Valve and place Tank Valve Cap back onto Tank Valve ensuring cap gasket is in place. Make sure the Tank Cap is placed tightly onto the Tank Valve.

NOTE: Always use an adapter between the liquid transfer valve (ME449 Series) and the liquid withdrawal valve. Extreme care must be used whenever liquid transfer of LP-Gas is in progress. Only persons trained in the proper method of transfer should attempt this type of operation. Reference NFPA #58 Liquefied Petroleum Gas Code Chapter 7, LP-Gas Liquid Transfer for additional information.



Liquid Withdrawal Adapter
ME458
ME458S

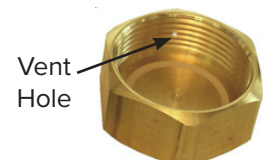


Liquid Withdrawal Tank Valve
ME462
ME462S
ME462SS



ME461 Series
Cap included

Liquid Withdrawal Tank Valve Cap
ME461



LIQUID TRANSFER ADAPTERS

Designed for use between the liquid transfer shutoff valve and the liquid withdrawal tank valve. These adapters enable the tank valve to open properly and allows a tight seal when transferring liquid. Special threads on the tank valve and the adapter help eliminate tampering.

The ME458 Series fits all new underwriters laboratories listed valves. The ME453 and ME455 fit older style liquid withdrawal tank valves that are still in service and have not been replaced. They will not provide a positive seal during actuation of liquid withdrawal tank valve until fully seated.

| Part No. | Material | Inlet Connection | Outlet Connection |
|----------|----------|------------------|-------------------|
| ME458 | Brass | 1-5/8" UNF | 3/4" FNPT |
| ME458S* | Steel | 1-5/8" UNF | 3/4" FNPT |
| ME453 | Brass | 3/4" NGT | 3/4" FNPT |
| ME455 | Brass | 3/4" NGT | 3/4" MNPT |

* Rated for LP-Gas & NH₃



ME453



ME455



ME458

COMBINATION VALVES

Developed to mount a pressure gauge and fixed tube liquid level gauge all in one valve. The shutoff portion of the valve increases the pressure gauge's life and accuracy by eliminating constant gauge pressure and allows for easy gauge replacement. To replace a gauge simply close the valve and open the vent valve to relieve pressure before disassembling pressure gauge.

The valve can be installed at the maximum fill level or an 1/8" MNPT dip tube can be installed on the container connection side to set any liquid level desired. For use in ASME bulk storage containers and DOT transport tank installations.

Additionally, these valves can be used for a wide variety of other applications, including in-line use, as they meet the requirements of UL 125 – Flow Control Valves.

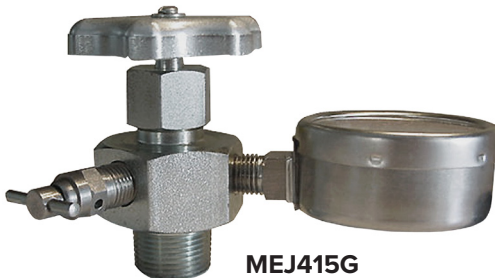
FEATURES

- All steel and stainless steel component construction
- Integral #54 orifice provides gauge dampening protection
- Durable ductile iron body with automotive grade powder coat finish or plated steel body



ME830

MEP449S-101
Replacement
Protective
Weather Boot



MEJ415G

ME830SS



For LP-Gas & NH₃



MEP449S-101
Replacement
Protective
Weather Boot

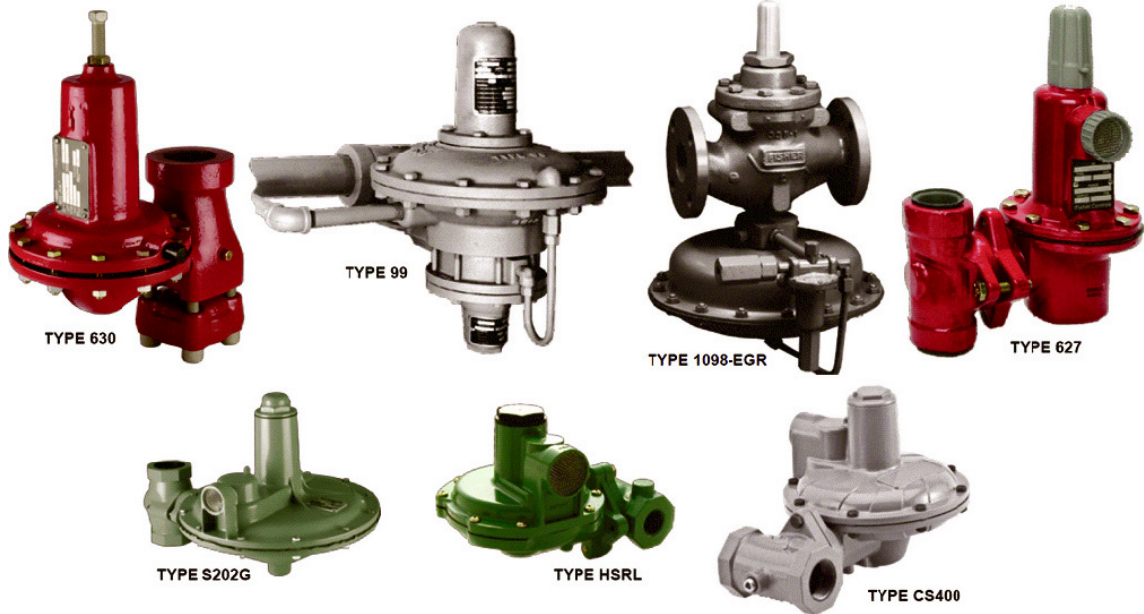


MEJ415

| Part No. | Material | Container Connection MNPT | Service Connections FNPT | Dip Tube Connection FNPT | Orifice | Accessories | |
|----------|-----------------|---------------------------|--------------------------|--------------------------|--------------|----------------------------|---|
| | | | | | | Stainless Steel Vent Valve | Stainless Steel 0-400 PSIG Pressure Gauge |
| ME830 | Ductile Iron | 3/4" MNPT | 1/4" FNPT (1) | 1/8" | .062" | Included | MEJ526 MEJ542 |
| ME830SS | Stainless Steel | 3/4" MNPT | 1/4" FNPT (1) | 1/8" | .062" | Included | MEJ526 MEJ542 |
| MEJ415 | Steel | 3/4" MNPT | 1/4" FNPT (2) | 1/4" | #55 (0.025") | MEJ402S | MEJ542 |
| MEJ415G | Steel | 3/4" MNPT | 1/4" FNPT (2) | 1/4" | #55 (0.025") | Included | Included |

COMMERCIAL REGULATORS

Fisher Commercial Regulators



| Part Number | Capacity BTU/hr Propane | Inlet & Outlet Connections | Outlet Pressure Setting | Outlet Adjustment Range | Orifice Size | Vent Location & Size | Service |
|--------------|-------------------------|----------------------------|-------------------------|-------------------------|--------------|----------------------------|-----------------------|
| 627-6210 | 10,755,000 | 3/4" FNPT | 10 PSIG | 5-20 PSIG | 1/2" | 3/4" FNPT, Side, Screened | First Stage |
| 627-7710 | 10,773,000 | 1" FNPT | 10 PSIG | 5-20 PSIG | 1/2" | 3/4" FNPT, Side, Screened | First Stage |
| 630-104/78 | 14,000,000 | 2" FNPT | 10 PSIG | 8-20 PSIG | 1/2" | 3/4" FNPT, Side, Screened | First Stage |
| 99-510 | 29,400,000 | 2" FNPT | 1 PSIG | 7" W.C. to 2 PSIG | 7/8" | N/A | First or Second Stage |
| 99-513 | 36,368,000 | 2" FNPT | 10 PSIG | 2-10 PSIG | 7/8" | N/A | First or Second Stage |
| 1098H-L21 | 170,500,000 | 2" FNPT | 15 PSIG | 3-20 PSIG | 2-3/8" | N/A | First or Second Stage |
| HSRL-BFC | 2,300,000 | 3/4" FNPT | 11" W.C. | 9"-13" W.C. | 3/8" | 3/4", Over-Inlet, Screened | Second Stage |
| HSRL-CFC | 2,600,000 | 1" FNPT | 11" W.C. | 9"-13" W.C. | 3/8" | 3/4", Over-Inlet, Screened | Second Stage |
| CS400IR-8EC6 | 6,800,000 | 1-1/4" FNPT | 11" W.C. | 10"-14" W.C. | 3/4" | 1", Side, Screened | Second Stage |
| CS400IR-8EC7 | 7,600,000 | 1-1/2" FNPT | 11" W.C. | 11"-14" W.C. | 3/4" | 1", Side, Screened | Second Stage |
| CS400IR-8EC8 | 7,600,000 | 2" FNPT | 11" W.C. | 11"-14" W.C. | 3/4" | 1", Side, Screened | Second Stage |
| S202G-BNC | 10,200,000 | 1-1/2" FNPT | 11" W.C. | 9"-18" W.C. | 1" | 1", Side, Screened | Second Stage |
| S202G-CNC | 21,600,000 | 2" FNPT | 11" W.C. | 9"-18" W.C. | 1" | 1", Side, Screened | Second Stage |

Sensus Commercial Regulators



- Build to order.
- Many options available.
- Small to large applications.
- 3/4" to 6" pipe size.
- Available in 3 to 5 days.



| Part Number | Capacity BTU/hr Propane | Inlet & Outlet Connections | Outlet Adjustment Range | Orifice Size |
|---------------|-------------------------|----------------------------|-------------------------|--------------|
| 143-80-2 | 2,800,000 | 1-1/4" FPT | 6-14" WC SPR | 1/2" |
| 143-80-2HP* | 2,800,000 | 1-1/4" REG | 2-6# WC SPR | 1/2" |
| 143-80-2HP-2# | 2,800,000 | 1-1/4" REG | .5-3# WC SPR | 1/2" |

APPLIANCE REGULATORS

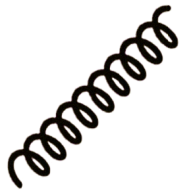
Maxitrol Appliance Regulators



| Part Number | LP Capacity | Inlet & Outlet Connections | Outlet Adjustment Range |
|-------------|---------------|----------------------------|-------------------------|
| 325-3 | 200,000 BTU | 1/2" NPT | 4"-12" W.C. |
| 325-5 | 700,000 BTU | 3/4" NPT | 4"-12" W.C. |
| 325-5A-1/2 | 700,000 BTU | 1/2" NPT | 4"-12" W.C. |
| 325-5A-1 | 700,000 BTU | 1" NPT | 7"-11" W.C. |
| 325-7L | 1,500,000 BTU | 1-1/4" NPT | 7"-11" W.C. |

*Individual Appliance 470,000 BTU

Maxitrol Parts & Accessories



| Part Number | Fits | Description |
|--------------|-------|---|
| R325C10-26 | 325-3 | 2"-6" W.C. Spring for 325-3 Regulator |
| R325E10-26A | 325-5 | 2"-6" W.C. Spring for 325-5 Regulator |
| R325E10-412A | 325-5 | 4"-12" W.C. Spring for 325-5A Regulator |
| R325E10-711A | 325-5 | 7"-11" W.C. Spring for 325-5 Regulator |
| R325E1022A | 325-5 | 10"-22" W.C. Spring for 325-5 Regulator |
| MAXICAP-3R | 325-3 | Protective Cap for 325-3 Regulator |
| MAXICAP-5R | 325-5 | Protective Cap for 325-5 Regulator |
| MAXICAP-7R | 325-7 | Protective Cap for 325-7 Regulator |
| 13A15 | 325-3 | 1/8" NPT Vent Protector |
| 13A15-5 | 325-5 | 3/8" NPT Vent Protector |
| 13A25 | 325-7 | 1/2" NPT Vent Protector |

Designed for outdoor applications. Use on vent opening to protect breather hole from rain, snow, dust, insects and other foreign particles.

Note: Vent protector MUST be mounted in an upright position.

- 13A15: for 1/8" NPT vent. For outdoor use in 325-3, 325-3L, RV48, RV52, RV53, RV61, R500(S) (Z), and R600(S)(Z).
- 13A15-5: for 3/8" NPT vent. For outdoor use in 325-5, 325-5L, RV81, 210D.
- 13A25: for 1/2" NPT vent. For outdoor use in 325-7A, 325-7AL, 325-9, 325-9L, RV91, 210E.

Note: NOT a vent limiting device. Consult Maxitrol regarding other configurations

Norgas Appliance Regulators



| Part Number | LP Capacity | Inlet & Outlet Connections | Outlet Adjustment Range |
|--------------------|---------------|----------------------------|-------------------------|
| N5AN-0500-O-VL0125 | 340,000 BTU | 1/2" NPT | 3-13" WC |
| N5B-1000-S-VL0375 | 1,559,000 BTU | 1" NPT | 7-11" WC |
| N5BN-0500-O-VL0375 | 1,013,000 BTU | 1/2" NPT | 3-13" WC |
| N5BN-0750-O-VL0375 | 1,013,000 BTU | 3/4" NPT | 3-13" WC |
| N5C-1250-S-VL0500 | 1,710,000 BTU | 1-1/4" NPT | 7-11" WC |
| NGR02-BAA | 1,150,000 BTU | 3/4" NPT | 6.5-16" WC |

PIPE & PIPE FITTINGS

Pipe

Steel Pipe Standard Pipe



| Part Number | Description |
|-------------|---|
| STD02 | 1/8" Standard Schedule 40 Pipe |
| STD04 | 1/4" Standard Schedule 40 Pipe |
| STD06 | 3/8" Standard Schedule 40 Pipe |
| STD08 | 1/2" Standard Schedule 40 Pipe |
| STD12 | 3/4" Standard Schedule 40 Pipe |
| STD16 | 1" Standard Schedule 40 Pipe |
| STD20 | 1-1/4" Standard Schedule 40 Pipe |
| STD24 | 1-1/2" Standard Schedule 40 Pipe |
| STD32 | 2" Standard Schedule 40 Pipe. Seamless. |
| STD40 | 2-1/2" Standard Schedule 40 Pipe |
| STD48 | 3" Standard Schedule 40 Pipe. Seamless. |
| STD64 | 4" Standard Schedule 40 Pipe |

Seamless Extra Heavy Pipe



| Part Number | Description |
|-------------|--|
| XH02 | 1/8" Extra Heavy, Seamless, Schedule 80 Pipe |
| XH04 | 1/4" Extra Heavy, Seamless, Schedule 80 Pipe |
| XH06 | 3/8" Extra Heavy, Seamless, Schedule 80 Pipe |
| XH08 | 1/2" Extra Heavy, Seamless, Schedule 80 Pipe |
| XH12 | 3/4" Extra Heavy, Seamless, Schedule 80 Pipe |
| XH16 | 1" Extra Heavy, Seamless, Schedule 80 Pipe |
| XH20 | 1-1/4" Extra Heavy, Seamless, Schedule 80 Pipe |
| XH24 | 1-1/2" Extra Heavy, Seamless, Schedule 80 Pipe |
| XH32 | 2" Extra Heavy, Seamless, Schedule 80 Pipe |
| XH40 | 2-1/2" Extra Heavy, Seamless, Schedule 80 Pipe |
| XH48 | 3" Extra Heavy, Seamless, Schedule 80 Pipe |
| XH64 | 4" Extra Heavy, Seamless, Schedule 80 Pipe |

Fusion Coated Seamless Standard Pipe for Underground Service



| Part Number | Description |
|-------------|--|
| FUSION12 | 3/4" Standard, Schedule 40, Fusion Bonded, Seamless Pipe |
| FUSION16 | 1" Standard, Schedule 40, Fusion Bonded, Seamless Pipe |
| FUSION20 | 1-1/4" Standard, Schedule 40, Fusion Bonded, Seamless Pipe |
| FUSION32 | 2" Standard, Schedule 40, Fusion Bonded, Seamless Pipe |
| FUSION48 | 3" Standard, Schedule 40, Fusion Bonded, Seamless Pipe |
| FUSION64 | 4" Standard, Schedule 40, Fusion Bonded, Seamless Pipe |
| FUSION96 | 6" Standard, Schedule 40, Fusion Bonded, Seamless Pipe |

Standard Fittings

Standard 45 Degree Elbows



| Part Number | Description |
|-------------|--------------------------------|
| ST45L04 | 1/4" STD BLK 45 Degree Elbow |
| ST45L08 | 1/2" STD BLK 45 Degree Elbow |
| ST45L12 | 3/4" STD BLK 45 Degree Elbow |
| ST45L16 | 1" STD BLK 45 Degree Elbow |
| ST45L20 | 1-1/4" STD BLK 45 Degree Elbow |

PIPE & PIPE FITTINGS

Standard Fittings

Standard 45 Degree Street Elbow



| Part Number | Description |
|-------------|-------------------------------------|
| ST45SL06 | 3/8" STD BLK 45 Degree Street Elbow |
| ST45SL08 | 1/2" STD BLK 45 Degree Street Elbow |
| ST45SL12 | 3/4" STD BLK 45 Degree Street Elbow |

Standard Bushings



| Part Number | Description |
|-------------|---------------------------------|
| STB0402 | 1/4" x 1/8" STD BLK Bushing |
| STB0602 | 3/8" x 1/8" STD BLK Bushing |
| STB0604 | 3/8" x 1/4" STD BLK Bushing |
| STB0802 | 1/2" x 1/8" STD BLK Bushing |
| STB0804 | 1/2" x 1/4" STD BLK Bushing |
| STB0806 | 1/2" x 3/8" STD BLK Bushing |
| STB1202 | 3/4" x 1/8" STD BLK Bushing |
| STB1204 | 3/4" x 1/4" STD BLK Bushing |
| STB1206 | 3/4" x 3/8" STD BLK Bushing |
| STB1208 | 3/4" x 1/2" STD BLK Bushing |
| STB1602 | 1" x 1/8" STD BLK Bushing |
| STB1604 | 1" x 1/4" STD BLK Bushing |
| STB1606 | 1" x 3/8" STD BLK Bushing |
| STB1608 | 1" x 1/2" STD BLK Bushing |
| STB1612 | 1" x 3/4" STD BLK Bushing |
| STB2004 | 1-1/4" x 1/4" STD BLK Bushing |
| STB2006 | 1-1/4" x 3/8" STD BLK Bushing |
| STB2008 | 1-1/4" x 1/2" STD BLK Bushing |
| STB2012 | 1-1/4" x 3/4" STD BLK Bushing |
| STB2016 | 1-1/4" x 1" STD BLK Bushing |
| STB2412 | 1-1/2" x 3/4" STD BLK Bushing |
| STB2416 | 1-1/2" x 1" STD BLK Bushing |
| STB2420 | 1-1/2" x 1-1/4" STD BLK Bushing |
| STB3208 | 2" x 1/2" STD BLK Bushing |
| STB3212 | 2" x 3/4" STD BLK Bushing |
| STB3216 | 2" x 1" STD BLK Bushing |
| STB3220 | 2" x 1-1/4" STD BLK Bushing |
| STB3224 | 2" x 1-1/2" STD BLK Bushing |
| STB4016 | 2-1/2" x 1" STD BLK Bushing |
| STB4032 | 2-1/2" x 2" STD BLK Bushing |
| STB4820 | 3" x 1-1/4" STD BLK Bushing |
| STB4824 | 3" x 1-1/2" STD BLK Bushing |
| STB4832 | 3" x 2" STD BLK Bushing |
| STB4840 | 3" x 2-1/2" STD BLK Bushing |

PIPE & PIPE FITTINGS

Standard Fittings

Standard Couplings



| Part Number | Description |
|-------------|-------------------------|
| STC02 | 1/8" STD BLK Coupling |
| STC04 | 1/4" STD BLK Coupling |
| STC06 | 3/8" STD BLK Coupling |
| STC08 | 1/2" STD BLK Coupling |
| STC12 | 3/4" STD BLK Coupling |
| STC16 | 1" STD BLK Coupling |
| STC20 | 1-1/4" STD BLK Coupling |
| STC24 | 1-1/2" STD BLK Coupling |
| STC32 | 2" STD BLK Coupling |
| STC40 | 2-1/2" STD BLK Coupling |
| STC48 | 3" STD BLK Coupling |
| STC64 | 4" STD BLK Coupling |

Standard Caps



| Part Number | Description |
|-------------|--------------------|
| STCAP02 | 1/8" STD BLK Cap |
| STCAP04 | 1/4" STD BLK Cap |
| STCAP06 | 3/8" STD BLK Cap |
| STCAP08 | 1/2" STD BLK. Cap |
| STCAP12 | 3/4" STD BLK Cap |
| STCAP16 | 1" STD BLK Cap |
| STCAP20 | 1-1/4" STD BLK Cap |
| STCAP24 | 1-1/2" STD BLK Cap |
| STCAP32 | 2" STD BLK Cap |
| STCAP40 | 2-1/2" STD BLK Cap |
| STCAP48 | 3" STD BLK Cap |

Standard Cross



| Part Number | Description |
|-------------|----------------------|
| STCR04 | 1/4" STD BLK Cross |
| STCR08 | 1/2" STD BLK Cross |
| STCR12 | 3/4" STD BLK Cross |
| STCR16 | 1" STD BLK Cross |
| STCR20 | 1-1/4" STD BLK Cross |
| STCR32 | 2" STD BLK Cross |

Standard 45 Degree Elbows



| Part Number | Description |
|-------------|--------------------------------|
| STL02 | 1/8" STD BLK 90 Degree Elbow |
| STL04 | 1/4" STD BLK 90 Degree Elbow |
| STL06 | 3/8" STD BLK 90 Degree Elbow |
| STL08 | 1/2" STD BLK 90 Degree Elbow |
| STL12 | 3/4" STD BLK 90 Degree Elbow |
| STL16 | 1" STD BLK 90 Degree Elbow |
| STL20 | 1-1/4" STD BLK 90 Degree Elbow |
| STL24 | 1-1/2" STD BLK 90 Degree Elbow |
| STL32 | 2" STD BLK 90 Degree Elbow |
| STL40 | 2-1/2" STD BLK 90 Degree Elbow |
| STL48 | 3" STD BLK 90 Degree Elbow |

PIPE & PIPE FITTINGS

Standard Fittings

Standard Plug



| Part Number | Description |
|-------------|------------------------------|
| STP02 | 1/8" STD BLK SQ. Head Plug |
| STP04 | 1/4" STD BLK SQ. Head Plug |
| STP06 | 3/8" STD BLK SQ. Head Plug |
| STP08 | 1/2" STD BLK SQ. Head Plug |
| STP12 | 3/4" STD BLK SQ. Head Plug |
| STP16 | 1" STD BLK SQ. Head Plug |
| STP20 | 1 1/4" STD BLK SQ. Head Plug |
| STP24 | 1-1/2" STD BLK SQ. Head Plug |
| STP32 | 2" STD BLK SQ. Head Plug |
| STP48 | 3" STD BLK SQ. Head Plug |

Standard Reducing Couplings



| Part Number | Description |
|-------------|--|
| STRC0402 | 1/4" x 1/8" STD BLK Reducing Coupler |
| STRC0602 | 3/8" x 1/8" STD BLK Reducing Coupler |
| STRC0604 | 3/8" x 1/4" STD BLK Reducing Coupler |
| STRC0802 | 1/2" x 1/8" STD BLK Reducing Coupler |
| STRC0804 | 1/2" x 1/4" STD BLK Reducing Coupler |
| STRC0806 | 1/2" x 3/8" STD BLK Reducing Coupler |
| STRC1202 | 3/4" x 1/8" STD BLK Reducing Coupler |
| STRC1204 | 3/4" x 1/4" STD BLK Reducing Coupler |
| STRC1206 | 3/4" x 3/8" STD BLK Reducing Coupler |
| STRC1208 | 3/4" x 1/2" STD BLK Reducing Coupler |
| STRC1604 | 1" x 1/4" STD BLK Reducing Coupler |
| STRC1608 | 1" x 1/2" STD BLK Reducing Coupler |
| STRC1612 | 1" x 3/4" STD BLK Reducing Coupler |
| STRC2008 | 1-1/4" x 1/2" STD BLK Reducing Coupler |
| STRC2012 | 1-1/4" x 3/4" STD BLK Reducing Coupler |
| STRC2016 | 1-1/4" x 1" STD BLK Reducing Coupler |
| STRC2412 | 1-1/2" x 3/4" STD BLK Reducing Coupler |
| STRC2416 | 1-1/2" x 1" STD BLK Reducing Coupler |
| STRC2420 | 1-1/2" x 1-1/4" STD BLK Reducing Coupler |
| STRC3208 | 2" x 1/2" STD BLK Reducing Coupler |
| STRC3212 | 2" x 3/4" STD BLK Reducing Coupler |
| STRC3216 | 2" x 1" STD BLK Reducing Coupler |
| STRC3220 | 2" x 1-1/4" STD BLK Reducing Coupler |
| STRC3224 | 2" x 1-1/2" STD BLK Reducing Coupler |
| STRC4032 | 2-1/2" x 2" STD BLK Reducing Coupler |
| STRC4816 | 3" x 1" STD BLK Reducing Coupler |
| STRC4820 | 3" x 1-1/4" STD BLK Reducing Coupler |
| STRC4832 | 3" x 2" STD BLK Reducing Coupler |
| STRC4840 | 3" x 2-1/2" STD BLK Reducing Coupler |
| STRC6424 | 4" x 1-1/2" STD BLK Reducing Coupler |
| STRC6432 | 4" x 2" STD BLK Reducing Coupler |
| STRC6440 | 4" x 2-1/2" STD BLK Reducing Coupler |
| STRC6448 | 4" x 3" STD BLK Reducing Coupler |
| STRC8064 | 5" x 4" STD BLK Reducing Coupler |
| STRC9664 | 6" x 4" STD BLK Reducing Coupler |

PIPE & PIPE FITTINGS

Standard Fittings

Standard 90 Degree Reducing Elbows



| Part Number | Description |
|-------------|--|
| STRL1208 | 3/4" x 1/2" STD BLK Reducing Elbow |
| STRL1608 | 1" x 1/2" STD BLK Reducing Elbow |
| STRL1612 | 1" x 3/4" STD BLK Reducing Elbow |
| STRL2016 | 1-1/4" x 1" STD BLK Reducing Elbow |
| STRL2420 | 1-1/2" x 1-1/4" STD BLK Reducing Elbow |

Standard Reducing Tees



| Part Number | Description |
|-------------|------------------------------------|
| STRT0604 | 3/8" x 1/4" STD BLK Reducing Tee |
| STRT0804 | 1/2" x 1/4" STD BLK Reducing Tee |
| STRT0806 | 1/2" x 3/8" STD BLK Reducing Tee |
| STRT1208 | 3/4" x 1/2" STD BLK Reducing Tee |
| STRT1608 | 1" x 1/2" STD BLK Reducing Tee |
| STRT1612 | 1" x 3/4" STD BLK Reducing Tee |
| STRT2008 | 1-1/4" x 1/2" STD BLK Reducing Tee |
| STRT2012 | 1-1/4" x 3/4" STD BLK Reducing Tee |
| STRT2016 | 1-1/4" x 1" STD BLK Reducing Tee |
| STRT3208 | 2" x 1/2" STD BLK Reducing Tee |
| STRT4012 | 2-1/2" x 3/4" STD BLK Reducing Tee |

Standard Street Elbows



| Part Number | Description |
|-------------|---|
| STSL02 | 1/8" STD BLK Street Elbow |
| STSL04 | 1/4" STD BLK Street Elbow |
| STSL06 | 3/8" STD BLK Street Elbow |
| STSL08 | 1/2" STD BLK Street Elbow |
| STSL12 | 3/4" STD BLK Street Elbow |
| STSL16 | 1" STD BLK Street Elbow |
| STSL20 | 1-1/4" STD BLK Street Elbow |
| STRSL1208 | 3/4"F x 1/2"M STD BLK Reducing Street Elbow |

Standard Tees



| Part Number | Description |
|-------------|--------------------|
| STT02 | 1/8" STD BLK Tee |
| STT04 | 1/4" STD BLK Tee |
| STT06 | 3/8" STD BLK Tee |
| STT08 | 1/2" STD BLK Tee |
| STT12 | 3/4" STD BLK Tee |
| STT16 | 1" STD BLK Tee |
| STT20 | 1-1/4" STD BLK Tee |
| STT24 | 1-1/2" STD BLK Tee |
| STT32 | 2" STD BLK Tee |
| STT40 | 2-1/2" STD BLK Tee |
| STT48 | 3" STD BLK Tee |
| STT64 | 4" STD BLK Tee |

PIPE & PIPE FITTINGS

Standard Fittings

Standard Unions



| Part Number | Description |
|-------------|----------------------|
| STU02 | 1/8" STD BLK Union |
| STU04 | 1/4" STD BLK Union |
| STU06 | 3/8" STD BLK Union |
| STU08 | 1/2" STD BLK Union |
| STU12 | 3/4" STD BLK Union |
| STU16 | 1" STD BLK Union |
| STU20 | 1-1/4" STD BLK Union |
| STU24 | 1-1/2" STD BLK Union |
| STU32 | 2" STD BLK Union |
| STU40 | 2-1/2" STD BLK Union |
| STU48 | 3" STD BLK Union |

PIPE & PIPE FITTINGS

Standard Nipples

Steel Pipe Nipples

Standard



| Part Number | Diameter | Length |
|-------------|----------|--------|
| STN02-C | 1/8" | Close |
| STN02-32 | 1/8" | 2" |
| STN02-48 | 1/8" | 3" |
| STN02-64 | 1/8" | 4" |
| STN02-80 | 1/8" | 5" |
| STN02-96 | 1/8" | 6" |
| STN04-C | 1/4" | Close |
| STN04-24 | 1/4" | 1 1/2" |
| STN04-32 | 1/4" | 2" |
| STN04-40 | 1/4" | 2 1/2" |
| STN04-48 | 1/4" | 3" |
| STN04-56 | 1/4" | 3 1/2" |
| STN04-64 | 1/4" | 4" |
| STN04-72 | 1/4" | 4 1/2" |
| STN04-80 | 1/4" | 5" |
| STN04-88 | 1/4" | 5 1/2" |
| STN04-96 | 1/4" | 6" |
| STN06-C | 3/8" | Close |
| STN06-24 | 3/8" | 1 1/2" |
| STN06-32 | 3/8" | 2" |
| STN06-40 | 3/8" | 2 1/2" |
| STN06-48 | 3/8" | 3" |
| STN06-56 | 3/8" | 3 1/2" |
| STN06-64 | 3/8" | 4" |
| STN06-72 | 3/8" | 4 1/2" |
| STN06-80 | 3/8" | 5" |
| STN06-88 | 3/8" | 5 1/2" |
| STN06-96 | 3/8" | 6" |
| STN08-C | 1/2" | Close |
| STN08-24 | 1/2" | 1 1/2" |
| STN08-32 | 1/2" | 2" |
| STN08-40 | 1/2" | 2 1/2" |
| STN08-48 | 1/2" | 3" |
| STN08-56 | 1/2" | 3 1/2" |
| STN08-64 | 1/2" | 4" |
| STN08-72 | 1/2" | 4 1/2" |
| STN08-80 | 1/2" | 5" |
| STN08-88 | 1/2" | 5 1/2" |
| STN08-96 | 1/2" | 6" |
| STN08-128 | 1/2" | 8" |
| STN08-160 | 1/2" | 10" |
| STN08-192 | 1/2" | 12" |

| | | |
|-----------|--------|--------|
| STN08-288 | 1/2" | 18" |
| STN12-C | 3/4" | Close |
| STN12-24 | 3/4" | 1 1/2" |
| STN12-32 | 3/4" | 2" |
| STN12-40 | 3/4" | 2 1/2" |
| STN12-48 | 3/4" | 3" |
| STN12-56 | 3/4" | 3 1/2" |
| STN12-64 | 3/4" | 4" |
| STN12-72 | 3/4" | 4 1/2" |
| STN12-80 | 3/4" | 5" |
| STN12-88 | 3/4" | 5 1/2" |
| STN12-96 | 3/4" | 6" |
| STN12-128 | 3/4" | 8" |
| STN12-160 | 3/4" | 10" |
| STN12-192 | 3/4" | 12" |
| STN12-288 | 3/4" | 18" |
| STN16-C | 1" | Close |
| STN16-32 | 1" | 2" |
| STN16-40 | 1" | 2 1/2" |
| STN16-48 | 1" | 3" |
| STN16-56 | 1" | 3 1/2" |
| STN16-64 | 1" | 4" |
| STN16-72 | 1" | 4 1/2" |
| STN16-80 | 1" | 5" |
| STN16-88 | 1" | 5 1/2" |
| STN16-96 | 1" | 6" |
| STN16-192 | 1" | 12" |
| STN20-C | 1 1/4" | Close |
| STN20-32 | 1 1/4" | 2" |
| STN20-40 | 1 1/4" | 2 1/2" |
| STN20-48 | 1 1/4" | 3" |
| STN20-56 | 1 1/4" | 3 1/2" |
| STN20-64 | 1 1/4" | 4" |
| STN20-72 | 1 1/4" | 4 1/2" |
| STN20-80 | 1 1/4" | 5" |
| STN20-88 | 1 1/4" | 5 1/2" |
| STN20-96 | 1 1/4" | 6" |
| STN24-C | 1 1/2" | Close |
| STN24-32 | 1 1/2" | 2" |
| STN24-40 | 1 1/2" | 2 1/2" |
| STN24-48 | 1 1/2" | 3" |
| STN24-56 | 1 1/2" | 3 1/2" |
| STN24-64 | 1 1/2" | 4" |
| STN24-72 | 1 1/2" | 4 1/2" |
| STN24-80 | 1 1/2" | 5" |
| STN24-88 | 1 1/2" | 5 1/2" |
| STN24-96 | 1 1/2" | 6" |
| STN32-C | 2" | Close |
| STN32-C | 2" | Close |
| STN32-40 | 2" | 2 1/2" |
| STN32-48 | 2" | 3" |
| STN32-56 | 2" | 3 1/2" |
| STN32-64 | 2" | 4" |
| STN32-72 | 2" | 4 1/2" |
| STN32-80 | 2" | 5" |
| STN32-88 | 2" | 5 1/2" |
| STN32-96 | 2" | 6" |
| STN48-C | 3" | Close |

PIPE & PIPE FITTINGS

Standard Nipples

Steel Pipe Nipples

Standard

| Part Number | Diameter | Length |
|-------------|----------|--------|
| STN48-48 | 3" | 3" |
| STN48-56 | 3" | 3 1/2" |
| STN48-64 | 3" | 4" |
| STN48-72 | 3" | 4 1/2" |
| STN48-80 | 3" | 5" |
| STN48-88 | 3" | 5 1/2" |
| STN48-96 | 3" | 6" |

* Some additional sizes available.

Standard Pack

| Part Number | Description |
|-------------|---|
| STDPK-08 | 66 Pack of STD 1/2" Nipples. 6 Each of close - 6" |
| STDPK-12 | 66 Pack of STD 3/4" Nipples. 6 Each of close - 6" |
| STDPK-16 | 60 Pack of STD 1" Nipples. 6 Each of close - 6" |

PIPE & PIPE FITTINGS

PIPE & PIPE FITTINGS

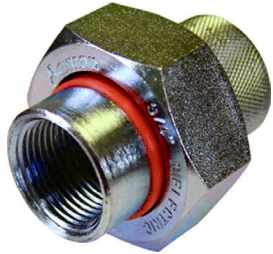
Insulated Unions

Forged Steel Insulated Unions



| Part Number | Description |
|-------------|---|
| FSINSU08 | 1/2" Forged Steel Insulating O-Ring Union |
| FSINSU12 | 3/4" Forged Steel Insulating O-Ring Union |
| FSINSU16 | 1" Forged Steel Insulating O-Ring Union |
| FSINSU20 | 1-1/4" Forged Steel Insulating O-Ring Union |
| FSINSU32 | 2" Forged Steel Insulating O-Ring Union |

Standard Insulated Unions



| Part Number | Description |
|-------------|-------------------------|
| INSU08 | 1/2" Dielectric Union |
| INSU12 | 3/4" Dielectric Union |
| INSU16 | 1" Dielectric Union |
| INSU20 | 1-1/4" Dielectric Union |
| INSU32 | 2" Dielectric Union |

Forged Steel Fittings

Forged Steel 45 Degree Elbows



| Part Number | Description |
|-------------|---------------------------|
| FS45L04 | 1/4" FS 45 Degree Elbow |
| FS45L06 | 3/8" FS 45 Degree Elbow |
| FS45L08 | 1/2" FS 45 Degree Elbow |
| FS45L12 | 3/4" FS 45 Degree Elbow |
| FS45L16 | 1" FS 45 Degree Elbow |
| FS45L20 | 1-1/4" FS 45 Degree Elbow |
| FS45L24 | 1-1/2" FS 45 Degree Elbow |
| FS45L32 | 2" FS 45 Degree Elbow |
| FS45L40 | 2-1/2" FS 45 Degree Elbow |
| FS45L48 | 3" FS 45 Degree Elbow |
| FS45L64 | 4" FS 45 Degree Elbow |

PIPE & PIPE FITTINGS

Forged Steel Fittings

Forged Steel Bushings



| Part Number | Description |
|-------------|--------------------------------|
| FSB0402 | 1/4" x 1/8" FS Hex Bushing |
| FSB0602 | 3/8" x 1/8" FS Hex Bushing |
| FSB0604 | 3/8" x 1/4" FS Hex Bushing |
| FSB0802 | 1/2" x 1/8" FS Hex Bushing |
| FSB0804 | 1/2" x 1/4" FS Hex Bushing |
| FSB0806 | 1/2" x 3/8" FS Hex Bushing |
| FSB1204 | 3/4" x 1/4" FS Hex Bushing |
| FSB1206 | 3/4" x 3/8" FS Hex Bushing |
| FSB1208 | 3/4" x 1/2" FS Hex Bushing |
| FSB1604 | 1" x 1/4" FS Hex Bushing |
| FSB1606 | 1" x 3/8" FS Hex Bushing |
| FSB1608 | 1" x 1/2" FS Hex Bushing |
| FSB1612 | 1" x 3/4" FS Hex Bushing |
| FSB2004 | 1-1/4" x 1/4" FS Hex Bushing |
| FSB2008 | 1-1/4" x 1/2" FS Hex Bushing |
| FSB2012 | 1-1/4" x 3/4" FS Hex Bushing |
| FSB2016 | 1-1/4" x 1" FS Hex Bushing |
| FSB2404 | 1-1/2" x 1/4" FS Hex Bushing |
| FSB2406 | 1-1/2" x 3/8" FS Hex Bushing |
| FSB2408 | 1-1/2" x 1/2" FS Hex Bushing |
| FSB2412 | 1-1/2" x 3/4" FS Hex Bushing |
| FSB2416 | 1-1/2" x 1" FS Hex Bushing |
| FSB2420 | 1-1/2" x 1-1/4" FS Hex Bushing |
| FSB3204 | 2" x 1/4" FS Hex Bushing |
| FSB3208 | 2" x 1/2" FS Hex Bushing |
| FSB3212 | 2" x 3/4" FS Hex Bushing |
| FSB3216 | 2" x 1" FS Hex Bushing |
| FSB3220 | 2" x 1-1/4" FS Hex Bushing |
| FSB3224 | 2" x 1-1/2" FS Hex Bushing |
| FSB4016 | 2-1/2" x 1" FS Hex Bushing |
| FSB4020 | 2-1/2" x 1-1/4" FS Hex Bushing |
| FSB4024 | 2-1/2" x 1-1/2" FS Hex Bushing |
| FSB4032 | 2-1/2" x 2" FS Hex Bushing |
| FSB4816 | 3" x 1" FS Hex Bushing |
| FSB4820 | 3" x 1-1/4" FS Hex Bushing |
| FSB4824 | 3" x 1-1/2" FS Hex Bushing |
| FSB4832 | 3" x 2" FS Hex Bushing |
| FSB4840 | 3" x 2-1/2" FS Hex Bushing |
| FSB6448 | 4" x 3" FS Hex Bushing |

Forged Steel Couplings



| Part Number | Description |
|-------------|--------------------|
| FSC04 | 1/4" FS Coupling |
| FSC06 | 3/8" FS Coupling |
| FSC08 | 1/2" FS Coupling |
| FSC12 | 3/4" FS Coupling |
| FSC16 | 1" FS Coupling |
| FSC20 | 1-1/4" FS Coupling |
| FSC24 | 1-1/2" FS Coupling |
| FSC32 | 2" FS Coupling |
| FSC40 | 2-1/2" FS Coupling |
| FSC48 | 3" FS Coupling |

PIPE & PIPE FITTINGS

Forged Steel Fittings

Forged Steel Caps



| Part Number | Description |
|-------------|---------------|
| FSCAP04 | 1/4" FS Cap |
| FSCAP06 | 3/8" FS Cap |
| FSCAP08 | 1/2" FS Cap |
| FSCAP12 | 3/4" FS Cap |
| FSCAP16 | 1" FS Cap |
| FSCAP20 | 1-1/4" FS Cap |
| FSCAP24 | 1-1/2" FS Cap |
| FSCAP32 | 2" FS Cap |
| FSCAP48 | 3" FS Cap |

Forged Steel Cross



| Part Number | Description |
|-------------|-----------------|
| FSCR04 | 1/4" FS Cross |
| FSCR06 | 3/8" FS Cross |
| FSCR08 | 1/2" FS Cross |
| FSCR12 | 3/4" FS Cross |
| FSCR16 | 1" FS Cross |
| FSCR20 | 1-1/4" FS Cross |
| FSCR24 | 1-1/2" FS Cross |
| FSCR32 | 2" FS Cross |
| FSCR48 | 3" FS Cross |

Forged Steel Half Coupling



| Part Number | Description |
|-------------|-------------------------|
| FSHC04 | 1/4" FS Half Coupling |
| FSHC06 | 3/8" FS Half Coupling |
| FSHC08 | 1/2" FS Half Coupling |
| FSHC12 | 3/4" FS Half Coupling |
| FSHC16 | 1" FS Half Coupling |
| FSHC20 | 1-1/4" FS Half Coupling |
| FSHC24 | 1-1/2" FS Half Coupling |
| FSHC32 | 2" FS Half Coupling |
| FSHC40 | 2-1/2" FS Half Coupling |
| FSHC48 | 3" FS Half Coupling |

Forged Steel 90 Degree Elbows



| Part Number | Description |
|-------------|---------------------------|
| FSL04 | 1/4" FS 90 Degree Elbow |
| FSL06 | 3/8" FS 90 Degree Elbow |
| FSL08 | 1/2" FS 90 Degree Elbow |
| FSL12 | 3/4" FS 90 Degree Elbow |
| FSL16 | 1" FS 90 Degree Elbow |
| FSL20 | 1-1/4" FS 90 Degree Elbow |
| FSL24 | 1-1/2" FS 90 Degree Elbow |
| FSL32 | 2" FS 90 Degree Elbow |
| FSL48 | 3" FS 90 Degree Elbow |

PIPE & PIPE FITTINGS

Forged Steel Fittings

Forged Steel Plugs



FSP24

| Part Number | Description |
|-------------|----------------------------|
| FSP02 | 1/8" FS Square Head Plug |
| FSP04 | 1/4" FS Square Head Plug |
| FSP06 | 3/8" FS Square Head Plug |
| FSP08 | 1/2" FS Square Head Plug |
| FSP12 | 3/4" FS Square Head Plug |
| FSP16 | 1" FS Square Head Plug |
| FSP20 | 1-1/4" FS Square Head Plug |
| FSP24 | 1-1/2" FS Square Head Plug |
| FSP32 | 2" FS Square Head Plug |
| FSP40 | 2-1/2" FS Square Head Plug |
| FSP48 | 3" FS Square Head Plug |

Forged Steel Reducing Couplings



| Part Number | Description |
|-------------|-------------------------------------|
| FSRC0604 | 3/8" x 1/4" FS Reducing Coupler |
| FSRC0804 | 1/2" x 1/4" FS Reducing Coupler |
| FSRC0806 | 1/2" x 3/8" FS Reducing Coupler |
| FSRC1204 | 3/4" x 1/4" FS Reducing Coupler |
| FSRC1206 | 3/4" x 3/8" FS Reducing Coupler |
| FSRC1208 | 3/4" x 1/2" FS Reducing Coupler |
| FSRC1604 | 1" x 1/4" FS Reducing Coupler |
| FSRC1608 | 1" x 1/2" FS Reducing Coupler |
| FSRC1612 | 1" x 3/4" FS Reducing Coupler |
| FSRC2006 | 1-1/4" x 3/8" FS Reducing Coupler |
| FSRC2008 | 1-1/4" x 1/2" FS Reducing Coupler |
| FSRC2012 | 1-1/4" x 3/4" FS Reducing Coupler |
| FSRC2016 | 1-1/4" x 1" FS Reducing Coupler |
| FSRC2408 | 1-1/2" x 1/2" FS Reducing Coupler |
| FSRC2412 | 1-1/2" x 3/4" FS Reducing Coupler |
| FSRC2416 | 1-1/2" x 1" FS Reducing Coupler |
| FSRC2420 | 1-1/2" x 1-1/4" FS Reducing Coupler |
| FSRC3208 | 2" x 1/2" FS Reducing Coupler |
| FSRC3212 | 2" x 3/4" FS Reducing Coupler |
| FSRC3216 | 2" x 1" FS Reducing Coupler |
| FSRC3220 | 2" x 1-1/4" FS Reducing Coupler |
| FSRC3224 | 2" x 1-1/2" FS Reducing Coupler |
| FSRC4032 | 2-1/2" x 2" FS Reducing Coupler |
| FSRC4824 | 3" x 1-1/2" FS Reducing Coupler |
| FSRC4832 | 3" x 2" FS Reducing Coupler |
| FSRC4840 | 3" x 2-1/2" FS Reducing Coupler |

Forged Steel Reducing Tees



| Part Number | Description |
|-------------|-------------------------------|
| FSRT1608 | 1" x 1/2" FS Reducing Tee |
| FSRT1612 | 1" x 3/4" FS Reducing Tee |
| FSRT2012 | 1-1/4" x 3/4" FS Reducing Tee |
| FSRT2412 | 1-1/2" x 3/4" FS Reducing Tee |
| FSRT2416 | 1-1/2" x 1" FS Reducing Tee |
| FSRT3208 | 2" x 1/2" FS Reducing Tee |
| FSRT3212 | 2" x 3/4" FS Reducing Tee |
| FSRT3216 | 2" x 1" FS Reducing Tee |
| FSRT3220 | 2" x 1-1/4" FS Reducing Tee |

PIPE & PIPE FITTINGS

Forged Steel Fittings

Forged Steel Street Elbows



| Part Number | Description |
|-------------|----------------------------------|
| FSSL04 | 1/4" FS 90 Degree Street Elbow |
| FSSL06 | 3/8" FS 90 Degree Street Elbow |
| FSSL08 | 1/2" FS 90 Degree Street Elbow |
| FSSL12 | 3/4" FS 90 Degree Street Elbow |
| FSSL16 | 1" FS 90 Degree Street Elbow |
| FSSL20 | 1-1/4" FS 90 Degree Street Elbow |
| FSSL32 | 2" FS 90 Degree Street Elbow |

Forged Steel Tees



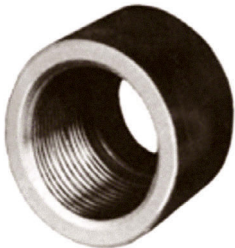
| Part Number | Description |
|-------------|---------------|
| FST04 | 1/4" FS Tee |
| FST06 | 3/8" FS Tee |
| FST08 | 1/2" FS Tee |
| FST12 | 3/4" FS Tee |
| FST16 | 1" FS Tee |
| FST20 | 1-1/4" FS Tee |
| FST24 | 1-1/2" FS Tee |
| FST32 | 2" FS Tee |
| FST40 | 2-1/2" FS Tee |
| FST48 | 3" FS Tee |

Forged Steel Unions



| Part Number | Description |
|-------------|-----------------|
| FSU04 | 1/4" FS Union |
| FSU06 | 3/8" FS Union |
| FSU08 | 1/2" FS Union |
| FSU12 | 3/4" FS Union |
| FSU16 | 1" FS Union |
| FSU20 | 1-1/4" FS Union |
| FSU24 | 1-1/2" FS Union |
| FSU32 | 2" FS Union |
| FSU40 | 2-1/2" FS Union |
| FSU48 | 3" FS Union |

Misc. Stainless Steel Fittings



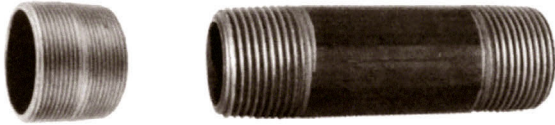
| Part Number | Description |
|-------------|--------------------------------|
| SS02 | 1/8" SS SCH 40 PIPE |
| SSC02 | 1/8" SS Coupling |
| SSCAP08 | 1/2" SS Cap |
| SSL02 | 1/8" SS 90 Degree Elbow |
| SSL08 | 1/2" SS 90 Degree Elbow |
| SSN02-64 | 1/8" x 4" SS Nipple |
| SSN08-48 | 1/2" x 3" SS Nipple |
| SSN08-C | 1/2" x Close SS Nipple |
| SSSL02 | 1/8" SS 90 Degree Street Elbow |
| SSSL08 | 1/2" SS 90 Degree Street Elbow |
| SST02 | 1/8" SS Tee |
| SST08 | 1/2" SS Tee |
| SSU02 | 1/8" SS Union |
| SSU08 | 1/2" SS Union |

PIPE & PIPE FITTINGS

Extra Heavy Seamless Nipples

Steel Pipe Nipples

Extra Heavy



| Part Number | Diameter | Length |
|-------------|----------|--------|
| XHN02-C | 1/8" | Close |
| XHN02-24 | 1/8" | 1 1/2" |
| XHN02-32 | 1/8" | 2" |
| XHN02-40 | 1/8" | 2 1/2" |
| XHN02-48 | 1/8" | 3" |
| XHN02-56 | 1/8" | 3 1/2" |
| XHN02-64 | 1/8" | 4" |
| XHN02-72 | 1/8" | 4 1/2" |
| XHN02-80 | 1/8" | 5" |
| XHN02-88 | 1/8" | 5 1/2" |
| XHN02-96 | 1/8" | 6" |
| XHN04-C | 1/4" | Close |
| XHN04-24 | 1/4" | 1 1/2" |
| XHN04-32 | 1/4" | 2" |
| XHN04-40 | 1/4" | 2 1/2" |
| XHN04-48 | 1/4" | 3" |
| XHN04-56 | 1/4" | 3 1/2" |
| XHN04-64 | 1/4" | 4" |
| XHN04-72 | 1/4" | 4 1/2" |
| XHN04-80 | 1/4" | 5" |
| XHN04-88 | 1/4" | 5 1/2" |
| XHN04-96 | 1/4" | 6" |
| XHN06-C | 3/8" | Close |
| XHN06-24 | 3/8" | 1 1/2" |
| XHN06-32 | 3/8" | 2" |
| XHN06-40 | 3/8" | 2 1/2" |
| XHN06-48 | 3/8" | 3" |
| XHN06-56 | 3/8" | 3 1/2" |
| XHN06-64 | 3/8" | 4" |
| XHN06-72 | 3/8" | 4 1/2" |
| XHN06-80 | 3/8" | 5" |
| XHN06-88 | 3/8" | 5 1/2" |
| XHN06-96 | 3/8" | 6" |
| XHN08-C | 1/2" | Close |
| XHN08-24 | 1/2" | 1 1/2" |
| XHN08-32 | 1/2" | 2" |
| XHN08-40 | 1/2" | 2 1/2" |
| XHN08-48 | 1/2" | 3" |
| XHN08-56 | 1/2" | 3 1/2" |
| XHN08-64 | 1/2" | 4" |
| XHN08-72 | 1/2" | 4 1/2" |
| XHN08-80 | 1/2" | 5" |
| XHN08-88 | 1/2" | 5 1/2" |
| XHN08-96 | 1/2" | 6" |

| | | |
|-----------|--------|--------|
| XHN08-192 | 1/2" | 12" |
| XHN12-C | 3/4" | Close |
| XHN12-24 | 3/4" | 1 1/2" |
| XHN12-32 | 3/4" | 2" |
| XHN12-40 | 3/4" | 2 1/2" |
| XHN12-48 | 3/4" | 3" |
| XHN12-56 | 3/4" | 3 1/2" |
| XHN12-64 | 3/4" | 4" |
| XHN12-72 | 3/4" | 4 1/2" |
| XHN12-80 | 3/4" | 5" |
| XHN12-88 | 3/4" | 5 1/2" |
| XHN12-96 | 3/4" | 6" |
| XHN12-128 | 3/4" | 8" |
| XHN12-160 | 3/4" | 10" |
| XHN12-192 | 3/4" | 12" |
| XHN16-C | 1" | Close |
| XHN16-32 | 1" | 2" |
| XHN16-40 | 1" | 2 1/2" |
| XHN16-48 | 1" | 3" |
| XHN16-56 | 1" | 3 1/2" |
| XHN16-64 | 1" | 4" |
| XHN16-72 | 1" | 4 1/2" |
| XHN16-80 | 1" | 5" |
| XHN16-88 | 1" | 5 1/2" |
| XHN16-96 | 1" | 6" |
| XHN16-128 | 1" | 8" |
| XHN16-160 | 1" | 10" |
| XHN16-192 | 1" | 12" |
| XHN20-C | 1 1/4" | Close |
| XHN20-32 | 1 1/4" | 2" |
| XHN20-40 | 1 1/4" | 2 1/2" |
| XHN20-48 | 1 1/4" | 3" |
| XHN20-56 | 1 1/4" | 3 1/2" |
| XHN20-64 | 1 1/4" | 4" |
| XHN20-72 | 1 1/4" | 4 1/2" |
| XHN20-80 | 1 1/4" | 5" |
| XHN20-88 | 1 1/4" | 5 1/2" |
| XHN20-96 | 1 1/4" | 6" |
| XHN20-128 | 1 1/4" | 8" |
| XHN20-192 | 1 1/4" | 12" |
| XHN24-C | 1 1/2" | Close |
| XHN24-32 | 1 1/2" | 2" |
| XHN24-40 | 1 1/2" | 2 1/2" |
| XHN24-48 | 1 1/2" | 3" |
| XHN24-56 | 1 1/2" | 3 1/2" |
| XHN24-64 | 1 1/2" | 4" |
| XHN24-72 | 1 1/2" | 4 1/2" |
| XHN24-80 | 1 1/2" | 5" |
| XHN24-88 | 1 1/2" | 5 1/2" |
| XHN24-96 | 1 1/2" | 6" |
| XHN32-C | 2" | Close |
| XHN32-40 | 2" | 2 1/2" |
| XHN32-48 | 2" | 3" |
| XHN32-56 | 2" | 3 1/2" |
| XHN32-64 | 2" | 4" |
| XHN32-72 | 2" | 4 1/2" |
| XHN32-80 | 2" | 5" |

PIPE & PIPE FITTINGS

PIPE & PIPE FITTINGS

Extra Heavy Seamless Nipples

Steel Pipe Nipples

Extra Heavy

| Part Number | Diameter | Length |
|-------------|----------|---------|
| XHN32-88 | 2" | 5 1/2" |
| XHN32-96 | 2" | 6" |
| XHN32-112 | 2" | 7" |
| XHN32-128 | 2" | 8" |
| XHN32-160 | 2" | 10" |
| XHN32-192 | 2" | 12" |
| XHN40-C | 2 1/2" | Close |
| XHN48-C | 3" | Close |
| XHN48-48 | 3" | 3" |
| XHN48-56 | 3" | 3 1/2" |
| XHN48-64 | 3" | 4" |
| XHN48-72 | 3" | 4 1/2" |
| XHN48-80 | 3" | 5" |
| XHN48-88 | 3" | 5 1/2" |
| XHN48-96 | 3" | 6" |
| XHN48-104 | 3" | 6 1/2" |
| XHN48-112 | 3" | 7" |
| XHN48-120 | 3" | 7 1/2" |
| XHN48-128 | 3" | 8" |
| XHN48-136 | 3" | 8 1/2" |
| XHN48-144 | 3" | 9" |
| XHN48-152 | 3" | 9 1/2" |
| XHN48-160 | 3" | 10" |
| XHN48-168 | 3" | 10 1/2" |
| XHN48-176 | 3" | 11" |
| XHN48-184 | 3" | 11 1/2" |
| XHN48-192 | 3" | 12" |

* Some additional sizes available.

PIPE & PIPE FITTINGS

Swage Nipples

Extra Heavy Concentric Swage Nipples



| Part Number | Description |
|-------------|------------------------------|
| CSN12-08 | 3/4" x 1/2" Swage Nipple |
| CSN16-08 | 1" x 1/2" Swage Nipple |
| CSN16-12 | 1" x 3/4" Swage Nipple |
| CSN20-12 | 1-1/4" x 3/4" Swage Nipple |
| CSN20-16 | 1-1/4" x 1" Swage Nipple |
| CSN24-12 | 1-1/2" x 3/4" Swage Nipple |
| CSN24-16 | 1-1/2" x 1" Swage Nipple |
| CSN24-20 | 1-1/2" x 1-1/4" Swage Nipple |
| CSN32-12 | 2" x 3/4" Swage Nipple |
| CSN32-16 | 2" x 1" Swage Nipple |
| CSN32-20 | 2" x 1-1/4" Swage Nipple |
| CSN32-24 | 2" x 1-1/2" Swage Nipple |
| CSN40-16 | 2-1/2" x 1" Swage Nipple |
| CSN48-20 | 3" x 1-1/4" Swage Nipple |
| CSN48-32 | 3" x 2" Swage Nipple |
| CSN48-40 | 3" x 2-1/2" Swage Nipple |

Stainless Steel Flex Connectors



Schedule 80 male pipe thread each end, 4" long to easily fit into chain vice without damaging collar or braid. Corrugated inner tubing with wire braid outer cover. Flanged ends and custom lengths are also available.

| Part Number | Diameter | Length | Working Pressure | Burst Pressure |
|-------------|----------|--------|------------------|----------------|
| SSFC04 | 1/4" | 6" | 575 PSI | 1725 |
| SSFC06 | 3/8" | 18" | 575 PSI | 1725 |
| SSFC08 | 1/2" | 18" | 575 PSI | 1725 |
| SSFC12 | 3/4" | 18" | 575 PSI | 1725 |
| SSFC16 | 1" | 18" | 575 PSI | 1725 |
| SSFC20 | 1 1/4" | 18" | 575 PSI | 1725 |
| SSFC24 | 1 1/2" | 18" | 575 PSI | 1725 |
| SSFC32 | 2" | 18" | 550 PSI | 1650 |
| SSFC48 | 3" | 24" | 525 PSI | 1575 |

Ductile Iron Y-Type Strainers

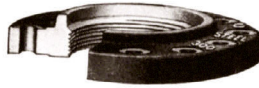


| Part Number | Description |
|-------------|--------------------------------------|
| DIS04 | 1/4" Ductile Iron Screwed Strainer |
| DIS08 | 1/2" Ductile Iron Screwed Strainer |
| DIS12 | 3/4" Ductile Iron Screwed Strainer |
| DIS16 | 1" Ductile Iron Screwed Strainer |
| DIS20 | 1 1/4" Ductile Iron Screwed Strainer |
| DIS24 | 1 1/2" Ductile Iron Screwed Strainer |
| DIS32 | 2" Ductile Iron Screwed Strainer |
| DIS40 | 2 1/2" Ductile Iron Screwed Strainer |
| DIS48 | 3" Ductile Iron Screwed Strainer |
| DIS48-F | 3" Ductile Iron Flanged Strainer |
| DIS64-F | 4" Ductile Iron Flanged Strainer |

PIPE & PIPE FITTINGS

Flanges

Forged Steel Flanges



Screwed Flange



Blind Flange

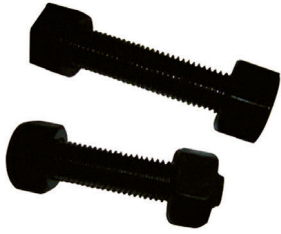


Slip-On-Welding Flange

| Part Number | Description |
|-------------|---|
| 150B32 | 2" 150 LB Blind Flange |
| 150B40 | 2-1/2" 150 LB Blind Flange |
| 150B48 | 3" 150 LB Blind Flange |
| 150B64 | 4" 150 LB Blind Flange |
| 150B96 | 6" 150 LB Blind Flange |
| 150SO32 | 2" 150 LB Slip-On Flange |
| 150SO40 | 2-1/2" 150 LB Slip-On Flange |
| 150SO48 | 3" 150 LB Slip-On Flange |
| 150SO64 | 4" 150 LB Slip-On Flange |
| 150SO96 | 6" 150 LB Slip-On Flange |
| 150T32 | 2" 150 LB Threaded Flange |
| 150T40 | 2-1/2" 150 LB Threaded Flange |
| 150T48 | 3" 150 LB Threaded Flange |
| 150T48-32 | 3" x 2" 150 LB Threaded Reducing Flange |
| 150T64 | 4" 150 LB Threaded Flange |
| 150T64-48 | 4" x 3" 150 LB Threaded Reducing Flange |
| 150T96 | 6" 150 LB Threaded Flange |
| 150WN32 | 2" 150 LB Weld Neck Flange |
| 150WN48 | 3" 150 LB Weld Neck Flange |
| 150WN64 | 4" 150 LB Weld Neck Flange |
| 300B20 | 1-1/4" 300 LB Blind Flange |
| 300B24 | 1-1/2" 300 LB Blind Flange |
| 300B32 | 2" 300 LB Blind Flange |
| 300B48 | 3" 300 LB Blind Flange |
| 300B64 | 4" 300 LB Blind Flange |
| 300B96 | 6" 300 LB Blind Flange |
| 300SO20 | 1-1/4" 300 LB Slip-On Flange |
| 300SO24 | 1-1/2" 300 LB Slip-On Flange |
| 300SO32 | 2" 300 LB Slip-On Flange |
| 300SO40 | 2-1/2" 300 LB Slip-On Flange |
| 300SO48 | 3" 300 LB Slip-On Flange |
| 300SO64 | 4" 300 LB Slip-On Flange |
| 300SO96 | 6" 300 LB Slip-On Flange |
| 300T20 | 1-1/4" 300 LB Threaded Flange |
| 300T24 | 1-1/2" 300 LB Threaded Flange |
| 300T32 | 2" 300 LB Threaded Flange |
| 300T40 | 2-1/2" 300 LB Threaded Flange |
| 300T48 | 3" 300 LB Threaded Flange |
| 300T48-32 | 3" x 2" 300# Threaded Reducing Flange |
| 300T64 | 4" 300 LB Threaded Flange |
| 300T64-32 | 4" x 2" 300# Threaded Reducing Flange |
| 300T64-48 | 4" x 3" 300# Threaded Reducing Flange |
| 300T96 | 6" 300 LB Threaded Flange |
| 300WN20 | 1-1/4" 300 LB Weldneck Flange |
| 300WN24 | 1-1/2" 300 LB Weldneck Flange |
| 300WN32 | 2" 300 LB Weldneck Flange |
| 300WN48 | 3" 300 LB Weldneck Flange |
| 300WN64 | 4" 300 LB Weldneck Flange |

PIPE & PIPE FITTINGS

Studs and Nuts



| Part Number | Description |
|-------------|-------------------------------|
| SN1048 | 5/8" x 3" B-7 Stud w/Nuts |
| SN1056 | 5/8" x 3-1/2" B-7 Stud w/Nuts |
| SN1064 | 5/8" x 4" B-7 Stud w/Nuts |
| SN1072 | 5/8" x 4-1/2" B-7 Stud w/Nuts |
| SN1076 | 5/8" x 4-3/4" B-7 Stud w/Nuts |
| SN1080 | 5/8" x 5" B-7 Stud w/Nuts |
| SN1248 | 3/4" x 3" B-7 Stud w/Nuts |
| SN1256 | 3/4" x 3-1/2" B-7 Stud w/Nuts |
| SN1264 | 3/4" x 4" B-7 Stud w/Nuts |
| SN1272 | 3/4" x 4-1/2" B-7 Stud w/Nuts |
| SN1280 | 3/4" x 5" B-7 Stud w/Nuts |
| SN1296 | 3/4" x 6" B-7 Stud w/Nuts |

Metalbestos Gaskets

150# Gaskets



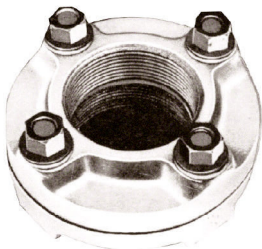
| Part Number | Description |
|-------------|------------------------------------|
| MB150-32 | 2" 150# Gasket W/ Graphite Filler |
| MB150-48 | 3" 150# Gasket W/ Graphite Filler |
| MB150-64 | 4" 150# Gasket W/ Graphite Filler |
| MB150-96 | 6" 150# Gasket W/ Graphite Filler |
| MB150-128 | 8" 150# Gasket W/ Graphite Filler |
| MB150-256 | 16" 150# Gasket W/ Graphite Filler |
| MB150-288 | 18" 150# Gasket W/ Graphite Filler |

300# Gaskets



| Part Number | Description |
|-------------|---|
| MB300-20 | 1-1/4" 300# Gasket W/ Graphite Filler |
| MB300-24 | 1-1/2" 300# Gasket W/ Graphite Filler |
| MB300-32 | 2" 300# Gasket W/ Graphite Filler |
| MB300-40 | 2-1/2" 300# Gasket W/ Graphite Filler |
| MB300-48 | 3" 300# Gasket W/ Graphite Filler |
| MB300-64 | 4" 300# Gasket W/ Graphite Filler |
| MB300-96 | 6" 300# Gasket W/ Graphite Filler |
| MB300-256 | 16" 300# Gasket W/ Graphite Filler |
| MB300-288 | 18" 300# Gasket W/ Graphite Filler |
| 4ACF | 4" ACF Flange Gasket & Weather Gasket Set |

Maloney Flange Insulation Kits

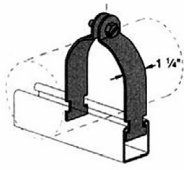


| DIS04 | 1/4" Ductile Iron Screwed Strainer |
|----------|------------------------------------|
| M150K-20 | 1-1/4" 150 LB Insulation Kit |
| M150K-32 | 2" 150 LB Insulation Kit |
| M150K-48 | 3" 150 LB Insulation Kit |
| M150K-64 | 4" 150 LB Insulation Kit |
| M150K-96 | 6" 150 LB Insulation Kit |
| M300K-20 | 1-1/4" 300LB Insulation Kit |
| M300K-32 | 2" 300 LB Insulation Kit |
| M300K-40 | 2-1/2" 300LB Insulation Kit |
| M300K-48 | 3" 300 LB Insulation Kit |
| M300K-64 | 4" 300 LB Insulation Kit |
| M300K-96 | 6" 300 LB Insulation Kit |

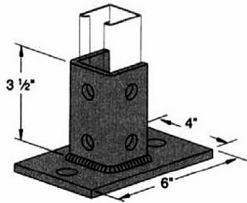
PIPE & PIPE FITTINGS

Power Strut

Power Strut Pipe Hanger



PS1100-2



PS3025

| Part Number | Description |
|--------------|---|
| PS1100-1 | 1" IPS Galvanized Power Strut Clamp |
| PS1100-1/2 | 1/2" IPS Galvanized Power Strut Clamp |
| PS1100-1-1/4 | 1-1/4" IPS Galvanized Power Strut Clamp |
| PS1100-2 | 2" IPS Galvanized Power Strut Clamp |
| PS1100-3 | 3" IPS Galvanized Power Strut Clamp |
| PS1100-3/4 | 3/4" IPS Galvanized Power Strut Clamp |
| PS1100-4 | 4" IPS Galvanized Power Strut Clamp |
| PS1200-3/8 | 3/8" OD 1/8" Pipe Galv. Power Strut Clamp |
| PS200EH | 1-5/8" x 1-5/8" Green Power Strut |
| PS3025 | Power Strut Post Base |
| PS500EH | 1-5/8" x 13/16" Galvanized Power Strut |
| PS-CAP | Plastic End Cap For PS200EH Strut |

Weld Fittings

Standard 45 Degree Weld Elbows



| DIS04 | 1/4" Ductile Iron Screwed Strainer |
|---------|------------------------------------|
| S45WL32 | 2" STD BLK 45 Degree Weld Elbow |
| S45WL48 | 3" STD BLK 45 Degree Weld Elbow |
| S45WL64 | 4" STD BLK 45 Degree Weld Elbow |

Standard Weld Capss



| DIS04 | 1/4" Ductile Iron Screwed Strainer |
|---------|------------------------------------|
| SWCAP12 | 3/4" STD BLK Weld Cap |
| SWCAP16 | 1" STD BLK Weld Cap |
| SWCAP20 | 1-1/4" STD BLK Weld Cap |
| SWCAP24 | 1-1/2" STD BLK Weld Cap |
| SWCAP32 | 2" STD BLK Weld Cap |
| SWCAP40 | 2-1/2" STD BLK Weld Cap |
| SWCAP48 | 3" STD BLK Weld Cap |
| SWCAP64 | 4" STD BLK Weld Cap |
| SWCAP80 | 5" STD BLK Weld Cap |
| SWCAP96 | 6" STD BLK Weld Cap |

Standard 90 Degree Weld Elbows



| DIS04 | 1/4" Ductile Iron Screwed Strainer |
|----------|-------------------------------------|
| SWL12 | 3/4" STD BLK Weld Elbow |
| SWL16 | 1" STD BLK Weld Elbow |
| SWL20 | 1-1/4" STD BLK Weld Elbow |
| SWL24 | 1-1/2" STD BLK Weld Elbow |
| SWL32 | 2" STD BLK Weld Elbow |
| SWL40 | 2-1/2" STD BLK Weld Elbow |
| SWL48 | 3" STD BLK Weld Elbow |
| SWL64 | 4" STD BLK Weld Elbow |
| SWL80 | 5" STD BLK Weld Elbow |
| SWL96 | 6" STD BLK Weld Elbow |
| SRWL4832 | 3" x 2" STD BLK Reducing Weld Elbow |

PIPE & PIPE FITTINGS

Weld Fittings

Standard Weld Reducing Couplings



| Part Number | Description |
|-------------|--|
| SWRC1612 | 1" x 3/4" STD BLK CONC Weld Reducer Coupling |
| SWRC2008 | 1-1/4" x 1/2" STD BLK CONC Weld Reducer Coupling |
| SWRC2012 | 1-1/4" x 3/4" STD BLK CONC Weld Reducer Coupling |
| SWRC2016 | 1-1/4" x 1" STD BLK CONC Weld Reducer Coupling |
| SWRC2408 | 1-1/2" x 1/2" STD BLK CONC Weld Reducer Coupling |
| SWRC2412 | 1-1/2" x 3/4" STD BLK CONC Weld Reducer Coupling |
| SWRC2416 | 1-1/2" x 1" STD BLK CONC Weld Reducer Coupling |
| SWRC2420 | 1-1/2" x 1-1/4" STD BLK CONC Weld Reducer Coupling |
| SWRC3212 | 2" x 3/4" STD BLK CONC Weld Reducer Coupling |
| SWRC3216 | 2"x 1" STD BLK CONC Weld Reducer Coupling |
| SWRC3220 | 2" x 1-1/4" STD BLK CONC Weld Reducer Coupling |
| SWRC3224 | 2" x 1-1/2" STD BLK CONC Weld Reducer Coupling |
| SWRC4032 | 2-1/2" x 2" STD BLK CONC Weld Reducer Coupling |
| SWRC4816 | 3" x 1" STD BLK CONC Weld Reducer Coupling |
| SWRC4820 | 3" x 1-1/4" STD BLK CONC Weld Reducer Coupling |
| SWRC4824 | 3" x 1-1/2" STD BLK CONC Weld Reducer Coupling |
| SWRC4832 | 3" x 2" STD BLK CONC Weld Reducer Coupling |
| SWRC4840 | 3" x 2-1/2" STD BLK CONC Weld Reducer Coupling |
| SWRC6432 | 4" x 2" STD BLK CONC Weld Reducer Coupling |
| SWRC6448 | 4" x 3" STD BLK CONC Weld Reducer Coupling |
| SWRC8032 | 5" x 2" STD BLK CONC Weld Reducer Coupling |
| SWRC8048 | 5" x 3" STD BLK CONC Weld Reducer Coupling |
| SWRC8064 | 5" x 4" STD BLK CONC Weld Reducer Coupling |
| SWRC9648 | 6" x 3" STD BLK CONC Weld Reducer Coupling |
| SWRC9664 | 6" x 4" STD BLK CONC Weld Reducer Coupling |

Standard Weld Tees



| Part Number | Description |
|-------------|---|
| SWT12 | 3/4" STD BLK Weld Tee |
| SWT16 | 1" STD BLK Weld Tee |
| SWT20 | 1-1/4" STD BLK Weld Tee |
| SWT24 | 1-1/2" STD BLK Weld Tee |
| SWT32 | 2" STD BLK Weld Tee |
| SWT40 | 2-1/2" STD BLK Weld Tee |
| SWT48 | 3" STD BLK Weld Tee |
| SWT64 | 4" STD BLK Weld Tee |
| SWT80 | 5" STD BLK Weld Tee |
| SWT96 | 6" STD BLK Weld Tee |
| SRWT2012 | 1-1/4" x 3/4" STD BLK Reducing Weld Tee |
| SRWT4820 | 3" x 1-1/4" STD BLK Reducing Weld Tee |
| SRWT4832 | 3" x 2" STD BLK Reducing Weld Tee |
| SRWT6448 | 4" x 3" STD BLK Reducing Weld Tee |

PIPE & PIPE FITTINGS

Weld Fittings

Forged Steel Thread-O-Let



| Part Number | Description |
|-------------|-----------------------------|
| TOL08 | 1/2" 3000 LB Thread-O-Let |
| TOL12 | 3/4" 3000 LB Thread-O-Let |
| TOL16 | 1" 3000 LB Thread-O-Let |
| TOL20 | 1-1/4" 3000 LB Thread-O-Let |
| TOL32 | 2" 3000 LB Thread-O-Let |
| TOL48 | 3" 3000 LB Thread-O-Let |
| WOL32 | 2" 3000 LB Weld-O-LET |
| WOL64 | 4" 3000 LB Weld-O-LET |
| WOL96 | 6" 3000 LB Weld-O-LET |

BALL AND NEEDLE VALVES

Ball Valves

High Pressure Full Port Ball Valves



| Part Number | Description |
|-------------|----------------------------|
| T100-701 | 1/4" UL Listed Full-Port |
| T100-702 | 3/8" UL Listed Full-Port |
| T100-703 | 1/2" UL Listed Full-Port |
| T100-704 | 3/4" UL Listed Full-Port |
| T100-705 | 1" UL Listed Full-Port |
| T100-706 | 1 1/4" UL Listed Full-Port |
| T100-707 | 1 1/2" UL Listed Full-Port |
| T100-708 | 2" UL Listed Full-Port |
| T100-709 | 2 1/2" UL Listed Full-Port |
| T100-710 | 3" UL Listed Full-Port |
| T100-711 | 4" UL Listed Full-Port |

Locking Handles for Full Port Ball Valves



| Part Number | Description |
|-------------|---|
| PBFA13 | Locking Handle for 1/2" Ball Valve- RUB |
| PBFA16 | Locking Handle for 3/4"- 1" Ball Valve- RUB |
| PBFA19 | Locking Handle for 1 1/4"- 2" Ball Valve- RUB |
| PBFA20 | Locking Handle for 3" -4" Ball Valve- RUB |
| 210-995 | Lift-N-Lock Device for 3/4" Ball Valve - Jomar |
| 210-996 | Lift-N-Lock Device for 1" - 1 1/4" Ball Valve - Jomar |
| 210-997 | Lift-N-Lock Device for 1 1/2"- 2" Ball Valve - Jomar |
| 210-998 | Lift-N-Lock Device for 2 1/2"- 3" Ball Valve - Jomar |
| 220-997 | Locking Handle For 1-1/2" & 2" Jomar Ball Valve |

4-bolt Stainless Steel Full Port Ball Valve w/ Locking Handle



| Part Number | Description |
|-------------|---|
| 500-304 | Jomar 3/4" 4-Bolt SS Full Port Ball Valve |
| 500-306 | Jomar 1-1/4" 4-Bolt SS Full Port Ball Valve |
| 500-307 | Jomar 1-1/2" 4-Bolt SS Full Port Ball Valve |
| 500-308 | Jomar 2" 4-Bolt SS Full Port Ball Valve |

Stainless Steel Full Port Ball Valve w/ Locking Handle



| Part Number | Description |
|-------------|------------------------------------|
| SST100-701 | 1/4" SS Ball Valve w/Locing Handle |
| SST100-702 | 3/8" SS Ball Valve w/Locing Handle |
| SST100-703 | 1/2" SS Ball Valve w/Locing Handle |

Apollo High Pressure Standard Port Bronze Ball Valves



| Part Number | Description |
|-------------|--|
| 80-108-01 | 2" Apollo Standard Port Ball Valve |
| 80-101-01 | 1/4" Apollo Standard Port Ball Valve |
| 80-102-01 | 3/8" Apollo Standard Port Ball Valve |
| 80-103-01 | 1/2" Apollo Standard Port Ball Valve |
| 80-104-01 | 3/4" Apollo Standard Port Ball Valve |
| 80-105-01 | 1" Apollo Standard Port Ball Valve |
| 80-106-01 | 1 1/4" Apollo Standard Port Ball Valve |
| 80-107-01 | 1 1/2" Apollo Standard Port Ball Valve |

BALL AND NEEDLE VALVES

Ball Valves

Carbon Steel Full Port Ball Valves



Features

- Solid ball construction
- Latch lock handle may be locked in open or closed position
- 29 in-Hg vacuum rating
- 100% leak tested
- Wetted surfaces contain less than .25% lead content

Approvals

- UL Listed
- MHKZ - Manual valves
 - YQNZ - Compressed gas shut-off valves
 - YRBX - Flammable liquid shut-off valves
 - YRPV - Gas shut-off valves
 - YSDT - LP gas shut-off valves
 - YQAR - Anhydrous ammonia shut-off valves

- Conforms to API 598
- ANSI B16.34
- MSS SP-110, SP-61, SP-82
- NACE Certified
- ANSI B1.20.1

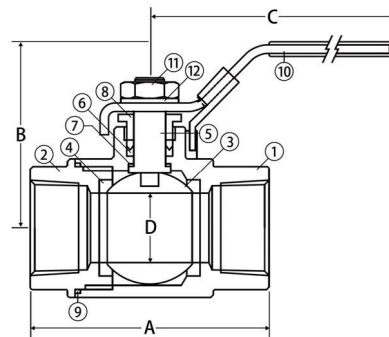
Valve Seat Rating

1000 WOG - 150 WSP

| Part Number | Size | Dimensions | | | | Torque | Description |
|-------------|------|------------|------|------|------|--------|--|
| | | A | B | C | D | | |
| CS100-971 | 1/4" | 2.20 | 2.20 | 4.21 | 0.43 | 40 | 1/4" UL Listed Carbon Steel Full Port Ball Valve |
| CS100-973 | 1/2" | 2.60 | 2.30 | 4.21 | 0.56 | 60 | 1/2" UL Listed Carbon Steel Full Port Ball Valve |
| CS100-974 | 3/4" | 2.99 | 2.79 | 5.73 | 0.81 | 40 | 3/4" UL Listed Carbon Steel Full Port Ball Valve |
| CS100-975 | 1" | 3.54 | 2.96 | 5.73 | 1.00 | 70 | 1" UL Listed Carbon Steel Full Port Ball Valve |
| CS100-978 | 2" | 5.00 | 4.24 | 8.08 | 1.97 | 250 | 2" UL Listed Carbon Steel Full Port Ball Valve |

Material Specifications

| No. | Part | Materials |
|-----|----------------|--------------------------------|
| 1 | End Connection | WCB Carbon Steel |
| 2 | Ball | CF8M Stainless Steel |
| 3 | Seat (2) | Hostaflo [®] TFM 1600 |
| 4 | Stem | 316 Stainless Steel |
| 5 | Packing (2) | RPTFE |
| 6 | Stem Seal | Hostaflo [®] TFM 1600 |
| 7 | Packing Gland | 1045 Carbon Steel |
| 8 | Body Seal | Hostaflo [®] TFM 1600 |
| 9 | Handle | A283 Carbon Steel |
| 10 | Handle Nut | A283 Carbon Steel |
| 11 | Lock Washer | 1008 Carbon Steel |
| 12 | Handle Nut | 304 Stainless Steel |



Apollo High Pressure Standard Port Forged Steel Ball Valves



| Part Number | Description |
|-------------|---|
| 73-101-01 | 1/4" Apollo FS Standard Port Ball Valve |
| 73-103-01 | 1-2" Apollo FS Standard Port Ball Valve |
| 73-104-01 | 3/4" Apollo FS Standard Port Ball Valve |
| 73-105-01 | 1" Apollo FS Standard Port Ball Valve |
| 73-106-01 | 1 1/4" Apollo FS Standard Port Ball Valve |
| 73-107-01 | 1 1/2" Apollo FS Standard Port Ball Valve |
| 73-108-01 | 2" Apollo FS Standard Port Ball Valve |

Apollo 3-Way Ball Valves



| Part Number | Description |
|-------------|------------------------------|
| 70-603-01 | 1/2" Apollo 3-Way Ball Valve |
| 70-604-01 | 3/4" Apollo 3-Way Ball Valve |

BALL AND NEEDLE VALVES

BALL AND NEEDLE VALVES

Ball Valves

Low Pressure Butterfly Handle Ball Valves



| Part Number | Description |
|--------------|---|
| 101-703DU | Jomar 1/2" FL x 1/2" MNPT Union End Ball Valve |
| R-60212 | 1/2" x 1/2" FPT |
| R-60212S | 12" x 12" FPT w/18" Side Tap |
| R-60234 | 34" x 34" FPT |
| R-60234S | 34" x 3/4" FPT w/18" Side Tap |
| R-60238 | 38" x 38" FPT |
| R-602FL12 | 12" Flare x 1/2" Flare |
| R-602FL12S | 12" Flare x 12" Flare w/1/8" Side Tap |
| R-602FL38 | 38" Flare x 3" Flare |
| R-602FL38S | 3" Flare x 38" Flare w/1/8" Side Tap |
| R-602FL58 | 58" Flare x 58" Flare |
| R-602FLF1212 | 1/2" Flare x 12" FPT |
| R-602FLF3812 | 3" Flare x 12" FPT |
| R-602FLF5834 | 58" Flare x 34" FPT |
| R-602FLM1212 | 1/2" Flare x 12" MPT |
| R-602FLM3812 | 3" Flare x 12" MPT |
| R-602T | 1/2" FNPT x 1/2" Hose Barb/1/8" MPT (Texas Pattern) |

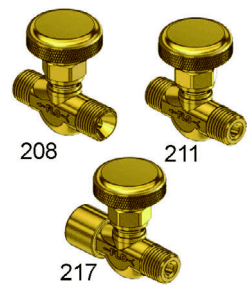
High Pressure Butterfly Handle Ball Valves



| Part Number | Description |
|-------------|----------------------------------|
| 101-402 | 3/8" x 3/8" FPT |
| 101-403 | 1/2" x 1/2" FPT |
| 101-404 | 3/4" x 3/4" FPT |
| 102-303 | 1/2" x 1/2" FPT w/ 1/8" Side Tap |
| 102-304 | 3/4" x 3/4" FPT w/ 1/8" Side Tap |

Needle Valves

Brass Needle Valves



| Part Number | Inlet | Outlet |
|-------------|-----------|-----------|
| 208 | 9/16" MLH | 1/4" MNPT |
| 208F | 9/16" MLH | 1/4" FNPT |
| 211 | 1/4" MNPT | 1/4" MNPT |
| 217 | 1/4" MNPT | 1/4" FNPT |
| 218 | 1/4" FNPT | 1/4" MNPT |
| 218D | 1/4" FNPT | 1/4" FNPT |
| V-334 | 1/4" FNPT | 1/4" MNPT |

COPPER TUBING & BRASS FITTINGS

Brass Fittings

Short Forged Nut- No. NS4



| Part Number | O. D. Tube Size |
|-------------|-----------------|
| NS4C | 1/4" |
| NS4E | 3/8" |
| NS4F | 1/2" |
| NS4I | 5/8" |
| NS4K | 3/4" |
| NS4L | 7/8" |

Forged Reducing Nut- No. NRS4



| Part Number | O. D. Tube Size |
|-------------|-----------------|
| NRS4EC | 3/8" x 1/4" |
| NRS4FE | 1/2" x 3/8" |
| NRS4IE | 5/8" x 3/8" |
| NRS4IF | 5/8" x 1/2" |

Swivel Nut- No.US4



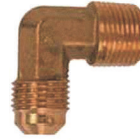
| Part Number | O. D. Tube Size |
|-------------|-----------------|
| US4C | 1/4" |
| US4E | 3/8" |
| US4F | 1/2" |
| US4I | 5/8" |
| US4FE | 1/2" x 3/8" |
| US4IF | 5/8" x 1/2" |

Male Connector- No. 48



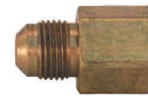
| Part Number | O. D. Tube Size - Pipe Size |
|-------------|-----------------------------|
| 48CA | 1/4" x 1/8" |
| 48CC | 1/4" x 1/4" |
| 48CE | 1/4" x 3/8" |
| 48CF | 1/4" x 1/2" |
| 48EA | 3/8" x 1/8" |
| 48EC | 3/8" x 1/4" |
| 48EE | 3/8" x 3/8" |
| 48EE-HD | 3/8" x 3/8" -Heavy Duty |
| 48EF | 3/8" x 1/2" |
| 48EF-HD | 3/8" x 1/2" - Heavy Duty |
| 48EK | 3/8" x 3/4" |
| 48FC | 1/2" x 1/4" |
| 48FE | 1/2" x 3/8" |
| 48FF | 1/2" x 1/2" |
| 48FF-HD | 1/2" x 1/2" - Heavy Duty |
| 48FK | 1/2" x 3/4" |
| 48IC | 5/8" x 1/4" |
| 48IE | 5/8" x 3/8" |
| 48IF | 5/8" x 1/2" |
| 48IF-HD | 5/8" x 1/2" -Heavy Duty |
| 48IK | 5/8" x 3/4" |
| 48KF | 3/4" x 1/2" |
| 48KK | 3/4" x 3/4" |
| 48LF | 7/8" x 1/2" |
| 48LK | 7/8" x 3/4" |

Forged Male Elbow- No. 49



| Part Number | O. D. Tube Size - Pipe Size |
|-------------|-----------------------------|
| 49CA | 1/4" x 1/8" |
| 49CC | 1/4" x 1/4" |
| 49EA | 3/8" x 1/8" |
| 49EC | 3/8" x 1/4" |
| 49EE | 3/8" x 3/8" |
| 49EF | 3/8" x 1/2" |
| 49EK | 3/8" x 3/4" |
| 49FC | 1/2" x 1/4" |
| 49FE | 1/2" x 3/8" |
| 49FF | 1/2" x 1/2" |
| 49FK | 1/2" x 3/4" |
| 49IC | 5/8" x 1/4" |
| 49IE | 5/8" x 3/8" |
| 49IF | 5/8" x 1/2" |
| 49IK | 5/8" x 3/4" |
| 49KF | 3/4" x 1/2" |
| 49KK | 3/4" x 3/4" |
| 49LK | 7/8" x 3/4" |

Female Connector- No. 46



| Part Number | O. D. Tube Size - Pipe Size |
|-------------|-----------------------------|
| 46CA | 1/4" x 1/8" |
| 46CC | 1/4" x 1/4" |
| 46EA | 3/8" x 1/8" |
| 46EC | 3/8" x 1/4" |
| 46EE | 3/8" x 3/8" |
| 46EF | 3/8" x 1/2" |
| 46EK | 3/8" x 3/4" |
| 46FC | 1/2" x 1/4" |
| 46FE | 1/2" x 3/8" |
| 46FF | 1/2" x 1/2" |
| 46FK | 1/2" x 3/4" |
| 46IE | 5/8" x 3/8" |
| 46IF | 5/8" x 1/2" |
| 46IK | 5/8" x 3/4" |
| 46LK | 7/8" x 3/4" |

Forged Female Elbow- No. 54



| Part Number | O. D. Tube Size - Pipe Size |
|-------------|-----------------------------|
| 54EA | 3/8" x 1/8" |
| 54EC | 3/8" x 1/4" |
| 54EE | 3/8" x 3/8" |
| 54EF | 3/8" x 1/2" |
| 54EK | 3/8" x 3/4" |
| 54FE | 1/2" x 3/8" |
| 54FF | 1/2" x 1/2" |
| 54FK | 1/2" x 3/4" |
| 54IE | 5/8" x 3/8" |
| 54IF | 5/8" x 1/2" |
| 54IK | 5/8" x 3/4" |

DISCLAIMER: Brass fittings must not be installed underground

COPPER TUBING & BRASS FITTINGS

Brass Fittings

Full Union- No.42



| Part Number | O. D. Tube Size |
|-------------|-----------------|
| 42C | 1/4" |
| 42E | 3/8" |
| 42F | 1/2" |
| 42I | 5/8" |
| 42K | 3/4" |
| 42L | 7/8" |

Reducing Union- No.42



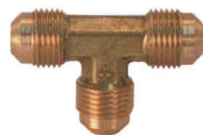
| Part Number | O. D. Tube Size |
|-------------|-----------------|
| 42EC | 3/8" x 1/4" |
| 42FE | 1/2" x 3/8" |
| 42IE | 5/8" x 3/8" |
| 42IF | 5/8" x 1/2" |

Forged 2-Way Elbow- No.55



| Part Number | O. D. Tube Size |
|-------------|-----------------|
| 55C | 1/4" |
| 55E | 3/8" |
| 55F | 1/2" |
| 55FE | 1/2" x 3/8" |
| 55I | 5/8" |
| 55IE | 5/8" x 3/8" |
| 55IF | 5/8" x 1/2" |
| 55L | 7/8" |

Forged 3-Way Tee- No. 44



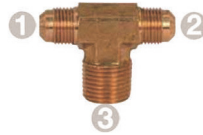
| Part Number | O. D. Tube Size |
|-------------|-----------------|
| 44C | 1/4" |
| 44E | 3/8" |
| 44F | 1/2" |
| 44I | 5/8" |
| 44K | 3/4" |
| 44L | 7/8" |

Forged 3-Way Reducing Tee- No. 44



| Part Number | O. D. Tube Size (1 x 2 x 3) |
|-------------|-----------------------------|
| 44EEF | 3/8" x 3/8" x 1/2" |
| 44EEI | 3/8" x 3/8" x 5/8" |
| 44FFE | 1/2" x 1/2" x 3/8" |
| 44FEE | 1/2" x 3/8" x 3/8" |
| 44FEF | 1/2" x 3/8" x 1/2" |
| 44FFI | 1/2" x 1/2" x 5/8" |
| 44IEI | 5/8" x 3/8" x 5/8" |
| 44IIE | 5/8" x 5/8" x 3/8" |
| 44IFI | 5/8" x 1/2" x 5/8" |
| 44IIF | 5/8" x 5/8" x 1/2" |

Forged 2-Way Tee- No. 45



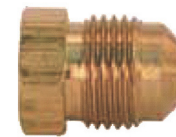
| Part Number | O. D. Tube Size - Pipe Size (1 x 2 x 3) |
|-------------|---|
| 45EEE | 3/8" x 3/8" x 3/8" |
| 45EEF | 3/8" x 3/8" x 1/2" |
| 45FFE | 1/2" x 1/2" x 3/8" |
| 45FFF | 1/2" x 1/2" x 1/2" |
| 45IIE | 5/8" x 5/8" x 3/8" |
| 45IIF | 5/8" x 5/8" x 1/2" |

Flare Cap- No. N5



| Part Number | O. D. Tube Size |
|-------------|-----------------|
| N5C | 1/4" |
| N5E | 3/8" |
| N5F | 1/2" |
| N5I | 5/8" |

Flare Plug- No. P2



| Part Number | O. D. Tube Size |
|-------------|-----------------|
| P2C | 1/4" |
| P2E | 3/8" |
| P2F | 1/2" |
| P2I | 5/8" |

Forged Sae Flare Cross- No.C1



| Part Number | O. D. Tube Size |
|-------------|-----------------|
| C1E | 3/8" |
| C1F | 1/2" |
| C1I | 5/8" |

Copper Seal Bonnet



| Part Number | Size |
|-------------|-----------|
| B1C | 1/4" O.D. |
| B1E | 3/8" O.D. |
| B1F | 1/2" O.D. |
| B1I | 5/8" O.D. |

Brass Elbows



| Part Number | Description |
|-------------|-----------------------|
| SBSL04 | 1/4" 90° Street Elbow |

Brass Hex Bushings



| Part Number | Description |
|-------------|-------------|
| SBB0402 | 1/4" x 1/8" |
| SBB0604 | 3/8" x 1/4" |
| SBB0802 | 1/2" x 1/8" |
| SBB0804 | 1/2" x 1/4" |

Brass Nipples



| Part Number | Description |
|-------------|----------------------|
| SBHN04-C | 1/4 X 1/4 hex nipple |

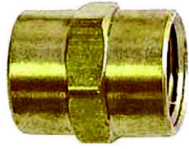
DISCLAIMER: Brass fittings must not be installed underground

COPPER TUBING & BRASS FITTINGS

COPPER TUBING & BRASS FITTINGS

Brass Fittings

Brass Couplings



| Part Number | Description |
|-------------|-------------|
| SBC04 | 1/4" |

Male Breakaway Nut With Sleeve



| Part Number | Size |
|-------------|-----------------------------|
| CF-639 | 1/8" O.D. |
| CF-640 | 3/16" O.D. |
| 43283-2 | 1/4" O.D. |
| 43283-2L | 1/4" O.D. - Long Sleeve |
| R1539 | 1/8" O.D. x 7/16" Nut |
| R1633 | 1/8" O.D. x 7/16" Nut- Long |

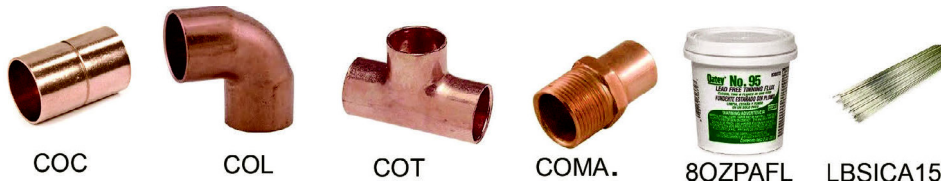
Compression Nut And Sleeve



| Part Number | Tube Size |
|-------------|------------------------------|
| 60-2 | 1/8" Sleeve |
| 61-2 | 1/8" Female Compression Nut |
| 60-3 | 3/16" Sleeve |
| 61-3 | 3/16" Female Compression Nut |
| 60-4 | 1/4" Sleeve |
| 61-4 | 1/4" Female Compression Nut |

Copper & Aluminum Tubing

Copper Sweat Fittings



COC

COL

COT

COMA.

8OZPAFL

LBSICA15

| Part Number | I.D. Tube Size | Description |
|-------------|----------------|---|
| 1COMA | 1" | 1" Copper Male Adapter |
| 114COMA | 1-1/4" | 1-1/4" Copper Male Adapter |
| 112COMA | 1-1/2" | 1-1/2" Copper Male Adapter |
| 1COL | 1" | 1" Copper 90 Deg Elbow |
| 114COL | 1-1/4" | 1-1/4" Copper 90 Deg Elbow |
| 112COL | 1-1/2" | 1-1/2" Copper 90 Deg Elbow |
| 1COT | 1" | 1" Copper Tee |
| 114COT | 1-1/4" | 1-1/4" Copper Tee |
| 112COT | 1-1/2" | 1-1/2" Copper Tee |
| 1COC | 1" | 1" Copper Coupling |
| 114COC | 1-1/4" | 1-1/4" Copper Coupling |
| 112COC | 1-1/2" | 1-1/2" Copper Coupling |
| LBSICA15 | ONE STICK-1/8" | ONE STICK-1/8" Silver Soder/Sold Individually |
| 8OZPAFL | 8 OZ | 8 OZ Tinning Flux |

DISCLAIMER: Brass fittings must not be installed underground

COPPER TUBING & BRASS FITTINGS

Copper & Aluminum Tubing

Copper Tubing

Refrigeration Copper



Sold by outside diameter (O. D.)

| Part Number | O.D. Tube Size | Length |
|-------------|----------------|--------|
| R.125 | 1/8" | 50' |
| R.250 | 1/4" | 50' |
| R.375 | 3/8" | 100' |
| R.500 | 1/2" | 100' |
| R.625 | 5/8" | 100' |

Type K Copper

Sold by inside diameter (I. D.)

| Part Number | I.D. Tube Size | Length |
|-------------|----------------|--------|
| K.250 | 1/4" | 100' |
| K.375 | 3/8" | 100' |
| K.500 | 1/2" | 100' |
| K.750 | 3/4" | 100' |
| K1.00 | 1" | 100' |
| K1.25 | 1-1/4" | 100' |
| K1.50 | 1-1/2" | 100' |

Type L Copper

Sold by inside diameter (I. D.)

| Part Number | I.D. Tube Size | Length |
|-------------|----------------|--------|
| L.250 | 1/4" | 50' |
| L.375 | 3/8" | 100' |
| L.500 | 1/2" | 100' |
| L.750 | 3/4" | 100' |

*Additional sizes available for special order.

Coated Type R Copper

| Part Number | O.D. Tube Size | Length | Wall Thickness | Description |
|-------------|----------------|--------|----------------|--|
| R.375-C | 3/8" | 100' | .032" | 3/8" O.D. Coated Refrigeration Copper Tube |
| R.500-C | 1/2" | 100' | .032" | 1/2" O.D. Coated Refrigeration Copper Tube |
| R.625-C | 5/8" | 100' | .035" | 5/8" O.D. Coated Refrigeration Copper Tube |

Aluminum Tubing

Sold by outside diameter (O. D.)

| Part Number | O.D. Tube Size | Length |
|-------------|----------------|--------|
| A.250 | 1/4" | 50' |

COPPER TUBING & BRASS FITTINGS

HOSE & HOSE FITTINGS

High Pressure Propane Hose



LP-25

| Part Number | Closing Flow | | # of Braids | Approximate Reel Length |
|-------------|--------------|-------|-------------|-------------------------|
| | I. D. | O. D. | | |
| LP25 | 1/4" | .58" | 2 | 800' |
| LP38 | 3/8" | .75" | 2 | 800' |
| LP50 | 1/2" | .94" | 2 | 800' |
| LP75 | 3/4" | 1.25" | 2 | 500' |
| LP100 | 1" | 1.50" | 2 | |
| LPN125 | 1 1/4" | 1.87" | 2 | |
| LPN150 | 1 1/2" | 2.18" | 3 | |
| LPN200 | 2" | 2.75" | 3 | |

Low Pressure Propane Hose



LOW38

| Part Number | Hose | | | Ft/Reel * |
|-------------|-------|-------|-----------------|-----------|
| | I. D. | O. D. | Pressure Rating | |
| LOW38 | 3/8" | .66" | 125 PSI | 700' |

Motor Fuel Hose



| Part Number | Closing Flow | | Working Pressure |
|-------------|--------------|-------|------------------|
| | I. D. | O. D. | |
| SS6-UL | 5/16" | .67" | 350 PSI |

Bobtail Hose Assemblies



| Part Number | Description |
|-------------|--|
| LT100-SC | 1" x 100' Thermoid Polar Flex Low Temp Hose Assembly |
| LT125-SC | 1" x 125' Thermoid Polar Flex Low Temp Hose Assembly |
| LT150-SC | 1" x 150' Thermoid Polar Flex Low Temp Hose Assembly |
| RT125-SC | 1" x 125' Thermoid Regular Temp Hose Assembly |
| RT150-SC | 1" x 150' Thermoid Regular Temp Hose Assembly |

Nylon Propane Hose Assemblies Coupled Male X Male



LPN200

| Part Number | Description |
|-------------|----------------------------|
| LPN125 X 12 | 1 1/4" x 12' Hose Assembly |
| LPN125 X 15 | 1 1/4" x 15' Hose Assembly |
| LPN125 X 20 | 1 1/4" x 20' Hose Assembly |
| LPN200 X 12 | 2" x 12' Hose Assembly |
| LPN200 X 15 | 2" x 15' Hose Assembly |
| LPN200 X 20 | 2" x 20' Hose Assembly |

Lifeguard Safety Hoses



| Part Number | Description |
|----------------|---|
| GPS-LP-20-15-F | 1-1/4" x 15' Rubber Transport Hose For LP |
| GPS-LP-32-10-F | 2" x 10' Rubber Transport Hose For LP |
| GPS-LP-32-15-F | 2" x 15' Rubber Transport Hose For LP |
| GPS-LP-32-18-F | 2" x 18'6" Rubber Transport Hose For LP |
| GPS-LP-32-20-F | 2" x 20' Rubber Transport Hose For LP |

HOSE & HOSE FITTINGS

Propane Torch Hoses



HEF-20

| Part Number | Description |
|-------------|--|
| HEF-12 | Goss 12' Vapor LP Hose W/9/16-LH Hose Fittings |
| HEF-20 | Goss 20' Vapor LP Hose W/9/16-LH Hose Fittings |
| HEF-25 | Goss 25' Vapor LP Hose W/9/16-LH Hose Fittings |
| HEF-35 | Goss 35' Vapor LP Hose W/9/16-LH Hose Fittings |

ICE SHIELD Propane Hoses



| Pre-made 1/2" Hose Assemblies | Description |
|-------------------------------|---|
| LP-8-FLARE-25 | ICE SHIELD HOSE ASSM 1/2" X 25' STEEL FLARE SWIVEL |
| LP-8-FLARE-50 | ICE SHIELD HOSE ASSEMBLY 1/2" X 50' STEEL FLARE SWIVEL |
| LP-8-FLARE-100 | ICE SHIELD HOSE ASSMBLY 1/2" X 100' STEEL FLARE SWIVEL |
| Bobtail Hose Assemblies | Description |
| LP-16-MNPT-50-DOT | ICE SHIELD 1" X 50' DOT TESTED AND CERTIFIED M X M ENDS |
| LP-16-MNPT-125-DOT | ICE SHIELD BOBTAIL HOSE ASSEMBLY 1" X 125' |
| LP-16-MNPT-150-DOT | ICE SHIELD BOBTAIL HOSE ASSEMBLY 1" X 150' |
| LP-16-MNPT-175-DOT | ICE SHIELD BOBTAIL HOSE ASSEMBLY 1" X 175' |
| Nylon Hose Assemblies | Description |
| LP-20-MNPT-12-DOT | ICE SHIELD 1-1/4" X 12' MNPT FITTINGS HOSE ASSM |
| LP-20-MNPT-15-DOT | ICE SHIELD 1-1/4" X 15' MNPT FITTINGS HOSE ASSM |
| LP-20-MNPT-18.5-DOT | ICE SHIELD 1-1/4" X 18.5' MNPT FITTINGS HOSE ASSM |
| LP-20-MNPT-20-DOT | ICE SHIELD 1-1/4" X 20' MNPT FITTINGS HOSE ASSM |
| LP-32-MNPT-12-DOT | ICE SHIELD 2" X 12' MNPT FITTINGS HOSE ASSM |
| LP-32-MNPT-15-DOT | ICE SHIELD 2" X 15' MNPT FITTINGS HOSE ASSM |
| LP-32-MNPT-18.5-DOT | ICE SHIELD 2" X 18' MNPT FITTINGS HOSE ASSM |
| LP-32-MNPT-20-DOT | ICE SHIELD 2" X 20' MNPT FITTINGS HOSE ASSM |

Key Features

- **UL 21 Listed & Approved** – Meets industry safety and quality standards.
- **Extreme Temperature Performance** – Flexible in temperatures from -40°F to +180°F.
- **Durability** – Aerospace-grade rubber compounds resist wear up to 50% longer than standard hoses.
- **Safety Assured** – Pin-pricked covers prevent gas build-up; textile reinforcement provides strength.
- **Proven Reliability** – Trusted in demanding environments from the Arctic to the Equator.

Construction

- **Tube:** Extruded Nitrile (NBR)
- **Cover:** Specially compounded Neoprene (CR)
- **Reinforcement:** High-strength textile layers
- **Design:** Smooth cover (sizes 1/4"–1"), pin-pricked for safety
- **Assembly Options:** Available with steel or brass UL-21/CSA approved fittings

Performance Specs

- **Working Pressure:** 350 psi (23.13 bar)
- **Minimum Burst:** 5:1 safety factor (≥1,750 psi)
- **Lengths Available:** 25–175 ft (custom lengths on request)
- **Sizes Available:** 1/2" up to 2"

HOSE & HOSE FITTINGS

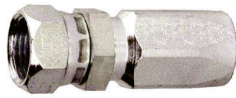
Press-On Hose Couplings



HC50 & HC50-F

| Part Number | Hose | |
|-------------|-------------|--------------------------|
| | Size | End |
| HC25 | 1/4" I.D. | 1/4" MNPT |
| HC38 | 3/8" I.D. | 3/8" MNPT |
| HC38-F | 3/8" I.D. | 3/8" Female Flare Swivel |
| HC50 | 1/2" I.D. | 1/2" MPT |
| HC50-F | 1/2" I.D. | 1/2" Female Flare Swivel |
| HC75 | 3/4" I.D. | 3/4" MNPT |
| HC100 | 1" I.D. | 1" MNPT |
| HC125 | 1 1/4" I.D. | 1 1/4" MNPT |
| HC150 | 1 1/2" I.D. | 1 1/2" MNPT |
| HC200 | 2" I.D. | 2" MNPT |

Reusable Hose Couplings- Female SAE 45° Flare Swivel



| Part Number | Flare Size | Hose I.D. |
|-------------|------------|-----------|
| M4100-6S | 38" | 38" |
| M4100-8S | 1/2" | 1/2" |

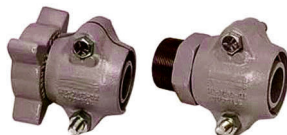
Reusable Hose Couplings- Male NPT



206H-4

| Part Number | Size MNPT | Hose | |
|-------------|-----------|------|--------------|
| | | I.D. | Approx. O.D. |
| M4100-4 | 1/4" | 1/4" | 5-8" |
| 206H-4 | 1/2" | 1/2" | 15-16" |
| 217H-6 | 3-4" | 3-4" | 1 1/4" |
| 226H-8 | 1" | 1" | 1 1/2" |

Reusable Hose Couplings- Clamp Style MNPT



M3162-32S

M3162-32

| Part Number | Size MNPT | Hose | |
|-------------|------------------------------|--------|--------------|
| | | I.D. | Approx. O.D. |
| M3162-08 | 1/2" MNPT | 1/2" | 15-16" |
| M3162-12 | 3/4" MNPT | 3/4" | 1 1/4" |
| M3162-16 | 1" MNPT | 1" | 1 1/2" |
| M3162-20 | 1 1/4" MNPT | 1 1/4" | 2" |
| M3162-24 | 1 1/2" MNPT | 1 1/2" | 2 1/4" |
| M3162-32 | 2" MNPT | 2" | 2 3/4" |
| M3162-32S | 3 1/4" F. Acme Swivel-Steel | 2" | 2 3-4" |
| M3162-32B | 3 1/4" F. Acme Swivel- Brass | 2" | 2 3-4" |

Propane Fuel Line Fittings



| Part Number | Description |
|-------------|---|
| 20820-6-6 | Straight 3/8" Flare x 5/16" Swivel Hose End |

Brass Hose Ferrules



7327

| Part Number | I.D. | Ferrule Length | Thickness |
|-------------|-------|----------------|-----------|
| 7324 | .531" | 1" | .024" |
| 7325 | .562" | 1" | .024" |
| 7326 | .593" | 1" | .024" |
| 7327 | .625" | 1" | .024" |
| 7328 | .656" | 1" | .024" |
| 7329 | .687" | 1" | .024" |
| 7330 | .718" | 1" | .024" |
| 7331 | .750" | 1" | .024" |
| 7332 | .781" | 1" | .024" |

HOSE & HOSE FITTINGS

Female Flare Swivel by Hose Barb Connector



HC4335

| Part Number | Hose I.D. | Female Flare Swivel |
|-------------|-----------|---------------------|
| HC4334 | 1/4" | 1/4" |
| HC4335 | 1/4" | 3/8" |
| HC4336 | 3/8" | 3/8" |
| HC4337 | 3/8" | 1/2" |

Note: Female connectors are one piece. they do not swivel

Male Flare by Hose Barb



HC4855

| Part Number | Hose I.D. | Female Flare Swivel |
|-------------|-----------|---------------------|
| HC4835 | 1/4" | 3/8" |
| HC4855 | 3/8" | 3/8" |
| HC4857 | 3/8" | 1/2" |

Female NPT by Hose Barb Connector



126-4

| Part Number | Hose I.D. | Female Flare Swivel |
|-------------|-----------|---------------------|
| 126-4 | 1/4" | 1/4" FNPT |
| 126-6-4 | 3/8" | 1/4" FNPT |
| 126-6 | 3/8" | 3/8" FNPT |

Note: Female connectors are one piece. they do not swivel.

Male NPT by Hose Barb Connector



BG30EE

| Part Number | Hose I.D. | Male Pipe Size |
|-------------|-----------|----------------|
| BG30AA | 1/8" | 1/8" MNPT |
| BG30CB | 3/16" | 1/4" MNPT |
| BG30AB | 3/16" | 1/8" MNPT |
| BG30FC | 1/4" | 1/2" MNPT |
| BG30CC | 1/4" | 1/4" MNPT |
| BG30AC | 1/4" | 1/8" MNPT |
| BG30EC | 1/4" | 3/8" MNPT |
| BG30FE | 3/8" | 1/2" MNPT |
| BG30CE | 3/8" | 1/4" MNPT |
| BG30EE | 3/8" | 3/8" MNPT |
| BG30FF | 1/2" | 1/2" MNPT |
| BG30CF | 1/2" | 1/4" MNPT |
| BG30EF | 1/2" | 1/8" MNPT |

Note: 1/8" MNPT is the test port size on regulators.

Miscellaneous Hose Barb Fittings



HC5133



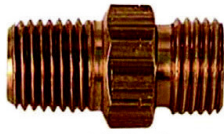
BG27C

| Part Number | Hose I.D. | Description |
|-------------|-----------|------------------------------------|
| HC5133 | 1/4" | 1/4" Male Inverted Flare (Pigtail) |
| BG27C | 1/4" | Hose Splicer |
| BG27E | 3/8" | Hose Splicer |
| BG27F | 1/2" | Hose Splicer |

DISCLAIMER: Brass fittings must not be installed underground

HOSE & HOSE FITTINGS

9/16 Left Hand Connectors



BG24C

| Part Number | Hose I.D. | Description |
|-------------|-----------|---------------------------|
| BG23C | 1/4" | 1/4" Barb x 9/16" L.H.N |
| BG23E | 3/8" | 3/8" Barb x 9/16" L.H.N |
| BG26C | n/a | 9/16" Male LH x 9/16" MLH |
| BG24C | n/a | 1/4" MNPT x 9/16" MLH |
| BG24E | n/a | 3/8" MNPT x 9/16" MLH |

Hansen Quick Disconnects



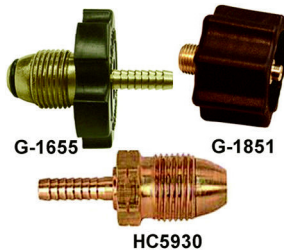
100-006



100-506

| Part Number | Description |
|-------------|--|
| 100-006 | Hansen 3/8" Female Socket |
| 100-008 | Hansen 1/2" Female Socket |
| 100-010 | Hansen 3/4" Female Socket |
| 100-012 | Hansen 1" Female Socket |
| 100-506 | Hansen 3/8" Plug |
| 100-508 | Hansen 1/2" Plug |
| 100-510 | Hansen 3/4" Plug |
| 100-512 | Hansen 1" Plug |
| B4-HP26 | Hansen 1/2" Female Socket Two Way Shutoff Hi-Press |
| B4-KP26 | Hansen 1/2" Male Plug Two Way Shutoff Hi-Press |
| UL2-H16 | Hansen 1/4" Female Socket |
| UL2-K16 | Hansen 1/4" Plug |
| UL3-H21 | Hansen 3/8" Female Socket |
| UL3-K21 | Hansen 3/8" Plug w/ Positive Shutoff |

POL & QCC Connectors



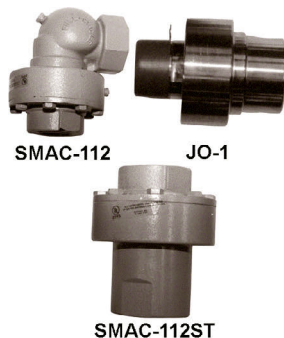
G-1655

G-1851

HC5930

| Part Number | Hose I.D. | Description |
|-------------|-----------|---|
| HC5930 | 1/4" | POL x 1/4" Hose Barb 7/8 Hex |
| G-1655 | 1/4" | Excess Flow Soft Nose POL w/ Handwheel x 1/4" Hose Barb |
| G-1851 | 1/4" | QCC1 Adapter w/ 1/4" MPT Black Handle - 70,000 Btu Max |
| G-1851-A03 | 1/4" | QCC1 Adapter w/ 1/4" MPT Green Nut - 200,000 Btu Max |
| G-1850 | n/a | QCC1 Purge Adapter For Cylinder 1 5/16 ACME |
| G-1650 | n/a | POL x 9/16 LHT |
| G-1650SN | n/a | Soft Nose POL x 9/16-18 LH |
| G-1653 | n/a | Soft Nose POL w/ Excess Flow & Handwheel |
| G-1654 | n/a | Soft Nose POL x 1/4 MNPT w/ Handwheel |
| G-1630-2 | n/a | Plastic Handwheel For Pol Nut |

Full Circle Swivels



SMAC-112

JO-1

SMAC-112ST

| Part Number | Description |
|---------------|--|
| JO-1 | Full Circle 1" M x F Hose Swivel *LP Only* |
| JO-1LN | Full Circle 1" M x F Hose Swivel *NH3 Only* |
| JO-3/4 | Full-Circle 3/4" M x F Hose Swivel *LP Only* |
| MA-98SLT | 2" Meter Bleed Flange |
| SMAC-112 | 1-1/2" 90 Deg Full-Circle Swivel *LP Only* |
| SMAC-112ST | 1-1/2" Strt Thru Full-Circle Swiv. *LP Only* |
| SMAC-200 | 2" 90 Degree Full-Circle Swivel *LP Only* |
| SMAC-200112ST | 2" x 1-1/2" Strt-Thru Full-Circle Swiv. *LP Only* |
| SMAC-200SS | 2" 90 Deg. Full-Circle Swivel w/ Cr Option *LP Only* |
| SMAC-200ST | 2" Strt-Thru Full-Circle Swivel *LP Only* |

FULL  CIRCLE *Repair Kits Available*

POLY TUBING & FITTINGS

Continental Stab Fittings Installation Instructions

Installation Instruction

ASSEMBLY INSTRUCTIONS : I.D. SEAL® CON-STAB

IMPORTANT

For use on:

Polyethylene gas pipe meeting the requirements of ASTM D 2513

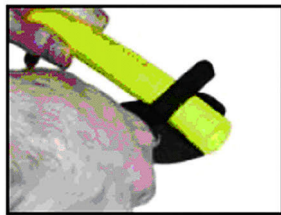
Pressure Rating: 125 psig MAOP

Operating Temperature: -20 to 140° F

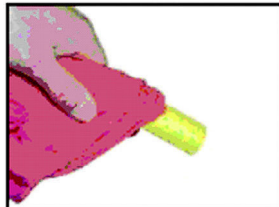
1 Verify the stab fitting is the correct size for the polyethylene (P.E.) pipe. Verify the SDR (or wall thickness) of the pipe matches the SDR (or wall thickness) printed on the fitting label.



2 Cut pipe ends square.



3 Clean piping thoroughly to assure there is no dirt, grease or oil in assembly area.

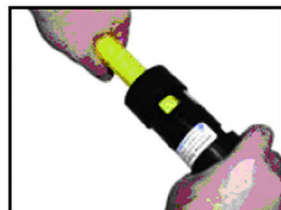


4a Chamfer end of pipe using Continental's ID c hamfering tool with ID gauge.



or

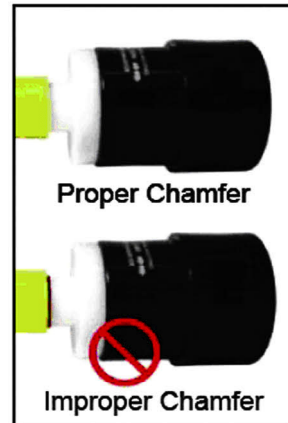
4b Chamfer end of pipe using Continental's double ended ID chamfering tool.



5 Mark the stab depth by inserting pipe into ID chamfer tool and marking the pipe at the entrance as shown.



6 If using ID chamfer tool with gauge, check for proper chamfer by inserting pipe on gauge up to the o ring. With proper chamfer, o ring will begin to enter pipe.



7 Stab pipe completely into fitting entrance.



8 Stab pipe completely into fitting so that the mark on the pipe is within 1/8" from the fitting entrance.



9 Repeat steps 1 thru 8 for all Con-Stab joints.

10 To assure proper assembly and to comply with 49 CFR 192 Subpart J—Test Requirements, the joint shall be leak tested.

**IMPORTANT
CHAMFER THE ID
OF PIPE**



POLY TUBING & FITTINGS

POLY TUBING & FITTINGS

Continental Stab Fittings

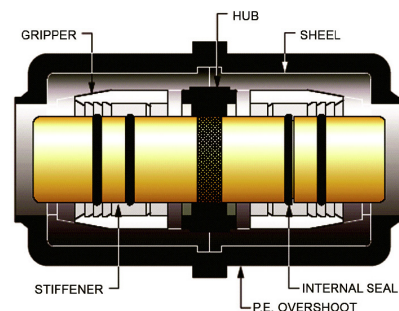
The internal seal enables each fitting to seal on scratched pipe. A seal is maintained on the smooth inside surface of the polyethylene pipe, regardless of the exterior surface of the piping. This improved seal protection creates the ultimate design for mechanical joints.

Each Con-Stab fitting provides the following unique features:

- Two internal seals
- Fixed stiffener
- Self-locking gripper
- Moisture lip
- Uni-body construction

The Con-Stab I.D. Seal® fittings provide the user with the following advantages:

- Cost effective joining method
- Simple assembly
- No additional assembly equipment required for installation (just chamfer pipe and push)
- Expanded product line with various configurations and material options (PE 3408/4710 or PE 2406)
- Uni-body design eliminating all external parts
- Meets or exceeds all D.O.T., ASTM and NFPA 58 requirements



Continental Industries is an ISO 9001 Certified Company. Continental's Con-Stab I.D. Seal® product line is manufactured and tested to the following industry standards.

- ASTM D 2513 "Standard Specification for Thermoplastic Gas Pressure Pipe, Tubing and Fittings"
- ASME B31.8-1995 "Gas Transmission and Distribution Piping Systems"
- D.O.T., Title 49 of the Code of Federal Regulations, Part 192.283 (b)
- NFPA 58, LP-Gas Code

Full Couplings



| Part Number | Continental # | Size |
|-------------|-----------------|------------------------------|
| STAB08-C | 3259-52-1004-00 | 1/2" CTS (5/8" OD) .090 Wall |
| STAB12-C | 3259-52-1013-00 | 3/4" IPS SDR-11 |
| STAB16-C | 3259-52-1014-00 | 1" IPS SDR-11 |
| STAB20-C | 3259-52-1015-00 | 1 1/4" IPS SDR-10 |
| STAB32-C | 3259-52-1017-00 | 2" IPS SDR-11 |

Reducer Couplings



| Part Number | Continental # | Size |
|-------------|-----------------|--|
| STAB1208-RC | 3259-54-1304-00 | 3/4" IPS SDR-11 x 1/2" CTS (5/8" OD) .090 Wall |
| STAB1608-RC | 3259-54-1404-00 | 1" IPS SDR-11 x 1/2" CTS (5/8" OD) .090 Wall |
| STAB1612-RC | 3259-54-1413-00 | 1" IPS SDR-11 x 3/4" IPS SDR-11 |
| STAB2012-RC | 3259-54-1513-00 | 1 1/4" IPS SDR-10 x 3/4" IPS SDR-11 |
| STAB2016-RC | 3259-54-1514-00 | 1 1/4" IPS SDR-10 x 1" IPS SDR-11 |
| STAB3220-RC | 3259-54-1715-00 | 2" IPS SDR-11 x 1 1/4" IPS SDR-10 |
| STAB3216-RC | 3259-54-1714-00 | 2" IPS SDR-11 x 1" IPS SDR-11 |

Cap-N-Go Couplings



| Part Number | Continental # | Size |
|-------------|-----------------|------------------------------|
| STAB08-C&G | 3259-57-1004-00 | 1/2" CTS (5/8" OD) .090 Wall |
| STAB12-C&G | 3259-57-1013-00 | 3/4" IPS SDR-11 |
| STAB16-C&G | 3259-57-1014-00 | 1" IPS SDR-11 |
| STAB20-C&G | 3259-57-1015-00 | 1 1/4" IPS SDR-10 |
| STAB32-C&G | 3259-57-1017-00 | 2" IPS SDR-11 |

End Cap



| Part Number | Continental # | Size |
|-------------|-----------------|------------------------------|
| STAB08-CAP | 3259-53-1004-00 | 1/2" CTS (5/8" OD) .090 Wall |
| STAB12-CAP | 3259-53-1013-00 | 3/4" IPS SDR-11 |
| STAB16-CAP | 3259-53-1014-00 | 1" IPS SDR-11 |
| STAB20-CAP | 3259-53-1015-00 | 1 1/4" IPS SDR-10 |
| STAB32-CAP | 3259-53-1017-00 | 2" IPS SDR-11 |

POLY TUBING & FITTINGS

Continental Stab Fittings

90 Degree Elbows



| Part Number | Continental # | Size |
|-------------|-----------------|------------------------------|
| STAB08-L | 3259-51-1004-00 | 1/2" CTS (5/8" OD) .090 Wall |
| STAB12-L | 3259-51-1013-00 | 3/4" IPS SDR-11 |
| STAB16-L | 3259-51-1014-00 | 1" IPS SDR-11 |
| STAB20-L | 3259-51-1015-00 | 1 1/4" IPS SDR-10 |
| STAB32-L | 3259-51-1017-00 | 2" IPS SDR-11 |

3-Way Tees



| Part Number | Continental # | Size |
|-------------|-----------------|------------------------------|
| STAB08-T | 3259-50-1004-00 | 1/2" CTS (5/8" OD) .090 Wall |
| STAB12-T | 3259-50-1013-00 | 3/4" IPS SDR-11 |
| STAB16-T | 3259-50-1014-00 | 1" IPS SDR-11 |
| STAB20-T | 3259-50-1015-00 | 1 1/4" IPS SDR-10 |
| STAB32-T | 3259-50-1017-00 | 2" IPS SDR-11 |

Reducing Tees



| Part Number | Continental # | Size |
|-------------|-----------------|--|
| STAB1208-RT | 3369-49-1304-00 | 3/4" IPS SDR-11 x 1/2" CTS (5/8" OD) .090 Wall |
| STAB1608-RT | 3369-49-1404-00 | 1" IPS SDR-11 x 1/2" CTS (5/8" OD) .090 Wall |
| STAB1612-RT | 3369-49-1413-00 | 1" IPS SDR-11 x 3/4" IPS SDR-11 |
| STAB3220-RT | 3369-49-1715-00 | 2" IPS SDR-11 x 1 1/4" IPS SDR-10 |
| STAB3216-RT | 3369-49-1714-00 | 2" IPS SDR-11 x 1" IPS SDR-11 |

Repair Couplings



| Part Number | Continental # | Size |
|-------------|-----------------|---------------------------------------|
| STAB08-REP | 0469-56-1200-00 | 1/2" CTS (5/8" OD) .090 Wall x 12" LG |
| STAB12-REP | 1369-56-1200-00 | 3/4" IPS SDR-11 x 12" LG |
| STAB16-REP | 1469-56-1200-00 | 1" IPS SDR-11 x 12" LG |
| STAB20-REP | 3238-14-4415-00 | 1 1/4" IPS SDR-10 x 14" LG |
| STAB32-REP | 3238-14-4417-00 | 2" IPS SDR-11 x 14" LG |

PE X Copper Transition Couplings



| Part Number | Continental # | Size |
|----------------|-----------------|---|
| STAB08.375-CTC | 9943-99-0063-00 | 1/2" CTS (5/8" OD) .090 Wall x 3/8" OD Copper |
| STAB08.50-CTC | 9943-99-0064-00 | 1/2" CTS (5/8" OD) .090 Wall x 1/2" OD Copper |
| STAB08.625-CTC | 9943-99-0065-00 | 1/2" CTS (5/8" OD) .090 Wall x 5/8" OD Copper |

Chamfer Tools

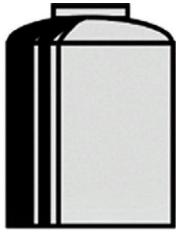


| Part Number | Continental # | Size |
|-------------|-----------------|-------------------------------|
| CHAM-1/2 | 0000-33-5481-00 | 3/4" IPS x 1/2" CTS (5/8" OD) |
| CHAM-1-1/4 | 0000-33-6580-15 | 1 1/4" IPS SDR-10 |
| CHAM-2 | 0000-33-6580-17 | 2" IPS SDR-11 |
| CHAM-1 | 0000-33-5516-00 | 1" IPS x 3/4" IPS |

POLY TUBING & FITTINGS

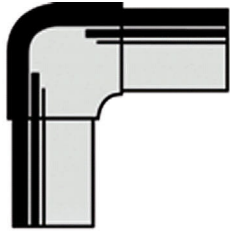
Butt Fusion Fittings

Butt Fusion Cap



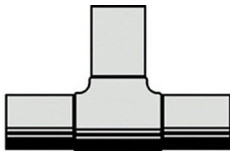
| Part Number | Description |
|-------------|------------------------|
| BFCAP20 | 1-1/4" Butt Fusion Cap |
| BFCAP32 | 2" Butt Fusion Cap |
| BFCAP48 | 3" Butt Fusion Cap |
| BFCAP64 | 4" Butt Fusion Cap |

Butt Fusion Elbow



| Part Number | Description |
|-------------|------------------------------------|
| BFL20 | 1-1/4" Butt Fusion 90 Degree Elbow |
| BFL32 | 2" Butt Fusion 90 Degree Elbow |
| BFL48 | 3" Butt Fusion 90 Degree Elbow |
| BFL64 | 4" Butt Fusion 90 Degree Elbow |

Butt Fusion Tee



| Part Number | Description |
|-------------|------------------------|
| BFT20 | 1-1/4" Butt Fusion Tee |
| BFT32 | 2" Butt Fusion Tee |
| BFT48 | 3" Butt Fusion Tee |
| BFT64 | 4" Butt Fusion Tee |

Socket Fusion Fittings

Socket Fusion Coupling



| Part Number | Description |
|-------------|---------------------------------|
| SFC08-CTS | 1/2" CTS Socket Fuse Coupling |
| SFC12-IPS | 3/4" IPS Socket Fuse Coupling |
| SFC16-IPS | 1" IPS Socket Fuse Coupling |
| SFC20-IPS | 1-1/4" IPS Socket Fuse Coupling |
| SFC32-IPS | 2" IPS Socket Fuse Coupling |
| SFC48-IPS | 3" IPS Socket Fuse Coupling |
| SFC64-IPS | 4" IPS Socket Fuse Coupling |

Socket Fusion Cap



| Part Number | Description |
|-------------|----------------------------|
| SFCAP08-CTS | 1/2" CTS Socket Fuse Cap |
| SFCAP12-IPS | 3/4" IPS Socket Fuse Cap |
| SFCAP16-IPS | 1" IPS Socket Fuse Cap |
| SFCAP20-IPS | 1-1/4" IPS Socket Fuse Cap |
| SFCAP32-IPS | 2" IPS Socket Fuse Cap |
| SFCAP48-IPS | 3" IPS Socket Fuse Cap |
| SFCAP64-IPS | 4" IPS Socket Fuse Cap |

POLY TUBING & FITTINGS

Socket Fusion Fittings

Socket Fusion Elbow



| Part Number | Description |
|-------------|--|
| SFL08-CTS | 1/2" CTS Socket Fuse 90 Degree Elbow |
| SFL12-IPS | 3/4" IPS Socket Fuse 90 Degree Elbow |
| SFL16-IPS | 1" IPS Socket Fuse 90 Degree Elbow |
| SFL20-IPS | 1-1/4" IPS Socket Fuse 90 Degree Elbow |
| SFL32-IPS | 2" IPS Socket Fuse 90 Degree Elbow |
| SFL48-IPS | 3" IPS Socket Fuse 90 Degree Elbow |
| SFL64-IPS | 4" IPS Socket Fuse 90 Degree Elbow |

Socket Fusion Reduce Coupling



| Part Number | Description |
|-----------------|--|
| SFRC1208-IPSCTS | 3/4" IPS x 1/2" CTS Socket Fuse Reducer Coupling |
| SFRC1608-IPSCTS | 1" IPS x 1/2" CTS Socket Fuse Reducer Coupling |
| SFRC1612-IPS | 1" x 3/4" IPS Socket Fuse Reducer Coupling |
| SFRC2012-IPS | 1-1/4" x 3/4" IPS Socket Fuse Reducer Coupling |
| SFRC2016-IPS | 1-1/4" x 1" IPS Socket Fuse Reducer Coupling |
| SFRC3212-IPS | 2" x 3/4" IPS Socket Fuse Reducer Coupling |
| SFRC3216-IPS | 2" x 1" IPS Socket Fuse Reducer Coupling |
| SFRC3220-IPS | 2" x 1-1/4" IPS Socket Fuse Reducer Coupling |
| SFRC4832-IPS | 3" x 2" IPS Socket Fuse Reducer Coupling |
| SFRC6432-IPS | 4" x 2" IPS Socket Fuse Reducer Coupling |
| SFRC6448-IPS | 4" x 3" IPS Socket Fuse Reducer Coupling |

Socket Fusion Tee



| Part Number | Description |
|-------------|----------------------------|
| SFT08-CTS | 1/2" CTS Socket Fuse Tee |
| SFT12-IPS | 3/4" IPS Socket Fuse Tee |
| SFT16-IPS | 1" IPS Socket Fuse Tee |
| SFT20-IPS | 1-1/4" IPS Socket Fuse Tee |
| SFT32-IPS | 2" IPS Socket Fuse Tee |
| SFT48-IPS | 3" IPS Socket Fuse Tee |
| SFT64-IPS | 4" IPS Socket Fuse Tee |

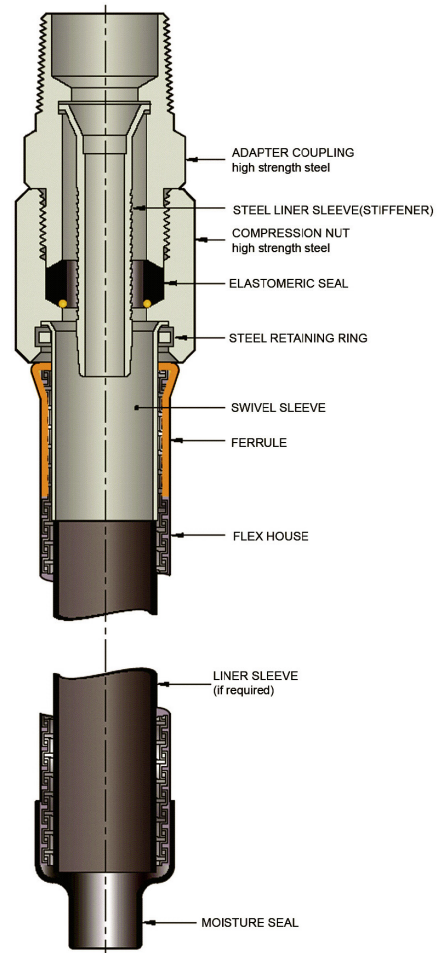
POLY TUBING & FITTINGS

POLY TUBING & FITTINGS

Continental Flex Risers

Conflex Risers

- ConFlex Risers are rated for 125 psig.
- ConFlex Risers conform to trench depth and flex with ground movement.
- ConFlex Risers may be installed with or without meter set present.
- ConFlex Risers have a swivel feature to allow tightening the Service Head Adapter without turning the flex hose.
- Service Head Adapter design has been used in the natural gas industry since 1967.
 - The Service Head Adapter offers a simple and dependable installation method.
 - The stiffener is integral to the adapter coupling. It does not fall out. No loose components.
 - The Service Head Adapter design is listed by IAPMO and CSA.
 - Service Head Adapter meets the requirements of ASTM F 1948 and ASTM D 2513.
- ConFlex Risers meet the requirements of;
 - ASTM D 2513
 - D.O.T. Title 49 of the Code of Federal Regulations, Part 192.283 (b) and 192.375.
 - NFPA 54 & NFPA 58
 - ConFlex Risers have a moisture seal as required in NFPA 54 & NFPA 58.
 - The Flex Hose meets 300 lb tensile requirement and 1000 lb crush requirement stated in NFPA 58.
 - The Flex Hose to Service Head Adapter joint meets 300 lb tensile requirement stated in NFPA 58.
 - Liner Sleeve provided to meet requirements of NFPA 58.
- IAPMO and CSA Listed.



Flex Risers



| Part Number | Continental # | Size |
|----------------------|-----------------|---|
| FLEX08-3CTS | 1253-92-1004-36 | 1/2" MPT x 1/2" CTS (5/8"OD) .090 Wall x 36" LG FLEX |
| FLEX08-6CTS | 1253-92-1004-72 | 1/2" MPT x 1/2" CTS (5/8"OD) .090 Wall x 72" LG FLEX |
| FLEX08-8CTS | 1253-92-1004-96 | 1/2" MPT x 1/2" CTS (5/8"OD) .090 Wall x 96" LG FLEX |
| FLEX08SW-3CTS | 9953-99-0511-36 | 1/2" F. Flare Swivel x 1/2" CTS (5/8"OD) .090 Wall x 36" LG FLEX (Female Flare) |
| FLEX08SW-6CTS | 9953-99-0511-72 | 1/2" F. Flare Swivel x 1/2" CTS (5/8"OD) .090 Wall x 72" LG FLEX (Female Flare) |
| FLEX08SW-8CTS | 9953-99-0511-96 | 1/2" F. Flare Swivel x 1/2" CTS (5/8"OD) .090 Wall x 96" LG FLEX (Female Flare) |
| FLEX12-3IPS | 1353-92-1013-36 | 3/4" MPT x 3/4" IPS SDR-11 x 36" LG FLEX |
| FLEX12-8IPS | 1353-92-1013-96 | 3/4"IPS x 8' Flex Anodeless Riser W/SERV HD ADT |
| FLEX12-6IPS | 1353-92-1013-72 | 3/4" MPT x 3/4" IPS SDR-11 x 72" LG FLEX |
| FLEX16-3IPS | 1453-92-1014-36 | 1" IPS x 3' Flex Anodeless Riser |
| FLEX16-5IPS | 1453-92-1014-60 | 1" IPS x 5' Flex Anodeless Riser |
| SWADT | 17-6842-00 | Converts MNPT Service Head to Female Flare |

Anodeless Risers



| Part Number | Continental # | Size |
|--------------------|-----------------|--|
| ASR08-CTS | 1353-91-4604-00 | 3/4" MPT x 1/2" CTS (5/8" OD) .090 Wall 30" V x 17" H) |
| ASR12-IPS | 1353-91-4613-00 | 3/4" MPT x 3/4" IPS SDR-11 (30" V x 16" H) |
| ASR16-IPS | 1453-91-4614-00 | 1" MPT x 1" IPS SDR-11 (30" V x 16" H) |
| ASR20-IPS | 1553-91-4615-00 | 1 1/4" MPT x 1 1/4" IPS SDR-10 (30" V x 22" H) |
| ASRSL32-IPS | 1752-91-4617-00 | 2" MPT x 2" IPS SDR-11 (36" V x 30" H) |

POLY TUBING & FITTINGS

X-Riser

CHICAGO FITTINGS
X-RISER
Backyard Products

From Meter To Point "B"

Solid Plastic Service From Point to Point

Total Joints = 4 (Zero Below Grade)

Total Joints = 16 (4 Below Grade)

Moisture Seal Only

Stab Coupling (Chamfering Tool Required)

Fusion Coupling (Fusion Equipment Required)

Competitors Traditional "Pigtail" Prebent Riser

Features & Benefits

- **NO UNDERGROUND JOINTS** - One solid service line from point-to-point with above ground terminations.
- **NO CHAMFERING** - A simple clean cut is all that is required.
- **BI-DIRECTIONAL SEAL** assembly CAN'T be installed improperly where some competitors multiple internal components MUST have proper order and orientation to function properly.
- **NO TORQUE REQUIREMENTS** - All X-Risers incorporate the "bottoming" or "positive stop" design. Simply tighten the compression nut until it is metal-to-metal and you are done.
- **SIMPLE DESIGN** can be installed with one flat jaw wrench extending the life of protective coatings commonly flawed or removed by pipe wrenches.
- **INTEGRAL BARBED STIFFENERS** are permanent (not loose) for additional pull out resistance.
- **QUALITY** - Chicago Fittings products are CNC machined from solid bar stock (not castings) providing high quality product with the most precise threads and design flexibility.

Flexible Anodeless Risers



| Part Number | Description |
|------------------|---|
| XR-10B-8-36 | 1/2" CTS X 1/2" MNPT X 3' FLEX RISER |
| XR-10B-8-72 | 1/2" CTS X 1/2" MNPT X 6' FLEX RISER |
| XR-10B-8-96 | 1/2" CTS X 1/2" MNPT X 8' FLEX RISER |
| XR-10B-8SN-36 | 1/2" CTS X 1/2" FEMALE FLARE SWIVEL X 3' FLEX RISER |
| XR-10B-8SN-72 | 1/2" CTS X 1/2" FEMALE FLARE SWIVEL X 6' FLEX RISER |
| XR-10B-8SN-96 | 1/2" CTS X 1/2" FEMALE FLARE SWIVEL X 8' FLEX RISER |
| XR-17C-10SN-36 | 3/4" IPS X 5/8" FEMALE FLARE SWIVEL X 3' FLEX RISER |
| XR-17C-10SN-72 | 3/4" IPS X 5/8" FEMALE FLARE SWIVEL X 6' FLEX RISER |
| XR-17C-12-36 | 3/4" IPS X 3/4" MNPT X 3' FLEX RISER |
| XR-17C-12-72 | 3/4" IPS X 3/4" MNPT X 6' FLEX RISER |
| XR-17C-12-96 | 3/4" IPS X 3/4" MNPT X 8' FLEX RISER |
| XR-21J-16-36 | 1" IPS X 1" MPT X 3' FLEX RISER WITH CFLEXLINER |
| XR-21J-16-72 | 1" IPS X 1" MPT X 6' FLEX RISER WITH CFLEXLINER |
| XR-A597-10-8-SW | 1/2" FEMALE SWIVEL 45 DEGREE FLARE |
| XR-A597-17-10-SW | 5/8" FEMALE SWIVEL 45 DEGREE FLARE |
| XR-M545-C2-S-090 | 1/2" MALE FLARE X 1/2" CTS TRANSITION FITTING |

Rigid Anodeless Risers



| Part Number | Description |
|------------------|--|
| XRR-10B-12-30-30 | RIGID RISER 1/2" CTS, 3/4" MALE NPT, 30" (H) X 30" (L) |
| XRR-17C-12-24-36 | RIGID RISER 3/4" IPS, 3/4" MALE NPT, 24" (H) X 36" (L) |
| XRR-17C-12-30-30 | RIGID RISER 3/4" IPS, 3/4" MALE NPT, 30" (H) X 30" (L) |
| XRR-21J-16-24-36 | RIGID RISER 1" IPS, 1" MALE NPT, 24" (H) X 36" (L) |
| XRR-21J-16-30-30 | RIGID RISER 1" IPS, 1" MALE NPT, 30" (H) X 30" (L) |
| XRR-27G-20-24-36 | RIGID RISER 1-1/4" IPS, 1-1/4" MALE NPT, 24" (H) X 36" (L) |
| XRR-27G-20-30-30 | RIGID RISER 1-1/4" IPS, 1-1/4" MALE NPT, 30" (H) X 30" (L) |

POLY TUBING & FITTINGS

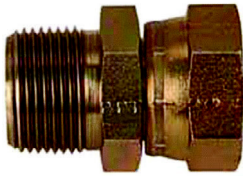
POLY TUBING & FITTINGS

X-Riser Accesories



| Part Number | Description |
|------------------|---|
| XR-A597-10-8-SW | 1/2" FEMALE SWIVEL 45 DEGREE FLARE |
| XR-A597-17-10-SW | 5/8" FEMALE SWIVEL 45 DEGREE FLARE |
| XR-M545-C2-S-090 | 1/2" MALE FLARE X 1/2" CTS TRANSITION FITTING |
| 4430-060 | CY10S 1/2" CTS SEAL AND FERRULE ASSEMBLY |
| 4430-062 | CY17S 3/4" IPS SEAL AND FERRULE ASSEMBLY |
| 4430-064 | CY21/22S 1" IPS SEAL AND FERRULE ASSEMBLY |

Adaptors



| Part Number | Description |
|-------------|--|
| 16ADT | 1" M x 1" F Adapter |
| 12ADT | 3/4" M x 3/4" F Adapter |
| 8ADT | 1/2" M x 1/2" F Adapter (25 Per Box) |
| COPO-0000 | 3/8" - 18F x 1/2" CTS Copper to Poly Adapter |

Installation Tools And Accessories



CAUTION BURIED PIPELINE BELOW

| Part Number | Description |
|----------------|---|
| CH10666 | Wire Connectors W/Silicone Sealant |
| CH90120 | Direct Bury Lug Junction Block |
| FLAG | Yellow Marker Flag With "Caution Buried Gas Line" |
| MTAPE | 2" x 1000' Magnetic Foil Detectable Marking Tape |
| RATCHET CUTTER | Plastic Tubing Cutter (Up To 2") |
| SUPERSLICE | Plastic Tubing Cutter (Cuts Up To 1" IPS) |
| WIRE | 2500' Spool Yellow Tracer Wire |
| WIRE-500 | 500' Spool Yellow Tracer Wire |

Poly Pipe



| Part Number | Roll/Stick Length | Description |
|-------------|---------------------|---|
| 8CTS | 500 Foot Roll | 1/2" NOM. CTS TUBING - .090 WALL SDR 7 |
| 12IPS | 500 Foot Roll | 3/4" NOM. IPS TUBING - .095 WALL SDR 11 |
| 16IPS | 500 Foot Roll | 1" NOM. IPS TUBING - .119 WALL SDR 11 |
| 20IPS | 500 Foot Roll | 1-1/4" NOM. IPS TUBING - .166 WALL SDR 10 |
| 32IPS | 500 Foot Roll | 2" NOM. IPS TUBING - .216 WALL SDR 11 |
| 48IPS | 20 or 40 Foot Stick | 3" NOM. IPS TUBING - .304 WALL SDR 11.5 |
| 64IPS | 20 or 40 Foot Stick | 4" NOM. IPS TUBING - .333 WALL SDR 13.5 |

CSST TUBING & FITTINGS

TracPipe CounterStrike

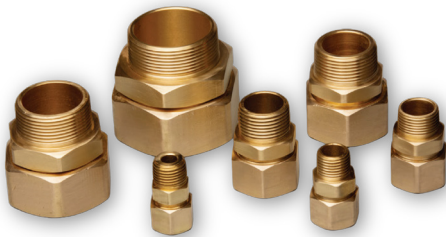
TracPipe CounterStrike CSST Piping



| Part Number | Size | Coil/Reel Length | Lb/Reel |
|----------------|--------|------------------|---------|
| FGP-CS-375-250 | 3/8" | 250 | 37 |
| FGP-CS-375-100 | 3/8" | 100 | 17 |
| FGP-CS-500-500 | 1/2" | 500 | 98 |
| FGP-CS-500-250 | 1/2" | 250 | 52 |
| FGP-CS-500-100 | 1/2" | 100 | 24 |
| FGP-CS-500-50 | 1/2" | 50* | 14 |
| FGP-CS-500-25 | 1/2" | 25* | 4.6 |
| FGP-CS-750-250 | 3/4" | 250 | 70 |
| FGP-CS-750-100 | 3/4" | 100 | 31 |
| FGP-CS-750-50 | 3/4" | 25* | 18 |
| FGP-CS-750-25 | 3/4" | 25* | 5.2 |
| FGP-CS-100-180 | 1" | 180 | 70 |
| FGP-CS-100-100 | 1" | 100 | 40 |
| FGP-CS-100-50 | 1" | 50* | 22 |
| FGP-CS-100-25 | 1" | 25* | 8.6 |
| FGP-CS-125-250 | 1-1/4" | 250 | 129 |
| FGP-CS-125-150 | 1-1/4" | 150 | 78 |
| FGP-CS-150-250 | 1-1/4" | 250 | 182 |
| FGP-CS-150-150 | 1-1/4" | 150 | 103 |
| FGP-CS-200-150 | 2" | 150 | 137 |

NOTE: Length followed by * indicates a coil.

AutoFlare Fittings



| Part Number | Size | Coil/Reel Length |
|------------------|---------------------------|------------------|
| FGP-FST-375N | AutoFlare Straight 3/8" | 3/8" (3/8"NPT) |
| FGP-FST-375 | AutoFlare Straight 3/8" | 3/8" (1/2"NPT) |
| FGP-FST-500 | AutoFlare Straight 1/2" | 1/2" |
| FGP-RST-500-750 | AutoFlare Reducing 1/2" | 1/2"-3/4"NPT |
| FGP-FST-750 | AutoFlare Straight 3/4" | 3/4" |
| FGP-RST-750-500 | AutoFlare Reducing 3/4" | 3/4" -1/2"NPT |
| FGP-FST-1000 | AutoFlare Straight 1" | 1" |
| FGP-RST-1000-750 | AutoFlare Reducing 1" | 1"-3/4"NPT |
| FGP-FST-1250 | AutoFlare Straight 1-1/4" | 1-1/4" |
| FGP-FST-1500 | AutoFlare Straight 1-1/2" | 1-1/2" |
| FGP-FST-2000 | AutoFlare Straight 2" | 2" |

TracPipe CounterStrike
Flexible Gas Piping by OmegaFlex.

CYLINDERS, TANKS, AND SCALES

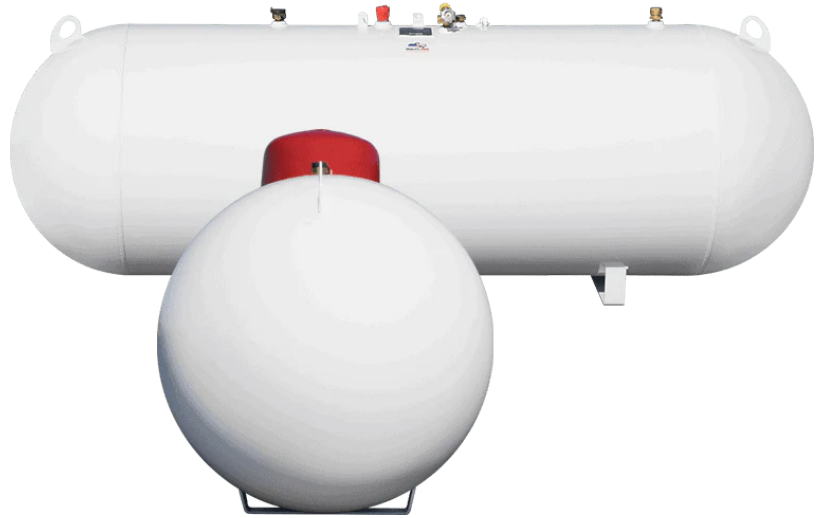
Quality Steel Tanks

Aboveground Tanks

Aboveground Domestic Tanks

Quality Steel Aboveground Tanks Feature:

- Available in 120-1990wg capacities
- Vacuum pre-purged to save time, money, and product
- Powder coated for a durable, long-lasting finish
- Personalized service through our sales representatives
- Equipped with RegO valves
- 5 year warranty
- Standard colors are available: White, Aluminum and Tan



General Specifications

Conforms to the last edition and addenda of the ASME Code for pressure Vessels, Section VIII, Division 1. Complies with NFPA 58.

Rated at 250 psig from -20° F, to 125° F, All tanks may be evacuated to a full (14.7 psi) vacuum.

Vessel Finish: Coated with TGIC powder.

| ABOVEGROUND VESSEL DIMENSIONAL INFORMATION | | | | | | | | | |
|--|------------------|-----------|----------------|----------------|--------------|----------------------|---------------|-----------|-----------|
| All vessels dimensions are approximate | | | | | | | | | |
| WATER CAPACITY | OUTSIDE DIAMETER | HEAD TYPE | OVERALL LENGTH | OVERALL HEIGHT | LEG WIDTH ** | LEG SPACING ** | WEIGHT (LBS.) | QUANTITY | |
| | | | | | | | | FULL LOAD | PER STACK |
| *120 wg. | 24" | Ellip | 5'-8" | 2'-10" | 1'-1 1/2" | 2'-10 1/2" or 3'-11" | 260 | 108 / 112 | 16 / 14 |
| *250 wg. | 30" | Hemi | 7'-10" | 3'-6" | 1'-5" | 4'-11" | 480 | 54 | 9 |
| *320 wg. | 30" | Hemi | 9'-7" | 3'-6" | 1'-5" | 5' | 620 | 45 | 9 |
| 500 wg. | 37.5" | Hemi | 10' | 4' | 1'-8" | 5' | 950 | 37 / 30 | 8 / 6 |
| 1000 wg. | 41" | Hemi | 16' | 4'-3" | 1'-8" | 10'-1" | 1,800 | 15 | 5 |
| 1450 wg. | 46.5" | Ellip | 17'-4" | 4'-9" | 1'-9" | 11'-7" | 2,650 | 12 | 4 |
| 1990 wg. | 46.5" | Ellip | 23'-11" | 4'-9" | 1'-9" | 16' | 3,520 | 8 | 4 |

* Drain plug may not be available in this size. By special request only.

** Leg spacing +/- 2". Leg widths and spacing may vary based on mfg. location. Check with your salesperson for details. 120, 250, 320 wg.

Standard tanks - no holes in legs (one center hole on request). 500 and 1000 wg. standard tanks - 2 - 3/4" holes, 16" on center each leg. 1450 wg. and up as shown above.



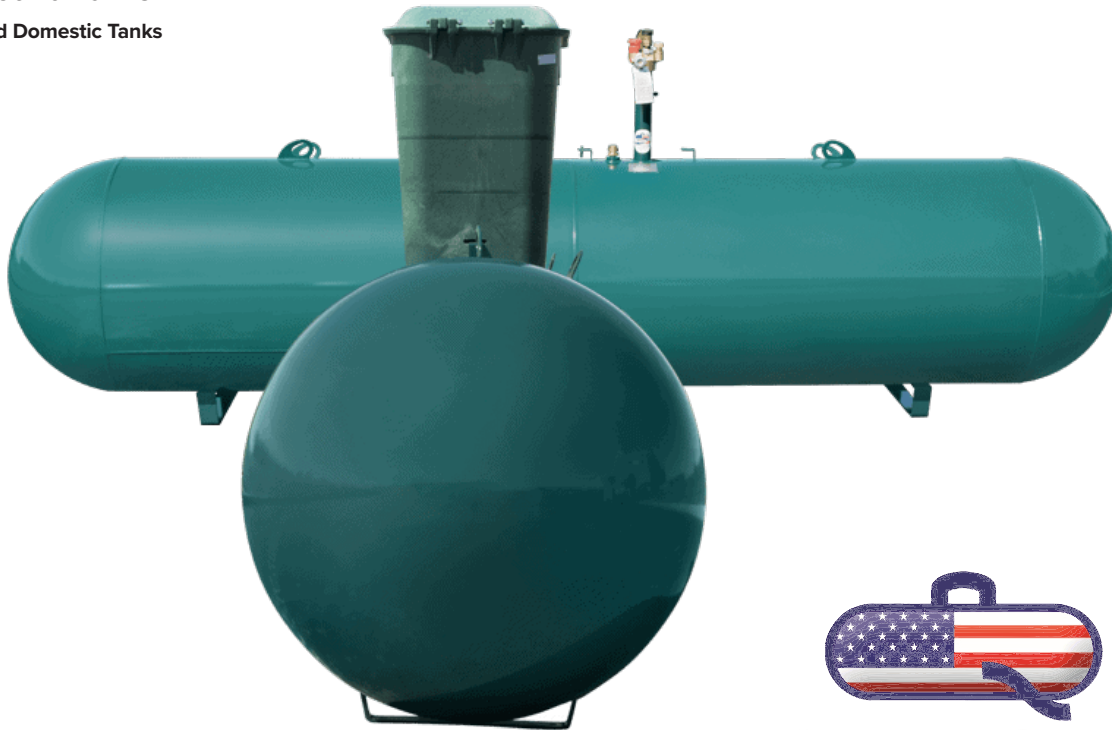
CYLINDERS, TANKS, AND SCALES

CYLINDERS, TANKS, AND SCALES

Quality Steel Tanks

Underground Tanks

Underground Domestic Tanks



Quality Steel Underground Tanks Feature:

- Powder coated for a durable, long lasting finish
- Vessels shipped with durable ready-to-bury coating.
- Vacuum pre-purged to save time, money, and product
- Our anode bolt is mounted on the riser providing a fast, secure connection of lead wires
- We provide dual lifting lugs on our 500s and 1000s for easier handling

* Applicable federal, state, or local regulations may contain specific requirements for protective coatings and cathodic protection. The purchaser and installer are responsible for compliance with all federal, state, local, and NFPA industry regulations. Cathodic protection is required and coating must be continuous and uninterrupted and must comply with any local and national code.

General Specifications

Conforms to the last edition and addenda of the ASME, Section VIII, Division 1. Complies with NFPA 58.

Container pressure rated at 250 psig from -20° F. to 125° F. All tanks may be evacuated to a full (14.7 psi) vacuum.

Vessel finish: Coated with green powder.

Applicable federal, state or local regulations may contain specific requirements for protective coatings and cathodic protection. The purchaser and installer are responsible for compliance with all federal, state, or local regulations. Including proper purging for first fill per NGPA 133-89 (a).

UNDERGROUND VESSEL DIMENSIONAL INFORMATION

All vessels dimensions are approximate

| WATER CAPACITY | OUTSIDE DIAMETER | HEAD TYPE | OVERALL LENGTH | OVERALL HEIGHT | | LEG WIDTH | WEIGHT (LBS.) | QUANTITY | |
|----------------|------------------|-----------|----------------|----------------|-----------|-----------|---------------|-----------|-----------|
| | | | | UGSR | UGLR | | | FULL LOAD | PER STACK |
| 120 wg. | 24" | Ellip | 5'-8" | 3'-10" | 1'-1 1/2" | 1'-1 1/2" | 260 | 48 / 60 | 6 / 10 |
| 250 wg. | 30" | Hemi | 7'-10" | 4'-6" | 5'-1" | 1'-5" | 480 | 60 / 42 | 5 / 7 |
| 320 wg. | 30" | Hemi | 9'-7" | 4'-6" | 5'-1" | 1'-5" | 620 | 25 / 35 | 5 / 7 |
| 500 wg. | 37.5" | Hemi | 10' | 5' | 5'-7" | 1'-8" | 950 | 25 | 5 |
| 1000 wg. | 41" | Hemi | 16' | 5'-3" | 5'-10" | 1'-8" | 1,800 | 15 | 5 |
| 1450 wg. | 46.5" | Ellip | 17'-4" | 5'-9" | 6'-4" | 1'-9" | 2,650 | 12 | 4 |
| 1990 wg. | 46.5" | Ellip | 23'-11" | 5'-9" | 6'-4" | 1'-9" | 3,520 | 8 | 4 |

CYLINDERS, TANKS, AND SCALES

Fisk Products

Tank Trailers

EZ-HD HAULER



FEATURES and BENEFITS:

- Safe and Easy One Person Operation
- New Structural, Streamlined "Bunk Free" Design
- Pickup and Set up to 500 Gal. Empty Tanks "Off-the-Tail" When Tank Carrier is Connected to Towing Vehicle
- Lifts, Transports and Sets 120 to 1000 gallon LP Tanks
- Designed for Above Ground and Underground LP Tanks
- Paint Saving Pulley Rail System easier to adjust For Various LP Tank sizes
- New Quick Strap Ratchet Winches for Securing and Safe Transport
- Tank Conforming Bumper Hangers
- Removable Side Panels conceal Winches and Tank Apparatus and Provide Advertising Space
- Enclosed Fenders and Mud Flaps
- D.O.T. Electric Brakes, Lighting System and Hitch
- Guarded Tail Light, LED Side Marker Lights
- Enclosed Wiring is Protected from Damage and Weathering
- Powerful Dual Drum Electric Winch for Level Lifting
- Adjustable Hitch for Bumper Heights and Ball Sizes
- Shorter Turning Radius while Backing
- Heavy Duty Smooth Ride Suspension System
- Extended Tank Rollers prevent Tank scratching
- Two-toned Paint Option
- Separate Battery and Tool Box
- Fully Assembled, "Ready-to-Roll"

- Collapsible Model for multiple orders and container shipment
- ***NEW Standard Stainless Steel Fenders, Boxes, Side Panels***
- ***NEW D.O.T. Exemption Kit Available***
- ***NEW Dual Winch Model Available***
- ***NEW Wireless Remote Kit Available***

SPECIFICATIONS and DIMENSIONS:

- Lifting Capacity: 6,000 lbs.
- Overall Length: 20' 6"
- Overall Height: 7' 0"
- Loaded Tank Ground Clearance: 25"
- Weight: 2,020 lbs.
- Axles: 7,000 lb. capacity
- Tires: 7.50 x 16LT, 8 Ply
- Brakes: Electric
- Hitch: Adjustable Ball Size with Wheel Jack (2) 10,000 lb.
- Straps: Fully wired D.O.T. lighting
- Electrical: 12 V Divided Drum Winch
12 V Auxiliary Battery (not furnished)

Specifications and Dimensions are subject to changes

EZHD-402

| Part Number | Description |
|-------------|--------------|
| TT-EZ-HD | EZ-HD Hauler |

CYLINDERS, TANKS, AND SCALES

Fisk Products

Tank Trailers

DOT Exemption Ready Bumper Kit

- Fisk DOT exemption Bumper System provides the ability to transport up to full 500g tank back to your bulk plant.
- Fits on the EZ-HD units and kits are available for existing units.
- Must have a dual winch system for special permit Sp14980.



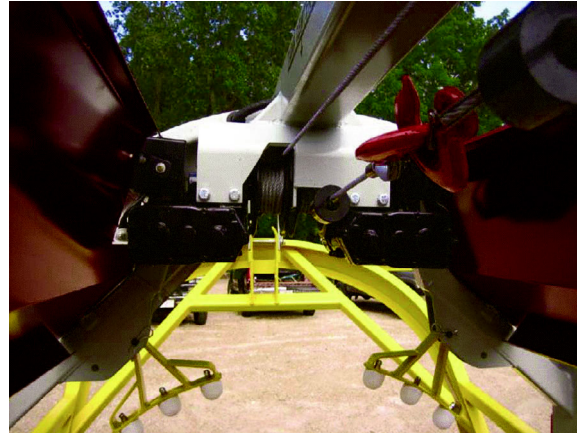
New Dual Winch Option

Fisk dual winch option provides independent control of the front and rear cables resulting in 3 advantages:

1. Independent control of front and rear cables makes leveling / setting tanks much easier.
2. Provides lateral movement of the tank if you are not exactly over your setting zone.
3. Cables never wind improperly.

*** Must have a dual winch system for special permit Sp14980.**

Both the front and rear cables have their own drum so the tanks always comes to rest against both the front and rear bumpers.



New Remote Winch Option

New remote winch option for both dual and single winch trailers.



CYLINDERS, TANKS, AND SCALES

Fisk Products

Tank Trailers

EZ HAULER



FEATURES and BENEFITS:

- Safe and Easy One Person Operation
- Structural “Bunk Free” Design
- Pickup and Set up to 500 Gal. Empty Tanks “Off-the-Tail” when Tank Carrier is Connected to the Tow Vehicle
- Lifts, Transports and Sets 120 to 1000 Gallon LP Tanks
- Designed for Above Ground and Underground LP Tanks
- Paint Saving Pulley Rail System easier to adjust for Various LP Tank Sizes
- Two-Toned Paint Option
- D.O.T. Electric Brakes, Lighting System and Hitch
- Powerful Dual Drum Electric Winch for Level Lifting
- Sturdy, 8-Point Tank Suspension System
- Ratchet Straps for Fast Securing and Safe Transport
- Open Yoke Design clears LP Tank Apparatus
- Heavy Duty Smooth Ride Suspension System
- Enclosed Fenders and Mud Flaps
- Separate Battery and Tool Box
- Fully Assembled, “Ready-to-Roll”
- ***NEW Standard Stainless Steel Fenders, Boxes***
- ***NEW Dual Winch Model Available***
- ***NEW Wireless Remote Kit Available***

SPECIFICATIONS and DIMENSIONS:

- Lifting Capacity: 6,000 lbs.
- Overall Length: 19’ 8”
- Overall Height: 7’ 9”
- Loaded Tank Ground Clearance: 25”
- Weight: 1,450 lbs.
- Axles: 7,000 lb. capacity
- Tires: 7.50 x 16LT, 8 Ply
- Brakes: Electric
- Hitch: 2 5/16” Ball with Wheel Jack
- Straps: (2) 10,000 lb.
- Electrical: Fully wired D.O.T. lighting
12 V Divided Drum Winch
12 V Auxiliary Battery (not furnished)

Specifications and Dimensions are subject to changes

EZHD-402

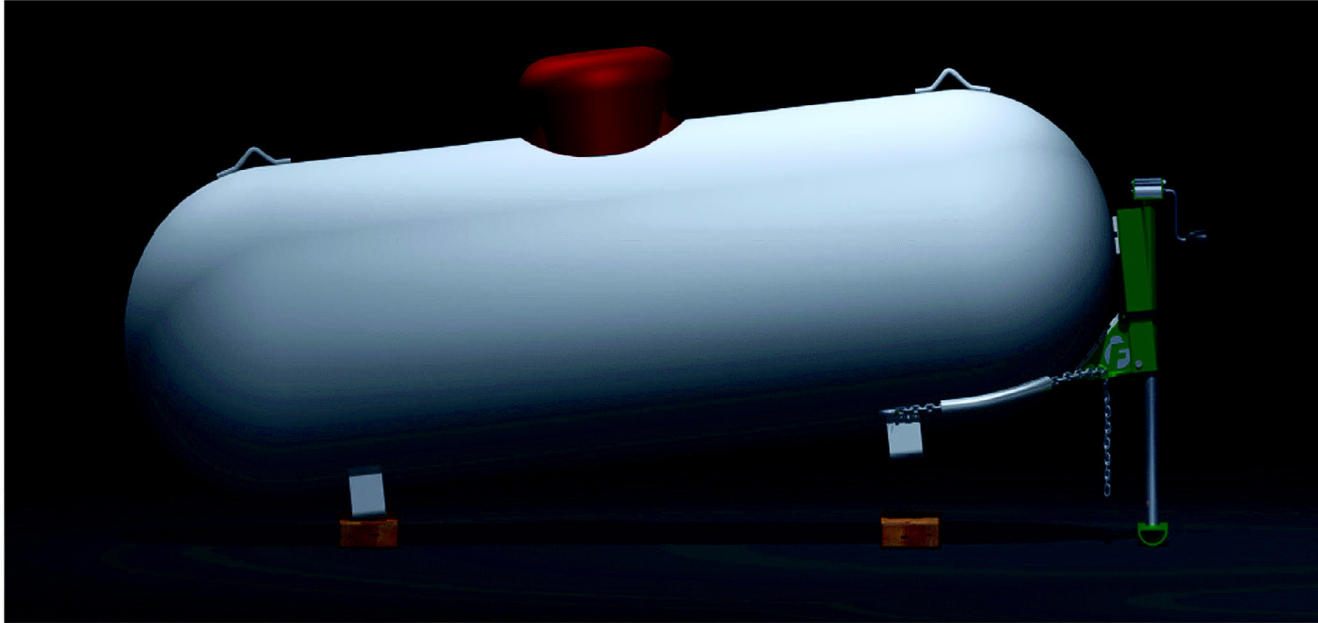
| Part Number | Description |
|--------------|-------------|
| TT-EZ Hauler | EZ Hauler |

CYLINDERS, TANKS, AND SCALES

Fisk Products

TANK-JAK

CYLINDERS, TANKS, AND SCALES



This tool allows you to lift one side of a tank at a time and reset the tank blocks. There are additional bumpers installed which protect the tank from scratches.

FEATURES and BENEFITS:

- Safe and Easy One Person Operation
- Takes the Place of Boom Truck or Tank Carrier to
- Reset, Block, Paint and Re Level LP Tank
- Economical Cost and Simple to operate
- Designed for use on 120 up to 1000 Gallon LP Tanks
- Chains Secure Jack to Tank for Safe Raising/Leveling
- Lift Pad and Chains are booted to prevent paint scratching
- Safe, Durable and Strong Construction
- Compact Design
- Efficient Jack Screw offers Anti-Drop Feature
- Provides accurate LP Tank Float Gauge readings after re leveling
- Fully Assembled, "Ready-to-Use"

SPECIFICATIONS and DIMENSIONS:

- Jack Capacity: 3,500 lbs.
- Overall Lift: 13"
- Overall Length: 12"
- Overall Width: 14"
- Overall Height: 25 1/2"
- Weight: 45 lbs.
- Chains: Adjustable Length with Hooks1

Specifications and Dimensions are subject to changes

TJAK-402

| Part Number | Lifting Capacity | Description |
|-------------|------------------|-------------|
| TANK-JAK | | 3,500 lbs. |

CYLINDERS, TANKS, AND SCALES

Fisk Products

Fisk Trailer Parts

| Part Number | Description |
|-------------|---|
| FBUMPER | Fisk Rubber Bumper |
| FCABLES | 1 Set Fisk Tank Trailer Cables/(1)10Ft. &(1)14Ft. |
| FLIFTSTRAPS | Fisk 11 Foot Lift Straps (Pair) |
| FMPUG | Fisk Elect. Plug (Male) |
| FPLUG | Fisk Elect. Plug (Female) |
| FPULLEY | Fisk Cable Pulley w/ Pin & Sleeved Bearing |
| FRATCHET | Fisk Trailer Ratchet |
| FREMOTE | Fisk Remote Control, Cord & Plug |
| FROLLER | Fisk Frame Roller |
| FSLIDE-PIN | Fisk Slide Collar Pin |
| FSTRAPS | Set - Load Huggers (Complete Set) |
| FWEIGHT | Fisk Cable Weight |
| SHORT STRAP | Short Double Loop Strap For Fisk TRLR (Each) |

Cylinders

Flame King Cylinders



| Part Number | Description |
|----------------|---|
| 200PD-FK | 20 Lb Cylinder W/Overfill Prevent Dev |
| 200PD-GAUGE-FK | 20 Lb Cylinder With Gauge |
| 300PD-FK | 30 Lb Cylinder With OPD Valve |
| 33FLAL-FK | 33 Lb Aluminum Forklift Cylinder |
| 33FLU-FK | 33 Lb Steel Forklift Cylinder Universal |
| 100CYL-FK | 100 Lb Cylinder W/ Collar And Valve |
| 400PD-FK | 40 Lb Cylinder With OPD Valve |
| 420CYL-ASME-FK | 420 Lb ASME Cylinder |
| 420DOT-FK | 420 Lb DOT Cylinder, White |



CYLINDERS, TANKS, AND SCALES

CYLINDERS, TANKS, AND SCALES

Cylinders

Portable Cylinder

Portable Cylinders 4-100lb



| Part Number | Height | Diameter | Tare Weight | Description |
|-------------|--------|----------|-------------|--|
| 04OPD | 11.8" | 9.1" | 11 LBS | 4.25 lb Cylinder with OPD |
| 11OPD | 16.8" | 9.1" | 13.1 LBS | 11 lb Cylinder with OPD |
| 20OPD | 17.8" | 12.3" | 16.6 LBS | 20 lb Cylinder with OPD |
| 30OPD | 23.7" | 12.3" | 23.5 LBS | 30 lb Cylinder with OPD |
| 40OPD | 29.3" | 12.3" | 29.1 LBS | 40 lb Cylinder with OPD |
| 60HC | 44.1 " | 12" | 48.1 LBS | 60 lb Cylinder with High Collar |
| 100CYL | 48.7" | 14.7" | 68 LBS | 100 lb Cylinder with 3-1/2" Threaded Boss (no valve) |
| 100HC | 48.7" | 14.7" | 68 LBS | 100 lb Cylinder with High Collar (With Valve) |

Portable Cylinders 200-420lb



| Part Number | Height | Diameter | Tare Weight | Description |
|-----------------|--------|----------|-------------|---|
| 200CYL | 40" | 24" | 142 LBS | 200 LB D.O.T. Cylinder |
| 420CYL | 52" | 30" | 271 LBS | 420 LB D.O.T. Cylinder |
| 420CYL-ASME | 52" | 30" | 271 LBS | 420 LB ASME Cylinder |
| 420CYL-FORKLIFT | 52" | 30" | 271 LBS | 420 LB D.O.T. Cylinder W/ Forklift Base |



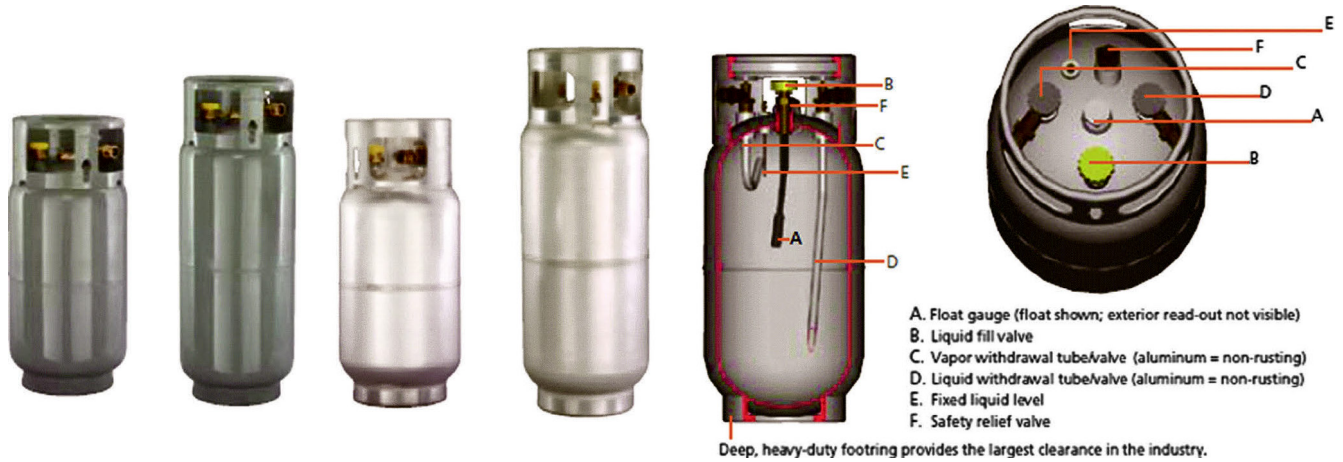
WORTHINGTON
CYLINDERS

CYLINDERS, TANKS, AND SCALES

CYLINDERS, TANKS, AND SCALES

Cylinders

Forklift Cylinders



| Part Number | Height | Diameter | Tare Weight | Description |
|-------------|--------|----------|-------------|--|
| 20FLU | 19.2" | 12.3" | 26.5 LBS | 20 lb Fork Lift Cylinder |
| 20FLAL | 20.3" | 12.3" | 19.3 LBS | 20 lb Fork Lift Cylinder (aluminum) |
| 20BUF | 20.3" | 12.3" | 19.3 LBS | 20 lb Buffer Cylinder-Vapor Service (aluminum) |
| 33FLU | 26.9" | 12.3" | 34.5 LBS | 33 lb Fork Lift Cylinder |
| 33FLAL | 28" | 12.3" | 22.9 LBS | 33 lb Fork Lift Cylinder (aluminum) |
| 33PMAL | 28" | 12.3" | 33.5 LBS | 33.5 lb Aluminum LP Mower OPD Cylinder |
| 43FLU | 32.8" | 12.3" | 40 LBS | 43 lb Fork Lift Cylinder |
| 43FLAL | 34.1" | 12.3" | 27 LBS | 43 lb Fork Lift Cylinder (aluminum) |

Caps & Collars

Protective Collars & Caps

For use on 60# or 100# cylinders to protect shut-off valve when cylinder is not permanently installed. Standard connection has 3 1/2" boss. Collars & caps for 3 1/8" boss also available.

| Part Number | Boss Diameter | Description |
|-------------|---------------|---|
| CAP3.125 | 3 1/8" | Cap for 3 1/8" boss. |
| CAP3.5 | 3 1/2" | Cap for 3 1/2" boss. |
| 312MV | 3 1/2" | Collar for 3 1/2" boss- w/ cutout for Multivalve. |

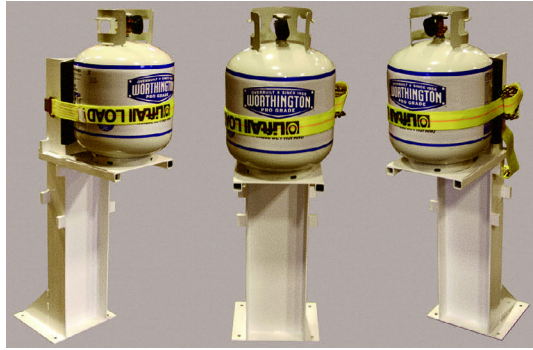


CYLINDERS, TANKS, AND SCALES

CYLINDERS, TANKS, AND SCALES

Cylinder Tools

Cylinder Vise



| Part Number | Description |
|-------------|--|
| CYLWISE | Adjustable shelf allows you to hold 20, 30 and 40 lb. cylinders. Remove shelf for 100 lb. cylinders. Heavy nylon ratchet strap and foam back support holds cylinder tight without marring cylinder finish. Vise can be shipped UPS or Spee Dee |

Bot-L-Rench Tools

Bot-L-Rench Kit



20-6



20-1



20-2



20-8

Special tool kit for removing cylinder valves in DOT cylinders. Available in kits or as parts.

| Part Number | Description |
|-------------|--|
| 20-1 | POL plug for removing cylinder valves |
| 20-2 | Wrench for POL plug to remove cylinder valves |
| 20-6 | Combo valve wrench for removing lift truck and QCC type valves |
| 20-8 | Wrench for OPD cylinder valve |

CYLINDERS, TANKS, AND SCALES

CYLINDERS, TANKS, AND SCALES

Scales

Portable Cylinder Scale



| Part Number | Capacity | Description |
|--------------|----------|---|
| CYLSCALE-500 | 500 Lbs | Portable Scale, Mechanical Beam, 19" x 28", 500 Lb Capacity |

Note: Other capacity scales may be ordered upon request.

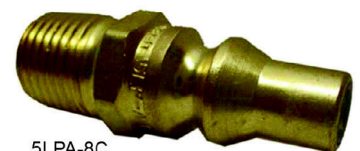
OPD Cylinder Valves

| Part Number | Description |
|--------------|--|
| 330685 | 4/5# OPD Valves (3" Dip Tube) |
| 330690 | 10/11# OPD Valves (3.6" Dip Tube) |
| 30 OPD-VALVE | 30# OPD Valve |
| 330705 | 40# OPD Cylinder Valve |
| PV2004S | OPD Valve For 20# Steel Cylinder (50 Per Case) |

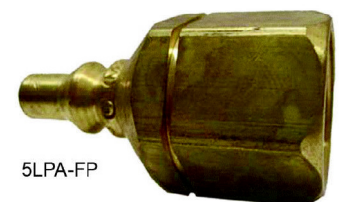


Cylinder Valve Connectors

| Part Number | Description |
|-------------|---|
| 5LPA-11C | Hansen Flow Limiter Quick Disconnect |
| 5LPA-8C | Quick Disconnect Plug For Hansen Coupler |
| 5LPA-FP | Quick Connect Filling ADT |
| ME393-1 | 1-5/16" M. Acme x FPOL x 1/4" FPT Adapter |



5LPA-8C



5LPA-FP

CYLINDERS, TANKS, AND SCALES

Misc Valve Repair Kits

| Part Number | Description |
|-------------|--|
| 3250-8LH | Selpac Bonnet Assembly-Left- (7/8"Nut) |
| 3329-13BLH | Selpac Left Hand Bonnet |
| 3329-7 | Handwheel For 3329, 3331,3349, & 2030 Series Valve |
| 3740-13 | Self-Tapping Screw |

Cylinder Mover

The Red Dragon CD-505 is specifically designed for transporting 100 pound cylinders. The ergonomic design features handles that are set wide and angled outward, making it easy to push, pull and turn. Constructed of heavy gauge square tubing. Features removable, two ply pneumatic tires mounted on steel wheels with heavy duty roller bearings on a 1" steel axle (cylinder not included).

| Part Number | Description |
|-------------|---------------------------|
| CD505 | Red Dragon Cylinder Mover |



CYLINDERS, TANKS, AND SCALES

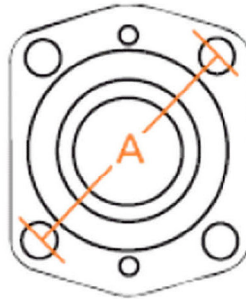
GAUGES

How To Order A Gauge

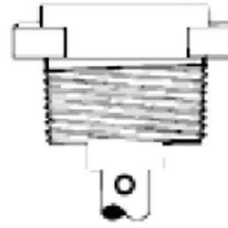
1. Determine Gauge Head Type:



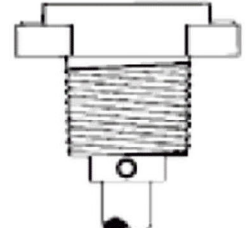
JR- 4 Bolt
A= 2-1/32"



SR- 4 Bolt
A= 2-1/2"



1-1/4" NPT
Thread

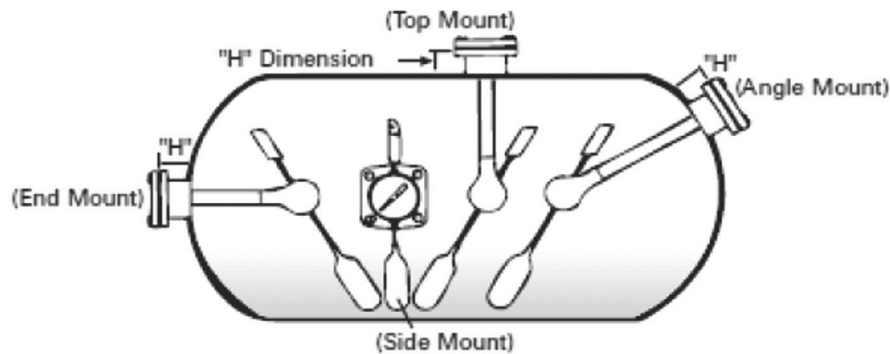


1" NPT
Thread

2. Determine Tank Diameter:

On tank data plate, or measure circumference (in inches) and divide by 3.14.

3. Determine Mounting Location and Riser Height:



GAUGES

Domestic Tank & Forklift Gauge Parts

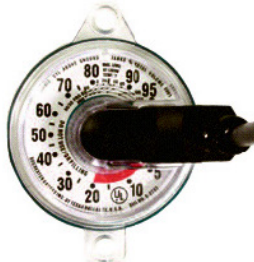
Junior Gauges



JRLD-U



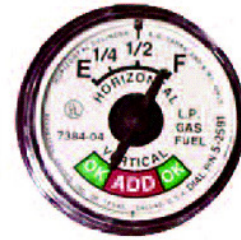
JRLD



5909S02799



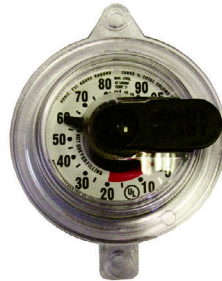
JRLDK



5374S02445

| Part Number | Fits | Description |
|-------------|---------------|---|
| JRLD | Junior Gauges | Junior LP Dial, ASME Aboveground, Remote Ready |
| 5909S02799 | Junior Gauges | Junior Dial, 5-95%, For ASME Underground Tanks, Remote Ready |
| 5909S02772 | Junior Gauges | Junior Dial, 10-80%, for DOT Vertical Cylinders |
| JRLD-U | Junior Gauges | Junior Dial- 33.5# Cylinders |
| 5374S02445 | Junior Gauges | Junior Dial, Snap-on, for 20 & 33.5# Cylinders, Universal |
| 5364S01951 | Junior Gauges | Junior Dial, Snap-on, 10-80%, for 1" NPT Gauges on Vertical Cylinders |
| JRLDK | Junior Gauges | Junior LP Dial Kit |
| JRBLT | Junior Gauges | Junior Gauge Bolt |
| JRGKT | Junior Gauges | Junior Gauge Gasket |
| JRRNG | Junior Gauges | Junior Gauge O-Ring |
| JRLD-BRKT | Junior Gauges | Bracket for junior gauges |

Senior Gauges



SRLD



SRLDK

| Part Number | Fits | Description |
|-------------|---------------|--|
| SRLD | Senior Gauges | Senior LP Dial, Remote Ready |
| 5986S02772 | Senior Gauges | Senior LP Dial, 10-80%, for DOT Vertical Tanks |
| SRLDK | Senior Gauges | Senior LP Dial Kit |
| SRBLT | Senior Gauges | Senior Gauge Bolt |
| SRGKT | Senior Gauges | Senior Gauge Gasket |
| SRRNG | Senior Gauges | Senior Gauge O-Ring |
| SRLD-BRKT | Senior Gauges | Bracket for senior gauges |

Taylor Gauges

| Part Number | Fits | Description |
|-------------|---------------|--------------------------------------|
| 130005 | Taylor Gauges | Junior Taylor Dial Kit |
| 130010 | Taylor Gauges | Senior Taylor Dial Kit |
| 130012 | Taylor Gauges | Junior Taylor- Replacement Dial Only |
| GSDTA0HAE00 | Taylor Gauges | Junior Taylor "A" Dial, Remote Ready |
| GSDTB0HAE00 | Taylor Gauges | Senior Taylor "B" Dial, Remote Ready |

GAUGES

GAUGES

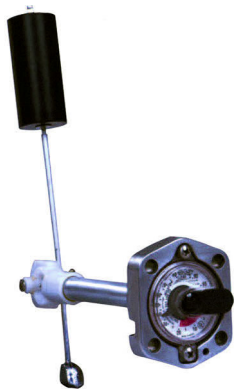
Domestic Tank Gauges

Junior



| Part Number | Mounting Type | Tank Diameter | Mounting Position | Riser Dimension |
|-------------|---------------|---------------|-------------------|-----------------|
| LJT24-1 | Junior | 24" | Top | 1" |
| LJT30-1 | Junior | 30" | Top | 1" |
| LJT30-4 | Junior | 30" | Top | 4" |
| LJT37-1 | Junior | 37" | Top | 1" |
| LJT37-4 | Junior | 37" | Top | 4" |
| LJT37-45 | Junior | 37" | 45 Deg. | 1" |
| LJT41-1 | Junior | 41" | Top | 1" |
| LJT41-4 | Junior | 41" | Top | 4" |
| LJT41-45 | Junior | 41" | 45 Deg. | 1" |
| LJT46-1 | Junior | 46" | Top | 1" |
| LJT46-4 | Junior | 46" | Top | 4" |
| LJT420-U | Junior | 420# Cyl | Top | 1" |

Senior



| Part Number | Mounting Type | Tank Diameter | Mounting Position | Riser Dimension |
|--------------|---------------|---------------|-------------------|-----------------|
| LST24-1 | Senior | 24" | Top | 1" |
| LST30-1 | Senior | 30" | Top | 1" |
| LST30-45 | Senior | 30" | 45 Deg. | 1" |
| LST37-1 | Senior | 37" | Top | 1" |
| LST37-45 | Senior | 37" | 45 Deg. | 1" |
| LST41-1 | Senior | 41" | Top | 1" |
| LST41-4 | Senior | 41" | Top | 4" |
| LST41-45 | Senior | 41" | 45 Deg. | 1" |
| LST46-1 | Senior | 46" | Top | 1" |
| LST46-45 | Senior | 46" | 45 Deg. | 1" |
| LST420-U | Senior | 420# Cyl | Top | 1" |
| LST37-CENTER | Senior | 37" | Center End Mount | - |
| LST41-CENTER | Senior | 41" | Center End Mount | - |

1-1/4" Threaded



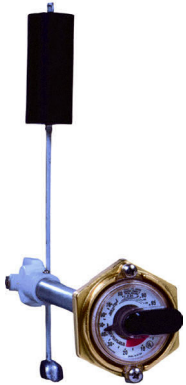
| Part Number | Mounting Type | Tank Diameter | Mounting Position | Riser Dimension |
|-------------|-----------------|---------------|-------------------|-----------------|
| LTT24-1 | 1-1/4" Threaded | 24" | Top | 1" |
| LTT30-1 | 1-1/4" Threaded | 30" | Top | 1" |
| LTT37-1 | 1-1/4" Threaded | 37" | Top | 1" |
| LTT41-1 | 1-1/4" Threaded | 41" | Top | 1" |
| LTT420 | 1-1/4" Threaded | 420# Cyl | Top | 1" |

GAUGES

GAUGES

Domestic Tank Gauges

1" Threaded



| Part Number | Mounting Type | Tank Diameter | Mounting Position | Riser Dimension |
|-------------|---------------|---------------|-------------------|-----------------|
| LT24 | 1" Threaded | 24" | Top | 1" |
| LT30 | 1" Threaded | 30" | Top | 1" |
| LT37 | 1" Threaded | 37" | Top | 1" |
| LT41 | 1" Threaded | 41" | Top | 1" |
| LT420 | 1" Threaded | 420# Cyl | Top | 1" |

Senior (NH3 Service)



| Part Number | Mounting Type | Tank Diameter | Mounting Position | Riser Dimension |
|-------------|----------------------|---------------|-------------------|-----------------|
| NST37-45 | Senior (NH3 Service) | 37" | 45 Deg. | 1" |
| NST41-1 | Senior (NH3 Service) | 41" | Top | 1" |
| NST41-45 | Senior (NH3 Service) | 41" | 45 Deg. | 1" |
| NST46-1 | Senior (NH3 Service) | 46" | Top | 1" |
| NST46-45 | Senior (NH3 Service) | 46" | 45 Deg. | 1" |

Fork Lift Cylinder Gauges



| Part Number | Cylinder Size | Gauge Type | Cyl. Mounting Position |
|-------------|---------------|-----------------|------------------------|
| LJF20-U | 20 Lb. | Junior | Universal |
| LJF20-H | 20 Lb. | Junior | Horizontal |
| LTF20-U | 20 Lb. | 1-1/4" Threaded | Universal |
| LTF20-H | 20 Lb. | 1-1/4" Threaded | Horizontal |
| LTF20-U75 | 20 Lb. | 3/4" Threaded | Universal |
| LJF33-U | 33 Lb. | Junior | Universal |
| LJF33-H | 33 Lb. | Junior | Horizontal |
| LTF33-U | 33 Lb. | 1-1/4" Threaded | Universal |
| LTF33-H | 33 Lb. | 1-1/4" Threaded | Horizontal |
| LTF33-U75 | 33 Lb. | 3/4" Threaded | Universal |
| LJF43-H | 43 Lb. | Junior | Horizontal |
| LJF43-U | 43 Lb. | Junior | Universal |
| LTF43-H | 43 Lb. | 1-1/4" Threaded | Horizontal |
| LTF43-U | 43 Lb. | 1-1/4" Threaded | Universal |
| LTF43-U75 | 43 Lb. | 3/4" Threaded | Universal |

GAUGES

Storage Tank Gauges



| Part Number | Tank Diameter | Dial Size | Description |
|-------------|---------------|-----------|---|
| MAG84 | 84" | 8" | 84" Storage Tank Gauge |
| MAG92 | 92" | 8" | 92" Storage Tank Gauge |
| MAG96 | 96" | 8" | 96" Storage Tank Gauge |
| MAG102 | 102" | 8" | 102" Storage Tank Gauge |
| MAG104 | 104" | 8" | 104" Storage Tank Gauge |
| MAG108 | 108" | 8" | 108" Storage Tank Gauge |
| MAG130 | 130" | 8" | 130" Storage Tank Gauge |
| P6293-R4400 | Up to 44" | 4" | Rotogauge Eliminator, for 1" Opening |
| P6293-R6000 | 44" - 60" | 4" | Rotogauge Eliminator, for 1" Opening |
| P6293-R7200 | 60" - 72" | 4" | Rotogauge Eliminator, for 1" Opening - Storage Only |
| P6293-R8400 | 72" - 84" | 4" | Rotogauge Eliminator, for 1" Opening - Storage Only |

* Additional sizes available through special order

Storage Tank Gauge Parts

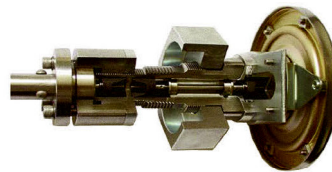


| Part Number | Fits | Description |
|-------------|-------------------------------|-------------------------------|
| 4GKT | Rochester 4" | 4" Dial Glass Gasket |
| 3-408 | Rochester 4" | 4" Dial Glass |
| 4DIAL | Rochester 4" | 4" Magnetel Dial |
| 4BRACKET | Rochester 4" | 4" Rochester Dial Bracket |
| 8GKT | Rochester 8" | 8" Dial Glass Gasket |
| 3-22 | Rochester 8" | 8" Dial Glass |
| 8DIAL | Rochester 8" | 8" Magnetel Dial |
| 8BRACKET | Rochester 8" | 8" Rochester Dial Bracket |
| 130035 | Taylor 8" | 8" Taylor LP Dial Assembly |
| MAGADT-WELD | All Rochester & Taylor Gauges | Weld-type Tank Gauge |
| MAGADT | All Rochester & Taylor Gauges | Threaded Tank Gauge Adaptor |
| MAGGKT | All Rochester & Taylor Gauges | Storage Tank Ga. Gasket |
| 40-413 | All Rochester & Taylor Gauges | S.S. Rochester Dial Screw |
| 44-403 | All Rochester & Taylor Gauges | Hex Nut for Adaptor Stud Bolt |
| 56-404 | All Rochester & Taylor Gauges | Stud Bolt for Mag. Adaptor |

Transport Tank Gauges



RR72



Robogauge Cutaway



Robogauge Face

| Part Number | Tank Diameter | Dial Size | Description |
|-------------|---------------|-----------|-------------------------------|
| RR72 | 72" | 4" | 72" Transport Tank Gauge |
| RR79 | 79" | 4" | 79" Transport Tank Gauge |
| RR84 | 84" | 4" | 84" Transport Tank Gauge |
| RR85 | 85" | 4" | 85" Transport Tank Gauge |
| RR86 | 86" | 4" | 86" Transport Tank Gauge |
| RR96 | 96" | 4" | 96" Transport Tank Gauge |
| ROBO84 | 84" | 4" | 84" Robogauge, for 1" Opening |

* Additional sizes available through special order

GAUGES

Anhydrous Ammonia Pressure Gauges

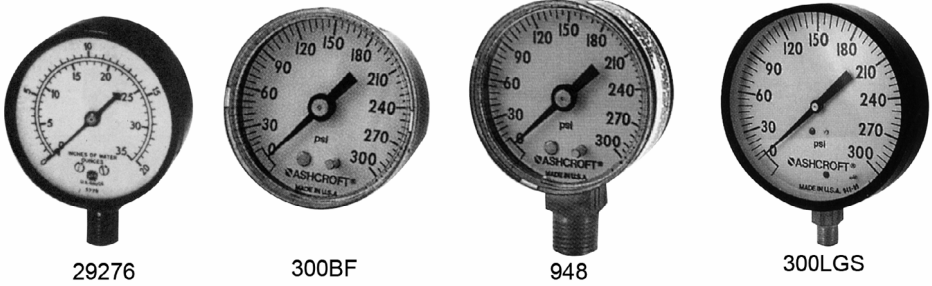
| Part Number | Pressure Range | Dial Size | Connection Type | Connection Location | Case Material |
|-------------|----------------|-----------|-----------------|---------------------|---------------|
| A8060 | 0-60 PSI | 2-1/2" | 1/4" NPT S.S. | Bottom | Steel |
| A8150 | 0-150 PSI | 2-1/2" | 1/4" NPT S.S. | Bottom | Steel |
| A8400 | 0-400 PSI | 2-1/2" | 1/4" NPT S.S. | Bottom | Steel |

Liquid Filled Pressure Gauges



| Part Number | Pressure Range | Dial Size | Connection Type | Connection Location | Case Material |
|-------------|----------------|-----------|-----------------|---------------------|---------------|
| 15LF | 0-15 PSI | 2-1/2" | 1/4" NPT | Bottom | Stainless |
| 30LF | 0-30 PSI | 2-1/2" | 1/4" NPT | Bottom | Stainless |
| 30LFBF | 0-30 PSI | 2-1/2" | 1/4" NPT | Back | Stainless |
| 60LF | 0-60 PSI | 2-1/2" | 1/4" NPT | Bottom | Stainless |
| 100LF | 0-100 PSI | 2-1/2" | 1/4" NPT | Bottom | Stainless |
| 100LFBF | 0-100 PSI | 2-1/2" | 1/4" NPT | Back | Stainless |
| 400LF | 0-400 PSI | 2-1/2" | 1/4" NPT | Bottom | Stainless |
| 400LFBF | 0-400 PSI | 2-1/2" | 1/4" NPT | Back | Stainless |
| 400LFSS | 0-400 PSI | 2-1/2" | 1/4" NPT S.S. | Bottom | Stainless |
| 400LFSSBF | 0-400 PSI | 2-1/2" | 1/4" NPT S.S. | Back | Stainless |

Standard Pressure Gauges



29276

300BF

948

300LGS

| Part Number | Pressure Range | Dial Size | Connection Type | Connection Location | Case Material |
|-------------|--------------------|-----------|-----------------|---------------------|---------------|
| 30VAC | 0-30" HG Vac. | 2-1/2" | 1/4" NPT | Bottom | Stainless |
| VAC/PSI | 30" HG Vac-300 PSI | 2-1/2" | 1/4" NPT | Bottom | Steel |
| 2434A-2 | 0-35" W.C. | 2-1/2" | 1/8" Hose Barb | Bottom | Steel |
| 29276 | 0-35" W.C. | 2-1/2" | 1/4" NPT | Bottom | ABS |
| 5PGS | 0-5 PSI | 2-1/2" | 1/4" NPT | Bottom | ABS |
| 15BF | 0-15 PSI | 2" | 1/4" NPT | Back | Steel |
| 15PGS | 0-15 PSI | 2" | 1/4" NPT | Bottom | Steel |
| 30-1/8BF | 0-30 PSI | 2" | 1/8" NPT | Back | Steel |
| 30-1/8 | 0-30 PSI | 2" | 1/8" NPT | Bottom | Steel |
| 2411 | 0-30 PSI | 2" | 1/4" NPT | Bottom | Brass |
| 3226A-3 | 0-30 PSI | 2" | 1/4" NPT | Bottom | Steel |
| 30BF | 0-30 PSI | 2" | 1/4" NPT | Back | Steel |
| 60BF | 0-60 PSI | 2" | 1/4" NPT | Back | Steel |
| 5575 | 0-60 PSI | 2" | 1/4" NPT | Bottom | Brass |
| 5547 | 0-60 PSI | 2" | 1/4" NPT | Bottom | Steel |
| 1286 | 0-100 PSI | 2" | 1/4" NPT | Bottom | Steel |
| 5576 | 0-100 PSI | 2" | 1/4" NPT | Bottom | Brass |
| 300-1/8 | 0-300 PSI | 1-1/2" | 1/8" NPT | Bottom | Steel |
| 300-1/8BF | 0-300 PSI | 1-1/2" | 1/8" NPT | Back | Steel |
| 300BF | 0-300 PSI | 2" | 1/4" NPT | Back | Steel |
| 948 | 0-300 PSI | 2" | 1/4" NPT | Bottom | Brass |
| 948B | 0-300 PSI | 2" | 1/4" NPT | Bottom | Steel |
| 300LGS | 0-300 PSI | 3-1/2" | 1/4" NPT | Bottom | Steel |

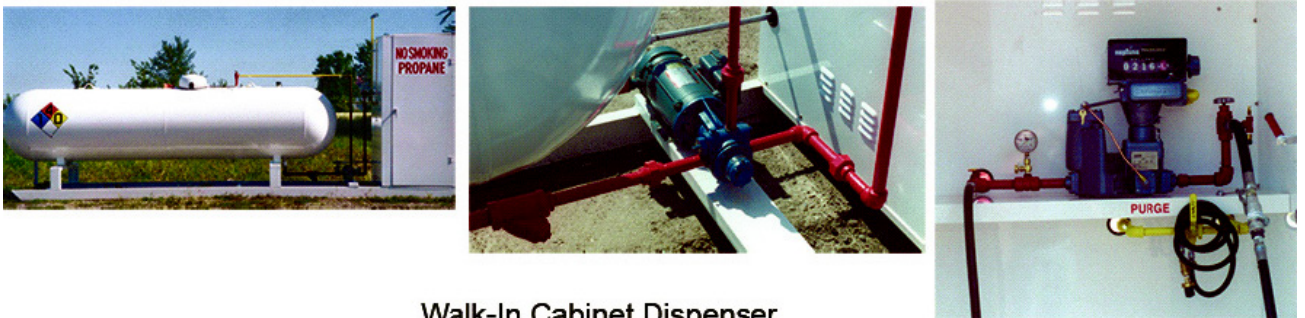
GAUGES

DISPENSERS & CYLINDER EXCHANGE CABINETS

Dispensers



Short Cabinet Dispenser



Walk-In Cabinet Dispenser

Dispensers are 100% custom built to your specifications. Call for a quote.

Typical specifications include:

- 1" Neptune Type 4D meter, Model 600- 18 GPM Max. Capacity register with totalizer, and available with Temperature Compensation.
- Blackmer LGF1PD propane pump with 1 1/2 HP 115/230V explosion proof motor with overload relay. Explosion proof switch is mounted inside the cabinet door. Capacity approximately 12 GPM @ 70 PSID. Conduit Installed. If a different pump is desired they are available at an adjusted price.
- Pump piping includes: pressure gauge, bypass line, and 20 GPM excess flow. All fittings are forged steel, and all piping is schedule 80.
- Detecto 854F-100 1000# beam scale, protected from the weather.
- 18ft of 1/2" propane hose for rec vehicle filling through the meter with safety hose coupling and emergency pull-away valve with separate shut off and blow down assembly.
- 5ft of 1/2" propane hose, bypassing meter for cylinder filling with long POL "O" ring fill adaptor and quick acting shut-off valve.
- Decals covering cylinder filling and rec vehicle filling.
- Cabinet fabricated of #14 gauge "Galvaneel" and is a Bright White Powder Coated finish.
- Filling station is also available without cylinder filling feature or without rec vehicle feature at an adjusted price.
- Walk-in Cabinet dimensions approximately: 80 1/2" high, 41" wide, 41" deep, with 29" door.
- Short Cabinet dimensions approximately: 46" high, 41" wide, 38" deep, with 24" door.
- Cylinder Purge System.
- Fire Extinguisher
- Heavy Duty 6" channel iron skid.
- Emergency Shut off pull cable and sign.
- Explosion Proof light available.

DISPENSERS & CYLINDER EXCHANGE CABINETS

Autogas Dispensers & Accessories



P577043



P575846



P577040



AUTOGAS2-3



P575845



60-EN001



41-FV202



41-AD205



41-AD206



MIFARE

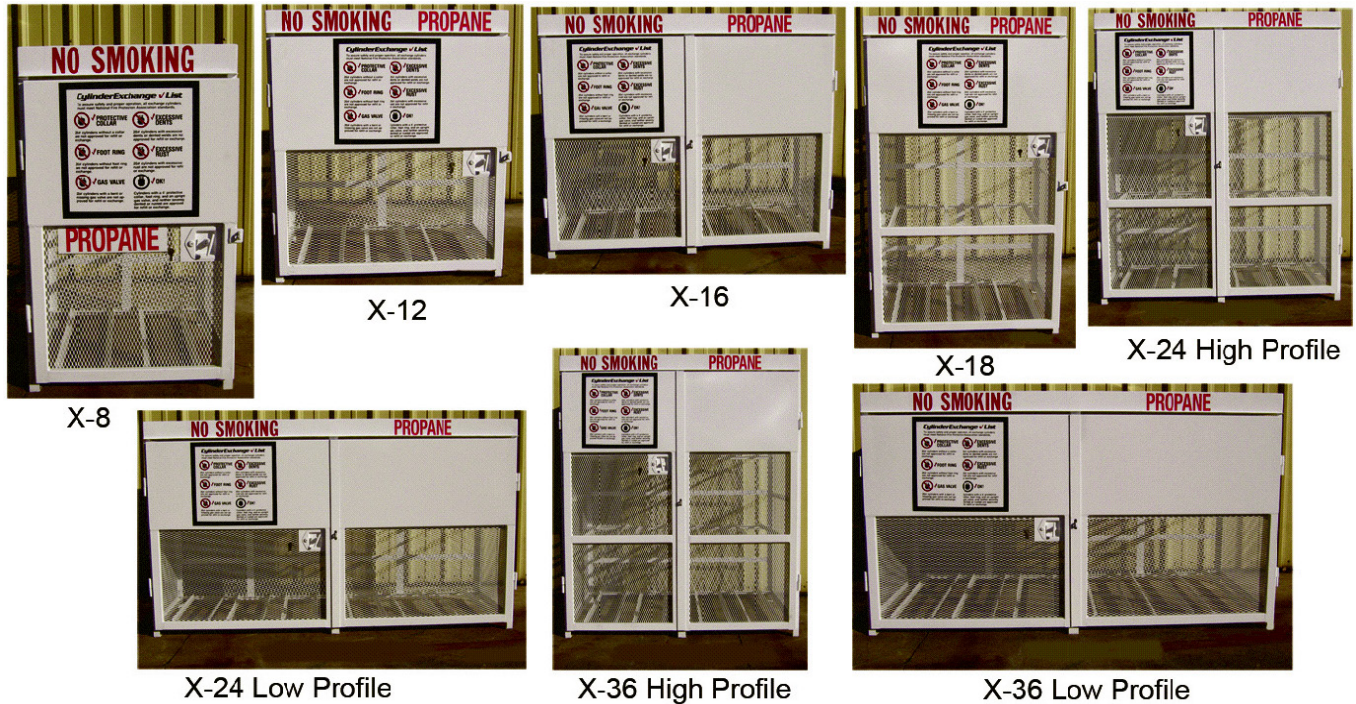
| Part Number | Description |
|------------------------|---|
| AUTOGAS2-3 | Atlas Single, LC Meter, 1000G Tank |
| AUTOGAS2-3 1990 | Atlas Single, LC Meter, 1990 G Tank |
| AUTOGAS3 | Atlas Retail Dispenser- Dispenser/Meter Only- No Skid |
| 60-EN002 | Staubli Ultra Low Emission Nozzle |
| 41-AD205 | Adapter- Acme Dispensing Nozzle To Euro Filler Valve |
| 41-AD206 | Adapter From Staubli Nozzle To Acme Filler Valve |
| 41-FV202 | Euro Style Remote Filler Valve W/1/2" SAE Elbow |
| MIFARE | Mifare Tag For Gasboy |
| GG20SL | Gasguard Autogas Filler Nozzle with Locking Handle |
| 10-1110-805 | Lever Latch For The GG20 |
| PDF4CP | 4" Donaldson Clean LPG Particulate Filter Assembly |
| PDF5CP | 5" Donaldson Clean LPG Particulate Filter Assembly |
| PDF5CP1 | 5" Donaldson Clean LPG Particulate Filter Assembly |
| PDF5CC | 5" Donaldson Clean LPG Carbon Filter Assembly |
| PDF5CC1 | 5" Donaldson Clean LPG Carbon Filter Assembly |
| P577043 | 4" Donaldson Clean LPG Filter Head |
| P575844 | 5" Donaldson Clean LPG Filter Head |
| P578670 | 5" Donaldson Clean LPG Filter Head |
| P575845 | 4" Donaldson Clean LPG Filter Housing |
| P575837 | 5" Donaldson Clean LPG Filter Housing |
| P575846 | 4" Donaldson Clean LPG Particulate Filter |
| P575836 | 5" Donaldson Clean LPG Particulate Filter |
| P577040 | 5" Donaldson Clean LPG Carbon Filter |

DISPENSERS & CYLINDER EXCHANGE CABINETS

DISPENSERS & CYLINDER EXCHANGE CABINETS

20# Exchange Cylinder Storage Cabinets

The "X" Series



DISPENSERS & CYLINDER EXCHANGE CABINETS

Features

- Three safety decals
- Heavy-duty tubular hinge welded to frame and door
- Stores 8, 12, 16, 18, 24 or 36, 20# cylinders
- 24 and 36 cylinder cabinets have double doors
- Can be fastened to floor
- Meets all safety requirements
- All 'X' series cabinets are powder coated white, other colors are available upon request.

Construction

- Frame 1 1/2" angle
- Shelves 1" angle
- Roof 16 gauge steel
- Doors and side 1/2" 16 gauge expanded metal
- Door frame 1" x 2"
- All-steel welded construction
- Set up, ready to use
- Lockable "T" handle latch, two keys furnished and keyed alike. Also has place to padlock. Padlock not included.



| Part Number | No. Cyls | Deep | Wide | High | Ship Wt. Lbs |
|-------------|----------|-------------------|-------------------|-------------------|--------------|
| X-8 | 8 | 27" (2 cylinders) | 30" (2 cylinders) | 50" (2 cylinders) | 170 |
| X-12 | 12 | 27" (2 cylinders) | 43" (3 cylinders) | 50" (2 cylinders) | 195 |
| X-16 | 16 | 27" (2 cylinders) | 60" (4 cylinders) | 50" (2 cylinders) | 270 |
| X-18 | 18 | 27" (2 cylinders) | 43" (3 cylinders) | 72" (3 cylinders) | 270 |
| X-24 Hi | 24 | 27" (2 cylinders) | 60" (4 cylinders) | 72" (3 cylinders) | 345 |
| X-24 Lo | 24 | 27" (2 cylinders) | 85" (6 cylinders) | 50" (2 cylinders) | 345 |
| X-36 Hi | 36 | 39" (3 cylinders) | 60" (4 cylinders) | 72" (3 cylinders) | 490 |
| X-36 Lo | 36 | 39" (3 cylinders) | 85" (6 cylinders) | 50" (2 cylinders) | 490 |

All Cabinets also available in Aluminum.

DISPENSERS & CYLINDER EXCHANGE CABINETS

33# Motor Fuel Cylinder Storage Cabinets

The "M" Series



M-4



M-6



M-12

Features

- Three safety decals
- Heavy-duty tubular hinge welded to frame and door
- Three safety decals
- Tapered shelf front
- Heavy-duty tubular hinge-welded to frame and door
- Lockable "T" handle latch, two keys furnished keyed alike. Also has place to padlock. Padlock not included
- 16 and 24 cylinder cabinets have two doors
- Stores motor fuel cylinders
- Meets all safety requirements
- Set up and ready to use

Construction

- Frame 1 1/2" angle
- Shelves 1" angle
- Roof 16 gauge steel
- All powder coated safety yellow. Other colors are available.
- Doors and sidewalls covered with 16 gauge expanded metal
- All-steel welded construction



| Part Number | No. Cyls | Deep | Wide | High | Ship Wt. Lbs |
|-------------|----------|------------------|-------------------|-------------------|--------------|
| M-4 | 4 | 31" (1 cylinder) | 30" (2 cylinders) | 40" (2 cylinders) | 120 |
| M-6 | 6 | 31" (1 cylinder) | 30" (3 cylinders) | 55" (2 cylinders) | 152 |
| M-8 | 8 | 31" (1 cylinder) | 30" (4 cylinders) | 70" (2 cylinders) | 180 |
| M-12 | 12 | 31" (1 cylinder) | 43" (4 cylinders) | 70" (3 cylinders) | 230 |
| M-16 | 16 | 31" (1 cylinder) | 60" (4 cylinders) | 70" (4 cylinders) | 315 |
| M-24 | 24 | 31" (1 cylinder) | 85" (4 cylinders) | 70" (6 cylinders) | 405 |

All Cabinets also available in Aluminum.

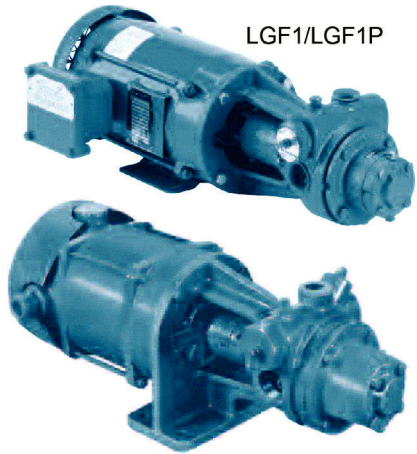
DISPENSERS & CYLINDER EXCHANGE CABINETS

PUMPS & COMPRESSORS

Blackmer Pumps

LGF1 Pumps

Motor Speed Pumps for Cylinder Filling



LGF1/LGF1P

These 1-inch motor speed pumps have long been popular for cylinder filling, small volume motor fueling and supplying small vaporizers. They offer the same heavy-duty construction of larger Blackmer models and are available in two mounting styles and capacity ranges. The LGF1 model is fitted with an integral bracket and coupling for direct flange mounting to a NEMA C-face motor. This bracket also allows the pump body to be rotated to simplify hookup to piping systems. The LGB1 model is equipped with a coupling and bracket for mounting to a conventional base. The LGF1 and LGB1 models will handle up to 10 U.S. gpm. The LGF1P and LGB1P models offer 50% greater capacity and will handle up to 15 U.S. gpm.²

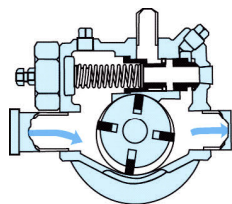
LGF Drive Style
Flange Mounting - Direct Motor Drive

LGF1 and LGF1P models are supplied with an integral bracket and flexible shaft coupling, ready to accept a NEMA C-face motor. All LGF units are available with or without electric motors. Standard motors furnished by Blackmer for these pumps are explosion-proof, single-phase, 115/230 volt, with automatic reset overload protection. An explosion-proof manual switch is also available for mounting at the motor or remote location.

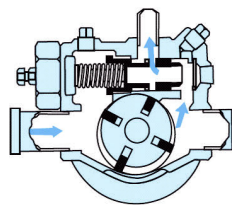
| Part Number | Factory Relief Valve Setting | Pump and Motor Speed RPM | Approximate Delivery of Propane at Differential Pressures and Pump Speeds Shown ¹ | | Maximum | | Normal Time To Fill LP Gas Cylinders in Minutes | | Standard Motor ² HP | Motor Size For Mounting on Standard Base ² | |
|-------------|------------------------------|--------------------------|--|------------------------|---------------------------|-----------------------------------|---|--------------------------|--------------------------------|---|--------------------|
| | | | 50 PSI (3.45 Bar) GPM | 100 PSI (6.89 Bar) GPM | Differential Pressure PSI | Working Pressure ³ PSI | 20 LB. (9 KG) Cylinder | 100 LB. (45 KG) Cylinder | | Minimum Frame Size | Maximum Frame Size |
| LGF1 | 105 psi (7.24 Bar) | 1,750 | 8.0 | 6.0 | 125 | 350 | 3/4 | 3 | 1 | 56C | 184C4 |
| LGF1P | 120 psi (8.27 Bar) | 1,750 | 13.0 | 10.0 | 125 | 350 | 1/2 | 2 | 1 1/2 | 56C | 184C4 |

- 1 Check the pump's delivery and brake horsepower requirements in the performance curves below. See footnote with the curves which explains the factors that can cause delivery to vary.
- 2 Motors may be specified from Electric Motor Price List No. 10-MTRG-01 (explosion-proof manual start switch for 1 & 1-1/2 horsepower single-phase motors also available).
- 3 Maximum rated working pressure is 350 psi (24.13 Bar) for LPG and NH3 (limited by U.L. and N.F.P.A. 58).
- 4 Pump flange accepts NEMA C-face motors with 5-7/8" bolt circle diameter. Pump flange will not accept 182TC or 184TC frames.

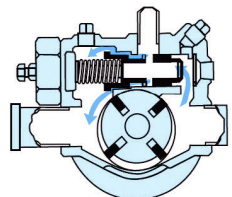
FIGURE3. Combination relief/bypass valve



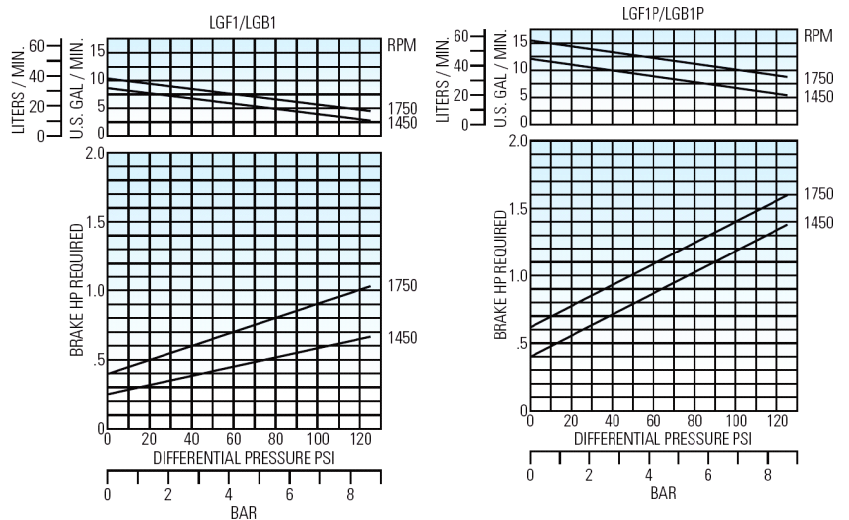
Normal Operation
Valve is completely closed during normal operation with discharge line open.



Back-to-Tank Bypassing
Discharge pressure exceeding the valve setting opens valve to second stage, returning all or part of pump flow back to supply tank.



Pressure Relief
If back-to-tank line is closed, valve opens to third stage, passing flow back to inlet side of pump.



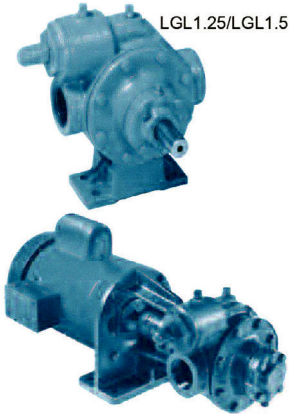
PUMPS & COMPRESSORS

PUMPS & COMPRESSORS

Blackmer Pumps

LGL1.25 & LGL1.5 Pumps

Motor Speed Pumps for Motor Fueling and Multi-Cylinder Filling



These durable motor speed pumps offer capacities from 9 to 35 U.S. gpm (34-132 lpm), and are ideal for motor fueling, multiple-station cylinder filling and a variety of small transfer jobs. The LGL models are designed for foot mounting to a common base-plate. The LGLF models are fitted with an integral bracket and coupling for direct flange mounting to a NEMA C-face motor. This bracket also allows the pump body to be rotated to simplify hookup to piping systems.

LGF Drive Style Flange Mounting - Direct Motor Drive

Standard LGR1.25 and LGLF1.25 models are supplied with an integral bracket and a flexible shaft coupling, ready to accept a NEMA C-face motor. All LGF units are available with or without electric motors.

| Part Number | Factory Relief Valve Setting | Pump and Motor Speed RPM | Approximate Delivery of Propane at Differential Pressures and Pump Speeds Shown ¹ | | Maximum | | Motor Size For Mounting on Standard Base ² | |
|-------------|------------------------------|--------------------------|--|------------------------|---------------------------|-----------------------------------|---|--------------------|
| | | | 50 PSI (3.45 Bar) GPM | 100 PSI (6.89 Bar) GPM | Differential Pressure PSI | Working Pressure ² PSI | Minimum Frame Size | Maximum Frame Size |
| LGLF1-1/4A | 150 psi (10.34 Bar) | 1,750, 1,150 | 21.0, 13.0 | 18.0, 10.0 | 150,150 | 350,350 | 56C,56C | 184C4,184C4 |
| LGL1-1/2 | 150 psi (10.34 Bar) | 1,750, 1,150 | 33.0, 20.0 | 29.0, 17.0 | 150,150 | 350,350 | 56,56 | 215,215 |

1 Check the pump's delivery and brake horsepower requirements in the performance curves. See footnote with the curves which explains the factors that can cause delivery to vary.

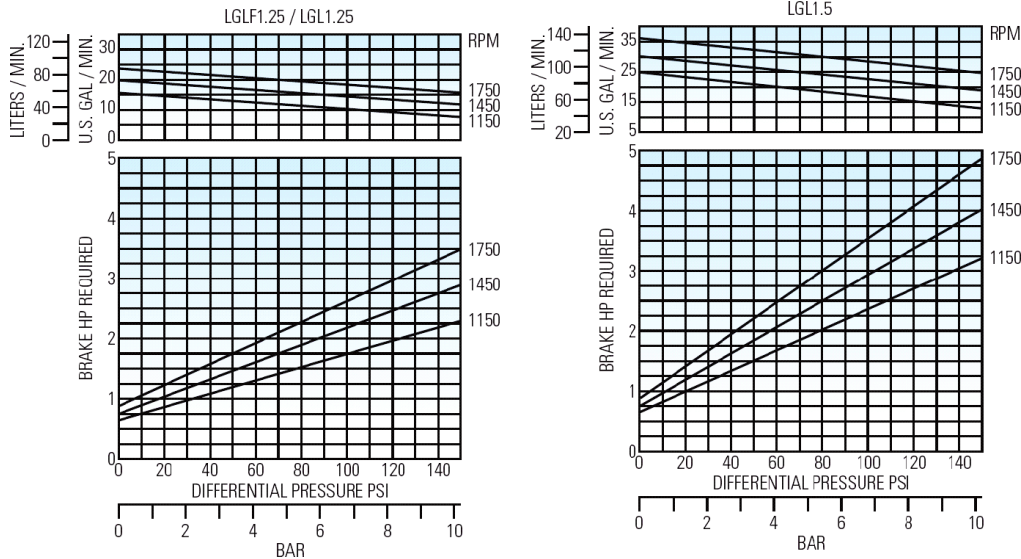
2 Maximum rated working pressure is 350 psi (24.13 Bar) for LPG and NH3 (limited by U.L. and N.F.P.A. 58).

3 Motors may be specified from Electric Motor Price List No. 10-MTRG-01 (explosion-proof manual start switch for 1 & 1-1/2 horsepower single-phase motors also available).

4 Pump flange accepts NEMA C-face motors with 5-7/8" bolt circle diameter. Pump flange will not accept 182TC or 184TC frames.

Note: Refer to back cover for external bypass valve information.

Performance Curves



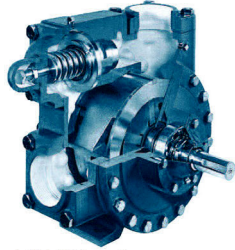
These curves are based on approximate delivery rates when handling propane or anhydrous ammonia at 80°F (26.7°C). Line restrictions such as excess flow valves, elbows, etc. will adversely affect deliveries. For propane at 32°F (0°C), actual delivery will be further reduced to about 80% of nominal. Delivery of butane at 80°F (26.7°C) will be 60% to 70% of these values and may run as low as 35% to 45% at 32°F (0°C). This loss of delivery is not a pump characteristic but is caused by natural thermodynamic phenomena of liquefied gases.

PUMPS & COMPRESSORS

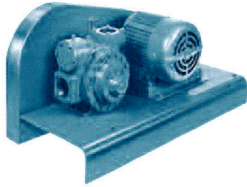
Blackmer Pumps

LGLD2, LGLD3 & LGLD4 Pumps

Multi-Purpose Pumps for Bulk Plants, Terminals and Truck Systems



LGLD4 cutaway



These rugged pumps are ideal for bulk plant service, multiple cylinder filling applications, vaporizers, bobtails and transports.

Single- or double-ended drive shaft models are offered in 2-, 3- and 4-inch port sizes with capacities ranging from 30 to 350 U.S. gpm (114 -1,325 lpm). The LGLD2 and LGLD3 models have long been popular for bobtail service because of their double-ended drive shaft arrangement, which allows the pump to be easily positioned for clockwise or counter-clockwise shaft rotation.

VB Drive Style V-Belt Drive

Standard base-mounted VB units are available, complete with pump, hubs, sheaves, high-torque V-belts and belt guard, mounted on a common base, ready to accept a standard NEMA motor. All VB units are available with or without motors.

| Part Number | Factory Relief Valve Setting | Pump Speed RPM (Using 1,750 RPM Motor) | Approximate Delivery of Propane at Differential Pressures and Pump Speeds Shown ¹ | | Maximum | | Motor Size For Mounting on Standard Base ² | |
|-------------|------------------------------|--|--|------------------------|---------------------------|-----------------------------------|---|------------------------|
| | | | 50 PSI (3.45 Bar) GPM | 100 PSI (6.89 Bar) GPM | Differential Pressure PSI | Working Pressure ² PSI | Minimum Frame Size | Maximum Frame Size |
| LGLD2E | 150 PSI (10.34 Bar) | 660, 520, 420, 330 | 67, 50, 40, 30 | 57, 41, 30, 23 | 150, 150, 150, 150 | 350, 350, 350, 350 | 184T, 182T, 182T, 182T | 213T, 184T, 184T, 182T |
| LGLD3E | 150 PSI (10.34 Bar) | 640, 520, 420, 340 | 133, 108, 80, 59 | 112, 84, 60, 42 | 150, 150, 150, 150 | 350, 350, 350, 350 | 215T, 213T, 213T, 184T | 254T, 215T, 215T, 184T |
| LGLD4 | 150 PSI (10.34 Bar) | 640, 520, 420, 340 | 270, 220, 170, 130 | 220, 180, 130, 90 | 125, 125, 125, 125 | 350, 350, 350, 350 | 254T, 254T, 215T, 213T | 284T, 256T, 256T, 215T |

1 Check the pump's delivery and brake horsepower requirements in the performance curves on opposite page. See footnote with the curves which explains the factors that can cause delivery to vary.

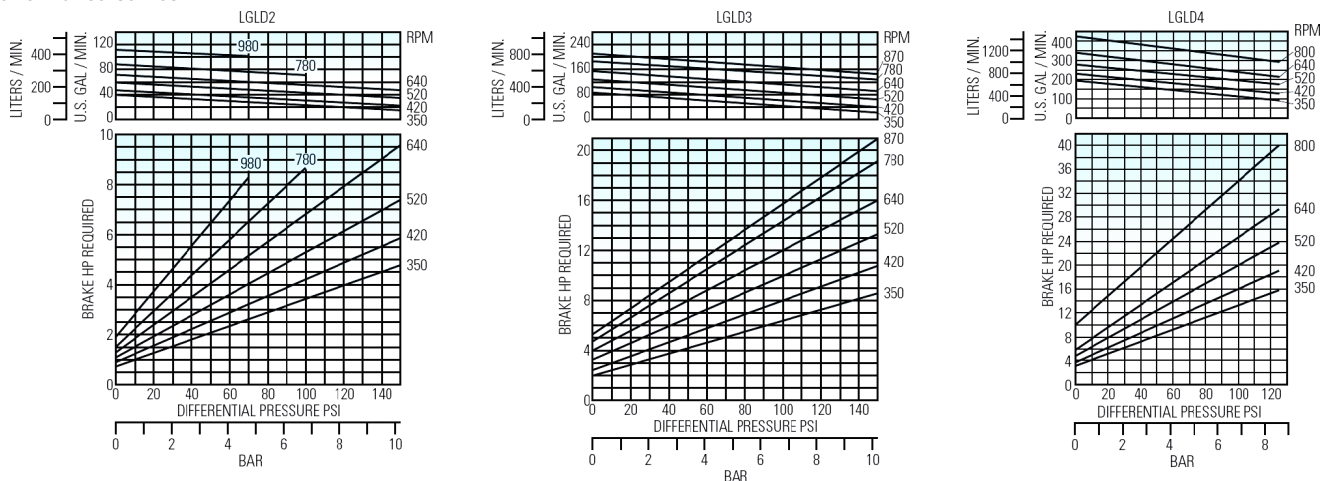
2 Maximum rated working pressure is 350 psi (24.13 Bar) for LPG and NH₃ (limited by U.L. and N.F.P.A. 58).

3 Maximum horsepower that standard drive (V-belt/gearbox and base) will transmit.

4 Motors may be specified from Electric Motor Price List No. 10-MTRG-01

Note: Refer to back cover for external bypass valve information.

Performance Curves



These curves are based on approximate delivery rates when handling propane or anhydrous ammonia at 80°F (26.7°C). Line restrictions such as excess flow valves, elbows, etc. will adversely affect deliveries. For propane at 32°F (0°C), actual delivery will be further reduced to about 80% of nominal. Delivery of butane at 80°F (26.7°C) will be 60% to 70% of these values, and may run as low as 35% to 45% at 32°F (0°C). This loss of delivery is not a pump characteristic but is caused by natural thermodynamic phenomena of liquefied gases.

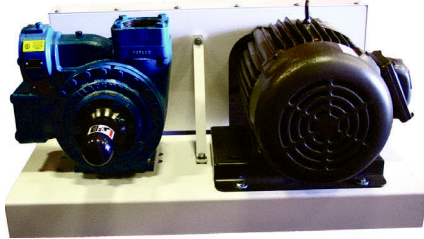
PUMPS & COMPRESSORS

Blackmer Pumps

LGLD2, LGLD3 & LGLD4 Pumps

LGL Series Transfer Pump Assemblies

Foot Mounted Pump



Complete with Base, V-Belts, Belt Guard and Sheaves

- Large capacity pumps for loading transports and delivery trucks and large multiple cylinder filling manifolds.
- Equipped with integral safety relief valve.
- Equipped with replaceable cylinder liner and end discs for easy inexpensive rebuilding
- Assembly includes everything except the motor.

LGLD2E-VB

Includes 184T Base and V-Belt Drive for 5 HP 230/460V Motor.

LGLD3E-VB

Includes 213T Base and V-Belt Drive for 7 1/2 /HP 230/460V Motor..

LGLD4-VB

Assembly includes Pump, 256T Base, V-Belt and Sheaves for 20 HP 230/460VMotor.

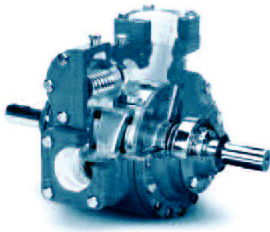
| Part Number | Inlet & Outlet Connections | Drive | Maximum Capacity |
|-------------|----------------------------|--------|------------------|
| LGLD2E-VB* | 2' F.NPT | V belt | 6S gpm |
| LGLD3E-VB* | 3' F.NPT | V belt | 140 gpm |
| LGLD4-VB** | 4' F.NPT, 3' F.NPT | V belt | 280 gpm |

*ASSEMBLY INCLUDES PUMP, BASE, V-BELTS, GUARD AND SHEAVES

**COMPLETE ASSEMBLY PUMP, BASE, V-BELTS, GUARD AND SHEAVES FOR 20 HP MOTOR.

LGLH2 High Differential Pressure Pump

High Pressure LPG and NH3



Designed for the toughest LPG applications:

- Single and dual hose auto fuel dispensers
- Aerosol filling
- Vaporizer feed
- Underground tank applications
- Aboveground tank applications
- Other high differential pressure liquefied gas applications

LGLH2 Performance

Make the best 2-inch LPG pump on the market even tougher – that is the LGLH2! Rated at 165 psi (11.4 Bar) differential pressure, the LGLH2 is perfect for use on bobtails filling LPG tanks on the top of multi-story buildings, high capacity LPG fueling or other high differential pressure applications. See Spec Sheet 501-005 for more information.

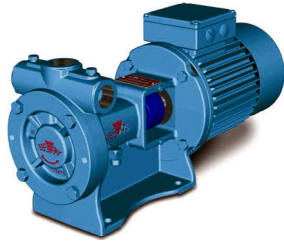
| Part Number | Performance at 145 psid (10 bar) differential pressure | | | Maximum Differential Pressure | Relief Valve Setting | Maximum Working Pressure |
|-------------|--|------------------|-------------------|-------------------------------|----------------------|--------------------------|
| | 780 rpm | 640 rpm | 520 rpm | | | |
| LGLH2 | 61 gpm / 11.7 hp | 47 gpm / 9.2 hp | 32.6 gpm / 7.1 hp | 165 psi | 190 psi | 390 psi |
| | 231 lpm / 8.7 kw | 178 lpm / 6.9 kw | 123 lpm / 5.3 kw | 11.4 Bar | 13.1 Bar | 26.9 Bar |

U.L. listed for use on propane, butane and butane/propane mixes.

PUMPS & COMPRESSORS

Blackmer Pumps

Regenerative Turbine Pump



Features:

The Ebsray RC Series Regenerative Turbine Pumps are designed and precision-built for high-pressure transfer of LPG, autogas, propane, and butane.

Applications

- LPG Autogas dispensers, single or two hoses (RC25)
- Industrial dispensing
- Autogas refueling
- Marine dispensing
- Portable tanks
- Cylinder filling
- Forklift refueling
- Direct burner or vaporizer feed

Benefits

- Quiet, vibration-free operation
- Low maintenance, single-stage impeller
- Close coupled to standard NEMA C-face motors. IEC C-face adapters available.
- Simple installation with C-face close coupled mounting
- Versatile 3-port arrangement, self-venting design
- Bypass valve connection port direct on pump
- Balanced mechanical seal, unique cartridge design for simplicity of assembly/maintenance
- Throttle bushing for secondary sealing

Assured Quality & Performance

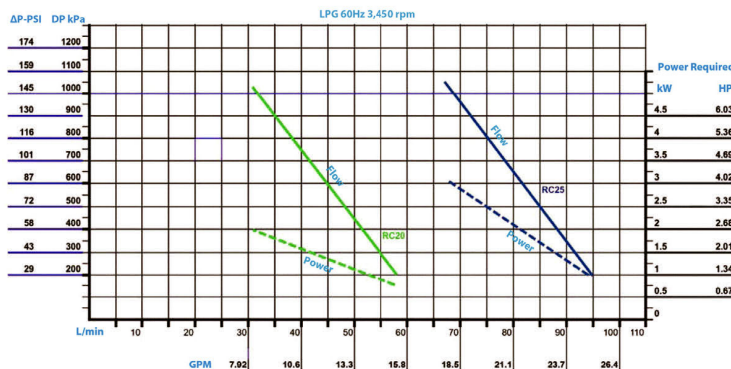
ISO 9001 Quality System assures compliance with the high safety and quality standards demanded by the LPG

industry Pumps are listed by Underwriters Laboratories for LP-gas service.

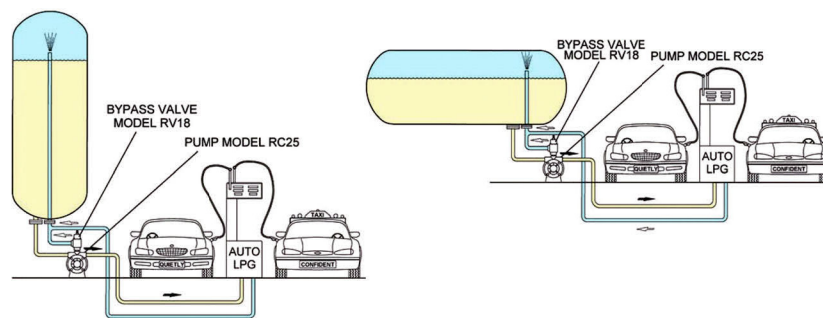


| Part Number | Flow Rate (at 3,500 rpm) | | Differential Pressure (at 3,500 rpm) | | Hydrostatic Test Pressure | | Power | | Pump Speed (RPM) | Weight | |
|-------------|--------------------------|-------|--------------------------------------|-----|---------------------------|-----|-------|----|------------------|--------|------|
| | gpm | L/min | psi | bar | psi | bar | HP | kW | | lbs | kg |
| RC20-3 | 15 | 58 | 145 | 10 | 1,015 | 70 | 2.6 | 2 | 3,500 | 43 | 19.5 |
| RC25-5 | 25 | 94 | 145 | 10 | 1,015 | 70 | 4 | 3 | 3,500 | 43 | 19.5 |

Performance



Typical Installations



Porting:

Inlet: NPT 1" 90° and/or 180°

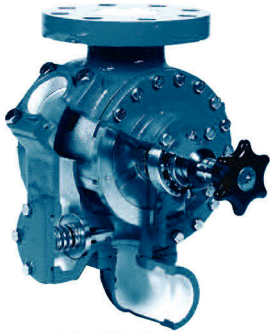
Discharge: NPT 1" 90° and/or 180°

PUMPS & COMPRESSORS

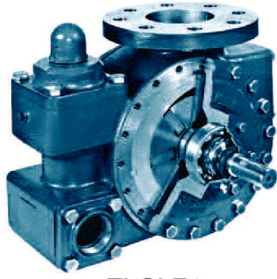
Blackmer Pumps

TLGLF3 & TLGLF4 Pumps

Flange Mounted Pumps for Bobtails and Transports



TLGLF3



TLGLF4

Blackmer TLGLF3 and TLGLF4 pumps are designed to flange mount directly to a commercial internal control valve, in combination with the tank of a bobtail or transport. Direct mounting eliminates the need for inlet pipes, shut-off valve and external strainer which can restrict flow and cause vaporization problems. The result is smoother operation and longer pump life. Both models are equipped with a double-ended drive shaft for clockwise or counterclockwise rotation by simply changing position of the pump. Each model also has an auxiliary intake port which can be used for emergency unloading of another tank or transport. In addition, these pumps have an internal relief valve, patented cavitation suppression liners to reduce noise, vibration and wear.

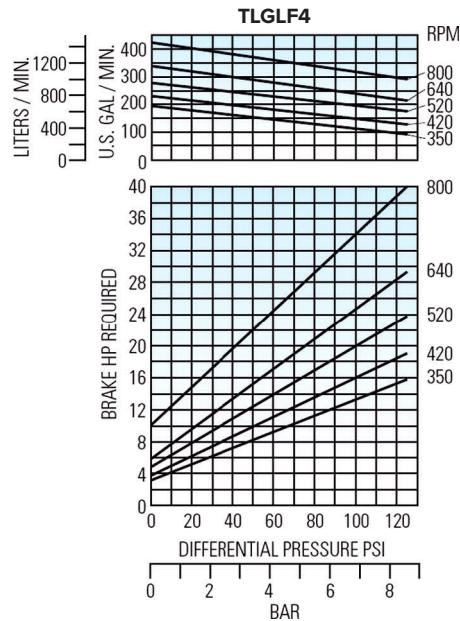
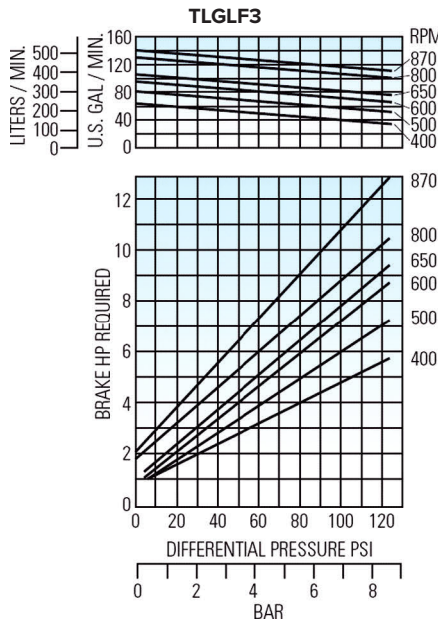
| Part Number | Factory Relief Valve Setting | Pump Speed RPM | Approximate Delivery of Propane at Differential Pressures and Pump Speeds Shown ¹ | | | | Maximum | |
|-------------|------------------------------|------------------------------|--|----------------------------|--------------------------|-----------------------------|------------------------------|-----------------------------------|
| | | | 50 PSI (3.45 bar) GPM | 50 PSI (3.45 bar) BHP | 100 PSI (6.89 Bar) GPM | 100 PSI (6.89 Bar) BHP | Differential Pressure PSI | Working Pressure ² PSI |
| TLGLF3C | 150 PSI (10.34 Bar) | 870, 800, 650, 600, 500, 400 | 129, 118, 93, 85, 70, 52 | 6.5, 5.1, 4.3, 4, 3.6, 2.8 | 119, 107, 83, 75, 68, 40 | 10.9, 8.7, 7.9, 7.1, 6, 4.8 | 125, 125, 125, 125, 125, 125 | 350, 350, 350, 350, 350, 350 |
| TLGLF4 | 150 PSI (10.34 Bar) | 800, 650, 600, 500, 400 | 350, 280, 260, 210, 160 | 22, 15.5, 14.3, 11.9, 9.5 | 306, 245, 220, 170, 120 | 34, 25.0, 23.0, 19.0, 15.2 | 125, 125, 125, 125, 125 | 350, 350, 350, 350, 350 |

¹ Check the pump's delivery and brake horsepower requirements in the performance curves below. See footnote with the curves which explains the factors that can cause delivery to vary.

² Maximum rated working pressure is 350 psi (24.13 Bar) for LPG and NH3 (limited by U.L. and N.F.P.A. 58).

Note: Refer to back cover for external bypass valve information.

Performance Curves



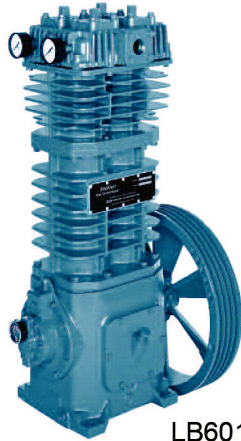
NOTE: Blackmer Characteristic Curves are based on Brake Horsepower (BHp). To determine Motor Horsepower, drive train inefficiencies must be added to the BHp. These curves are based on approximate delivery rates when handling propane or anhydrous ammonia at 80°F (26.7°C). Line restrictions such as excess flow valves, elbows, etc., will adversely effect deliveries. For propane at 32°F (0°C), actual delivery will be further reduced to about 80% of nominal. Delivery of butane at 80°F (26.7°C) will be 60 to 70% of these values, and may run as low as 35 to 45% at 32°F (0°C). This loss of delivery is not a pump characteristic but is caused by natural thermodynamic phenomena of liquefied gases.

PUMPS & COMPRESSORS

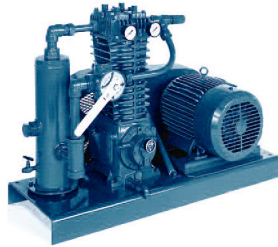
Blackmer Compressors

LB161, LB361, LB601 & LB942 Compressors

Oil-Free Gas Compressors for Liquid Transfer and Vapor Recovery



LB601



LB361LU

Blackmer oil-free gas compressors deliver high efficiency in handling propane, butane, anhydrous ammonia and other liquefied gases. They are ideal for rail car unloading and vapor recovery applications. The single-stage, reciprocating compressors are designed to give maximum performance and reliability under the most severe service conditions. All pressure parts are of ductile iron construction for greater resistance to both thermal and mechanical shock. They are designed for ease of maintenance, with all components readily accessible.

Models are available with capacities from 7 to 125 cfm (11.9 to 212 m³/h) with working pressure up to 425 psia (29.31 Bar).

Compressor Selection Data: Propane and Anhydrous Ammonia

| Part Number | Speed RPM | Approximate Liquid Transfer Delivery ¹ U.S. GPM | Driver Size ² HP | Pipe Diameter ³ | |
|-------------|-------------------------|--|-----------------------------|--|----------------------|
| | | | | Vapor in. | Liquid in. |
| LB-161-LU | 425, 560, 715, 780, 810 | 49, 65, 83, 90, 92 | 3, 5, 5, 7.5, 7.5 | 1, 1, 1, 1, 1, 1 | 2, 2, 2, 2, 2 |
| LB361 | 495, 540, 650, 780, 810 | 123, 134, 161, 194, 201 | 7.5, 10, 10, 15, 15 | 1, 1, 1, 1 1/2 - 2, 1 1/2 - 2, 1 1/2 - 2 | 2, 2, 2 1/2, 3, 3, 3 |
| LB601 | 550, 640, 700, 790 | 245, 285, 311, 351 | 15, 20, 20, 25 | 2 - 2 1/2, 2 - 2 1/2, 2 - 2 1/2, 2 - 2 1/2 | 4, 4, 4, 4 |
| LB942 | 470, 565, 750, 800 | 400, 480, 640, 680 | 25, 30, 40, 50 | 3 - 4, 3 - 4, 3 - 4, 3 - 4 | 6, 6, 6, 6 |

1 Delivery will depend on proper system design, pipe sizing and valve capacity.

2 Horsepower is for liquid transfer and vapor recovery in moderate climates. For liquid transfer without vapor recovery, horsepower will be lower. For severe climates, contact your Blackmer representative for horsepower required.

3 Use next larger pipe size if piping exceeds 100 feet (30 meters).

4 LBLTRAN (a computer program available at Blackmer's website www.blackmer.com) may be used to perform a detailed performance report based on your system parameters.

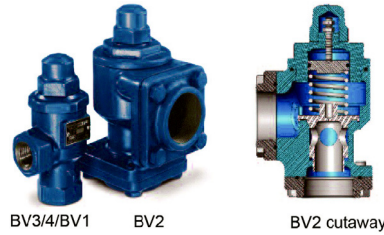
PUMPS & COMPRESSORS

Blackmer Bypass Valves

Bypass Valves

Precise, On-Line Pressure Protection

Maximum flow-through Valve



In operation, Blackmer valves provide exceptionally close pressure control, even under widely varying bypass flow conditions. The performance curve in Figure 4 below shows how a Blackmer valve maintains a virtually constant pressure of 100 psi (6.89 Bar) even as the volume being bypassed rises from 10 gpm to 100 gpm (38-378 lpm). Although the curve is that of a BV1 1/2" valve, the precision it demonstrates is typical of any Blackmer valve.

Blackmer bypass valves have no small, easily plugged, sensing passages; and with only two moving parts, their operation is simple and reliable. They open precisely at the preset spring pressure, and they close smoothly and quietly, thanks to a patented dash-pot design. As shown in Figure 5, a small chamber in the valve stem fills with liquid when the valve opens. This liquid then provides a hydraulic cushion preventing the valve from slamming shut if pressure is suddenly released. It also minimizes chatter and valve seat wear when pressures hover around the crucial limit.

Selection Guide

Model BV3/4 (ports are 3/4-inch NPT tapped)

Model BV1 (ports are 1-inch NPT tapped)

These models are commonly used for cylinder-filling system. Either valve can be used with 1-1/4 or 1-1/2-inch Blackmer pump models.

Model BV1 1/4 (ports are 1-1/4-inch NPT tapped)

Model BV1 1/2 (ports are 1-1/2-inch NPT tapped)

These models are normally used for bobtail trucks and smaller bulk plant systems. Either valve can be used with 2 or 3-inch Blackmer pump models. Both valves are available with optional springs for use with the LGL 158 or LGLH2.

Model BV2 (ports have 2-inch NPT companion flanges, 1-1/4-inch and 1-1/2-inch NPT and WELD bolt-on flanges are available)

The BV2 model is widely used for transports or larger bulk plant systems. It is recommended for use with 3 and 4-inch Blackmer pump models. The BV2 is factory set at 125 PSI.

| Part Number | 20 PSI | 50 PSI | 80 PSI | 120 PSI |
|-----------------|--------|--------|--------|---------|
| BV-3/4 | 25 | 40 | 50 | 60 |
| BV-1 | 25 | 40 | 50 | 60 |
| BV-1-1/4 | 60 | 80 | 100 | 125 |
| BV-1-1/2 | 60 | 80 | 100 | 125 |
| BV-2 | 150 | 180 | 220 | 250 |

FIGURE 4. Bypass volume/pressure Curve BV1 1/2"

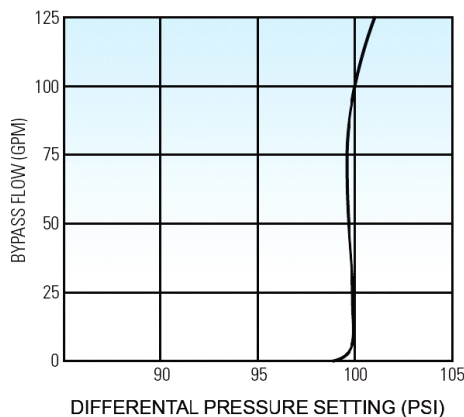
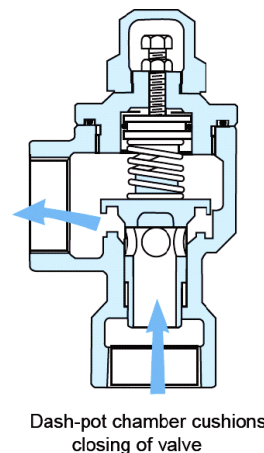


Figure5. Bypass valve operation



PUMPS & COMPRESSORS

Blackmer Bypass Valves

Bypass Valves

Ebsray RV Series-Model RV18



Design

In-line design Bypass/Pressure Relief Valves are used for a wide variety of LPG services. Adjustable differential pressure is attained for accurate and repeatable performance in return-to-tank or bypass systems. This enables full pump flow while maintaining controlled preset maximum pressure.

Features & Benefits

- CBS – Constant Bleed System
- Chatter-free quiet operation
- 90° porting arrangement
- 1" NPT tapped ports. 1" ANSI 300 flanged option.
- Adjustable pressure setting
- Low pressure rise
- VRS – Vapor Removal System

Assured Quality & Performance

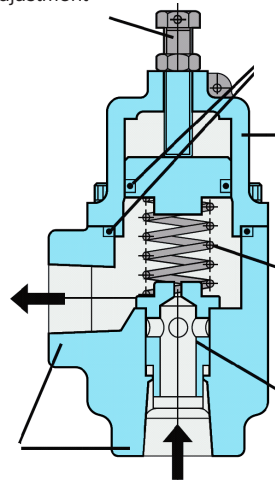
ISO9001 Quality System assures compliance with the high safety and quality standards demanded by the LPG industry. Pumps are listed by Underwriters Laboratories for LP-gas service.



| Part Number | Flow Rate*** | | Differential Pressure** | | Hydrostatic Test Pressure | |
|-------------|--------------|-------|-------------------------|-----|---------------------------|-----|
| | gpm | L/min | psi | bar | psi | bar |
| RV18 | 52 | 200 | 203 | 14 | 1,015 | 70 |

ADJUSTING SCREW

- Easy access, simple to adjust
- Positive locking
- Leak free during adjustment



SEALING

- O-ring
- Simple to service

CASING

- Ductile iron to ASTM A395
- Assembled valve hydrostatically
- tested to 1,015 psi (70 bar)

SPRING

- Adjustable within spring pressure range 1, 2
- High quality spring steel

VALVE

- Spool type quiet operation
- CBS (Constant Bleed System)
- Standard (optional VRS)

Porting:

1" NPT tapped

* Downstream system resistance will affect differential pressure.

** Spring selection to suit required pressure range.

*** Pressure rise is dependent upon flow through Bypass Valve

NOTE: All specifications and illustrations are typical only and subject to revision without notice. Certified data available upon request.

Dimensions

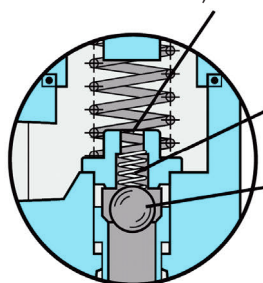
| Pump Model | A | B | C | Ports | Weight |
|------------|----|------|-----|-------|----------|
| RV18 | in | 2.17 | 2.6 | 53 | 13.9 lbs |
| | MM | 55 | 66 | 135 | 6.3 kg |

PORTS

- 1" NPT tapped
- Ease of installation service

VAPOR PATH

- Low Resistance (when in priming mode)

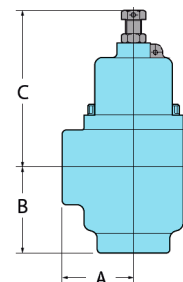


SPRING

- Stainless steel

Ball

- Non-metallic for quiet actuation and positive sealing



Optional

Integral "excess flow" type VRS. (Vapor Removal System)

Easy access, simple to adjust

- Rapid Vapor Clearing
- Efficiency – after vapor clearing is completed "excess flow" valve closes fully. This ensures full pump outlet is available at discharge point.
- Interchangeable with standard
- Spool Valve. (CBS)

PUMPS & COMPRESSORS

Corken Bypass Valves

AUTOMATIC, DUAL PURPOSE BY-PASS VALVE

B166



Typical Application: On all Corken Coro-Flo pumps as well as bottle pumps of other manufactures. On propellant feed pumps at aerosol filling plants.



| Part Number | Size |
|-------------|-----------|
| B166 | 3/4" - 1" |

PUMP FLO-CONTROL VALVE

T166



Typical Application: Large capacity pumps filling variable size tanks and bottles such as those used with delivery trunks or multi-spot bottle filling plants.



| Part Number | Size |
|-------------|-----------------|
| T166 | 1 1/4" - 1 1/2" |

DIFFERENTIAL BY-PASS VALVE

B177



Typical Application: In Liquefied gas bulk plant installations for the loading and unloading pumps.



| Part Number | Size |
|-------------|-------------------------------|
| B177 | 1 1/4" - 1 1/2" - 2" - 2 1/2" |

Corken Compressors

CORKEN "DRY CYLINDER" GAS COMPRESSOR

For propane or anhydrous ammonia. A compressor unit for liquid transfer and vapor recovery.



Model 491

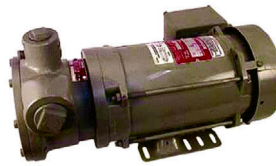
| Part Number | Description |
|-------------|--------------------------------|
| 291 | Bare Compressor with Flywheel* |
| 491 | Bare Compressor with Flywheel* |
| 691 | Bare Compressor with Flywheel* |

* For propane or anhydrous ammonia.

PUMPS & COMPRESSORS

Corken Coro-Flo Pumps

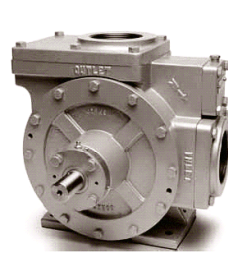
CORO-FLO TURBINE-VANE PUMPS



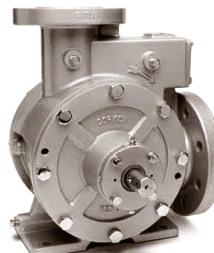
| Specification | Model Number |
|--|--------------|
| CLOSE COUPLED 3/4 Hp. Pump Unit with Continuous Duty. Fan Cooled. Capacitor Type Motor and MOTOR MOUNTED MANUAL STARTER (Starter Provides Thermal Overload Protection, Manual Reset and Heater) for 115 or 230 Volt, 60 Hertz Single Phase Current (a) | C10SM |
| CLOSE COUPLED 1 Hp. Pump Unit with Continuous Duty. Fan Cooled, Capacitor Type Motor and MOTOR MOUNTED MANUAL STARTER (Starter Provides Thermal Overload Protection, Manual Reset and Heater) for 115 or 230 Volt, 60 Hertz Single Phase Current (a) (c) | C12SM |
| CLOSE COUPLED 2 Hp. Pump Unit with Continuous Duty. Fan Cooled, Capacitor Type Motor including Automatic Thermal Overload for 115 or 230 Volt, 50 or 60 Hertz. Single Phase Current and MOTOR MOUNTED MANUAL STARTER (a) | C13SM |
| CLOSE COUPLED 3 Hp. Pump Unit No Overload Relay. Requires Separate Starter. Motor is Continuous Duty. Fan Cooled Type for 230 or 460 Volt, 60 Hertz, Three Phase Current (a) | C14SM |

| Part Number | GPM | PSID | Inlet | Outlet |
|--------------|------|------|------------|---------|
| C10SM | 7 | 50 | 1 1/4" NPT | ALL- 1" |
| C12SM | 12.5 | 70 | 1 1/2" NPT | NPT |
| C13SM | 20 | 50 | 1 1/2" NPT | |
| C14SM | 26 | 70 | 1 1/2" NPT | |

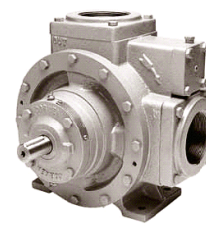
Corken Stationary Pumps



Model Z3500
Stationary and Truck Pump



Model Z4500
Stationary Pump



Model 1021
Stationary Coro-Vane®

Equipment Type & Options

Stationary sliding vane pump 521, 1021—NPT connections: F1521—300# ANSI flanges -101 or -103 mounting options

Applications

Propane & butane bulk transfer Barge, tank, railcar unloading LPG cylinder & NH3 nurse tank filling Autogas pumping Carousel cylinder filling

Features & Benefits

| | |
|--|--|
| Sliding vane type: | Positive displacement pump |
| Heavy duty bearings: | Long bearing life |
| Single mechanical seal: | Very easy seal replacement and maintenance |
| Built in relief valve (NPT models only): | Factory pre-set—added protection |
| Pressure gauge connections: | Suction and discharge to reduce piping needs |
| Reversible side plates: | Longer service life |

| Part Number | RPM range | Temperature Range | Maximum Working Pressure Psig (bar g) | Maximum Differential Pressure psid (bar d) | Maximum Driver Size HP (kW) | Flow Range GPM (L/min) |
|--------------|-----------|--------------------------------|---------------------------------------|--|-----------------------------|------------------------|
| 521 | 420-950 | -25°F (-32°C) to 225°F (107°C) | 400 (28.6) | 125 (18.6) | 10 (7.5) | 30-85 (113.6-321.8) |
| 1021 | 420-950 | -25°F (-32°C) to 225°F (107°C) | 400 (28.6) | 125 (18.6) | 20 (15) | 65-195 (246-738.2) |
| Z3500 | 420-800 | -25°F (-32°C) to 225°F (107°C) | 400 (28.6) | 125 (18.6) | 25 (18.6) | 52-197 (197-746) |
| Z4500 | 420-800 | -25°F (-32°C) to 225°F (107°C) | 400 (28.6) | 125 (18.6) | 25 (18.6) | 197-382 (746-1,446) |

PUMPS & COMPRESSORS

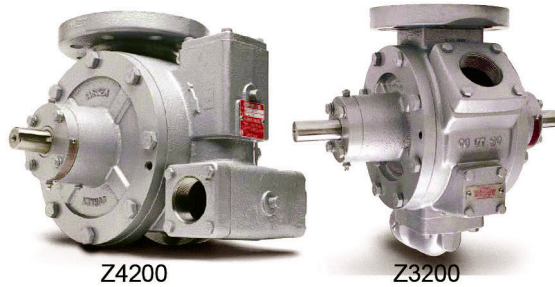
Corken Coro-Flo Pumps

Corken Stationary Pumps

Flange Options

| Model | | Standard | No Cost Option | Extra Cost Option |
|-------|--------|------------------|--------------------|--------------------------------|
| 521 | Inlet | 2-1/2" NPT | 2" NPT | 2", 2-1/2" weld flange |
| | Outlet | 2" NPT | 1-1/2", 2-1/2" NPT | 1-1/2", 2", 2-1/2" weld flange |
| 1021 | Inlet | 3" NPT | 4" NPT | 3", 4" weld flange |
| | Outlet | 3" NPT | 4" NPT | 3", 4" weld flange |
| Z3500 | Inlet | 3" NPT | 4" NPT | 3", 4" weld flange |
| | Outlet | 3" NPT Elongated | — | 3" weld flange elongated |
| Z4500 | Inlet | 4" 300# ANSI | — | — |
| | Outlet | 3" 300# ANSI | — | — |

Corken Truck Pumps



Z4200

Z3200

| Part Number | Flange | | Maximum RPM | Temperature | | Maximum Pressure | | Discharge Flange Option | Internal Relief Valve | Steel Slip-on Flange Option |
|-------------|--------------|-------------|-------------|---------------|---------------|---------------------|--------------------|-------------------------|-----------------------|-----------------------------|
| | Suction | Discharge | | Minimum | Maximum | Working | Differential | | | |
| Z3200 | 3" 300# ANSI | 2" NPT ELL | 800 | -25°F (-32°C) | 225°F (107°C) | 400 psig (28.6 bar) | 125 psid (8.6 bar) | Yes | Yes | Yes |
| Z4500 | 4" 300# ANSI | 2" Dual NPT | 800 | -25°F (-32°C) | 225°F (107°C) | 400 psig (28.6 bar) | 125 psid (8.6 bar) | No | Yes | Yes |

Z3200 Performance Chart

| Pump Speed RPM | Differential Pressure | | Approximate Delivery on Propane | | Brake hp Required | | Pump Torque Required | |
|-------------------|-----------------------|-------|---------------------------------|---------|-------------------|-------|----------------------|--------|
| | psi | (kPa) | gpm | (L/min) | bhp | (kW) | ft*lb | (Nm) |
| 750 | 50 | (345) | 112 | (424) | 6.2 | (4.6) | 43.4 | (58.9) |
| | 100 | (689) | 99 | (375) | 9.9 | (7.4) | 69.3 | (94.0) |
| 650 | 50 | (345) | 95 | (360) | 5.2 | (3.9) | 42.0 | (57.0) |
| | 100 | (689) | 84 | (318) | 8.2 | (6.1) | 66.3 | (89.9) |
| 600 | 50 | (345) | 86 | (326) | 5.0 | (3.7) | 41.3 | (56.0) |
| | 100 | (689) | 76 | (288) | 7.8 | (5.9) | 64.8 | (87.9) |
| 500 | 50 | (345) | 70 | (265) | 3.8 | (2.8) | 39.9 | (54.1) |
| | 100 | (689) | 62 | (235) | 5.8 | (4.3) | 60.9 | (82.6) |

Z4200 Performance Chart

| Pump Speed RPM | Differential Pressure | | Approximate Delivery on Propane | | Brake hp Required | | Pump Torque Required | |
|-------------------|-----------------------|-------|---------------------------------|---------|-------------------|--------|----------------------|---------|
| | psi | (kPa) | gpm | (L/min) | bhp | (kW) | ft*lb | (Nm) |
| 750 | 50 | (345) | 369 | (1,397) | 12.5 | (9.3) | 87 | (118.0) |
| | 100 | (689) | 325 | (1,230) | 25.1 | (18.6) | 175 | (237.3) |
| 650 | 50 | (345) | 316 | (1,196) | 10.8 | (8.0) | 87 | (118.0) |
| | 100 | (689) | 278 | (1,052) | 21.7 | (16.1) | 175 | (237.3) |
| 600 | 50 | (345) | 289 | (1,094) | 9.9 | (7.3) | 87 | (118.0) |
| | 100 | (689) | 254 | (961) | 20.0 | (14.8) | 175 | (237.3) |
| 500 | 50 | (345) | 236 | (893) | 8.3 | (6.2) | 87 | (118.0) |
| | 100 | (689) | 208 | (787) | 16.7 | (12.4) | 175 | (237.3) |

PUMPS & COMPRESSORS

Corken Flo Check Valve

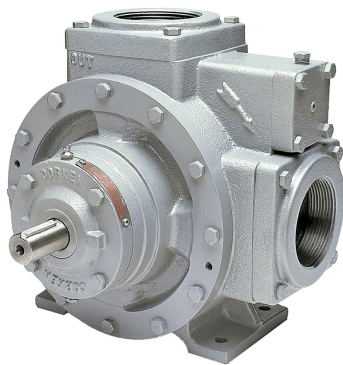


The new Corken Flo-Chek, flow indicating back-check valve is designed to replace and interchange with the Corken SF200 sight flow indicators.

| Part Number | Size |
|-------------|-------------------|
| FC150 | 1 1/2 x 1 1/2 NPT |
| FC200 | 2 x 2 NPT |
| FC300 | 3 x 3 NPT |

Corken Rebuilt Pump Program

Corken Pump Exchange Program



2" and 3" Corken rebuilt pumps are available on an exchange basis. We send you a rebuilt pump and add a \$550.00 core charge to the rebuilt pump price. The core charge is refunded when we receive your old pump. Note: Core charge is refundable only if the old rotor and shaft is reusable.

| Part Number | Description |
|-------------|-----------------|
| R521AA | 2" Rebuilt Pump |
| R1021AA | 3" Rebuilt Pump |
| RCORE | 2" or 3" Core |

Krug Compressors

KRUG VAPOR COMPRESSOR

TOPS FOR EFFICIENT TRANSFER OF BUTANE, PROPANE, OR ANHYDROUS AMMONIA

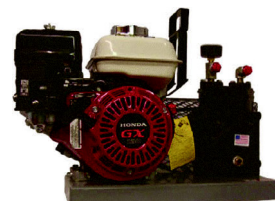
- Economical way in which to transfer, evacuate or purge tanks
- Environmentally friendly, once the connections are made it is a closed loop system with little chance of leaks
- Save your truck pump from damages use this unit for evacuating tanks
- Capacity 18 to 50 GPM depending on piping

Engine Spec's

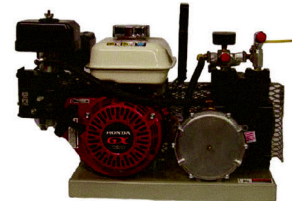
- 4hp overhead valve Honda engine
- Spark arresting muffler
- Shielded electronic ignition
- On-Off switch
- Available with Gasoline or LP carburetion

Compressor Spec's

- 2 cylinder 10.7 cu. in. displacement
- Suction port 1/2in fmpt
- Discharge port 1/2in fmpt with pressure gauge
- 1000 rpm

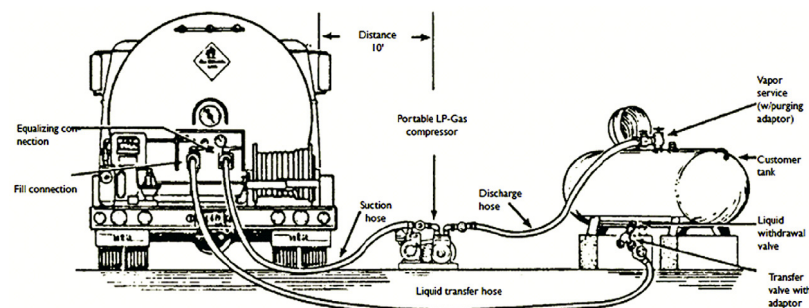


1400GS-H



1400LP-H

| Part Number | Description |
|-------------|-------------------------------------|
| 1400BR | Krug Comp Only |
| 1400GS-H | Krug Compressor W/ Honda Gas Engine |
| 1400LP-H | Krug Compressor W/ Honda LP Engine |



PUMPS & COMPRESSORS

Krug Compressor Parts

| Part Number | Description |
|-------------|---|
| 1501-6-8 | 3/8 M Pipe x 1/2 FM Pipe Swivel, Suction Side |
| 1501-6-8DT | 3/8M Pipe x 1/2FM SW. W/Tap For GA. Disch. Side |
| 39-122 | Garretson KN Zero Governor |
| 8PULLEY | 8" Krug Compressor Pulley |
| CLUTCH | 3/4" Bore Centrifugal Clutch (#209870) |
| DIPSTICK | Dipstick For Krug Compressor |

Krug Piston Type Hand Pump



Capacity: Piston displacement per stroke over 34 cubic inches. 6 GPM at 40 strokes..

| Part Number | Description |
|-------------|---|
| PUMP | Model G Krug Hand Pump 1" Inlet x 3/4" Outlet |
| M7A | Krug G Hand Pump Packing |

Tank Evacuator



The Ventur-Evac is an evolution in the process of evacuating liquefied propane from propane tanks. Developed and tested to provide safe, efficient and reliable use, the Ventur-Evac is the answer to the age old problem of propane tank evacuation.

Safety

- The Ventur-Evac's compact, light weight design reduces the possibility of employee injury during tank evacuation.
- Eliminates the ignition hazard created by an engine driven compressor.
- No moving parts, no pinch points, no belts or pulleys, no guards and no hot muffler.

Efficiency

- 1 person, 1 truck operation reduces labor costs during tank evacuation and keeps drivers on the road.
- Easily fits into a truck mounted tool box providing instant accessibility for un-scheduled evacuation needs and allows for the closest driver to respond.
- Reasonable cost permits the purchase of multiple units, increasing efficiency and convenience.
- Fast and easy hookup reduces set up and take down times
- Liquid and vapor hose requirements are reduced dramatically.

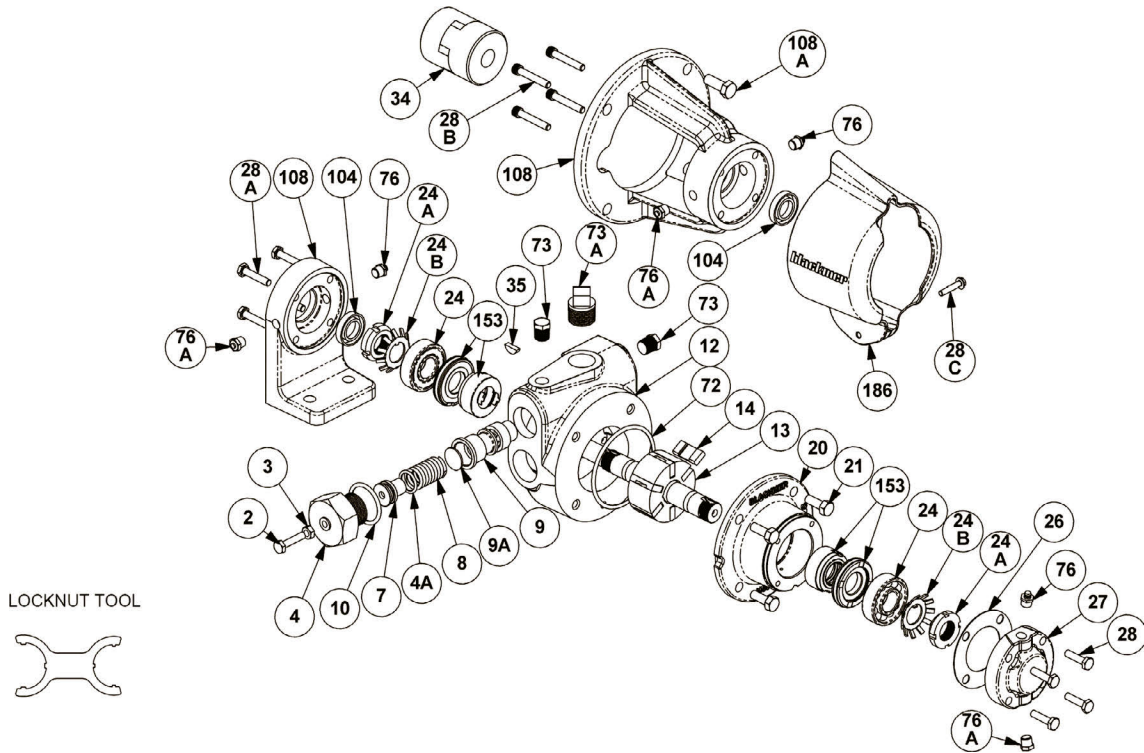
| Part Number | Weight | Length | Evacuation Rate | Description |
|-------------|----------|-----------|-----------------|-------------------------|
| VENTUR-EVAC | 6 pounds | 14 inches | 10.7 GPM | Jet Pump-Tank Evacuator |

PUMPS & COMPRESSORS

Blackmer Pump Repair Parts

Parts

LGF1 Pumps



BLACKMER PARTS LIST PUMP MODELS: LGF1E, LGB1E, LGF1PE, LGB1PE and discontinued Models LGF1D, LGB1D, LGF1PD, LGB1PD, LGF1C, LGB1C, LGF1PC, LGB1PC (See Instructions 501-A00 for Installation, Operation and Maintenance)

| Part Number | Ref. No. | Parts per Pump | Description |
|-------------|----------|----------------|---|
| 432901 | 2 | 1 | Adjusting Screw - Relief Valve (R/V) |
| 922811 | 3 | 1 | Locknut - Adjusting Screw |
| 412901 | 4 | 1 | Cover - R/V |
| 711940* | 4A | 1 | O-Ring - Spring Guide |
| 422901 | 7 | 1 | Spring Guide - R/V |
| 472901 | 8 | 1 | Spring - R/V |
| 452901 | 9 | 1 | Valve - R/V |
| 442901 | 9A | 1 | Disc - R/V |
| 701965* | 10 | 1 | O-Ring - R/V Cover |
| 022914 | 12 † | 1 | Cylinder - LGF1, LGB1 |
| 022915 | 12 † | 1 | Cylinder - LGF1P, LGB1P |
| 262907 | 13 | 1 | Rotor & Shaft Assembly, Six Vane 2 (Includes Ref. Nos. 24A & 24B) |
| 092913* | 14 | 4, 6 | Vane - Duravane (Std.)3 |
| 032905 | 20 † | 1 | Head |
| 920178 | 21 | 4 | Capscrews - Head |
| 903405* | 24 | 2 | Ball Bearing |
| 903531 | 24A | 2 | Locknut - Bearing |
| 903532* | 24B | 2 | Lockwasher - Bearing |
| 383075* | 26 † | 1 | Gasket - Bearing Cover |

PUMPS & COMPRESSORS

Blackmer Pump Repair Parts

Parts

LGF1 Pumps

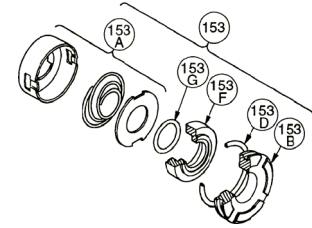
| Part Number | Ref. No. | Parts per Pump | Description |
|-------------|----------|----------------|--|
| 043071 | 27 † | 1 | Bearing Cover |
| 920080 | 28 † | 4 | Capscrews - Bearing Cover |
| 920090 | 28A † | 4 | Bracket Mounting Screws |
| 920101 | 28B † | 4 | Bracket Mounting Screws |
| 920026 | 28C | 1 | Guard Screw |
| 906150 | 34 | 1 | Coupling Half - Pump |
| 906151 | 34 | 1 | Coupling Half - Motor (56C) |
| 906147 | 34 | 1 | Coupling Half - Motor (143-145TC/184C) |
| 906155 | 34 | 1 | Coupling Spider |
| 909126* | 35 | 1 | Key - Shaft |
| 711941* | 72 | 1 | O-Ring - Head |
| 908198 | 73 | 2 | Gage Plug (1/4") |
| 908225 | 73A | 1 | Plug (3/4"), External Bypass |
| 317815 | 76 | 2 | Grease Fitting |
| 701992 | 76A | 2 | Grease Relief Fitting |
| 331934* | 104 | 1 | Grease Seal |
| 832913 | 108 | 1 | Bracket - (base mount) - LGB1(P)D |
| 832912 | 108 | 1 | Bracket (C-faced footless) - LGF1(P) |
| 920331 | 108A | 4 | Capscrews - Bracket |
| SEE PAGE 2 | 108B | | Bracket (C-faced footed) |
| 804120 | 186 | 1 | Guard |
| 903090 | | | Tool - Locknut |
| 898916 | | | Kit - Maintenance (4-Vane) |
| 898994 | | | Kit - Maintenance (6-Vane) |

* Included in Maintenance Kit. 2 Discontinued 'D' and 'C' models shipped with a 4-vane rotor. The current 6-vane rotor is fully interchangeable as long as the slotted vanes (pn 092913) are used. 3 The current slotted vanes (pn 092913) may be used in either the 6-vane or 4-vane rotors. The discontinued solid vanes may be used in the 4-vane rotors ONLY. Always install the vanes with the slot facing the direction of rotation. f To fit the LGB1(P)C, LGF1(P)C use: Ref. No. 12-022902/022911 respectively, Ref. No. 20-032902, Ref. No. 26-382901, Ref. No. 27-042901, Ref. No. 28-920203, Ref. No. 28A & B-920230, Ref. No. 73A-908198, and Ref. No.108-832901/832905 respectively.

Keep this parts list with Installation, Operation and Maintenance Instructions.

MECHANICAL SEAL

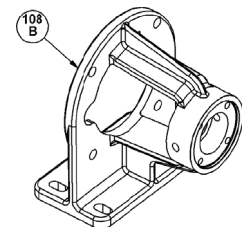
| Part Number | Ref. No. | Parts per Pump | Description |
|-------------|----------|----------------|-----------------------------------|
| 332920* | 153 | 2 | Mechanical Seal Assembly |
| 332922 | 153A** | 2 | Jacket Assembly - Seal |
| 332901 | 153B** | 2 | Stationary Seat (Steel) |
| 711916 | 153D | 2 | O-Ring - Stationary Seat (Buna-N) |
| 332902 | 153F** | 2 | Seal Face (Carbon) |
| 711939 | 153G | 2 | O-ring - Rotating (Buna-N) |



Keep this parts list with Installation, Operation and Maintenance Instructions.

MECHANICAL SEAL

| Part Number | Ref. No. | Parts per Pump | Description |
|-------------|----------|----------------|-------------------------------------|
| 833000 | 108B | 1 | Bracket (C-faced footed) - LGF1(P)D |



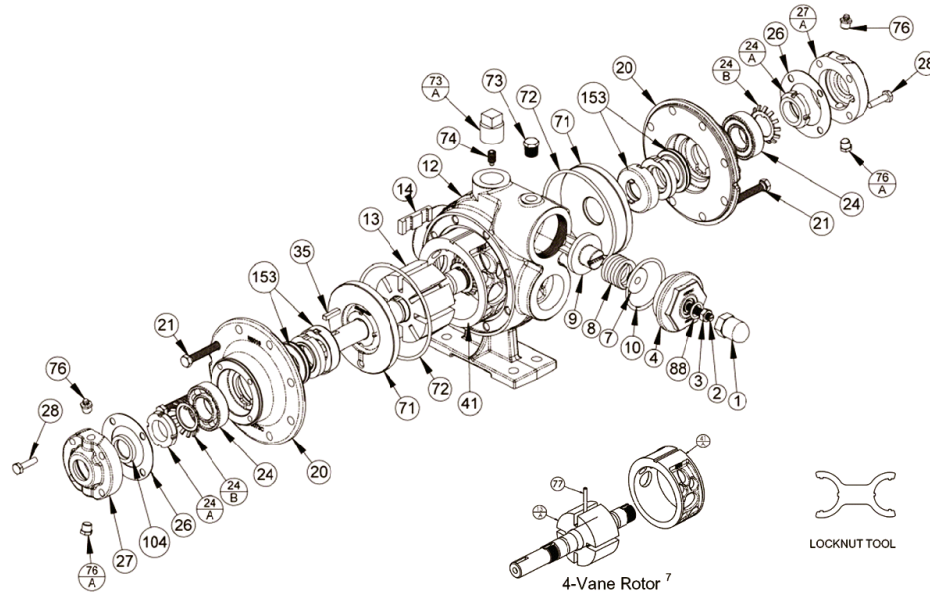
PUMPS & COMPRESSORS

PUMPS & COMPRESSORS

Blackmer Pump Repair Parts

Parts

LGL1.25 & LGL1.5 Pumps



PUMPS & COMPRESSORS

BLACKMER PARTS LIST PUMP MODELS: LGR1.25, LGR1.25A, LGL1.25, LGL1.25A, LGL1.5, LGL1.5A and discontinued models: LGR1.25, LGL1.25 Keep with Instructions 501-B00 for Installation, Operation and Maintenance

| Part Number | Ref. No. | Parts per Pump | Description |
|-------------|----------|----------------|---|
| 413200 | 1 | 1 | Cap - Relief Valve (R/V) |
| 433909 | 2 | 1 | Adjusting Screw - R/V |
| 922923 | 3 | 1 | Locknut - Adjusting Screw |
| 413076 | 4 | 1 | Cover - R/V |
| 423955 | 7 | 1 | Spring Guide - R/V |
| 471428 | 8 | 1 | Spring - R/V (81 - 125 psi) |
| 453077 | 9 | 1 | Valve - R/V |
| 711924* | 10 | 1 | O-Ring - R/V Cover |
| 013075 | 12 | 1 | Casing with feet (1.25) |
| 013376 | 12 | 1 | Casing with feet (1.5) |
| 262300** | 13 | 1 | Rotor & Shaft Assembly, Eight Vane (with Ref. Nos. 24A & 24B) |
| 093088* | 14 | 8 | Vane - Duravane |
| 033073 | 20 | 2 | Head |
| 920276 | 21 | 16 | Capscrews - Head |
| 903114* | 24 | 2 | Ball Bearing |
| 903534** | 24A | 2 | Locknut - Bearing |
| 903533* | 24B | 2 | Lockwasher - Bearing |
| 383075* | 26 | 1-2 | Gasket - Bearing Cover 3 |
| 043070 | 27 | 0-1 | Bearing Cover - Inboard 5 |
| 043071 | 27A | 1 | Bearing Cover - Outboard |
| 920080 | 28 | 4 - 8 | Capscrews - Bearing Cover 4 |
| 909152* | 35 | 1 | Shaft Key † |
| 183019** | 41 | 1 | Liner - LGR1(F)1.25 [8 - Vane Only] |
| 183020** | 41 | 1 | Liner - LGL(F)1.25 [8 - Vane Only] |

PUMPS & COMPRESSORS

Blackmer Pump Repair Parts

Parts

LGL1.25 & LGL1.5 Pumps

| Part Number | Ref. No. | Parts per Pump | Description |
|-------------|----------|----------------|---------------------------------------|
| 183310** | 41 | 1 | Liner - LGL(F)1.5 [8 - Vane Only] |
| 063075* | 71 | 2 | Disc |
| 701918* | 72 | 2 | O-Ring - Head |
| 908198 | 73 | 1 | Gage Plug (1/4") |
| 908225+ | 73A | 1 | Gage Plug (3/4") |
| 922088 | 74 | 1 | Setscrew - Liner |
| 317815 | 76 | 2 | Grease Fitting |
| 701992 | 76A | 2 | Grease Relief Fitting |
| 701949* | 88 | 1 | O-Ring - R/V Cap |
| 331927* | 104 | 1 | Grease Seal |
| 903090 | — | — | Tool - Locknut |
| 898976 | — | — | Kit - Maintenance [8 Vane] |
| 899076 | — | — | Kit - Rebuild LGRL(F)1.25(A) [8 Vane] |
| 899077 | — | — | Kit - Rebuild LGL(F)1.25(A) [8 Vane] |
| 899078 | — | — | Kit - Rebuild LGL(F)1.5(A) [8 Vane] |

* Included in Maintenance Kits and Rebuild Kits ** Included in Rebuild Kits.

3, 4, 5 Applies to LG(R)LF pump models only: 3 Use one outboard 4 Use four outboard 5 Use none.

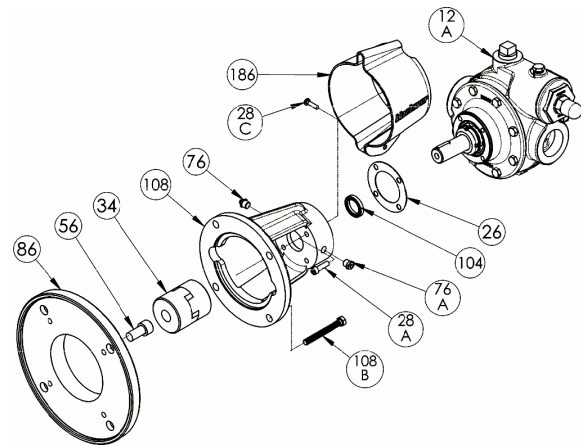
+ Ref. No. 73A: Older pumps may use a 1/4" plug (pn 908198) or 1/2" plug (pn 908215).

7 See opposite side re parts for older pumps fitted with a 4-vane rotor.

Note: Earlier model pumps used taper pins, which are no longer required. f Previous pumps used Woodruff Key 901925

FLANGE 'F' MOUNTING

| Part Number | Ref. No. | Parts per Pump | Description |
|-------------|----------|----------------|--|
| 013077 | 12A | 1 | Casing without Feet - LG(R)LF1.25 |
| 013377 | 12A | 1 | Casing without Feet - LGLF1.5 |
| 383075 | 26 | 1 | Gasket - Bearing Cover |
| 920101 | 28A | 4 | Bracket Mounting Screws |
| 920026 | 28C | 1 | Guard Screw |
| 906147 | 34 | 1 | Coupling Half - Pump |
| 906155 | 34 | 1 | Coupling Spider |
| 906151 | 34 | 1 | Coupling Half - Motor (56C) |
| 906147 | 34 | 1 | Coupling Half - Motor (143TC,145TC,184C) |
| 906146 | 34 | 1 | Coupling Half - Motor (182TC,184TC,215C) |
| 920480 | 56 | 4 | Capscrews - Adapter Ring Mounting |
| 317815 | 76 | 1 | Grease Fitting |
| 701992 | 76A | 1 | Grease Relief Fitting |
| 832914 | 86 | 1 | Motor Adapter Ring- 182TC,184TC,215C |
| 331927 | 104 | 1 | Grease Seal |
| 832912 | 108* | 1 | Mounting Bracket Includes Ref. Nos. 76 & 76A |
| 920331 | 108B | 4 | Capscrews - Bracket |
| 804120 | 186 | 1 | Guard |



PUMPS & COMPRESSORS

PUMPS & COMPRESSORS

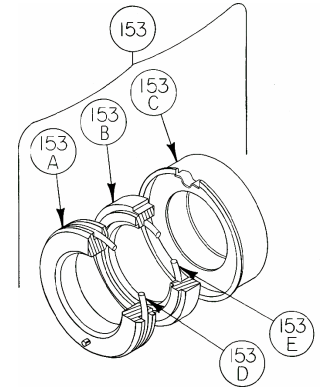
Blackmer Pump Repair Parts

Parts

LGL1.25 & LGL1.5 Pumps

MECHANICAL SEAL

| Part Number | Ref. No. | Parts per Pump | Description |
|-------------|----------|----------------|-----------------------------------|
| 333045* | 153 | 2 | Mechanical Seal Assembly |
| ** | 153A | 2 | Stationary Seat (Hardened Steel) |
| ** | 153B | 2 | Seal Face (Carbon) |
| ** | 153C | 2 | Jacket Assembly |
| 711916 | 153D | 2 | O-Ring - Stationary (Buna-N) |
| 711915 | 153E | 2 | O-Ring - Rotating (Buna-N) |



* Included in Maintenance Kits and Rebuild Kits

** NOTE: Mechanical Seal Ref. No. 153 is only sold as a complete assembly.
Ref. Nos. 153A, 153B & 153C are not available as separate replacement parts.

4-VANE ROTOR/SHAFT PARTS

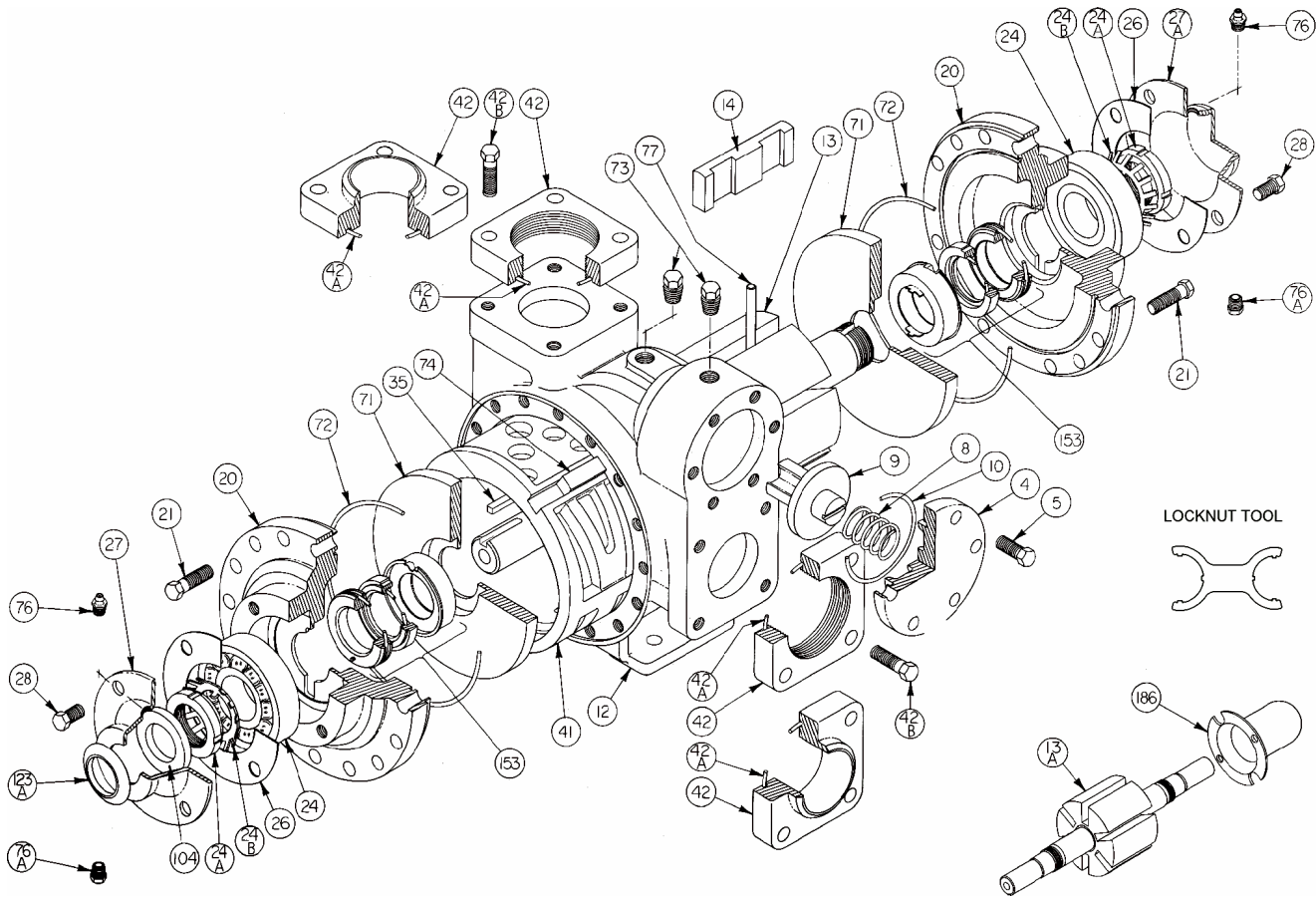
| Part Number | Ref. No. | Parts per Pump | Description |
|-------------|----------|----------------|--|
| 263076** | 13A | 1 | Rotor & Shaft Assembly, Four Vane (Includes Ref. Nos. 24A & 24B) |
| 093088* | 14 | 4 | Vane - Duravane |
| 183003** | 41A | 1 | Liner - LGRL(F)1.25 [4 - Vane Only] |
| 183004** | 41A | 1 | Liner - LGL(F)1.25 [4 - Vane Only] |
| 183301** | 41A | 1 | Liner - LGL(F)1.5 [4 - Vane Only] |
| 123004* | 77 | 2 | Push Rod - LGRL(F)1.25 |
| 123076* | 77 | 2 | Push Rod - LGL(F)1.25 |
| 123401* | 77 | 2 | Push Rod LGL(F)1.5 |
| 898917 | | | Kit - Maint LGRL(F)1.25A [4 Vane] |
| 898918 | | | Kit - Maint LGL(F)1.25(A) [4 Vane] |
| 898919 | | | Kit - Maint LGL(F)1.5(A) [4 Vane] |
| 899017 | | | Kit - Rebuild LGRL(F)1.25A [4 Vane] |
| 899018 | | | Kit - Rebuild LGL(F)1.25(A) [4 Vane] |
| 899019 | | | Kit - Rebuild LGL(F)1.5(A) [4 Vane] |

PUMPS & COMPRESSORS

Blackmer Pump Repair Parts

Parts

LGLD2, LGLD3 & LGLD4 Pumps



PUMPS & COMPRESSORS

PUMPS & COMPRESSORS

Blackmer Pump Repair Parts

Parts

LGLD2, LGLD3 & LGLD4 Pumps

Size 2

BLACKMER PARTS LIST PUMP MODELS: LGLD2E, LGL2E, LGLD3F, LGL3F and discontinued LGLD3E, LGL3E Keep with 501-C00 Installation, Operation and Maintenance Instructions

| Part Number | Ref. No. | Parts per Pump | Description |
|-------------|----------|----------------|--|
| 414401 | 4 | 1 | Cover - Relief Valve (R/V) |
| 920331 | 5 | 6 | Capscrews - R/V Cover |
| 471423 | 8 | 1 | Spring - R/V |
| 454405 | 9 | 1 | Valve - R/V |
| 701919* | 10 | 1 | O-Ring - R/V Cover |
| 014405 | 12 | 1 | Casing |
| 264443 | 13 | 1 | Rotor & Shaft Asy. - LGL (Includes Ref. Nos. 24A & 24B) |
| 264445** | 13A | 1 | Rotor & Shaft Asy. - LGLD 5 (Includes Ref. Nos. 24A & 24B) |
| 091419* | 14 | 6 | Vane - Duravane (Std.) |
| 034416 | 20 | 2 | Head |
| 920351 | 21 | 32 | Capscrews - Head (Size 2) |
| 903156* | 24 | 2 | Ball Bearing |
| 903521** | 24A | 2 | Locknut - Bearing |
| 903522* | 24B | 2 | Lockwasher - Bearing |
| 383940* | 26 | 2 | Gasket - Bearing Cover |
| 041431 | 27 | 1 | Bearing Cover (Inboard) 3 |
| 041433 | 27A | 1 | Bearing Cover (Outboard) 4 |
| 920285 | 28 | 8-12 | Capscrews - Bearing Cover |
| 909209*++ | 35 | 1 | Key - Shaft, 1/4" Square |
| 184405** | 41 | 1 | Liner |
| 654401 | 42 | 2 | Flange - NPT |
| 654405 | 42 | 2 | Flange - Weld |
| 702004* | 42A | 2 | O-Ring - Flange |
| 920384 | 42B | 8 | Capscrew - NPT Flange |
| 920351 | 42B | 8 | Capscrew - Weld Flange |
| 064412* | 71 | 2 | Disc |
| 702022* | 72 | 2 | O-Ring - Head |
| 908198 | 73 | 2 | Gage Plug |
| 183991**+++ | 74 | 1 | Key - Liner |
| 317815 | 76 | 2 | Grease Fitting |
| 701992 | 76A | 2 | Grease Relief Fitting |
| 123905*+ | 77 | 3 | Push Rod |
| 331918*,*** | 104 | 1 | Grease Seal |
| 701480*,*** | 123A | 1 | Dirt Shield |
| 341601 | 186 | 1 | Shaft Protector (LGLD Models Only) |
| 903091 | — | — | Tool - Locknut |
| 898979 | — | — | Kit - Maintenance |
| 899079 | — | — | Kit - Rebuild |

PUMPS & COMPRESSORS

Blackmer Pump Repair Parts

Parts

LGLD2, LGLD3 & LGLD4 Pumps

Size 3

| Part Number | Ref. No. | Parts Per Pump | Description |
|-------------|----------|----------------|--|
| 415113 | 4 | 1 | Cover - Relief Valve (R/V) |
| 920331 | 5 | 6 | Capscrews - R/V Cover |
| 475135 | 8 | 1 | Spring - R/V |
| 455129 | 9 | 1 | Valve - R/V |
| 701925* | 10 | 1 | O-Ring - R/V Cover |
| 015127 | 12 | 1 | Casing |
| 265149 | 13 | 1 | Rotor & Shaft Asy. - LGL (Includes Ref. Nos. 24A & 24B) |
| 265148** | 13A | 1 | Rotor & Shaft Asy. - LGLD 5 (Includes Ref. Nos. 24A & 24B) |
| 095131* | 14 | 6 | Vane - Duravane (Std.) |
| 035128 | 20 | 2 | Head |
| 920369 | 21 | 40 | Capscrews - Head (Size 3) |
| 903166* | 24 | 2 | Ball Bearing |
| 903523** | 24A | 2 | Locknut - Bearing |
| 903524* | 24B | 2 | Lockwasher - Bearing |
| *385125 | 26 | 2 | Gasket - Bearing Cover |
| 041815 | 27 | 1 | Bearing Cover (Inboard) 3 |
| 041817 | 27A | 1 | Bearing Cover (Outboard) |
| 920285 | 28 | 8 - 12 | Capscrews - Bearing Cover |
| 909209*++ | 35 | 1 | Key - Shaft, 1/4" Square |
| 185111** | 41 | 1 | Liner |
| 655112 | 42 | 2 | Flange - NPT |
| 655102 | 42 | 2 | Flange - Weld |
| 702002* | 42A | 2 | O-Ring - Flange |
| 920547 | 42B | 8 | Capscrew - NPT Flange |
| 920510 | 42B | 8 | Capscrew - Weld Flange |
| 065112* | 71 | 2 | Disc |
| 702041* | 72 | 2 | O-Ring - Head |
| 908198 | 73 | 2 | Gage Plug |
| 185191** | 74 | 1 | Key - Liner |
| 317815 | 76 | 2 | Grease Fitting |
| 701992 | 76A | 2 | Grease Relief Fitting |
| 125110*+ | 77 | 3 | Push Rod |
| 331908*,*** | 104 | 1 | Grease Seal |
| 341801 | 186 | 1 | Shaft Protector (LGLD Models Only) |
| 903091 | — | — | Tool - Locknut |
| 898981 | — | — | Kit - Maintenance |
| 899081 | — | — | Kit - Rebuild |

* Included in Maintenance Kit and Rebuild Kit ** Included in Rebuild Kit
 The following applies to double end shaft pumps (LGLD): *** Use Two 4 Use None
 5 Double-Ended Rotor & Shaft. + 2" pushrod is metal, 3" is composite.
 ++ Pumps before April 2008 used Woodruff key 909130, included in Maintenance kits.
 +++ Pump before 1995 require liner key 184407.

PUMPS & COMPRESSORS

PUMPS & COMPRESSORS

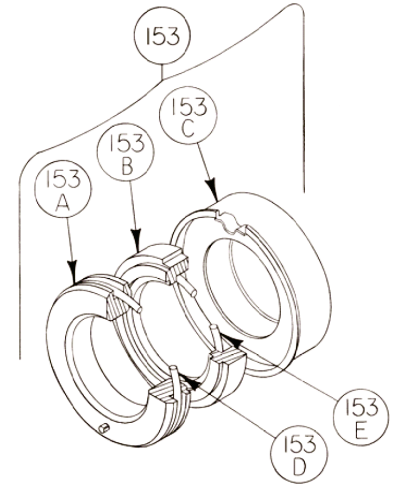
Blackmer Pump Repair Parts

Parts

LGLD2, LGLD3 & LGLD4 Pumps

MECHANICAL SEAL – NH₃ OR DUAL SERVICE – SNCN (ID Code = QA) - Size 2

| Part Number | Ref. No. | Parts Per Pump | Description |
|----------------|----------|----------------|------------------------------|
| 334439* | 153 | 2 | Mechanical Seal Assembly |
| ** | 153A | 2 | Stationary Seat (Steel) |
| ** | 153B | 2 | Seal Face (Carbon) |
| ** | 153C | 2 | Jacket Assembly |
| 711924 | 153D | 2 | O-Ring - Stationary (Buna-N) |
| 711918 | 153E | 2 | O-Ring Rotating (Buna-N) |



MECHANICAL SEAL - NH₃ OR DUAL SERVICE - SNCN (ID Code = QA) - Size 3

| Part Number | Ref. No. | Parts Per Pump | Description |
|----------------|----------|----------------|------------------------------|
| 335225* | 153 | 2 | Mechanical Seal Assembly |
| ** | 153A | 2 | Stationary Seat (Steel) |
| ** | 153B | 2 | Seal Face (Carbon) |
| ** | 153C | 2 | Jacket Assembly |
| 702025 | 153D | 2 | O-Ring - Stationary (Buna-N) |
| 711912 | 153E | 2 | O-Ring Rotating (Buna-N) |

* Included in Maintenance Kit and Rebuild Kit

** NOTE: Mechanical Seal Ref. No. 153 is only sold as a complete assembly.
Ref. Nos. 153A, 153B & 153C are not available as separate replacement parts.

PUMPS & COMPRESSORS

Blackmer Pump Repair Parts

Parts

LGLD2, LGLD3 & LGLD4 Pumps

OPTIONAL HYDRAULIC MOTOR ADAPTER PARTS - Size 2 - 1-1/4" Hyd Motor Shaft

| Part Number | Ref. No. | Parts Per Pump | Description |
|-------------|-----------|----------------|---|
| 894425 | See Below | See Below | Hydraulic Motor Adapter Kit * |
| 383940 | 26A | 1 | Gasket- Hydraulic Motor Adapter |
| 920369 | 28A | 4 / 6 | Capscrew - Hydraulic Motor Adapter / Head |
| 906967 | 34 | 1 | Coupling w/ Setscrew - straight key hydraulic motor shaft |
| 909184 | 35 | 1 | Key - Coupling |
| 317815 | 76 | 1 | Grease Fitting |
| 701992 | 76A | 1 | Grease Relief Fitting |
| 041827 | 135 | 1 | Hydraulic Motor Adapter - SAE A Flange |
| 920510 | 135A | 2 | Capscrew - Adapter / Motor |

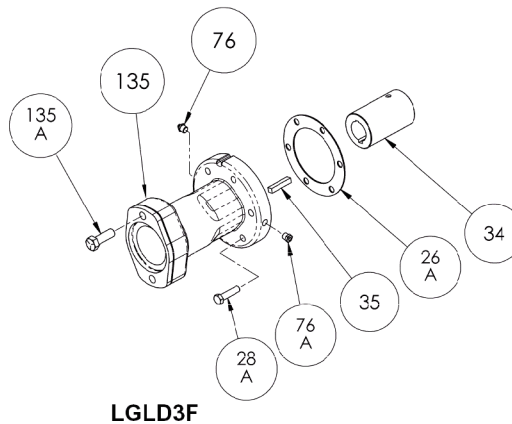
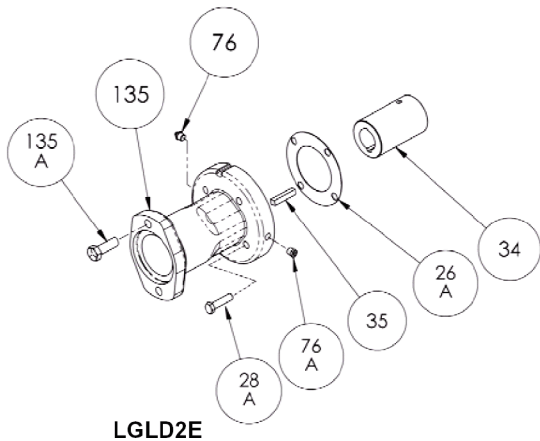
OPTIONAL HYDRAULIC MOTOR ADAPTER PARTS - Size 3 - 1" Hyd Motor Shaft

| Part Number | Ref. No. | Parts Per Pump | Description |
|-------------|-----------|----------------|---|
| 895143 | See Below | See Below | Hydraulic Motor Adapter Kit * |
| 381817 | 26A | 1 | Gasket- Hydraulic Motor Adapter |
| 920369 | 28A | 4 / 6 | Capscrew - Hydraulic Motor Adapter / Head |
| 906990 | 34 | 1 | Coupling w/ Setscrew - straight key hydraulic motor shaft |
| 909184 | 35 | 1 | Key - Coupling |
| 317815 | 76 | 1 | Grease Fitting |
| 701992 | 76A | 1 | Grease Relief Fitting |
| 041831 | 135 | 1 | Hydraulic Motor Adapter - SAE A Flange |
| 920510 | 135A | 2 | Capscrew - Adapter / Motor |

OPTIONAL HYDRAULIC MOTOR ADAPTER PARTS - Size 2 - 1-1/4" Hyd Motor Shaft

| Part Number | Ref. No. | Parts Per Pump | Description |
|-------------|-----------|----------------|---|
| 895140 | See Below | See Below | Hydraulic Motor Adapter Kit * |
| 381817 | 26A | 1 | Gasket- Hydraulic Motor Adapter |
| 920369 | 28A | 4 / 6 | Capscrew - Hydraulic Motor Adapter / Head |
| 906967 | 34 | 1 | Coupling w/ Setscrew - straight key hydraulic motor shaft |
| 909184 | 35 | 1 | Key - Coupling |
| 317815 | 76 | 1 | Grease Fitting |
| 701992 | 76A | 1 | Grease Relief Fitting |
| 041831 | 135 | 1 | Hydraulic Motor Adapter - SAE A Flange |
| 920510 | 135A | 2 | Capscrew - Adapter / Motor |

* Hydraulic Motor Adapter Kits shipped prior to Spring 2002 were of a two piece design



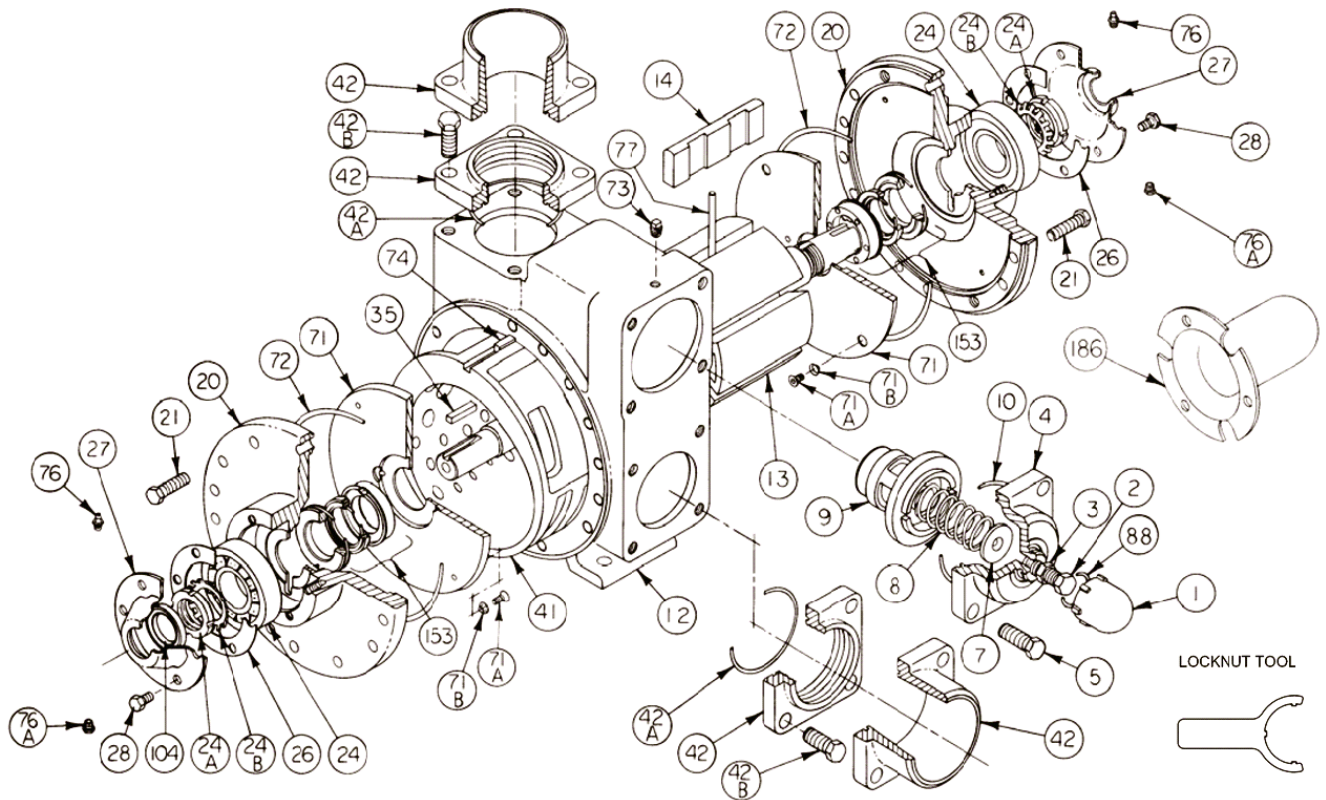
PUMPS & COMPRESSORS

PUMPS & COMPRESSORS

Blackmer Pump Repair Parts

Parts

Pump Model: LGLD4B



Keep with Instructions 501-E00 for Installation, Operation and Maintenance

| Part Number | Ref. No. | Parts Per Pump | Description |
|-------------|----------|----------------|---|
| 413957 | 1 | 1 | Cap - Relief Valve (R/V) |
| 436310 | 2 | 1 | Adjusting Screw - R/V |
| 432039 | 3 | 1 | Locknut - Adjusting Screw |
| 412001 | 4 | 1 | Cover - R/V |
| 920663 | 5 | 4 | Capscrew - R/V Cover |
| 426355 | 7 | 1 | Spring Guide - R/V |
| 472039 | 8 | 1 | Spring - R/V |
| 452001 | 9 | 1 | Valve - R/V |
| 701946* | 10 | 1 | O-Ring - R/V Cover |
| 012019 | 12 | 1 | Casing |
| 262041** | 13 | 1 | Rotor & Shaft Asy, Dbl. End (Includes Ref. No. 24A & 24B) |
| 092019* | 14 | 6 | Vane - Duravane |
| 032041 | 20 | 2 | Head |
| 920532 | 21 | 28 | Capscrews - Head |
| 903166* | 24 | 2 | Ball Bearing |
| 903541** | 24A | 2 | Locknut - Bearing |
| 903542* | 24B | 2 | Lockwasher - Bearing |
| 385125* | 26 | 2 | Gasket - Bearing Cover |
| 041815 | 27 | 2 | Bearing Cover - LGLD4B |

PUMPS & COMPRESSORS

Blackmer Pump Repair Parts

Parts

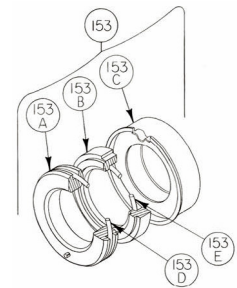
Pump Model: LGLD4B

| Part Number | Ref. No. | Parts per Pump | Description |
|-------------|----------|----------------|-------------------------------|
| 920285 | 28 | 12 | Capscrews - Bearing Cover |
| 909183* | 35 | 1 | Key - Shaft |
| 182000** | 41 | 1 | Liner |
| 652012 | 42 | 1-2 | Flange - 3" NPT |
| 652007 | 42 | 1-2 | Flange - 3" Weld |
| 652005 | 42 | 1-2 | Flange - 4" Weld |
| 701937** | 42A | 2 | O-Ring - NPT, Weld Flange |
| 920663 | 42B | 8 | Capscrew - NPT Flange |
| 920640 | 42B | 8 | Capscrew - Weld Flange |
| 062039* | 71 | 2 | Disc |
| 920015** | 71A | 8 | Machine Screw - Disc |
| 909634** | 71B | 8 | Lockwasher - Machine Screw |
| 702039** | 72 | 2 | O-Ring - Head |
| 908198 | 73 | 2 | Gage Plug |
| 182040** | 74 | 1 | Key - Liner |
| 317815 | 76 | 2 | Grease Fitting |
| 701992 | 76A | 2 | Grease Relief Fitting |
| 122009* | 77 | 3 | Push Rod - composite - LGLD4B |
| 701926* | 88 | 1 | O-Ring - R/V Cap |
| 331908* | 104 | 2 | Grease Seal - LGLD4B |
| 341801 | 186 | 1 | Shaft Protector |
| 903092 | | | Tool - Locknut |
| 898922 | | | Kit - Maintenance |
| 899022 | | | Kit - Rebuild -LGLD4B |

*Included in Maintenance Kit and Rebuild Kit ** Included in Rebuild Kit only.

MECHANICAL SEAL - STANDARD

| Part Number | Ref. No. | Parts per Pump | Description |
|-------------|----------|----------------|----------------------------------|
| 332050* | 153 | 2 | Mechanical Seal Assembly |
| ** | 153A | 2 | Stationary Seat (Hardened Steel) |
| ** | 153B | 2 | Seal Face (Carbon) |
| ** | 153C | 2 | Jacket Assembly |
| 701934 | 153D | 2 | O-Ring - Stationary (Buna-N) |
| 711912 | 153E | 2 | O-Ring - Rotating (Buna-N) |

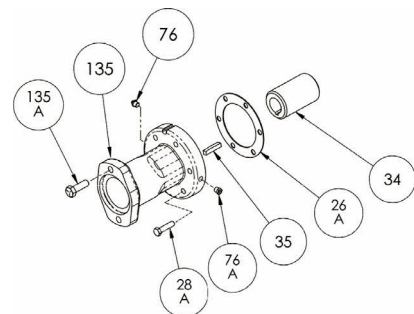


*Included in Maintenance Kit and Rebuild Kits

** NOTE: Mechanical Seal Ref. No. 153 is only sold as a complete assembly. Ref. Nos. 153A, 153B & 153C are not available as separate replacement parts.

HYDRAULIC MOTOR ADAPTER PARTS

| Part Number | Ref. No. | Parts per Pump | Description |
|-------------|-----------|----------------|--|
| 892037 | See Below | See Below | Hydraulic Motor Adapter Kit |
| 381817 | 26A | 1 | Gasket - Hydraulic Motor Adapter |
| 920369 | 28A | 6 | Capscrew - Hydraulic Motor Adapter / Head |
| 906970 | 34 | 1 | Coupling w/ Setscrew - 1.25" straight key hyd. motor shaft |
| 909184 | 35 | 1 | Key - Coupling |
| 317815 | 76 | 1 | Grease Fitting |
| 701992 | 76A | 1 | Grease Relief Fitting |
| 041829 | 135 | 1 | Hydraulic Motor Adapter - SAE A Flange |
| 920510 | 135A | 2 | Capscrew - Adapter / Motor |

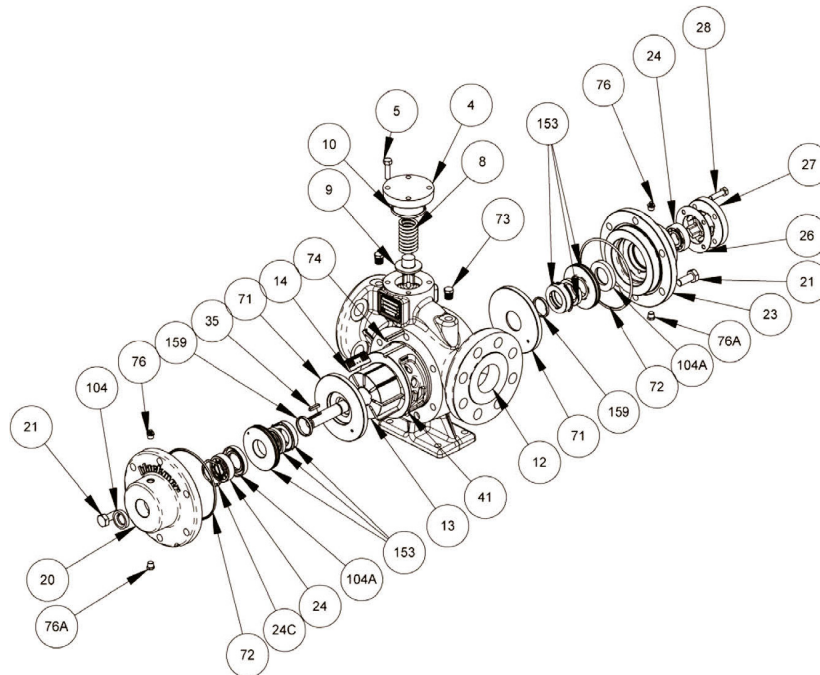


PUMPS & COMPRESSORS

Blackmer Pump Repair Parts

Parts

LGL 154, LGL 156, LGL 158 and LGLH2 High Differential Pressure Pump



BLACKMER PARTS LIST PUMP MODELS: LGL154A, LGL156A, LGL158B and Discontinued LGL158A Keep with Installation, Operation and Maintenance Instructions 501-K00

| Part Number | Ref. No. | Parts Per Pump | Description |
|-------------|----------|----------------|--|
| 415701 | 4 | 1 | Cover - Relief Valve (R/V) |
| 920122 | 5 | 4 | Capscrews - R/V Cover |
| 471400 | 8 | 1 | Spring - R/V (225 psi) |
| 455701 | 9 | 1 | Valve - R/V |
| 711924* | 10 | 1 | O-Ring - R/V Cover |
| 015701 | 12 | 1 | Casing |
| 265702 | 13 | 1 | Rotor & Shaft Asy. |
| 265701** | 13 | 1 | Rotor & Shaft Asy. (LGL158A only) 2 |
| 094860* | 14 | 8 | Vane - Duravane |
| 035701 | 20 | 1 | Head Inboard |
| 920468 | 21 | 12 | Capscrews - Head |
| 035703 | 23 | 1 | Head Outboard |
| *903148 | 24 | 2 | Ball Bearing |
| *903187 | 24C | 1 | Bearing Spring |
| 905172 | 26 | Varies | Shim Kit (6 ea: .002", .005" & .010") |
| 045701 | 27 | 1 | Bearing Cover |
| 920122 | 28 | 4 | Capscrews - Bearing Cover |
| 909153* | 35 | 1 | Key - Shaft (for shaft 265702) |
| *909152 | 35 | 1 | Key - Shaft (for older shaft 265701) |
| 185701 | 41 | 1 | Liner (LGL158) |
| 185710 | 41 | 1 | Liner (LGL156) |
| 185711 | 41 | 1 | Liner (LGL154) |
| 065701* | 71 | 2 | Disc |
| 702169* | 72 | 2 | O-Ring - Head |
| 908198 | 73 | 2 | Gage Plug |
| 909177 | 74 | 1 | Key - Liner |

PUMPS & COMPRESSORS

PUMPS & COMPRESSORS

Blackmer Pump Repair Parts

Parts

LGL 154, LGL 156, LGL 158 and LGLH2 High Differential Pressure Pump

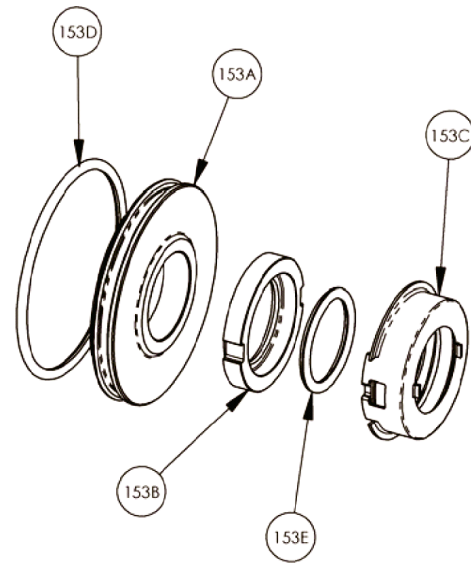
| Part Number | Ref. No. | Parts Per Pump | Description |
|-------------|----------|----------------|--|
| 317815 | 76 | 2 | Grease Fitting |
| 701992 | 76A | 2 | Grease Relief Fitting |
| 331921* | 104 | 1 | Grease Seal - Outer |
| 335702* | 104A | 2 | Grease Seal - Inner |
| 375701 | 159 | 2 | Seal Spacer Ring |
| 899222 | — | — | Kit - Maintenance |
| 455750 | — | — | Priming Valve (for Underground Tank Installations) |

* Included in Maintenance Kit.

** The 265702 will fit the LGL158A, but will require baseplate modifications as it is 1.41" longer than the 265701 shaft..

MECHANICAL SEAL – LPG

| Part Number | Ref. No. | Parts Per Pump | Description |
|-------------|----------|----------------|---------------------------------|
| 335703* | 153 | 2 | Mechanical Seal Assembly - SNCN |
| ** | 153A | 2 | Stationary Seat (Steel) |
| ** | 153B | 2 | Seal Face (Carbon) |
| ** | 153C | 2 | Jacket Assembly |
| 701934 | 153D | 2 | O-Ring - Stationary (Buna-N) |
| 711917 | 153E | 2 | O-Ring Rotating (Buna-N) |

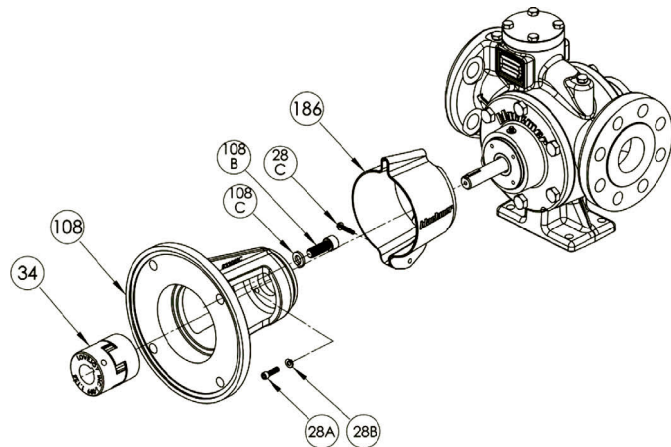


* Included in Maintenance Kit and Rebuild Kit

** NOTE: Mechanical Seal Ref. No. 153 is only sold as a complete assembly. Ref. Nos. 153A, 153B & 153C re not available as separate

C-FACE MOTOR ADAPTOR BRACKET

| Part Number | Ref. No. | Parts Per Pump | Description |
|-------------|----------|----------------|--|
| 920102 | 28A | 4 | Bracket Mounting Screws |
| 909602 | 28B | 4 | Lockwasher |
| 920026 | 28C | 1 | Guard Screw |
| 906033 | 34 | 1 | Coupling Half - Pump |
| 906034 | 34 | 1 | Coupling Spider |
| 906164 | 34 | 1 | Coupling Half - Motor 182TC,184TC,215C |
| 906032 | 34 | 1 | Coupling Half - Motor 213TC,215TC |
| 833003 | 108 | 1 | Mounting Bracket |
| 098116 | 108B | 4 | Capscrew - Bracket to Motor |
| 909706 | 108C | 4 | Lockwasher |
| 804120 | 186 | 1 | Guard |

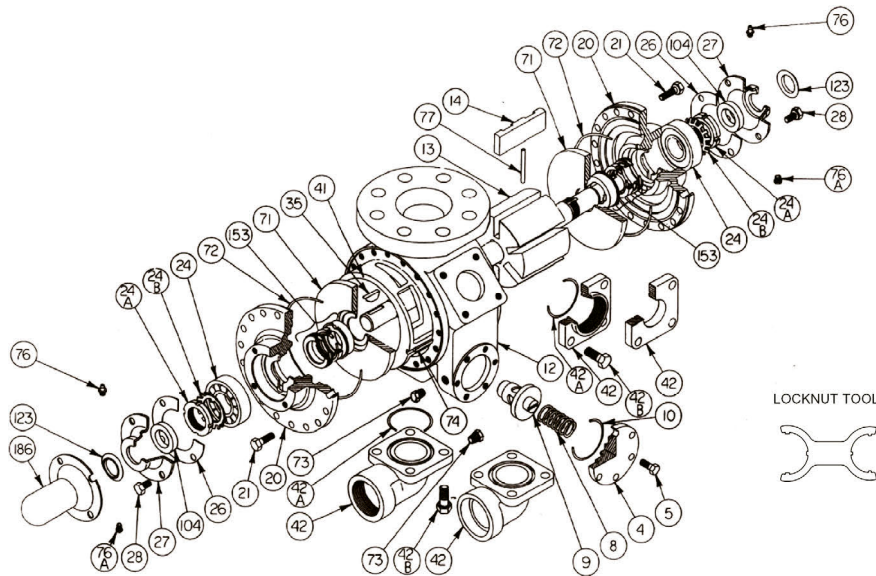


PUMPS & COMPRESSORS

Blackmer Pump Repair Parts

Parts

Pump Model: TLGLF3C



Keep this parts list with Installation, Operation and Maintenance Instructions 501-D00

| Part Number | Ref. No. | Parts Per Pump | Description |
|-------------|----------|----------------|---|
| 415108 | 4 | 1 | Cover - Relief Valve (R/V) |
| 920331 | 5 | 6 | Capscrew - R/V Cover |
| 471428**** | 8 | 1 | Spring - R/V |
| 451417**** | 9 | 1 | Valve - R/V |
| 701919* | 10 | 1 | O-Ring - R/V Cover |
| 015128 | 12 | 1 | Casing |
| 265147** | 13 | 1 | Rotor & Shaft Assembly 5 |
| 095132* | 14 | 6 | Vane - Duravane |
| 035132 | 20 | 2 | Head |
| 920351 | 21 | 36 | Capscrews - Head |
| 903156* | 24 | 2 | Ball Bearing |
| 903521** | 24A | 2 | Locknut - Bearing |
| 903522* | 24B | 2 | Lockwasher - Bearing |
| 383940* | 26 | 2 | Gasket - Bearing Cover |
| 041431 | 27 | 2 | Bearing Cover |
| 920285 | 28 | 8 | Capscrews - Bearing Cover |
| 909130* | 35 | 1 | Key - Shaft |
| 185101** | 41 | 1 | Liner |
| 652010 | 42 | 1-2 | Flange - 2" NPT |
| 652024 | 42 | 1-2 | Flange - 2" Weld |
| 655100 | 42 | 1-2 | Flanged Elbow - 2" NPT |
| 655109 | 42 | 1-2 | Flanged Elbow - 2" Weld |
| 652036 | 42 | 1-2 | Blank Flange for Auxiliary Inlet |
| 702004* *** | 42A | 2 | O-Ring - Flange 2 5/8" x 2 7/8" (current) |
| 701919* | 42A | 2 | O-Ring - Flange 2 1/2" x 2 3/4" (older pumps) |
| 920491 | 42B | 8 | Capscrew - Flanges |
| 065121* | 71 | 2 | Disc |
| 711923* | 72 | 2 | O-Ring - Head |
| 908198 | 73 | 2 | Gage Plug |
| 185193* | 74 | 1 | Key - Liner |
| 317815 | 76 | 2 | Grease Fitting |

PUMPS & COMPRESSORS

PUMPS & COMPRESSORS

Blackmer Pump Repair Parts

Parts

Pump Model: TLGLF3C

| Part Number | Ref. No. | Parts Per Pump | Description |
|-------------|----------|----------------|----------------------------|
| 701992 | 76A | 2 | Grease Relief Fitting |
| 121607* | 77 | 3 | Push Rod |
| 331918* | 104 | 2 | Grease Seal |
| 701480* | 123 | 2 | Dirt Shield |
| 341601 | 186 | 1 | Shaft Protector |
| 903091 | — | — | Tool - Locknut |
| 898980 | — | — | Kit - Maintenance |
| 899225 | — | — | Kit - Maintenance with R/V |
| 899080 | — | — | Kit - Rebuild |
| 899125 | — | — | Kit - Rebuild with R/V |

* Included in Maintenance Kit and Rebuild Kit

** Included in Rebuild Kit

*** Larger O-Ring introduced October 2002

****Additional parts Included in Kits with R/V

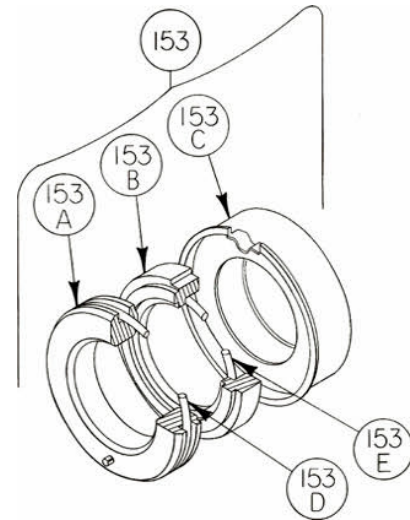
5 Includes Ref. No. 24A & 24B

MECHANICAL SEAL – NH3 OR DUAL SERVICE – SNCN (ID Code = QA)

| Part Number | Ref. No. | Parts Per Pump | Description |
|-------------|----------|----------------|------------------------------|
| 334439* | 153 | 2 | Mechanical Seal Assembly |
| ** | 153A | 2 | Stationary Seat (Steel) |
| ** | 153B | 2 | Seal Face (Carbon) |
| ** | 153C | 2 | Jacket Assembly |
| 711924 | 153D | 2 | O-Ring - Stationary (Buna-N) |
| 711918 | 153E | 2 | O-Ring - Rotating (Buna-N) |

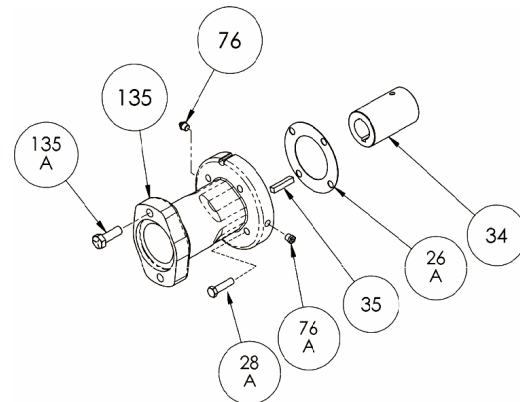
* Included in Maintenance Kit and Rebuild Kit

** NOTE: Mechanical Seal Ref. No. 153 is only sold as a complete assembly. Ref. Nos. 153A, 153B & 153C are not available as separate replacement parts.



OPTIONAL HYDRAULIC MOTOR ADAPTER PARTS- 1" Hyd Motor Shaft

| Part Number | Ref. No. | Parts Per Pump | Description |
|-------------|-----------|----------------|--|
| 891205 | See Below | See Below | Hydraulic Motor Adapter Kit |
| 383940 | 26A | 1 | Gasket - Hydraulic Motor Adapter |
| 920369 | 28A | 4 | Capscrew - Hydraulic Motor Adapter / Head |
| 906966 | 34 | 1 | Coupling w/ Setscrew - straight key hyd. motor shaft |
| 317815 | 76 | 1 | Grease Fitting |
| 701992 | 76A | 1 | Grease Relief Fitting |
| 041827 | 135 | 1 | Hydraulic Motor Adapter - SAE A Flange |
| 920510 | 135A | 2 | Capscrew - Adapter / Motor |



OPTIONAL HYDRAULIC MOTOR ADAPTER PARTS- 1-1/4" Hyd Motor Shaft

| Part Number | Description |
|-------------|--|
| 891458 | Hydraulic Motor Adapter Kit |
| 383940 | Gasket - Hydraulic Motor Adapter |
| 920369 | Capscrew - Hydraulic Motor Adapter / Head |
| 906967 | Coupling w/ Setscrew - straight key hyd. motor shaft |
| 909184 | Key - Coupling |
| 317815 | Grease Fitting |
| 701992 | Grease Relief Fitting |
| 041828 | Hydraulic Motor Adapter - SAE A Flange |
| 920510 | Capscrew - Adapter / Motor |

* Hydraulic Motor Adapter Kits shipped prior to Spring 2002 were a two two piece design - refer to page 206-C00.

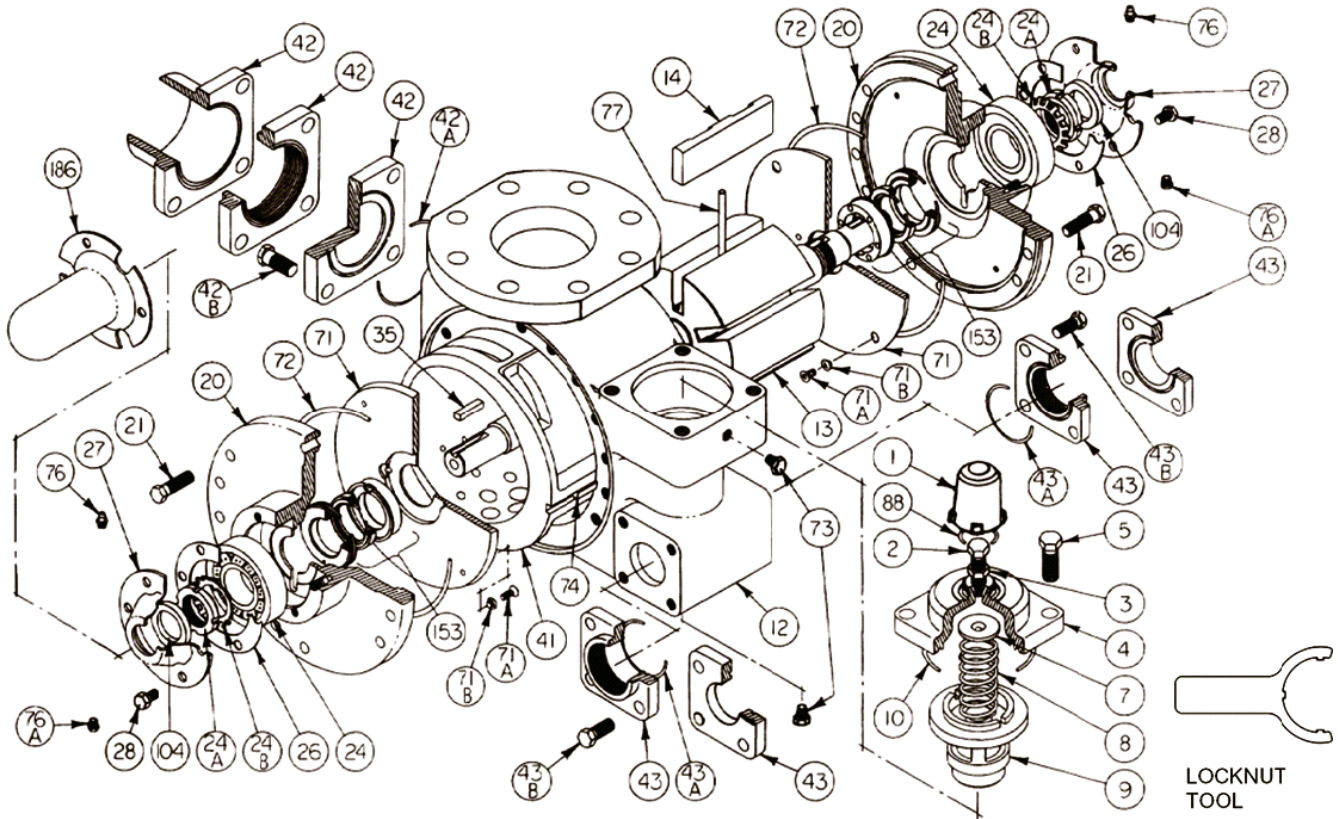
PUMPS & COMPRESSORS

PUMPS & COMPRESSORS

Blackmer Pump Repair Parts

Parts

Pump Model: TLGLF4B



Keep with 501-E00 for Installation, Operation and Maintenance Instructions

| Part Number | Ref. No. | Parts Per Pump | Description |
|-------------|----------|----------------|--|
| 413957 | 1 | 1 | Cap - Relief Valve (R/V) |
| 436310 | 2 | 1 | Adjusting Screw - R/V |
| 432039 | 3 | 1 | Locknut - Adjusting Screw |
| 412001 | 4 | 1 | Cover - R/V |
| 920663 | 5 | 4 | Capscrews - R/V Cover |
| 426355 | 7 | 1 | Spring Guide - R/V |
| 472039 | 8 | 1 | Spring - R/V |
| 452001 | 9 | 1 | Valve - R/V |
| 701946* | 10 | 1 | O-Ring - R/V Cover |
| 012041 | 12 | 1 | Casing |
| 262041** | 13 | 1 | Rotor & Shaft Asy. (includes Ref. No. 24A & 24B) |
| 092019* | 14 | 6 | Vane - Duravane |
| 032041 | 20 | 2 | Head |
| 920532 | 21 | 28 | Capscrews - Head |
| 903166* | 24 | 2 | Ball Bearing |
| 903541** | 24A | 2 | Locknut - Bearing |
| 903542* | 24B | 2 | Lockwasher - Bearing |
| 385125* | 26 | 2 | Gasket - Bearing Cover |
| 041815 | 27 | 2 | Bearing Cover |

PUMPS & COMPRESSORS

Blackmer Pump Repair Parts

Parts

Pump Model: TLGLF4B

| Part Number | Ref. No. | Parts Per Pump | Description |
|-------------|----------|----------------|---------------------------|
| 920285 | 28 | 12 | Capscrews - Bearing Cover |
| 909183** | 35 | 1 | Key - Shaft |
| 182000** | 41 | 1 | Liner |

AUXILIARY INLET OPTIONS

| Part Number | Ref. No. | Parts Per Pump | Description |
|-------------|----------|----------------|---|
| 652012 | 42 | 1 | Flange - 3" NPT |
| 652005 | 42 | 1 | Flange - 4" Weld |
| 652007 | 42 | 1 | Flange - 3" Weld |
| 652000 | 42 | 1 | Flange - Blank |
| 701937 | 42A | 1 | O-Ring - Aux. Inlet Flanges |
| 920663 | 42B | 4 | Capscrew - 3" NPT Flange |
| 920640 | 42B | 4 | Capscrew - 3", 4" Weld Flange; Blank Flange |

AUXILIARY INLET OPTIONS

| Part Number | Ref. No. | Parts Per Pump | Description |
|-------------|----------|----------------|-------------------------------|
| 652010 | 43 | 2 | Flange - 2" NPT |
| 652024 | 43 | 2 | Flange - 2" Weld |
| 702004* | 43A | 2 | O-Ring - 2" Discharge Flanges |
| 920491 | 43B | 8 | Capscrew - Discharge Flange |
| 062039* | 71 | 2 | Disc |
| 920015** | 71A | 8 | Machine Screw - Disc |
| 909634** | 71B | 8 | Lockwasher - Machine Screw |
| 702039* | 72 | 2 | O-Ring - Head |
| 908198 | 73 | 2 | Gage Plug |
| 182040** | 74 | 1 | Key - Liner |
| 317815 | 76 | 2 | Grease Fitting |
| 701992 | 76A | 2 | Grease Relief Fitting |
| 122009* | 77 | 3 | Push Rod - Composite |
| 701926* | 88 | 1 | O-Ring - R/V Cap |
| 331908* | 104 | 2 | Grease Seal |
| 341801 | 186 | 1 | Shaft, Protector |
| 903092 | | | Tool - Locknut |
| 898922 | | | Kit - Maintenance |
| 899022 | | | Kit - Rebuild |

*Included in Maintenance Kit and Rebuild Kit

**Included in Rebuild Kit

PUMPS & COMPRESSORS

PUMPS & COMPRESSORS

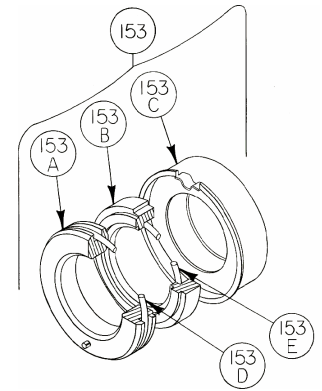
Blackmer Pump Repair Parts

Parts

Pump Model: TLGLF4B

MECHANICAL SEAL

| Part Number | Ref. No. | Parts Per Pump | Description |
|----------------|----------|----------------|----------------------------------|
| 332050* | 153 | 2 | Mechanical Seal Assembly |
| ** | 153A | 2 | Stationary Seat (Hardened Steel) |
| ** | 153B | 2 | Seal Face (Carbon) |
| ** | 153C | 2 | Jacket Assembly |
| 701934 | 153D | 2 | O-Ring - Stationary (Buna-N) |
| 711912 | 153E | 2 | O-Ring - Rotating (Buna-N) |

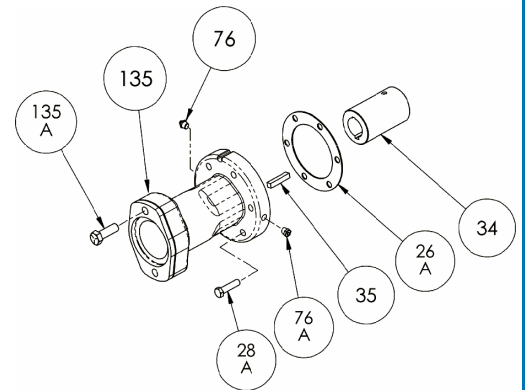


*Included in Maintenance Kit and Rebuild Kit

** NOTE: Mechanical Seal Assy. (Ref. 153) is only sold as a complete assembly. Ref. Nos. 153A, 153B & 153C are not available as separate replacement parts.

OPTIONAL HYDRAULIC MOTOR ADAPTER PARTS

| Part Number | Ref. No. | Parts Per Pump | Description |
|---------------|-----------|----------------|--|
| 892037 | See Below | See Below | Hydraulic Motor Adapter Kit |
| 381817 | 26A | 1 | Gasket - Hydraulic Motor Adapter |
| 920369 | 28A | 6 | Capscrew - Hydraulic Motor Adapter / Head |
| 906970 | 34 | 1 | Coupling w/ Setscrew - 1.25" straight key hyd. motor shaft |
| 909184 | 35 | 1 | Key - Coupling |
| 317815 | 76 | 1 | Grease Fitting |
| 701992 | 76A | 1 | Grease Relief Fitting |
| 041829 | 135 | 1 | Hydraulic Motor Adapter - SAE A Flange |
| 920510 | 135A | 2 | Capscrew - Adapter / Motor |



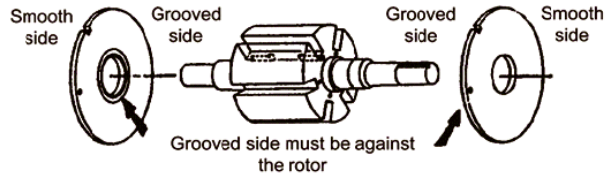
PUMPS & COMPRESSORS

Corken Pump Repair Parts

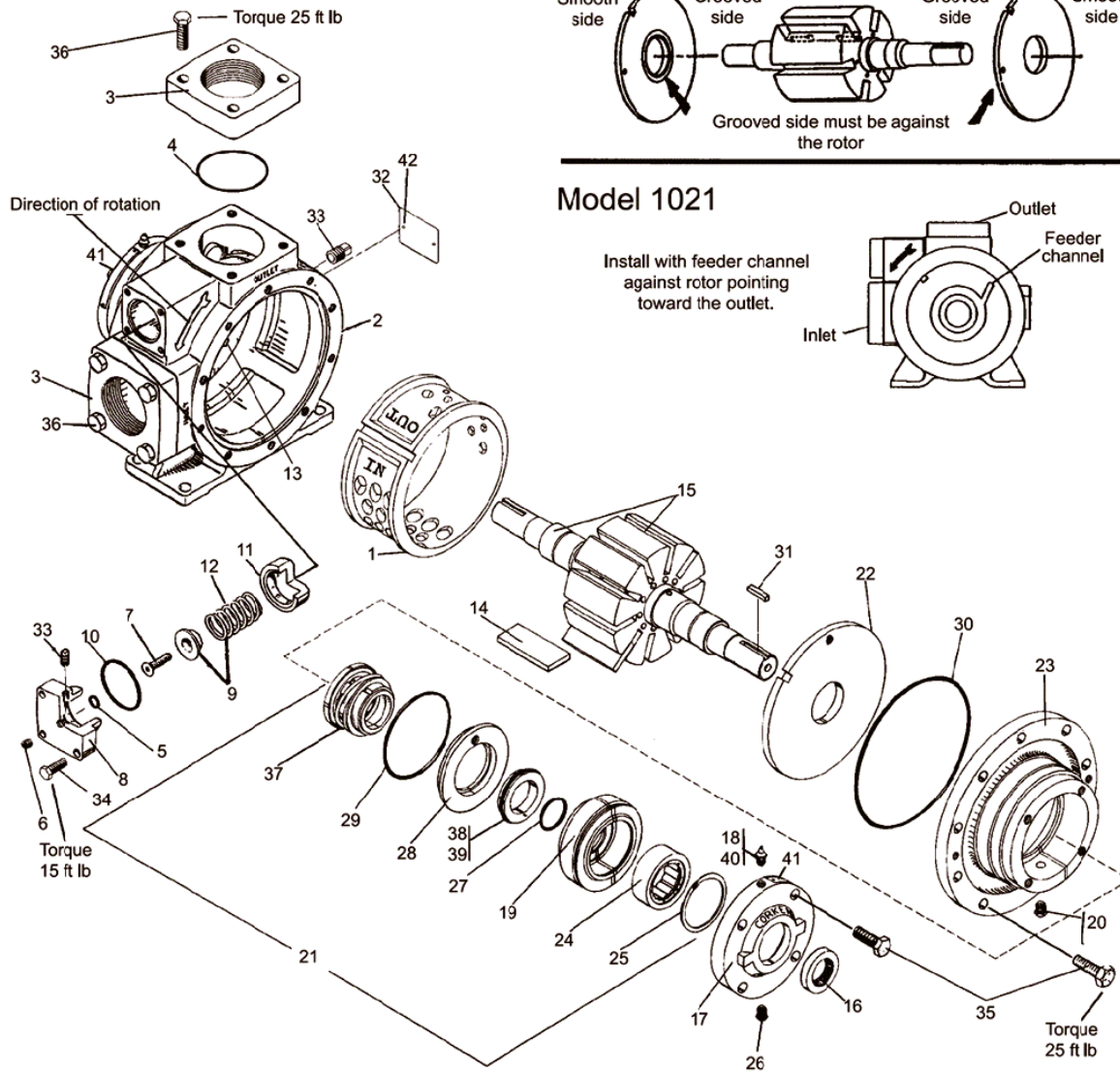
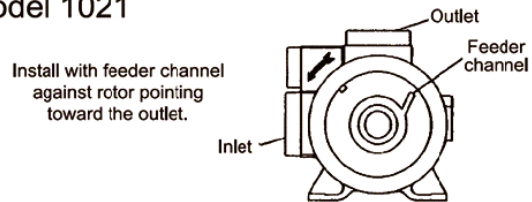
Parts Details For Stationary Coro-Vane Pumps Models 521 and 1021

CAUTION: Always relieve pressure in the unit before attempting any repairs

Model 521



Model 1021



| Part Number | Ref No. | Qty | Description |
|-------------|---------|-----|-------------------------|
| 1162-2 | 1 | 1 | Cam (521) |
| 1201-2 | 1 | 1 | Cam (1021) |
| 2832 | 2 | 1 | Case (521) |
| 2841 | 2 | 1 | Case (1021) |
| 1172-2.5 | 3 | 1 | 2.5" Flange (521) |
| 1172-2 | 3 | 1 | 2" Flange (521) |
| 1206-3 | 3 | 2 | 3" Flange (1021) |
| 2-234A | 4 | 2 | Flange O-ring (521) |
| 2-245A | 4 | 2 | Flange O-ring 3" (1021) |
| 2-249A | 4 | 2 | Flange O-ring 4" (1021) |

PUMPS & COMPRESSORS

Corken Pump Repair Parts

Parts Details For Stationary Coro-Vane Pumps Models 521 and 1021

| Part Number | Ref No. | Qty | Description |
|-----------------|---------|-----|-----------------------------------|
| 2-112A | 5 | 1 | Adjusting screw O-ring |
| 2590 | 6 | 1 | Flush seal plug 1/8" NPT |
| 2252 | 7 | 1 | Relief valve adjusting screw |
| 1174 | 8 | 1 | Valve cap (521) |
| 1207 | 8 | 1 | Valve cap (1021) |
| 1242-X | 9 | 1 | Relief valve spring & guide (521) |
| 1227 | 9 | 1 | Relief valve spring guide (1021) |
| 2-224A | 10 | 1 | Relief valve cap O-ring (521) |
| 2-228A | 10 | 1 | Relief valve cap O-ring (1021) |
| 1241 | 11 | 1 | Relief valve (521) |
| 1224 | 11 | 1 | Relief valve (1021) |
| 1242 | 12 | 1 | Relief valve spring (521) |
| 1226 | 12 | 1 | Relief valve spring (1021) |
| 1170 | 13 | 1 | Cam key (521) |
| 1309 | 13 | 1 | Came key (1021) |
| 1168-7 | 14 | 10 | Blade (521) |
| 1308-9 | 14 | 10 | Blade (1021) |
| 1166-1X1R | 15 | 1 | Rotor & shaft assembly (521) |
| 1208-1X1R | 15 | 1 | Rotor & shaft assembly (1021) |
| 1358 | 16 | 2 | Grease seal |
| 1164-1 | 17 | 2 | Bearing cap |
| 2158 | 18 | 2 | Grease zerk 1/8" NPT |
| 1769 | 19 | 2 | Bearing housing |
| 1343 | 20 | 2 | Relief fitting (seal vent) |
| 1769-XA | 21 | 2 | Seal assembly |
| 1769-XRA | 21 | 2 | Seal assembly-replacement |
| 1163-2 | 22 | 2 | Sideplate (521) |
| 1209-1 | 22 | 2 | Sideplate (1021) |
| 1161-4 | 23 | 2 | Head (521) |
| 1205-4 | 23 | 2 | Head (1021) |
| 2754-X | 24 | 2 | Roller bearing-complete |
| 2760-244 | 25 | 2 | Retainer ring |
| 1343 | 26 | 2 | Relief fitting (grease) |
| 2-128A | 27 | 2 | Shaft O-ring |
| 1882 | 28 | 2 | Seat adapter plate |
| 2-240A | 29 | 2 | Adapter plate O-ring |
| 2-261A | 30 | 2 | Case O-ring (521) |
| 2-268A | 30 | 2 | Case O-ring (1021) |
| 2270 | 31 | 2 | 1/4" Key |
| 2949 | 32 | 1 | nameplate |
| 3442 | 33 | 1 | 1/4" NPT plug |
| 7001-031 NC125A | 34 | 4 | Hex hd bolt 5/16-18x1-1/4 (521) |
| 7001-037 NC125A | 34 | 4 | Hex hd bolt 3/8-16x1-1/4 (1021) |
| 7001-037 NC125A | 35 | 28 | Hex head bolt 3/8-16x1-1/4 (521) |
| 7001-037 NC125A | 35 | 32 | Hex head bolt 3/8-16x1-1/4 (1021) |
| 7001-037 NC150A | 36 | 8 | Hex head bolt 3/8-16x1-1/2 |
| ____5 | 37 | 2 | Retainer |
| ____5 | 38 | 2 | Seal Seat |
| 2-227A | 39 | 2 | Seal seat O-ring |
| 2159 | 40 | 2 | Lubricap #2 |

PUMPS & COMPRESSORS

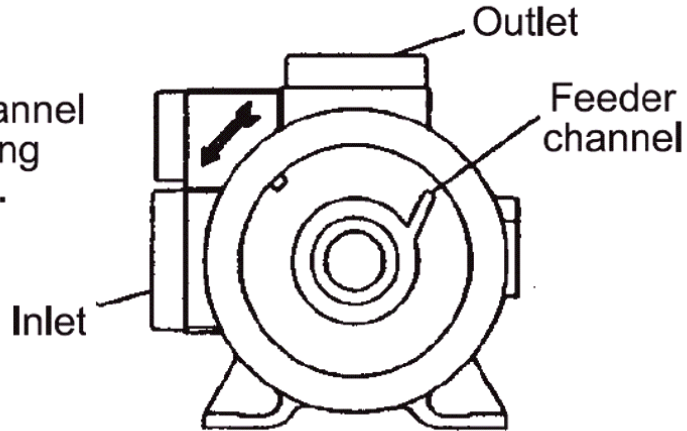
Corken Pump Repair Parts

Parts Details For Stationary Coro-Vane Pumps Models 521 and 1021

| Part Number | Ref No. | Qty | Description |
|-----------------|---------|-----|--|
| 1359 | 41 | 2 | Lubrication instruction tag |
| 7003-004 DR0198 | 42 | 2 | Round head plated drive screw 4 x 3/16 |

Model 1021

Install with feeder channel
against rotor pointing
toward the outlet.

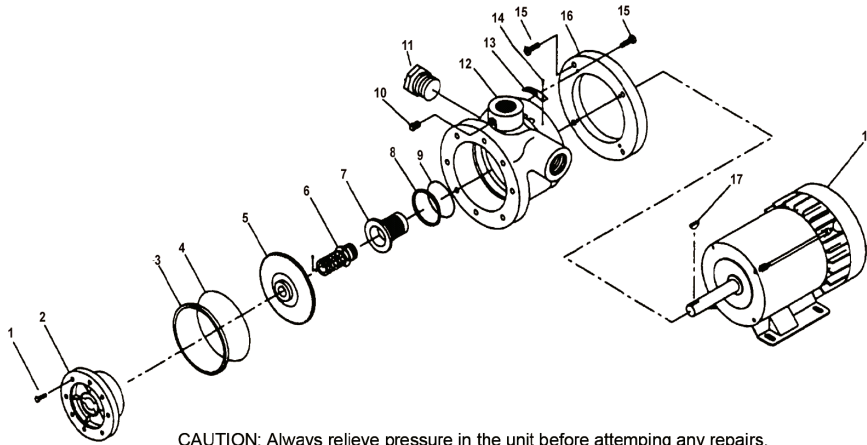


PUMPS & COMPRESSORS

PUMPS & COMPRESSORS

Corken Pump Repair Parts

Parts Details for Models C9 to C14



CAUTION: Always relieve pressure in the unit before attempting any repairs.

| Part Number | Ref No. | Qty | Description |
|----------------|---------|---------|--|
| 7001-031NC100A | 1 | 8 | Hex head cap screw |
| 1001-09 | 2 | 1 | Cover-model 9 |
| 1001-0 | 2 | 1 | Cover-model 10 |
| 1001-2 | 2 | 1 | Cover-model 12 |
| 1001-3 | 2 | 1 | Cover-model 13 |
| 1001-4 | 2 | 1 | Cover-model 14 |
| 1001-5 | 2 | 1 | Cover-model 15 |
| 1014 | 3 | As req. | Case clearance shim (0.002" red) |
| 1014-1 | 3 | As req. | Case clearance shim (0.003" green) |
| 2-246A | 4 | 1 | Case O-ring (non Teflon 1) |
| 2-247E | 4 | 1 | Case O-ring Teflon 1 |
| 1003-09 | 5 | 1 | Impeller, brass-model 9 |
| 1003-0 | 5 | 1 | Impeller, brass-model 10 |
| 1003-2 | 5 | 1 | Impeller, brass-model 12 |
| 1003-3 | 5 | 1 | Impeller, brass-model 13 |
| 1003-4 | 5 | 1 | Impeller, brass-model 14 |
| 1003-5 | 5 | 1 | Impeller, brass-model 15 |
| 113-CXA | 6 | 1 | Seal assembly |
| 1004-1X | 7 | 1 | Seal housing, steel (non-Teflon 1 O-rings) |
| 1004-11X | 7 | 1 | Seal housing, SS (non-Teflon 1 O-rings) |
| 1004-2X | 7 | 1 | Seal housing, steel (Teflon 1 O-rings) |
| 1004-21X | 7 | 1 | Seal housing, SS (Teflon 1 O-rings) |
| 1013 | 8 | As req. | Housing adjustment shim (0.010") |
| 1013-1 | 8 | As req. | Housing adjustment shim (0.020") |
| 2-224A | 9 | 1 | Housing O-ring |
| 3442 | 10 | 1 | Pipe plug, 1/4" NPT |
| 3444 | 11 | 1 | Pipe plug, 3/4" NPT |
| 1002-09 | 12 | 1 | Case-Model 9 |
| 1002-0 | 12 | 1 | Case-Model 10 |
| 1002-2 | 12 | 1 | Case-Model 12 |
| 1002-3 | 12 | 1 | Case-Model 13 |
| 1002-4 | 12 | 1 | Case-Model 14 |
| 1002-5 | 12 | 1 | Case-Model 15 |
| 1914-1 | 13 | 1 | Nameplate |
| 7012-006SF019E | 14 | 2 | Phillips head screw 6-32 x 1/4" |
| 7002-037NC087A | 15 | 8 | Socket head cap screw |

PUMPS & COMPRESSORS

Corken Pump Repair Parts

Parts Details for Models C9 to C14

| Part Number | Ref No. | Qty | Description |
|-------------|---------|-----|--------------------------------------|
| 1015 | 16 | 1 | Adapter ring |
| 2497 | 17 | 1 | Woodruff key, steel |
| 2497-1 | 17 | 1 | Woodruff key, SS |
| 2555 | 18 | 1 | Motor 3/4 hp models 9, 10 |
| 2556 | 18 | 1 | Motor 1 hp models 12 |
| 2557 | 18 | 1 | Motor 3 hp models 14, 15 |
| 2895 | 18 | 1 | Motor 3/4 hp, obsolete models 9E, 10 |
| 2896 | 18 | 1 | Motor 1 1/2 hp, obsolete models 12E |
| 4261 | 18 | 1 | Motor 2 hp model 13 |

Repair Kits and Spare Parts For Stationary Coro-Vane Pumps

521 Repair Kit 2904-X2*

| Part Number | Qty | Description |
|-------------|-----|-----------------------------|
| 1163-2 | 2 | Sideplate |
| 1168-7 | 10 | Vane |
| 1358 | 2 | Grease seal |
| 1769-XRA | 2 | Seal assembly (replacement) |
| 2-112A | 1 | O-ring, Buna-N |
| 2-224A | 1 | O-ring, Buna-N |
| 2-227A | 2 | O-ring, Buna-N |
| 2-234A | 2 | O-ring, Buna-N |
| 2-261A | 2 | O-ring, Buna-N |
| 2010 | 3 | Flange gasket |
| 2014 | 1 | Grease seal, thrust |
| 2754-X | 2 | Roller bearing |

* All repair kits have Buna-N O-rings which are suitable for both LPG and NH3 applications.

521 Additional Spare Parts

| Part Number | Qty | Description |
|-------------|-----|------------------------|
| 1166-1X1R | 1 | Rotor & shaft assembly |
| 1162-2 | 1 | Cam (liner) |

1021/F1021 Repair Kit 2906-X2*

| Part Number | Qty | Description |
|-------------|-----|-----------------------------|
| 1209-1 | 2 | Sideplate |
| 1308-9 | 10 | Vane |
| 1358 | 2 | Grease seal |
| 1769-XRA | 2 | Seal assembly (replacement) |
| 2-112A | 1 | O-ring, Buna-N |
| 2-228A | 1 | O-ring, Buna-N |
| 2-245A | 2 | O-ring, Buna-N |
| 2-249A | 2 | O-ring, Buna-N |
| 2-268A | 2 | O-ring, Buna-N |
| 2014 | 1 | Grease seal, thrust |
| 2754-X | 2 | Roller bearing |

* All repair kits have Buna-N O-rings which are suitable for both LPG and NH3 applications.

1021/F1021 Additional Spare Parts

| Part Number | Qty | Description |
|-------------|-----|------------------------|
| 1208-1X1R | 1 | Rotor & shaft assembly |
| 1201-2 | 1 | Cam (liner) |

MOTORS AND ELECTRICAL

Electric Motors



All sizes available in Class 1, Group D. Explosion proof. Specify horse power, single or three phase and voltage required. Non-explosion proof motors also available.

| Part Number | Horsepower | Frame | Description |
|-------------|------------|-------|----------------------------------|
| 1EC | 1 | 56C | 1 Phase 115/230 Volt X-Proof |
| 1EC-B | 1 | 56C | 1 Phase 115/230 Volt X-Proof |
| 1.5EC | 1.5 | 56C | 1 Phase 115/230 Volt X-Proof |
| 1.5EC-B | 1.5 | 56C | 1 Phase 115/230 Volt X-Proof |
| 1.5EFS | 1.5 | 145TC | 3 Phase 230/460 Volt X-Proof |
| 2EFS | 2 | 182T | 1 Phase 115/230 Volt X-Proof |
| 2EF | 2 | 145T | 3 Phase 230/460 Volt X-Proof |
| 3EFS | 3 | 215 | 1 Phase 115/230 Volt X-Proof |
| 3EF | 3 | 182T | 3 Phase 230/460 Volt X-Proof |
| 5EF | 5 | 184T | 3 Phase 230/460 Volt X-Proof |
| 5EFS | 5 | 215 | 1 Phase 230 Volt X-Proof |
| 7.5TEF | 7.5 | 213T | 3 Phase 230/460 Volt Total Encl. |
| 7.5EF | 7.5 | 213T | 3 Phase 230/460 Volt X-Proof |
| 10EF | 10 | 215T | 3 Phase 230/460 Volt X-Proof |
| 15EF | 15 | 254T | 3 Phase 230/460 Volt X-Proof |
| 20EF | 20 | 256T | 3 Phase 230/460 Volt X-Proof |
| 25EF | 25 | 284T | 3 Phase 230/460 Volt X-Proof |
| 3EFS-B | 3 | 215C | 1 Phase 110-230 Volt X-Proof |
| 5EF-B | 5 | 184T | 3 Phase 208-230/460 Volt X-Proof |
| 5EF-B-1200 | 5 | 215TC | 3 Phase 230-460 Volt X-Proof |
| 5EFS-B | 5 | 215C | 1 Phase 110/230 Volt X-Proof |

MOTORS AND ELECTRICAL

Variable Frequency Device



Features:

- Up to 30% smaller than the competition
- Current vector control, open loop
- RoHS compliance
- On-line tuning
- Induction motor (IM) or permanent magnet motor (PM) operation
- Function Block Diagram (FBD) programming via DriveWorksEZ™
- Starting torque of 200% at 0.5 Hz
- Side-by-side installation due to patented hybrid heatsink
- Removable terminal block with parameter backup function*
- "One-touch" copy function with verify
- Super-fast 2 ms scan cycle with dual CPU
- EN954-1 Safety Cat. 3, Stop Cat. 0
- Increased vibration resistance, from 20 Hz to 50 Hz (0.65G)
- 1 in 10,000 failure rate
- Swing PWM function to decrease noise at low carrier frequencies
- Pre-maintenance function
- Modbus communication
- Cooling fan replacement without tools
- MTBF: 28 years • Short Circuit Current Rating (SCCR): 30kA rms symmetrical
- Common programming with all other Yaskawa drives
- DriveWizard software available at no extra cost

Available Options

- Screwless Terminals
- Integral EMC Filter (C1, C2, C3)
- 24 VDC Control Power Unit
- 120 VAC Interface
- Network Communications: Profibus-DP,
- DeviceNet, EtherNet/IP, Modbus TCP/IP,
- MECHATROLINK-II
- Operator Kits: NEMA 1 (LED or LCD) and
- NEMA 3R/4X (LED or LCD)
- USB Copy Unit
- DIN Rail Kit
- Input CE Filter
- Dynamic Braking Resistor (3% or 10%)
- Input Reactor (3% or 5%)

| Part Number | Specification |
|-----------------------|--|
| Overload Capacity | 150% Overload for 60 sec. (Heavy Duty) 120% Overload for 60 sec. (Normal Duty) |
| Output Frequency | 0~400 Hz (higher frequencies available with custom software) |
| Control Methods | Open Loop Current Vector Control, V/f Control, PM Open Loop Vector Control Simple closed loop speed control available |
| Protective Design | IP20/NEMA1 |
| Braking Transistor | Standard in all models |
| Braking Torque | 20 - 40% increase with intelligent high-slip braking function |
| KEB Function | Uses mechanical energy to continue operation during momentary power failure, standard |
| Overvoltage Function | Prevention function for die-cushion in a hydraulic mechanical press and other applications |
| Maintenance | Elapsed timer assists in preventative maintenance for cooling fan, capacitors, and transistors Easily replaceable cooling fan |
| Global Certification | CE, UL, cUL, RoHS, TUV |
| Available I/O | (7) multi-function digital inputs (1) hardwire baseblock (2) multi-function analog inputs (1) multi-function pulse input (1) multi-function relay output (2) multi-function photo-coupler outputs (1) multi-function 0-10 Vdc analog output (1) multi-function pulse output |
| Network Communication | Standard: RS-422/485 MODBUS 115 kbps Optional: DeviceNet, EtherNet/IP, Profibus-DP, Modbus TCP/IP, MECHATROLINK-II |
| Keypad Operator | Standard LED 5 digit display Optional multi-lingual, full-text remote LCD |

| Part Number | Horsepower | Amps | Description |
|-------------|------------|------|--|
| VFD-5 | 5 | 18 | V1000, 18 AMP, 5HP, 240 VOLT, 3 Phase Output |

MOTORS AND ELECTRICAL

MOTORS AND ELECTRICAL

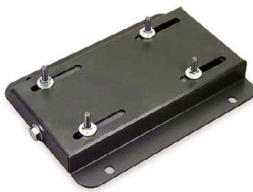
Variable Frequency Device

| 200-240VAC Single Phase 50/60 Hz | | | | | | | |
|----------------------------------|------------|------------|------------|------------|------------|--------------|--------------|
| Model Number CIMR-VU FAA | BA0001 | BA0002 | BA0003 | BA0006 | BA0010 | BA0012 | BA0018 |
| Motor Capacity ND (HP) HD | 1/4 1/8 | 1/4 1/4 | 3/4 1/2 | 1 1 | 3 2 | 3 3 | 5 5 |
| Output Current A ND (rms) HD | 1.2 0.8 | 1.9 1.6 | 3.3 3.0 | 6.0 5.0 | 9.6 8.0 | 12.0 11.0 | 17.5 17.5 |

| 200-240VAC Single Phase 50/60 Hz | | | | | | | | | | | |
|----------------------------------|------------|------------|------------|------------|------------|--------------|--------------|-----------|----------|----------|----------|
| Model Number CIMR-VU FAA | 2A0001 | 2A0002 | 2A0004 | 2A0006 | 2A0010 | 2A0012 | 2A0020 | 2A0030 | 2A0040 | 2A0056 | 2A0069 |
| Motor Capacity ND (HP) HD | 1/4 1/8 | 1/4 1/4 | 3/4 1/2 | 1 1 | 3 2 | 3 3 | 5 5 | 10 7.5 | 10 10 | 20 15 | 25 20 |
| Output Current A ND (rms) HD | 1.2 0.8 | 1.9 1.6 | 3.5 3.0 | 6.0 5.0 | 9.6 8.0 | 12.0 11.0 | 19.6 17.5 | 30 25 | 40 33 | 56 47 | 69 60 |

| 200-240VAC Single Phase 50/60 Hz | | | | | | | | | | | |
|----------------------------------|------------|------------|------------|------------|------------|---------|-------------|--------------|----------|----------|----------|
| Model Number CIMR-VU FAA | 4A0001 | 2A0002 | 2A0004 | 2A0006 | 2A0010 | 2A0012 | 2A0020 | 2A0030 | 2A0040 | 2A0056 | 2A0069 |
| Motor Capacity ND (HP) HD | 1/2 1/2 | 1 3/4 | 2.2 | 3.3 | 4.3 | 5.4 | 7.5 5 | 10 10 | 15 10 | 20 15 | 25 20 |
| Output Current A ND (rms) HD | 1.2 1.2 | 2.1 1.8 | 4.1 3.4 | 5.4 4.8 | 6.9 5.5 | 8.8 7.2 | 11.1 9.2 | 17.5 14.8 | 23 18 | 31 24 | 38 31 |

Adjustable Electric Motor Bases



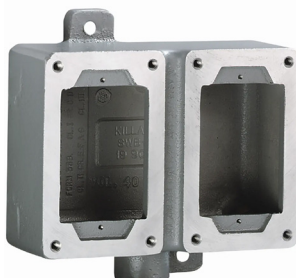
| Part Number | Description |
|--------------|-----------------------------|
| B145T | 2HP Adjustable Motor Base |
| B182T | 3HP Adjustable Motor Base |
| B184T | 5HP Adjustable Motor Base |
| B213T | 7.5HP Adjustable Motor Base |
| B215T | 10HP Adjustable Motor Base |
| B254T | 15HP Adjustable Motor Base |
| B256T | 20HP Adjustable Motor Base |

Explosion Proof Magnetic Starters



| Part Number | Description |
|-----------------|--|
| NEMA7-00 | Nema 7 Size 00 Hazardous Gas Starter & Enclosure |
| NEMA7-0 | Nema 7 Size 0 Hazardous Gas Starter & Enclosure |
| NEMA7-1 | Nema 7 Size 1 Hazardous Gas Starter & Enclosure |
| NEMA7-2 | Nema 7 Size 2 Hazardous Gas Starter & Enclosure |

Explosion Proof Switch Bodies



| Part Number | Description |
|---------------|--------------------------------|
| SWB-1 | Single Device Body |
| SWB-7 | 2-Gang Device Body - Dead End |
| SWB-10 | 2-Gang Device Body - Feed Thru |
| SWB-18 | 2-Gang Deep Device Body |
| SWB-19 | 3-Gang Deep Device Body |
| SWB-20 | 4-Gang Deep Device Body |

MOTORS AND ELECTRICAL

Explosion Proof Switch Covers



| Part Number | Description |
|-------------|---|
| XCS-0A15 | Device Cover - 2 Mini Pushbuttons, 1 Pilot Lite |
| XCS-0B4 | Double Push Button |
| XCS-0MRM3 | Device Cover - Push/Pull Mushroom Button |
| XS-2C | Tumbler Toggle Switch |

Explosion Proof Light



| Part Number | Description |
|-------------|--------------------------------|
| EMI15X2G | Exp. Proof Ceiling Mount Light |

MOTORS AND ELECTRICAL

METERS

Sensus LP Gas Meters

R-275 Series Meter



The latest design concepts and modern engineering materials on this series have been combined to provide a lighter weight, easier to handle, more durable meter which requires less maintenance and offers greater life expectancy.

| Part Number | Index Units | SCFH | BTU/Hr | Description |
|-------------|-------------|------|--------|--------------------------------------|
| 275-11 | Cubic Feet | 275 | 430000 | R-275 3/4" Vapor Meter W/Mtg.Bracket |

*Note: special order meters are also available.

Sensus LP Gas Meter Parts

| Part Number | Description |
|-------------|---|
| 275-GASKET | Lens Cover Gasket For S-275 Meters |
| 275-LENS | Window Lens For S-275 Series Meters |
| M-BAR | Top Connection Bar For 275-1 Meter |
| M-BRKT-5 | 5' Post Driven Meter Bracket |
| M-BRKT-6 | 6' Post Driven Meter Bracket |
| M-BRKT-W | Wall Mount Meter Bracket |
| 2# INDEX | 2# Index For R/S275 Meters (Cubic Foot) |

NEPTUNE LP-Gas Liquid Meter



Neptune's 1" Compact LP-Gas liquid meter, designed for metering small quantities of any LP-Gas, is particularly suited to the filling of portable gas bottles and fuel containers for portable boilers, pavement heaters, weed burners, fork lift trucks, and motor fuel tanks.

| Part Number | Connection Size | Working Pressure | Min/ Max Flow Rate | Temperature Compensated | Description |
|--------------|-----------------|------------------|--------------------|-------------------------|--|
| 631-4D | 3/4" FPT | 350PSI | 3/18 GPM | No | 1"Neptune Meter W/3/4" Flange |
| 631-4D-ATC | 3/4" FPT | 350PSI | 3/18 GPM | Yes | 1"Neptune Meter W/Atc & 3/4" Flange |
| 631-4D-E1000 | 3/4" FPT | 350PSI | 3/18 GPM | No | 1" Neptune Meter W/3/4" Flange & Electronic Register |

Liquid Controls LP-Gas Meter



| Part Number | Working Pressure | Max Flow | Description |
|-------------|------------------|----------|--------------------|
| MA-4-CLP-10 | 30GPM | 350PSI | LC DISPENSER METER |

VAPORIZERS

Algas Vaporizers

Direct Fired Vaporizers



Direct Fired LPG Vaporizer

As its name implies, a Direct Fired vaporizer uses direct flame to vaporize liquid LPG inside a heat exchanger. Requiring no electricity, the Direct Fired vaporizer utilizes LPG itself as its source of energy and provides a constant supply of LPG, regardless of the LPG composition. Its durable and safe design make it perfect for any number of agricultural and industrial applications, including animal confinement, crop drying, construction heating, manufacturing processes and many more. Algas-SDI's line of Direct Fired vaporizers is designed and constructed to withstand the harshest of conditions. The units include time tested and proven components and a heavy gauge, powder coated steel cabinet, making them exceptionally rugged and ready for all conditions and applications.

| Part Number | GPH Capacity | BTU/HR Capacity | Depth | Width | Height | Liquid Inlet Size (NPT) | Vapor Outlet Size (NPT) |
|-------------|--------------|-----------------|---------|---------|--------|-------------------------|-------------------------|
| 40/40H | 40 | 3,600,000 | 16" | 19 1/4" | 35" | 3/4" | 1" |
| 80/40H | 80 | 7,200,000 | 16" | 30 1/2" | 35" | 3/4" | 1" |
| 120/60H | 120 | 10,800,000 | 16 1/2" | 30 1/2" | 44" | 3/4" | 1" |

Electric Vaporizer



Torrexx



Zimmer

ZIMMER™ Electric LPG Vapo

The ZIMMER's Patented design incorporates breakthrough technology never before seen in the LPGas industry. By departing from the status quo, Algas-SDI has created a product that is simple, reliable and affordable. You no longer have to make a choice between high quality and low price. With the ZIMMER you can have both!

Applications include commercial, light industrial, mobile, and high-end residential. Commercial and industrial users will benefit from smaller space dedicated to LPG facilities, consistent pressure and combustion when used with LPG, and trouble free fuel supply day-in and day-out.

TORREXX™ Electric LPG Vaporizer

Set your mind at ease and deliver the reliability of LP-Gas that your customer expects with Algas- SDI's latest electric vaporizer-the TORREXX! Designed with both the discriminating LP-Gas professional and end-user in mind, the TORREXX raises the bar in performance, safety, and reliability. Compact, highly efficient, and extremely durable, the TORREXX is poised to become the new industry standard for electric vaporizersh

| Part Number | GPH Capacity | BTU/HR Capacity | Depth | Width | Height | Liquid Inlet Size (NPT) | Vapor Outlet Size (NPT) |
|-------------|--------------|-----------------|---------|---------|---------|-------------------------|-------------------------|
| ZIMMER | 20 | 1,800,000 | 6 1/2" | 31 1/8" | 10 1/4" | 3/4" | 1" |
| TX25 | 12.5 | 1,150,000 | 45 1/2" | 12 3/4" | 41" | 3/4" | 1" |
| TX50 | 25 GPH | 2,280,000 | 45 1/2" | 12 3/4" | 41" | 3/4" | 1" |
| TX100 | 50 GPH | 4,575,000 | 45 1/2" | 12 3/4" | 41" | 3/4" | 1" |
| TX160 | 80 GPH | 7,320,000 | 51 1/2" | 12 3/4" | 47" | 3/4" | 1" |

Vaporizer Accessories

| Part Number | Description |
|-------------|--|
| 80887 | Zimmer tank mount kit. |
| 1'DRIP-T | Vaporizer Drip Leg- 1" x 1" FNPT w/ 2" Body, 30" OAL. Includes needle valve, 0-30# gauge, drain valve. |
| 2'DRIP-T | Vaporizer Drip Leg- 2" x 2" FNPT w/ 3" body, 36" OAL. Includes needle valve, 0-30# gauge, drain valve. |
| 289H-43 | Fisher relief valve. 1" NPT. Adjustable from 10-20 PSI. |

VAPORIZERS

VAPORIZERS

Algas Portable Vaporizer

Algas Portable Vaporizer for Construction Sites



Features:

- 4" Steel channel base w/ fork holes for easy transport.
- 2" Steel pipe uprights w/ 1 1/4" horizontal braces- provides protection to vaporizer.
- Stabilizers to top of vaporizer.
- Built in drip-tee downstream of regulator- catches more heavy ends.
- 627-6210 Fisher High-Capacity regulator.
- 289H-43 pressure relief valve on vapor line.
- 2) 1" Vapor Outlets
- 1) 3/4" Liquid inlet w/ in-line strainer.
- Rego shutoff valves on liquid and vapor lines.
- Automatic re-ignition on vaporizer.
- Unions on liquid and vapor lines to allow for easy replacement of vaporizer or valves.
- Tank vapor burner supply option.

| Part Number | Description |
|-------------|---------------------------------|
| VAPSKID40 | 40 GPH Portable Vaporizer Unit |
| VAPSKID80 | 80 GPH Portable Vaporizer Unit |
| VAPSKID120 | 120 GPH Portable Vaporizer Unit |

VAPORIZERS

Algas Portable Vaporizer

Algas Vaporizer Parts

| Part Number | Description |
|-------------|---|
| 1502-4020 | Burner Manifold 40/40H- After 10/02 |
| 1501-4020 | Left Burner Manifold 80/40H- After 10/02 |
| 1501-4021 | Right Burner Manifold 80/40H- After 10/02 |
| 40764 | REPAIR KIT- LIQUID INLET/CAPACITY CONTROL |
| 40774 | Pilot Assembly Kit 40/40 (.018) (81113) |
| 37110 | Door Latch, Direct Fired- After 10/02 |
| 40768 | Pilot Assm. Kit 80/40H (.023) After 10/02 |
| 49-0 | Twin Stage Reg. For 80/40H & 40/40H |
| 41073 | Algas Thermostat w/Re-Ignitor-Fits 40H-120H |

*Only common parts listed. More parts available.

VAPORIZERS

TORCHES

NU-WAY Torches



| Part Number | Description |
|-------------|-------------------------|
| 4V | 200,000 BTU NUWAY TORCH |
| 5V | 500,000 BTU NUWAY TORCH |

Red Dragon Torches

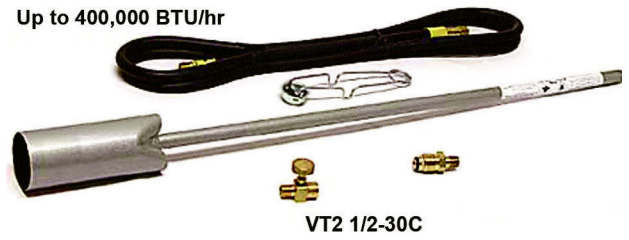


SHIPS FULLY ASSEMBLED!



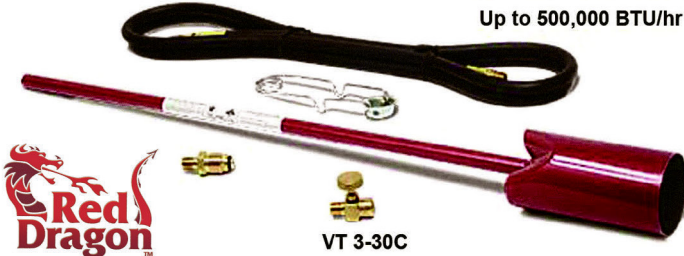
VT 2-23 C

Up to 400,000 BTU/hr



VT2 1/2-30C

Up to 500,000 BTU/hr



VT 3-30C



VT1.5-12C

| Part Number | Description |
|-------------|-----------------------------------|
| HT1.5-10 | Red Dragon Hand Torch Only |
| HT1.5-10C | Red Dragon Hand Torch Kit |
| VT1.5-12C | 50,000 BTU Red Dragon Kit |
| VT2.5-24CE | Red Dragon Torch Kit Economy |
| VT2.5-30C | 400,000 BTU Red Dragon Kit |
| VT2-12 | 100,000 BTU Vapor Torch |
| VT2-23C | 100,000 BTU Weed Dragon Torch Kit |
| VT3-30C | 500,000 BTU Red Dragon Kit |
| LT3-12 | 750,000 BTU Liquid Torch |
| LT3-12HD | Red Dragon Liquid Torch |

Red Dragon Torch Parts & Accessories



| Part Number | Description |
|-------------|--|
| HP-10C | 10' Hose w/ 1/4" MPT x 1/4" FPT |
| H-19 H | Safety Valve For CH220 |
| HK-7 | Fuel Line Quick Conn. Set |
| M-3012 | 12" Thermocouple For CH220 |
| M3-6 | Red Dragon Mounting BRKT |
| MODEL 21 | Piezo Ignitor w/ Lead Wire |
| R-700 C | 18 PSI Preset Regulator For CH220 |
| V-3055P | 1/4" Adjusting Needle Valve |
| V-334 | Heavy Duty 1/4" Adjusting Needle Valve |

OUTDOOR ITEMS

Mr. Heater Heaters

MH25LP

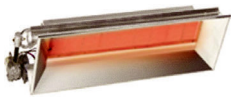


Features:

- Heats up to 500-600 sq. ft. (2-1/2 car garage)
- For use in low profile buildings with 7-8 ft. ceilings
- No electricity required - heats during power outages
- Includes thermostat
- CSA certified
- All necessary brackets and hardware included
- Available in propane (22,000 BTU/Hr.) or natural gas (25,000 BTU/Hr.)

| Part Number | Description |
|---------------|--|
| MH25LP | Heats up to 500-600 sq. ft. (2-1/2 car garage) |

MH40LP



Features:

- Heats up to 750 sq. ft.
- For use in low profile buildings with 12-15 ft. ceilings
- No electricity required - heats during power outages
- Includes thermostat
- CSA certified
- All necessary brackets and hardware included

| Part Number | Description |
|---------------|-------------------------|
| MH40LP | Heats up to 750 sq. ft. |

Mr. Heater Fittings

| Part Number | Description |
|----------------|---|
| F273655 | Excess Flow P.O.L. x 1/4" Male Pipe Thread |
| F273754 | 1/4" Male Pipe Thread x 1" - 20 Female Throwaway Cylinder Thread |
| F273755 | 1/4" Male Pipe Thread x 1" - 20 Male Throwaway Cylinder Thread |
| F273757 | 9/16" Male Pipe Thread x P.O.L. w/ Handwheel |
| F273762 | 1/4" Male Pipe Thread x Full Flow Soft Nose P.O.L. |
| F276129 | 9/16" Male Pipe Thread x P.O.L. |
| F276130 | 9/16" Left Hand Male Thread x 1" - 20 Throwaway Cylinder Thread w/Shutoff |
| F276139 | 1/4" Male Pipe Thread x P.O.L. |
| F276140 | Propane Male Throwaway Cylinder Adapter |
| F276152 | 1/4" Male Pipe Thread x 9/16" Left Hand Male Thread |
| F276153 | 3/8" Male Pipe Thread x 9/16" Left Hand Male Thread |
| F276154 | 9/16" Left Hand Male Pipe Thread x 9/16" Left Hand Male Thread |

OUTDOOR ITEMS

Mr. Heater Hose Assemblies

| Part Number | Description |
|-------------|--|
| F271149-36 | 3' Propane Hose Assembly |
| F271149-72 | 12" Propane Acme Flexible Pigtail Hose Assembly |
| F271158-15 | 15" Propane Acme Flexible Pigtail Hose Assembly |
| F271158-18 | 18" Propane Acme Flexible Pigtail Hose Assembly |
| F271161 | 22" Repl. Propane BBQ Hose & Regulator Assembly with Appliance End Fitting |
| F271470 | 15' Propane Appliance Extension Hose Assembly |
| F271474 | 15' Propane Appliance Extension Hose Assembly |
| F273071 | 5' Propane Hose/Regulator Assembly |
| F273072 | 12' Propane Hose/Regulator Assembly |
| F273701 | 5' Propane Hose Assembly |
| F273702 | 12' Propane Hose Assembly |
| F273707 | 5' Propane Hose Assembly |
| F273710 | 5' Propane Hose Assembly |
| F273711 | 12' Propane Hose Assembly |
| F273716 | 22" Propane Replacement Barbecue Hose |
| F273717 | 5' Propane Hose Assembly |
| F273720 | 12' Natural Gas Patio Hose Assembly |
| F273726 | 3' Propane Hose Assembly |
| F276124 | 5' Propane Hose Assembly |
| F276148 | 5' Propane Hose Assembly |

Mr. Heater Accessories

| Part Number | Description |
|-------------|---|
| F271239 | One Stop Universal Gas Appliance 'Hook Up' Kit |
| F271715 | Propane "Y" Male Adapter with Handwheel |
| F271735 | Propane "Y" Female Adapter with Handwheel |
| F273169 | "TankFoot" LP Gas Tank Stabilizer |
| F273714 | Stay Flow Assembly 12" hose M&F 1"-20 Throwaway Connections |
| F273719 | High Pressure Regulator with P.O.L. |
| F273733 | Stay A While Tee, 5' Hose Excess Flow POL, 1/4"IMF |
| F273751 | LP Gas Adapter Tee Two-way Output |
| F273752 | Stay A While Tee Adapter Three-way Output |
| F273753 | 90 Degree Stay Flow adapter Two-way Output |
| F273758 | LP Gas Bulk Cylinder Adapter w/handwheel |
| F273759 | 90 Degree Low Pressure Regulator w/POL |
| F273760 | 90 Degree Elbow POL, 1"-20 Throwaway Fitting |
| F273761 | 90 Degree Low Pressure Regulator w/Acme |
| F273767 | Low Pressure Regulator 1/4"FP, 3/8"FP |
| F273769 | Portable Table Top Regulator, Orifice Outlet, 1"-20 Throwaway Fitting |
| F276132 | LP Gas Bulk Cylinder Adapter w/o handwheel |
| F276136 | Low Pressure Regulator 3/8"FP, w/POL |
| F276171 | Steak Saver" Adapter w/POL/Acme Thread, 1"-20 Throwaway Fitting |
| F276186 | Propane or Natural Gas 1/4" Quick Connector & Excess Flow Plug |
| F276187 | Propane or Natural Gas 3/8" Quick Connector |
| F276190 | Quick Coupler Set, 1/4"MP, 1/4"FP |
| F276328 | Quick Coupler Male Plug, w/Excess Flow |
| F276329 | Quick Coupler Cylinder Fill Male Plug 7/8"F, POL |
| F276330 | Propane Gas Coupling Adapter Kit |
| F276334 | Propane Gas Grill "Quick Connect" Adapter |
| F276400 | Propane Brass Cap Brass Cap for 1"-20F |

OUTDOOR ITEMS

GASLIGHTS

Humphrey Gaslights



Features:

- Fully assembled – mount and hook up to fuel source, attach mantle
- Brightness comparable to a 70 watt bulb
- Costs only pennies per hour to operate

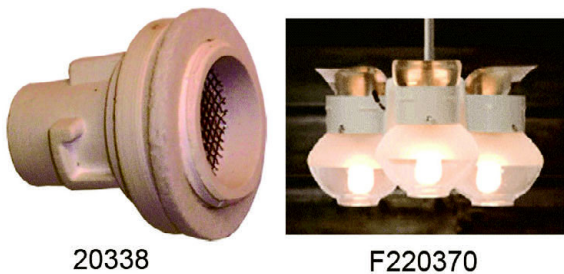
| Part Number | Description |
|-------------|--|
| 9GR | 9 Opalite /Hunter Green w/ Pre-Formed Mantle |
| 9NA | 9 Opalite /Natural Almond w/ Pre-Formed Mantle |
| 9PG | 9 Opalite /Pebble Gray w/ Pre-Formed Mantle |
| 9RW | 9 Opalite /Rustic Walnut w/ Pre-Formed Mantle |
| 9TNA | 9T Opalite /Natural Almond w/ Tie-On Mantle |
| 9TPG | 9T Opalite /Pebble Gray w/ Tie-On Mantle |
| 9TRW | 9T Opalite /Rustic Walnut w/ Tie-On Mantle |

Humphrey Gaslight Parts & Accessories



| Part Number | Description |
|-------------|---|
| L10-72A | Tie On Burner Nose/Bunsen Combo |
| L13-2 | Pre-Formed Mantle No. 8 |
| L13-6 | No.39 Tie-On Mantle |
| L13-8 | No.39 Clip-On Mantle |
| L22-23A | 1/8" NPT Street Elbow |
| L24-15 | Gas Light Seal (6/Pk.) |
| L6-20A | Humphrey Globe |
| L8-6C | Humphrey Wall Plate Assm.W/Valve & Nozzle |
| L9-50 | Humphrey Std. Lp Nozzle |
| OPK | Ceiling Mounting Kit |

Gaslight Parts & Accessories



| Part Number | Description |
|-------------|--|
| F220330 | Glass Globe |
| F220351 | Preformed Mantle |
| F220370 | Chandelier Kit For Base Camp Lights |
| 20338 | Preformed Burner Head For Base Camp Lights |
| 20339 | Burner Head Gasket For Base Camp Lights |
| 20381 | Tie-On Burner Head For Base Camp Lights |

HEATERS & VENTING

Empire Heating System

Vent-Free Heaters

Vent-Free systems draw room air to support combustion in a clean burning blue-flame or radiant-plaque system. Rated at 99.9 percent efficient, vent-free heaters release nearly all of the available heat energy into the room.

To ensure safe operation, all vent-free systems include an Oxygen Depletion Sensor (ODS) to automatically turn off the heater if room oxygen level drops to an unsafe level.

Vent-free systems are designed to provide supplemental heat and may not be used as a primary heat source.

- Total Comfort for Half the Cost of Electric Heat
- Radiant or Blue Flame Design
- 99.9 Percent Efficient
- Safe Operation with Auto Shut-off Safety Controls
- Manual or Hydraulic Thermostatic Controls
- Matchless Piezo Igniter LP or Natural Gas Models
- Mounts on Floor or Wall
- All Models Heat without Electricity
- Optional Manual and Automatic Blowers
- Empire BF and SR Models Include 5-year Limited
- Warranty on Parts and Labor
- HearthRite Models Include 3-year Limited Warranty on Parts and Labor

Infrared

Our radiant heaters project warmth into the room like sunlight through a window. Ideal for warming any cold spot in a room.

- Specify Type Of Gas



| Part Number | Input Btu | Temperature Control | Ignition System | Wt. (lb) |
|-------------|-----------|------------------------|----------------------|----------|
| SR-6 | 6,000 | Manual Setting | Standing Pilot/Piezo | 18 |
| SR-10 | 10,000 | Manual 1-Heat Setting | Standing Pilot/Piezo | 18 |
| SR-10T | 10,000 | Hydraulic Thermostat | Standing Pilot/Piezo | 18 |
| SR-18 | 18,000 | Manual 3-Heat Settings | Standing Pilot/Piezo | 27 |
| SR-18T | 18,000 | Hydraulic Thermostat | Standing Pilot/Piezo | 27 |
| SR-30 | 30,000 | Manual 3-Heat Settings | Standing Pilot/Piezo | 35 |
| SR-30T | 30,000 | Hydraulic Thermostat | Standing Pilot/Piezo | 36 |

ACCESSORIES

| Part Number | Wt. (lb) | Description |
|-------------|----------|--|
| SRB-18 | 4 | Blower for SR-18 |
| SRB-18T | 4 | Automatic Blower for SR-18T |
| SRB-30 | 4 | Blower for SR-30 |
| SRB-30T | 4 | Automatic Blower for SR-30T |
| SRS-10 | 3 | Stand for floor installation SR-6, SR-10, SR-10T |
| SRS-18 | 3 | Stand for floor installation SR-18, SR-18T |
| SRS-30 | 3 | Stand for floor installation SR-30, SR-30T |

HEATERS & VENTING

Empire Heating System

Vent-Free Heaters

Blue Flame

Our blue flame heaters warm the air, which rises to create natural circulation in the room. Ideal for any supplemental heat application.



| Part Number | Input Btu | Temperature Control | Ignition System | Wt. (lb) |
|--------------|-----------|---------------------------------|----------------------|----------|
| BF-10 | 10,000 | Hydraulic Thermostat | Standing Pilot/Piezo | 29 |
| BF-20 | 20,000 | Modulating Hydraulic Thermostat | Standing Pilot/Piezo | 29 |
| BF-30 | 30,000 | Modulating Hydraulic Thermostat | Standing Pilot/Piezo | 38 |

ACCESSORIES

| Part Number | Wt. | Description |
|----------------|-----|---|
| SRB-18T | 4 | Automatic Blower for BF-10, BF-20 |
| SRB-30T | 4 | Automatic Blower for BF-30 |
| SRS-18 | 3 | Stand for floor installation BF-10, BF-20 |
| SRS-30 | 3 | Stand for floor installation BF-30 |

HEATERS & VENTING

Empire Heating System

Direct-Vent Wall Furnaces

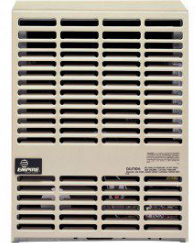
DV systems mount along an outside wall and have a vent-within-a-vent system to draw in outdoor air to support combustion and exhaust flue products to the outdoors. The vent cap usually installs on the outside wall of the home.

Because they do not draw your already-heated room air to support combustion, DV systems are among the most efficient of the vented heaters.

DV-210 / DV-215

Clean and cost-efficient comfort makes the DV210/215 wall furnaces ideal for smaller rooms, such as bedrooms or studies. The compact beige cabinet tucks out of the way on any outside wall.

- Specify Type Of Gas



| Part Number | Input Btu | Temperature Control | Ignition System | Wt. (lb) |
|-------------|-----------|----------------------------|----------------------|----------|
| DV-210-SG | 10,000 | Wall Thermostat, Millivolt | Standing Pilot/Piezo | 40 |
| DV-215-SG | 15,000 | Wall Thermostat, Millivolt | Standing Pilot/Piezo | 51 |

ACCESSORIES

| Part Number | Wt. (lb) | Description |
|-------------|----------|---|
| DVB-1 | 5 | Automatic Blower |
| TRW | 2 | Wireless Remote Wall Thermostat |
| VSK-1 | 4 | Slim-Line Vinyl Siding Kit - includes outside wall plate with vent shield (4 x 6 5/8) |
| DV-822 | 5 | Vinyl Siding Vent Kit |

Vent Extension Kits for DV-210 / DV-215, see page 222.

DV-25 / DV-35

Heat larger areas economically with Empire's DV25/35 wall furnace. Delivering ample, room-filling warmth, each furnace is stylishly crafted and fits against an outside wall.

- Specify Type Of Gas



| Part Number | Input Btu | Temperature Control | Ignition System | Wt. (lb) |
|-------------|-----------|----------------------------|----------------------|----------|
| DV-25-SG | 25,000 | Wall Thermostat, Millivolt | Standing Pilot/Piezo | 96 |
| DV-35-SG | 35,000 | Wall Thermostat, Millivolt | Standing Pilot/Piezo | 93 |

ACCESSORIES

| Part Number | Wt. (lb) | Description |
|-------------|----------|---|
| DRB-1 | 8 | Automatic Blower |
| TRW | 2 | Wireless Remote Wall Thermostat |
| VSK-2 | 4 | Slim-Line Vinyl Siding Kit - includes outside wall plate with vent shield (5X8) |
| DV-822 | 5 | Vinyl Siding Vent Kit |

Vent Extension Kits for DV-25 / DV-35, see page 222.

HEATERS & VENTING

Empire Heating System

Vented Wall Furnaces

Gravity Wall Furnaces

Our economical Gravity Vented Furnaces utilize state-of-the-art technology for the highest fuel efficiency. This furnace recesses into a wall or surface mounts with the optional kit. Heat two adjoining rooms with the GWT-50

- Specify Type Of Gas

| Part Number | Input Btu | Temperature Control | Ignition System | Wt. (lb) |
|----------------|-----------|---------------------------------|-----------------|----------|
| GWT-25 | 25,000 | Millivolt (T-Stat not Included) | Standing Pilot | 75 |
| GWT-35 | 35,000 | Millivolt (T-Stat not Included) | Standing Pilot | 81 |
| GWT-50* | 50,000 | Millivolt (T-Stat not Included) | Standing Pilot | 131 |



*Dual wall (heats 2 rooms)

ACCESSORIES

| Part Number | Wt. (lb) | Description |
|-------------------|----------|---|
| GWRB-T | 1 | Remote Bulb Thermostat, Millivolt, Fits GWT-25, GWT-35 and GWT-50 |
| GWRT-2* | 8 | Automatic Blower, Fits GWT-25, GWT-35 and GWT-50 |
| GWTH-25/35 | 2 | Header (include with furnace), Fits GWT-25, and GWT-35 |
| GWTH-50 | 4 | Header (include with furnace), Fits GWT-50 |
| GWTR-1 | 5 | Rear Register Kit, Fits GWT-25 and GWT-35 |
| GWTW-2 | 23 | Out-of Wall Installation Kit, Fits GWT-25, and GWT-35 |
| TMV | 2 | Wall Thermostat, Millivolt - Reed Switch |
| TRW | 2 | Wireless Remote Wall Thermostat |

*GWT-50 model may use two blowers

HEATERS & VENTING

HEATERS & VENTING

Empire Heating System

Direct-Vent Counterflow Wall Furnaces

Direct-Vent Counterflow Wall Furnaces

Rated at 76 percent efficient A.F.U.E., our counterflow wall furnaces heat large areas and use minimum floor space. Warm air exits at floor level for more even distribution.

Choose standing pilot or electronic ignition. DVC- 35 may be recessed between standard wall studs, larger models surface mount. Options vary by model but include side or rear register outlets, automatic blowers, and thermostats.

- Specify Type Of Gas

| Part Number | Input Btu | Temperature Control | Ignition System | Wt. (lb) |
|-------------|-----------|----------------------|-------------------------------|----------|
| DVC-35-SPP | 35,000 | Wall Thermostat, 24V | Standing Pilot/Piezo | 107 |
| DVC-35-IP | 35,000 | Wall Thermostat, 24V | Intermittent Pilot/Electronic | 107 |
| DV-55-SPP* | 55,000 | Wall Thermostat, 24V | Standing Pilot/Piezo | 123 |
| DV-55-IP* | 55,000 | Wall Thermostat, 24V | Intermittent Pilot/Electronic | 123 |

* Vent Kit (DV600) Vent Cap included, Ships in separate carton



ACCESSORIES

| Part Number | Wt. (lb) | Description |
|-------------|----------|---|
| SOR-1 | 2 | Side Outlet Register |
| SOK-1 | 7 | 10" Side Outlet Kit |
| VSK-2 | 2 | Slim-Line Vinyl Siding Kit - includes outside wall plate with vent shield |
| DV-822 | 5 | Vinyl Siding Vent Kit |
| TRW | 2 | Wireless Remote Wall Thermostat |

Vent Extension Kits for DVC-35 and DV-55, see page 222.

Conventional Vent Counterflow Wall Furnaces

Counterflow wall furnaces circulate warmth at floor level to provide comfort at a fraction of the cost of electric heat. The front panels remove easily for cleaning and servicing.

Choose standing pilot or electronic ignition. Optional side and rear registers help disperse heat to other areas.

- Specify Type Of Gas

| Part Number | Input Btu | Temperature Control | Ignition System | Wt. (lb) |
|-------------|-----------|----------------------|-------------------------------|----------|
| FAW-40-SPP | 40,000 | Wall Thermostat, 24V | Standing Pilot/Piezo | 110 |
| FAW-40-IP | 40,000 | Wall Thermostat, 24V | Intermittent Pilot/Electronic | 110 |
| FAW-55-SPP | 55,000 | Wall Thermostat, 24V | Standing Pilot/Piezo | 135 |
| FAW-55-IP | 55,000 | Wall Thermostat, 24V | Intermittent Pilot/Electronic | 135 |

ACCESSORIES

| Part Number | Wt. (lb) | Description |
|-------------|----------|------------------------------------|
| SOR-1 | 2 | Side Outlet Register |
| SOK-1 | 7 | 10" Side Outlet Kit |
| ROK-1 | 9 | 10" Rear Outlet Kit |
| FVE-24 | 7 | Vent Enclosure, 24 inch for FAW-40 |
| FVE-34 | 10 | Vent Enclosure, 34 inch for FAW-40 |
| FVE-46 | 14 | Vent Enclosure, 46 inch for FAW-40 |
| DV-651 | 6 | Vent Enclosure, 14 inch for FAW-55 |
| DV-665 | 9 | Vent Enclosure, 24 inch for FAW-55 |
| DV-666 | 14 | Vent Enclosure, 36 inch for FAW-55 |
| DV-648 | 2 | Oval-To-Round Flue Adapter Kit |
| TRW | 2 | Wireless Remote Wall Thermostat |



HEATERS & VENTING

Empire Heating System

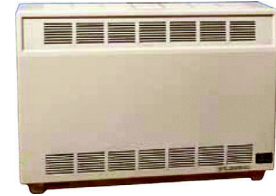
Room Heaters

Our console heaters feature an open design for maximum heat dispersion and include a draft diverter to eliminate pilot outages.

Choose closed cabinet for heat only or visual-flame (with optional log set or ceramic radiant package) for a fireplace-like experience. Installs easily with standard vent pipe. An optional automatic blower enhances heat circulation (standard on RH-50B/656B.)

Console

- Specify Type Of Gas



| Part Number | Input Btu | Temperature Control | Ignition System | Wt. (lb) |
|-------------|-----------|----------------------|----------------------|----------|
| RH-25 | 25,000 | Hydraulic Thermostat | Standing Pilot/Piezo | 84 |
| RH-35 | 35,000 | Hydraulic Thermostat | Standing Pilot/Piezo | 88 |

ACCESSORIES

| Part Number | Wt. (lb) | Description |
|-------------|----------|------------------------|
| DRB-1 | 8 | Automatic Blower |
| DVP-1 | 10 | Floor Pad 36 x 14 inch |

Visual Flame and Closed Front

- Specify Type Of Gas



Visual Flame Room Heaters with Blowers Installed

| Part Number | Input Btu | Temperature Control | Ignition System | Wt. (lb) |
|-------------|-----------|----------------------|----------------------|----------|
| RH-50B | 50,000 | Hydraulic Thermostat | Standing Pilot/Piezo | 124 |
| RH-65B | 65,000 | Hydraulic Thermostat | Standing Pilot/Piezo | 142 |

Closed Front Room Heaters

| Part Number | Input Btu | Temperature Control | Ignition System | Wt. (lb) |
|-------------|-----------|----------------------|----------------------|----------|
| RH-50C | 50,000 | Hydraulic Thermostat | Standing Pilot/Piezo | 124 |
| RH-65C | 65,000 | Hydraulic Thermostat | Standing Pilot/Piezo | 142 |

Closed Front Room Heaters with Blowers Installed

| Part Number | Input Btu | Temperature Control | Ignition System | Wt. (lb) |
|-------------|-----------|----------------------|----------------------|----------|
| RH-50CB | 50,000 | Hydraulic Thermostat | Standing Pilot/Piezo | 124 |
| RH-65CB | 65,000 | Hydraulic Thermostat | Standing Pilot/Piezo | 142 |

ACCESSORIES

| Part Number | Wt. (lb) | Description |
|-------------|----------|---|
| FRB-3 | 10 | Automatic Blower Optional on RH-50C, RH-65C Installed on RH-50B, RH-65B, RH50CB and RH-65CB |
| RAD-8 | 12 | Radiants and Supports Optional on RH-50B and RH-65B |
| RHL-2 | 5 | Log Kit Optional on RH-50B and RH-65B |
| RH-425 | 10 | Floor Pad 36 x 21 inch |

HEATERS & VENTING

Empire Heating System

Vent-Free Heaters

HearthRite Blue Flame Heaters



| Part Number | Input Btu | Temperature Control | Ignition System | Wt. (lb) |
|-------------|-----------|---------------------|----------------------|----------|
| HB10TL | 10,000 LP | Thermostat | Standing Pilot/Piezo | 17 |
| HB20TL | 20,000 LP | Thermostat | Standing Pilot/Piezo | 26 |
| HB30TL | 30,000 LP | Thermostat | Standing Pilot/Piezo | 33 |

ACCESSORIES

| Part Number | Wt. (lb) | Description |
|-------------|----------|--|
| HAB01 | 5 | Blower (Fits Heaters - 20,000 to 30,000 Btu) |

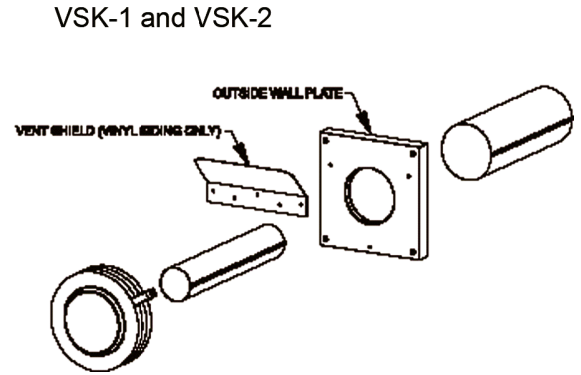
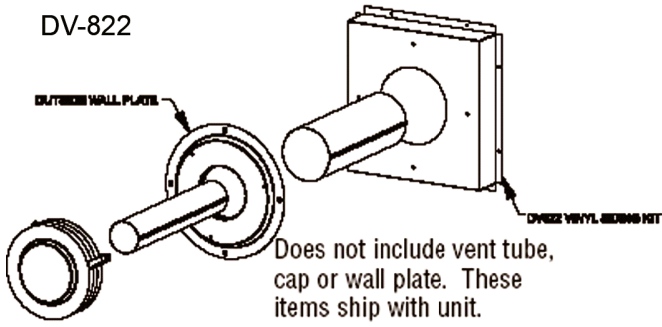
HEATERS & VENTING

HEATERS & VENTING

Empire Heating System

Vinyl Siding Kits

HEATERS & VENTING



| Part Number | Description |
|-------------|---|
| VSK-1 | Slim-Line Vinyl Siding Kit - includes outside wall plate with vent shield (DV-210, DV-215) |
| VSK-2 | Slim-Line Vinyl Siding Kit - includes outside wall plate with vent shield (DV-25, DV-35, DVC-35, DV-55) |
| DV-822 | Vinyl Siding Vent Kit - includes siding kit only |

Vent Extension Kits

DV-210 / DV-215

| Part Number | Description |
|-------------|--|
| TH-358 | (LP) Slim-Line Vinyl Siding Kit - includes outside wall plate with vent shield |
| TH-357 | (NG) Slim-Line Vinyl Siding Kit - includes outside wall plate with vent shield |

Includes both vent tubes with orifice.

DV-25 / DV-35 / DVC-35 / DV-55

| Part Number | Description |
|-------------|--|
| DV-984 | (LP) Vent Tube Extension fits walls from 13 to 19 inches |
| DV-983 | (NG) Vent Tube Extension fits walls from 13 to 19 inches |

Includes both vent tubes with orifice.

HEATERS & VENTING

L.B.White Heaters

Pilot Light Ignition Heaters

Side Draw Design

Some models:



- For indoor applications. <https://store.lpgnh3.com/product/346-4>
- Fully accessorized models (bolded) are CSA U.S. certified configurations. Models without all accessories are not CSA U.S. certified.
- All Classic 60 models are CSA Canadian certified. Classic 115 families are not CSA certified for Canada.
- Gas valve includes manual gas flow shut-off.
- Part number in chart indicates included accessory.

Classic™ 60



Classic™ 115



Check your local gas codes to determine if CSA certification is required.

| Part Number | Model | Btuh | Fuel | Thermostat Stainless Steel | Power Cord | 10 ft. Gas Hose | Piping Hardware | Sediment Trap | Gas Regulator | Eyebolts & Chain | Shipping Weight |
|--------------|--------------------|---------|------|-------------------------------|---------------|--------------------|--------------------|------------------|------------------|---------------------|--------------------|
| 346-4 | Classic 60 | 60,000 | LP | 05568 | 5 ft. | • | • | • | • | 08749 | 54 lbs. |
| 377-4 | Classic 115 | 115,000 | LP | 05568 | 5 ft. | • | • | • | • | 08748 | 86 lbs. |

→ -2 heater models include eyebolts, chains and thermostat.

KEY:

- Indicates optional part, and is not included in base model. See "Accessories" for a complete listing and pricing.
 - (A) CSA U.S. certified configuration
 - (C) CSA Canada certified configuration
 - (1) Single stage regulator only.
- LP=Liquid Propane Gas, NG=Natural Gas

HEATERS & VENTING

L.B.White Heaters

Pilot Light and Spark Ignition Heaters

Bottom Draw Design with pilot

- For indoor applications.
- Exclusive “take apart” removable pilot shield for quick and easy access to pilot orifice. CSA Certified.
- All models shipped with a sediment trap and 10 ft. power cord.
- Remote thermostats on bottom draw pilot units do not include wiring.
- Gas valve includes manual gas flow shut-off.



Guardian 250 Pilot

| Part Number | Model | Btuh | Fuel | Thermostat NEMA 4X(1) | 10 ft. Gas Hose | Piping Hardware | Gas Regulator | Eyebolts & Chain | Two-piece Air Diverter | Shipping Weight |
|-------------|--------------------|-----------------|-------|-----------------------|-----------------|-----------------|---------------|------------------|------------------------|-----------------|
| AB250P | Guardian 250 Pilot | 160,000/250,000 | LP/NG | . | . | . | . | . | . | 113 lbs. |

Accessory package

| Part Number | Fuel | Thermostat NEMA 4X(1) | 10 ft. Gas Hose | Piping Hardware | Gas Regulator | Eyebolts & Chain | Two-piece Air Diverter | Shipping Weight |
|-------------|------|-----------------------|-----------------|-----------------|---------------|------------------|------------------------|-----------------|
| 20178 | LP | 09454 | 20714 | 08752(2) | 06553 | 08748 | 20048 | 16 lbs. |
| 20179 | NG | 09454 | 20714 | 08752(2) | 24414 | 08748 | 20048 | 15 lbs. |

(see “Accessories” section for more info.)

Bottom Draw Design with Spark Ignition

- For indoor or outdoor applications.
- Adjustable heat output.
- CSA Certified.
- Shipped with a sediment trap and 10 ft. power cord.
- Incorporate an integral gas regulator in the gas valve with a maximum inlet pressure of 1/2 PSIG.
- Gas valve includes manual gas flow shut-off.

***SMART SENSE™
FEATURE AVAILABLE**



Guardian 250 SI

| Part Number | Model | Btuh | Fuel | Thermostat NEMA 4X(1) | 10 ft. Gas Hose | Piping Hardware | Gas Regulator | Eyebolts & Chain | Two-piece Air Diverter | Shipping Weight |
|-------------|-----------------|-----------------|-------|-----------------------|-----------------|-----------------|---------------|------------------|------------------------|-----------------|
| AW250 | Guardian 250 SI | 160,000/250,000 | LP/NG | . | . | . | . | . | . | 113 lbs. |

Accessory package

| Part Number | Fuel | Thermostat NEMA 4X(1) | 10 ft. Gas Hose | Piping Hardware | Gas Regulator | Eyebolts & Chain | Two-piece Air Diverter | Shipping Weight |
|-------------|------|-----------------------|-----------------|-----------------|---------------|------------------|------------------------|-----------------|
| 20180 | LP | 20176 | 20714 | 08752(2) | 06553 | 08748 | 20048 | 16 lbs. |
| 20181 | NG | 20176 | 20714 | 08752(2) | 24414 | 08748 | 20048 | 15 lbs. |

KEY:

- Indicates optional part, and is not included in base model.
- (*) ISmart Sense technology provides automatic variable heat output, with the ability to maintain exact desired temperature.
- (1) Series Tap with 20 ft. cord.
- (2) Gas valve includes gas flow manual shut-off.
- Piping Hardware for all above models include hose adapter, nipple, and gas cock.
- LP=Liquid Propane Gas, NG=Natural Gas

All models:



HEATERS & VENTING

L.B.White Heaters

Hot Surface Ignition (HSI) Heaters

Bottom Draw Design

- For indoor or outdoor applications.
- Adjustable heat output.
- CSA Certified.
- All models shipped with a sediment trap and 10 ft. power cord*.
- All models incorporate an integral gas regulator in the gas valve with a maximum inlet pressure of 1/2 PSIG. Gas valve includes manual gas flow shut-off

***SMARTSENSE™**
FEATURE/AVAILABLE



Guardian 60 HSI

| Part Number | Model | Btuh | Fuel | Thermostat NEMA 4X(1) | 10 ft. Gas Hose | Piping Hardware | Gas Regulator | Eyebolts & Chain | Two-piece Air Diverter | Shipping Weight |
|-------------|------------------------|---------------|-------|-----------------------|-----------------|-----------------|---------------|------------------|------------------------|-----------------|
| AW60 | Guardian 60 HSI | 30,000/60,000 | LP/NG | . | . | . | . | . | . | 55 lbs. |

Guardian 60 HSI Accessory pac

| Part Number | Fuel | Thermostat NEMA 4X(1) | 10 ft. Gas Hose | Piping Hardware | Gas Regulator | Eyebolts & Chain | Two-piece Air Diverter | Shipping Weight |
|--------------|------|-----------------------|-----------------|-----------------|---------------|------------------|------------------------|-----------------|
| 09985 | LP | 20176 | 21993 | 21973 | 06553 | 08749 | 20111 | 16 lbs. |
| 09986 | NG | 20176 | 21883 | 21973 | 07087 | 08749 | 20111 | 14 lbs. |

Guardian 100 HSI

| Part Number | Model | Btuh | Fuel | Thermostat NEMA 4X(1) | 10 ft. Gas Hose | Piping Hardware | Gas Regulator | Eyebolts & Chain | Two-piece Air Diverter | Shipping Weight |
|--------------|-------------------------|----------------|-------|-----------------------|-----------------|-----------------|---------------|------------------|------------------------|-----------------|
| AW100 | Guardian 100 HSI | 50,000/100,000 | LP/NG | . | . | . | . | . | . | 70 lbs. |

Guardian 100 HSI Accessory package

| Part Number | Fuel | Thermostat NEMA 4X(1) | 10 ft. Gas Hose | Piping Hardware | Gas Regulator | Eyebolts & Chain | Two-piece Air Diverter | Shipping Weight |
|--------------|------|-----------------------|-----------------|-----------------|---------------|------------------|------------------------|-----------------|
| 20182 | LP | 20176 | 21993 | 21973 | 06553 | 08749 | 23127 | 16 lbs. |
| 20183 | NG | 20176 | 21883 | 21973 | 07087 | 08749 | 23127 | 14 lbs. |

Guardian 250 HSI

| Part Number | Model | Btuh | Fuel | Thermostat NEMA 4X(1) | 10 ft. Gas Hose | Piping Hardware | Gas Regulator | Eyebolts & Chain | Two-piece Air Diverter | Shipping Weight |
|--------------|-------------------------|-----------------|-------|-----------------------|-----------------|-----------------|---------------|------------------|------------------------|-----------------|
| AW250 | Guardian 250 HSI | 160,000/250,000 | LP/NG | . | . | . | . | . | . | 113 lbs. |

Guardian 250 HSI Accessory package

| Part Number | Fuel | Thermostat NEMA 4X(1) | 10 ft. Gas Hose | Piping Hardware | Gas Regulator | Eyebolts & Chain | Two-piece Air Diverter | Shipping Weight |
|--------------|------|-----------------------|-----------------|-----------------|---------------|------------------|------------------------|-----------------|
| 20180 | LP | 20176 | 20714 | 08752 | 06553 | 08748 | 20048 | 16 lbs. |
| 20181 | NG | 20176 | 20714 | 08752 | 24414 | 08748 | 20048 | 15 lbs. |

Guardian 325 HSI

| Part Number | Model | Btuh | Fuel | Thermostat NEMA 4X(1) | 10 ft. Gas Hose | Piping Hardware | Gas Regulator | Eyebolts & Chain | Two-piece Air Diverter | Shipping Weight |
|--------------|-------------------------|-----------------|-------|-----------------------|-----------------|-----------------|---------------|------------------|------------------------|-----------------|
| AW325 | Guardian 325 HSI | 200,000/325,000 | LP/NG | . | . | . | . | . | . | 164 lbs. |

Guardian 325 HSI Accessory package

| Part Number | Fuel | Thermostat NEMA 4X(1) | 10 ft. Gas Hose | Piping Hardware | Gas Regulator | Eyebolts & Chain | Two-piece Air Diverter | Shipping Weight |
|--------------|------|-----------------------|-----------------|-----------------|---------------|------------------|------------------------|-----------------|
| 09004 | LP | 20176 | 20714(2) | 08752 | 06553 | 07802(2) | 09177(2) | 16 lbs. |
| 09006 | NG | 20176 | 20714(2) | 08752 | 25108 | 07802(2) | 09177(2) | 15 lbs. |

KEY:

- Indicates optional part, and is not included in base model.
 - (*) Smart Sense technology provides automatic variable heat output, with the ability to maintain exact desired temperature.
 - (1) Includes 25 ft. cord.
 - (2) Not needed for outdoor mounting. "Outdoor Mounting Kit" ships with 2 ft. gas hose.
 - Piping Hardware for all above models include hose adapter, nipple, and gas cock.
 - (3) AW325 power cord is not included. Requires direct wiring to control panel — 230 volts, 60 Hz., single phase
- LP=Liquid Propane Gas NG= Natural Gas

All models:



HEATERS & VENTING

HEATERS & VENTING

L.B.White Heaters

Accessories, Options & Regulators

Air diverters

| Part Number | Item | For Models: | Shipping Weight |
|-------------|-----------------------------|--------------------------------|-----------------|
| 00810 | One piece | Classic™ 60, 60N | 2 lbs. |
| 00808 | One piece | Classic™ 115, 115N, 170, 170N | 3 lbs. |
| 07742 | Two piece (snap-in) | Classic™ 60, 60N | 1/2 lbs. |
| 07434 | Two piece (snap-in) | Classic™ 115, 115N, 170, 170N | 1 lbs. |
| 20111 | Two piece (snap-in) | Guardian™ 60 | 1/2 lbs. |
| 23127 | Two piece (snap-in) | Guardian™ 100 | 1/2 lbs. |
| 20048 | Two piece (snap-in) | Guardian™ 250 (Pilot, HSI, SI) | 2 lbs. |
| 09177 | Two piece (snap-in) | Guardian™ 325 | 3 lbs. |
| 20095 | Flush mount diffuser(2) (3) | Guardian™ 250 (Pilot, HSI, SI) | 4 lbs. |

Thermostats

| Part Number | Item | For Models: | Shipping Weight |
|-------------|--|---|-----------------|
| 06537 | Remote thermostat — Stainless steel (less wiring) | All "-3" models | 1 lbs. |
| 00831 | Remote thermostat — Stainless steel w/20' series tap cord | All Guardians™ (Pilot, HSI, SI) and "-3" Classics | 3 lbs. |
| 09454 | Remote thermostat — NEMA 4X, meets NEC Article 547 w/20' series tap cord | All Guardians™ (Pilot, HSI, SI) and "-3" Classics | 3 lbs. |
| 09381 | Remote thermostat — NEMA 4X, meets NEC Article 547 (less wiring) | Service replacement | 1 lbs. |
| 05568* | Unit mount w/bracket Stainless steel (less wiring) | Service replacement for unit-mounted thermostats (not Guardians™) | 1 lbs. |
| 20177 | Remote thermostat — Stainless steel w/25' cord | All | 2 lbs. |
| 20176 | Remote thermostat — Nema 4X w/25' cord | All | 3 lbs. |

* Classic™ models (excluding -3 models) incorporate unit mounted thermostat part. no. 05568 as standard.

Miscellaneous Accessoriess

| Part Number | Item | For Models: | Shipping Weight |
|-------------|------------------------------|--|-----------------|
| 00815 | Sediment trap | All | 1 lbs. |
| 07802 | Eyebolts and chain | All, indoor mounting | 2 lbs. |
| 09810 | Outdoor mounting kit(1) (3) | Guardian™ 60 | 40 lbs. |
| 09811 | Outdoor mounting kit(1) (3) | Guardian™ 100 | 40 lbs. |
| 24097 | Outdoor mounting kit(1)(4) | Guardian™ 250 (HSI, SI) | 40 lbs. |
| 24098 | Outdoor mounting kit(1)(4) | Guardian™ 325 | 46 lbs. |
| 20257 | Sloped top for outdoor mount | Guardian™ 250 (HSI, SI) | 10 lbs. |
| 25678 | T-Duct (105o duct) | Guardian™ 250 | 5 lbs. |
| 03399 | Gas cock | All | 1 lbs. |
| 20712 | 1/2" X 2 ft. gas hose | All Guardian models TM (outside mount application) | 1 lbs. |

- (1) Check with L.B. White for air distribution options.
- (2) Used as accessory for outdoor mounting kit to replace air diverters.
- (3) Flush mount diffuser is included in outdoor mounting kit for Guardian™ 60 and
- (4) Premium kits that include sloped top, insulated ducting, and easy to assemble

HEATERS & VENTING

L.B.White Heaters

Portable Forced-Air



| Model | Description |
|-----------------------------|--|
| Tradesman 170 | 125,000-170,000 BTUH, LPG, PN: CP170 |
| Tradesman 170N | 125,000-155,000 BTUH, NG, |
| Tradesman 400 | 250,000-400,000 BTUH, LPG |
| Tradesman 170 Ultra | 125,000-170,000 BTUH, LPG-with Diagnostics, PN: CP170U |
| Tradesman 170N Ultra | 125,000-170,000 BTUH, NG-with Diagnostics |
| Tradesman 400 Ultra | 250,000-400,000 BTUH, LPG-with Diagnostics, PN: CP400 |

Thermostat control not available on Tradesman 100.
Tradesman units include thermostat. (Tradesman 100 and K45 excluded)

Ductable



| Model | Description |
|-----------------------|------------------------------------|
| Premier 80 | 80,000 BTUH, LPG |
| Premier 80N | 80,000 BTUH, NG, PN: PREMIER-80-N |
| Premier 170 | 170,000 BTUH, LPG, PN: PREMIER 170 |
| Premier 170N | 170,000 BTUH, NG |
| Premier 170 DF | 170,000 BTUH, LPG/NG |
| Premier 350 DF | 350,000 BTUH, LPG/NG |

All Premier units include thermostatic control.

Convection



| Model | Description |
|--------------------------------|-------------------------------------|
| Workman 100 Plus | 100,000 BTUH, LPG |
| Workman 225 Plus | 225,000-45,000 BTUH, LPG, PN: CV225 |
| Workman 100N Plus | 100,000 BTUH, NG |
| Norseman 250 | 250,000 BTUH, LPG, PN: 341H |
| Norseman 200 Plus | 200,000 BTUH, LPG |
| Norseman 200 Horizontal | 200,000 BTUH, LPG |

Workman units have variable heat output
Workman 100N Plus runs on low pressure and does not include gas hose

Ductable Heater Accessories

| Part Number | Description |
|--------------|--|
| 26347 | Duct, Gray, 12 ft (12") - Premier 80/170 |
| 21944 | Storage Sack (Stores 12" ducting) |
| 22835 | Duct, White, 12 ft (18") - Premier 350 |
| 26348 | Duct, Plastic, Light Duty, 12 ft (12") -Pr. 80/170 |
| 24442 | Duct, Plastic, Light Duty, 12 ft (18") -Pr. 350 |

Indirect-Fired Heater Accessories



| Part Number | Description |
|--------------|---|
| 27508 | Thermostat, Nema 4X w/ 20 ft. cord-rev B models |
| 24219 | Thermostat, Nema 4X w/ 20 ft. cord-rev A models |
| 24220 | Duct, 20 ft (16"), Fire-retardant, Director 300 |
| 26986 | Air Duct Adapter, Director 300 |
| 24222 | Pre-heated Fuel Filter Kit |
| 24223 | Rain Cap |
| 24224 | Steel Exhaust Pipe Extension |
| 26983 | Two Way Duct Split Adapter |

Duct adapter required when using duct

HEATERS & VENTING

L.B.White Heaters

Circulating Heater Accessories

| Part Number | Description |
|-------------|---------------------------|
| 00015 | Thermostat Kit, LPG Units |
| 00019 | Thermostat Kit, NG Units |

L.B.White Parts

| Part Number | Model Used On | Description |
|-------------|--------------------------------|--|
| 09626 | Guardian 60/100 | Flame Sensor |
| 20139 | Guardian 250 HSI | Flame Sensor |
| 05566 | All Except Guardian 60/100 | High Limit Switch |
| 20290 | Guardian 60; 346 | Motor, Ball Bearing |
| 20292 | Guardian 100 | Motor, Ball Bearing |
| 20169 | Guardian 250HSI, SI, and pilot | Motor, Ball bearing |
| 20554 | Classic 377/379, 408/410 | Motor, Ball Bearing |
| 02729 | Classic 346, 377, 408, 40 (LP) | Pilot Assembly |
| 03398 | All Classics w/ old Honeywell | Gas Valve-Pilot models w/ ball valve |
| 02309 | All Classics | Gas Valve-Pilot models w/o ball valve |
| 22076 | Guardian 60/100/250HSI, SI | Gas Valve, LP (replaces 09368) |
| 09201 | All HSI Models | Igniter |
| 21615 | "K" Classics | LP Valve |
| 22010 | All HSI Models | Ignition Control Kit (includes 09298) |
| 03497 | Classic 377/379, 408/410 | Thermocouple |
| 05568 | All Classics | Thermostat-Stainless Steel w/ bracket |
| 06537 | All Classics | Thermostat-Stainless Steel w/o bracket |
| 09381 | All | Thermostat Only-Nema 4X |
| 20176 | Guardian 250SI and All HSI | Thermostat- Nema 4X w/ 25ft Cord |
| 09454 | All Pilots | Thermostat- Nema 4X w/ 25ft. Cord |
| 02689 | All Classics | LP Pilot Orifice |
| 02680 | Classic 377/408 | Air Flow Switch |
| 02808 | Classic 346 | Fan Wheel |
| 03531 | Classic 377 | Fan Wheel |
| 02684 | Classic 408 | Fan Wheel |
| 03438 | All | 5ft. Power Cord |

HEATERS & VENTING

HEATERS & VENTING

Modine Heaters

Effinity

Propeller Unit Heater Model PTC



At 93% thermal efficiency for all model sizes, Modine's Effinity⁹³ condensing unit heater features the highest efficiency available in North America for commercial and industrial gas-fired unit heaters. This industry leading efficiency is a result of the coupling of our Conservicore™ secondary heat exchanger technology with our robust tubular primary heat exchanger design. The Conservicore™ technology features a secondary recuperative heat exchanger fabricated from AL29-4C® stainless steel. This material is superior to other lower grades of stainless steel and aluminum, resulting in outstanding ability to withstand the corrosive environment of condensing gas fired equipment.

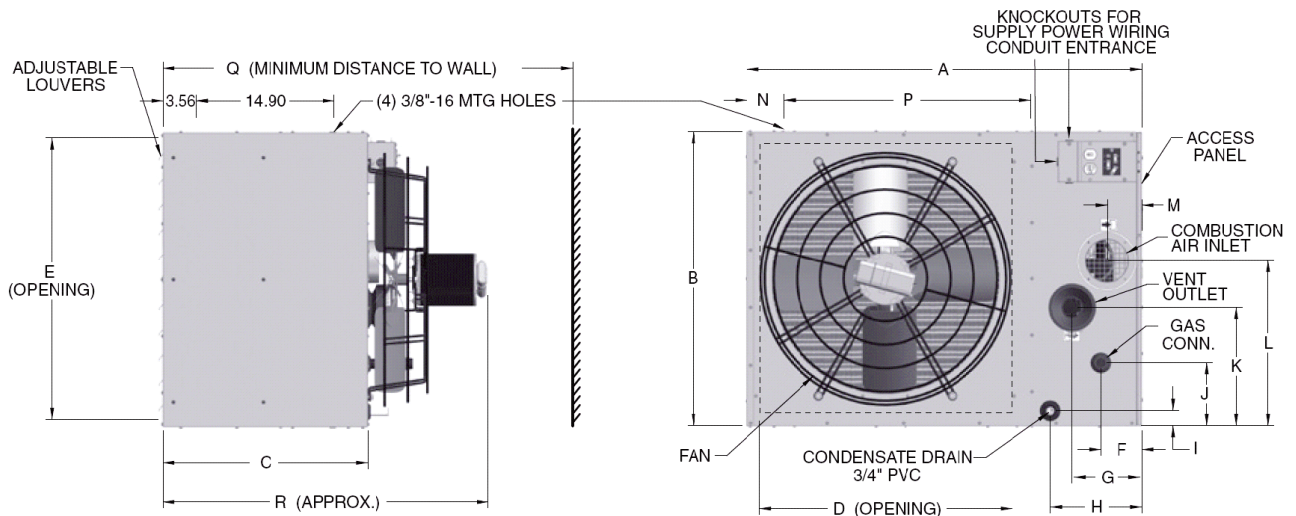
Available in six model sizes with input ranges from 135,000 to 310,000 Btu/Hr, Modine offers application flexibility unmatched in the industry. The separated combustion units draw combustion air from outside to ensure that the unit will always have plenty of fresh, clean air for combustion while increasing the overall heating efficiency. Venting material to be used is PVC, an extremely cost effective vent system.

| Part Number | Btu/Hr Input (1) | Btu/Hr Output (1) | Condensate Production (Ggal./Hr.) | Max. Mounting Height (Ft.) (2) | Heat Throw (Ft.) @ Max Mtg Ht |
|---------------|------------------|-------------------|-----------------------------------|--------------------------------|-------------------------------|
| PTC135 | 135,000 | 125,550 | 1.0 | 14 | 51 |
| PTC155 | 155,000 | 144,150 | 1.1 | 17 | 59 |
| PTC180 | 180,000 | 167,400 | 1.3 | 15 | 53 |
| PTC215 | 215,000 | 199,950 | 1.6 | 17 | 60 |
| PTC260 | 260,000 | 241,800 | 1.9 | 20 | 70 |
| PTC310 | 310,000 | 288,300 | 2.3 | 19 | 67 |

1) Ratings shown are for elevations up to 2,000 ft. For elevations above 2,000 feet, ratings should be reduced at the rate of 4% for each 1,000 feet above sea level. (In Canada see rating plate.) Reduction of ratings requires use of a high altitude kit.

(2) Data taken at 65°F ambient and unit fired at full-rated input. Mounting height as measured from bottom of unit, and without deflector hood

Dimensional Drawings - Model PTC



HEATERS & VENTING

HEATERS & VENTING

Modine Heaters

Effinitys

Propeller Unit Heater Model PTC

Dimensions (inches)

| Models | PTC135 | PTC155 | PTC180 | PTC215 | PTC260 | PTC310 |
|--------------------------------|--------|--------|--------|--------|--------|--------|
| A | 35.53 | 35.53 | 42.53 | 42.53 | 42.53 | 42.53 |
| B | 23.06 | 23.06 | 25.81 | 31.31 | 31.31 | 39.56 |
| C | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 |
| D | 22.52 | 22.52 | 29.52 | 29.52 | 29.52 | 29.52 |
| E | 21.18 | 21.18 | 23.93 | 29.43 | 29.43 | 37.68 |
| F | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 |
| G | 7.98 | 7.98 | 7.98 | 7.47 | 7.47 | 8.12 |
| H | 10.18 | 10.18 | 10.36 | 9.86 | 9.86 | 9.79 |
| I | 2.15 | 2.15 | 1.73 | 1.63 | 1.63 | 1.88 |
| J | 8.09 | 8.09 | 9.47 | 6.72 | 6.72 | 10.84 |
| K | 8.45 | 8.45 | 9.82 | 12.58 | 12.58 | 16.19 |
| L | 12.95 | 13.45 | 14.92 | 17.58 | 17.58 | 22.19 |
| M | 3.48 | 3.98 | 3.98 | 3.72 | 3.72 | 4.62 |
| N | 1.54 | 1.54 | 3.97 | 3.97 | 3.97 | 3.97 |
| P | 22.03 | 22.03 | 26.60 | 26.60 | 26.60 | 26.60 |
| Q | 45.83 | 45.83 | 45.83 | 45.83 | 46.83 | 46.83 |
| R | 33.83 | 33.83 | 33.83 | 33.83 | 34.83 | 34.83 |
| Combustion Air Inlet Pipe | 3.00 | 4.00 | 4.00 | 4.00 | 4.00 | 6.00 |
| Vent Outlet Pipe | 3.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| Gas Connection | 1/2 | 1/2 | 1/2 | 3/4 | 3/4 | 3/4 |
| Fan Diameter | 20.00 | 20.00 | 22.00 | 24.00 | 24.00 | 26.00 |
| Approx. Shipping Weight (lbs.) | 165 | 165 | 215 | 265 | 265 | 310 |

Clearances to Combustible Materials

| Unit Side | Clearance To Combustible Materials | Recommended Service Clearance |
|-----------------|------------------------------------|-------------------------------|
| Top and Bottom | 6" | 6" |
| Access Side | 6" | 18" |
| Non-Access Side | 6" | 18" |
| Rear | 18" | 18" |
| Vent Connector | 6" | 6" |

HEATERS & VENTING

Modine Heaters

Hot Dawg

Hot Dawg® Model HD Power-Exhausted, Gas-Fired Unit Heater



For The Heat You Need, Just Unleash A Hot Dawg!

Features:

- Hush-puppy quiet operation.
- Uses natural or propane gas.
- Certified for residential, commercial and industrial use.
- Low-profile design and neutral color to blend in with decor.
- Lightweight, easily installs 1" from ceiling with only 2 angle brackets (included on sizes 30-75, accessory for 100, 125).
- Install quickly and easily with field wiring connections and knockouts for quick access to gas and electricity.
- Standard power exhaust simplifies side-wall or roof venting with small-diameter vent pipe.
- Right or left hand controls available on all 30-75 units. Gas, electrical and flue connections can be changed by simply flipping the Hot Dawg over.
- Permanently-lubricated motor for trouble-free dependability.
- Full 10-year warranty on heat exchanger.

| Model Number | Btu/Hr Input | Typical Application |
|-------------------|----------------|-----------------------|
| HD/HDS 30 | 30,000 | 1 to 1-1/2 Car Garage |
| HD/HDS 45 | 45,000 | 2 to 2-1/2 Car Garage |
| HD/HDS 60 | 60,000 | 3 to 3-1/2 Car Garage |
| HD/HDS 75,100,125 | 75,000-125,000 | Large Garage |

Model HD Sizes

Nat.

| Part Number | Btu/Hr | | Max. Mounting Height (Ft.) | Heat Throw (Ft.) @ Max Mtg Ht |
|---------------|---------|---------|----------------------------|-------------------------------|
| | Input | Ouput | | |
| HD30AS-01-11 | 30,000 | 24,000 | 10 | 25 |
| HD45AS-01-11 | 45,000 | 36,000 | 10 | 27 |
| HD60AS-01-11 | 60,000 | 48,000 | 12 | 36 |
| HD75AS-01-11 | 75,000 | 60,000 | 14 | 38 |
| HD100AS-01-11 | 100,000 | 80,000 | 12 | 42 |
| HD125AS-01-11 | 125,000 | 100,000 | 16 | 56 |

LP

| Part Number | Btu/Hr | | Max. Mounting Height (Ft.) | Heat Throw (Ft.) @ Max Mtg Ht |
|---------------|---------|---------|----------------------------|-------------------------------|
| | Input | Ouput | | |
| HD30AS-01-21 | 30,000 | 24,000 | 10 | 25 |
| HD45AS-01-21 | 45,000 | 36,000 | 10 | 27 |
| HD60AS-01-21 | 60,000 | 48,000 | 12 | 36 |
| HD75AS-01-21 | 75,000 | 60,000 | 14 | 38 |
| HD100AS-01-21 | 100,000 | 80,000 | 12 | 42 |
| HD125AS-01-21 | 125,000 | 100,000 | 16 | 56 |

HEATERS & VENTING

HEATERS & VENTING

Modine Heaters

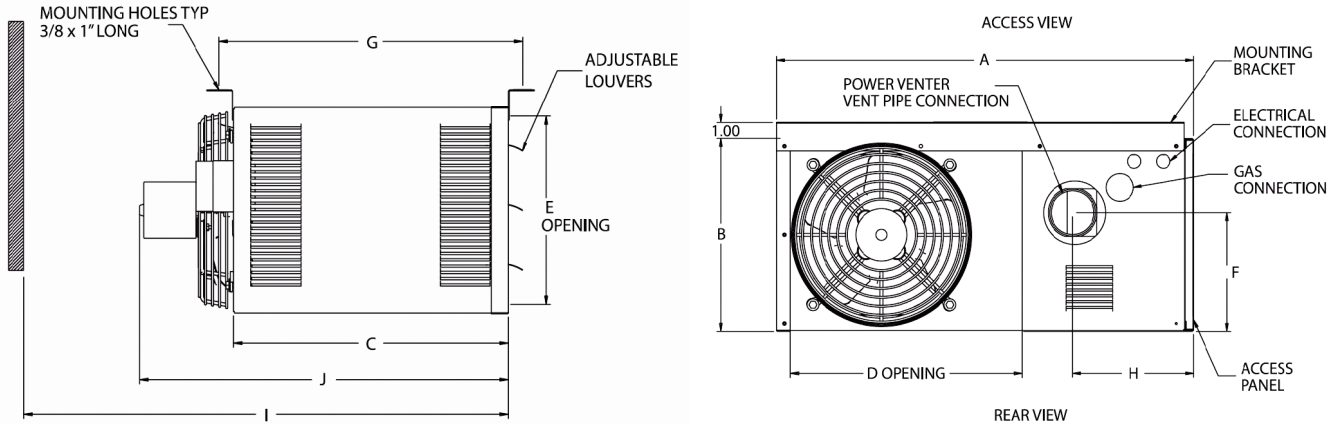
Hot Dawg

Model HD Sizes

LP

Propeller Units - Model HD

Dimensional Drawings - Model HD



Dimensions (inches) - HD

| Models | HD30 | HD45 | HD60 | HD75 | HD100/125 |
|-----------------------------------|------|------|------|------|-----------|
| A | 26.8 | 26.8 | 26.8 | 26.8 | 35.5 |
| B | 12.2 | 12.2 | 18.0 | 18.0 | 20.5 |
| C | 16.5 | 16.5 | 16.5 | 16.5 | 22.0 |
| D | 14.9 | 14.9 | 14.9 | 14.9 | 22.5 |
| E | 10.1 | 10.1 | 15.9 | 15.9 | 18.4 |
| F | 7.5 | 7.5 | 10.7 | 10.7 | 14.0 |
| G | 18.5 | 18.5 | 18.5 | 18.5 | 24.0 |
| H | 7.6 | 7.6 | 7.8 | 7.8 | 8.4 |
| Gas Connection | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| I | 34.5 | 34.5 | 34.5 | 34.5 | 43.0 |
| J | 22 | 22 | 25 | 25 | 31.0 |
| Fan Diameter | 10 | 10 | 14 | 14 | 18.0 |
| Approx. Shipping Weight (lbs.) | 55 | 60 | 80 | 85 | 125 |
| Vent Pipe Connector Diameter (in) | 3 | 3 | 3 | 3 | 4 |

Clearance to Combustibles, Model HD

| Unit Side | Clearance To Combustible Materials | Recommended Service Clearance |
|-----------------|------------------------------------|-------------------------------|
| Top and Bottom | 1" | 1" |
| Access Side | 1" | 18" |
| Non-Access Side | 1" | 1" |
| Rear | 18" | 18" |
| Vent Connector | 4" | 4" |

HEATERS & VENTING

Modine Heaters

IHR

High Intensity Infrared Unit Heater



Modine's high intensity ceramic infrared heater is approved for indoor unvented installation. It does not utilize a fan, thus eliminating noise and draft distractions. Gas and power connections are simple and maintenance is inexpensive, since there are no moving parts to maintain. Available controls include Direct Spark Ignition, Self-Generating Millivolt, and Intermittent Pilot (non-100% shut-off).

Modine's MHR series heaters include the following features:

- Rugged aluminized steel frame
- High temperature diamond-faced ceramic tiles provide maximum heat transfer
- Polished aluminum reflector efficiently directs infrared rays to desired area
- Corrosion resistant type 330 stainless steel screen re-radiates infrared rays back to ceramic tile for increased heat transfer, and protects ceramic tile from foreign objects

| Part Number | Dimensions (in) | | Condensate Production (Ggal./Hr.) | Max. Mounting Height (Ft.) |
|-------------|-----------------|-----------------|-----------------------------------|----------------------------|
| | A | B | | |
| IHR 30 | 16.625 | 14.625 | 30 | 173 |
| IHR 60 | 16.625 | 14.625 | 30 | 173 |
| IHR 90 | 25.250 | 23.250 | 36 | 346 |
| IHR 130 | 33.875 | 31.875 | 49 | 519 |
| IHR 160* | 33.875 / 42.500 | 31.875 / 40.500 | 49 / 62 | 519 / 692 |

| Model | Gas Controls (1) (2) | Input Rating (Btu/hr) | | Recommended Mounting Height (ft.) | | | |
|---------|---------------------------|-----------------------|---------|-----------------------------------|-------------|---------------------|-------------|
| | | Natural | Propane | Standard Reflector | | Parabolic Reflector | |
| | | | | 0° Angle | 30° Angle | 0° Angle | 30° Angle |
| MHR 30 | Single Stage or Millivolt | 30,000 | — | 11.0 — 13.0 | 10.0 — 12.0 | — | — |
| MHR 60 | Single Stage or Millivolt | 60,000 | — | 14.5 — 16.5 | 13.0 — 15.0 | 16.0 — 20.0 | 15.0 — 18.0 |
| MHR 90 | Single Stage or Millivolt | 90,000 | 90,000 | 16.0 — 18.5 | 14.5 — 17.0 | 19.5 — 22.5 | 17.5 — 20.5 |
| MHR 130 | Single Stage or Millivolt | 130,000 | 130,000 | 17.5 — 21.0 | 15.5 — 18.5 | 21.5 — 25.0 | 20.0 — 23.0 |
| MHR 160 | Single Stage or Millivolt | 160,000 | 160,000 | 19.0 — 23.0 | 17.0 — 20.5 | 25.0 — 28.5 | 22.5 — 25.5 |

* Single Stage or Millivolt

(1) Single stage are direct spark ignition with 100% safety shutoff and are available as either 115V or 24V

(2) Millivolt controls are self-energizing standing pilot requiring no external power source. Units include a millivolt thermostat and 35 feet of wire.

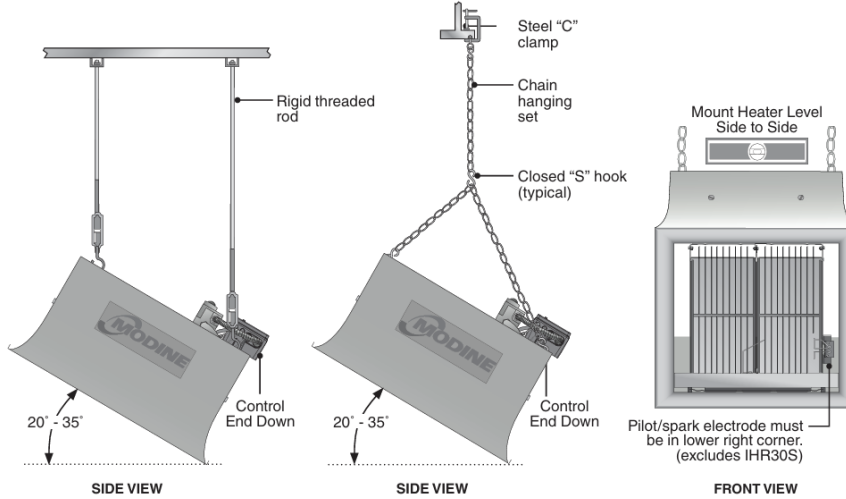
HEATERS & VENTING

Modine Heaters

IHR

High Intensity Infrared Unit Heater

Heater Mounting & Orientation



Allowable Mounting angle Range

| Model size | Allowable Mounting Angle Range |
|------------|--------------------------------|
| 30 - 60 | 0° - 30° |
| 90 | 5° - 29° |
| 130 | 0° - 30° |
| 160 | 5° - 29° |

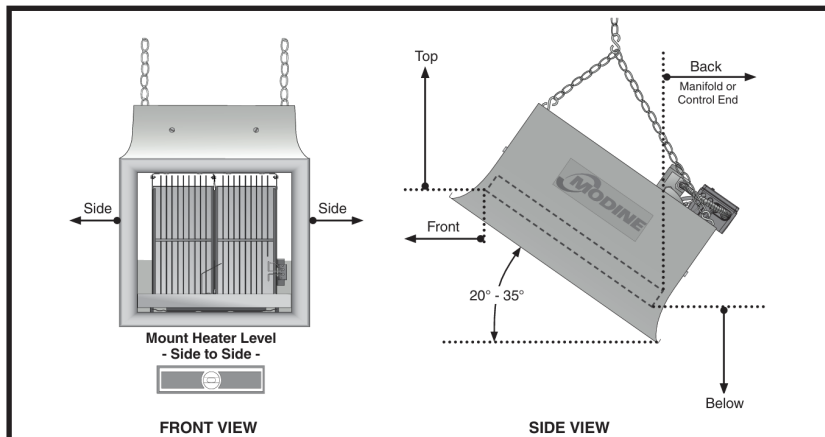
Clearances to Combustible Materials

| Model Sizes | 30-60 (1) (2) | 90 | 130 | 160 |
|---------------------------------------|---------------|-----|-----|-----|
| SIDE OF HEATER: | 30 | 36 | 46 | 48 |
| BACK OF HEATER | 30 | 30 | 33 | 33 |
| TOP OF HEATER: | | | | |
| - Mounted 0-29° | 60 | 62 | 64 | 68 |
| - Mounted 30° only | 48 | 50 | 58 | 68 |
| - w/ Optional Heat Deflector 0-29° | 34 | 38 | N/A | N/A |
| - w/ Optional Heat Deflector 30° only | 34 | 38 | N/A | N/A |
| BELOW HEATER: | | | | |
| - Standard Reflector | 80 | 105 | 125 | 140 |
| - w/ Optional Parabolic Reflector | 110 | 135 | 165 | 180 |

(1) 30MBH models not available in Canada.

(2) 60MBH models require a re-radiating wire grid accessory for use in Canada.

Clearances to Combustible Materials



HEATERS & VENTING

Modine Heaters

PDP

Model PDP Sizes

LP



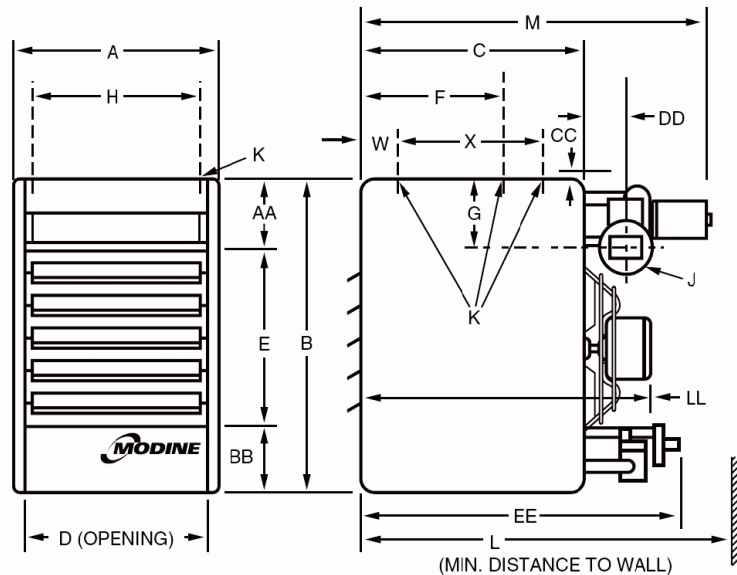
Each Modine power-exhausted unit heater has been engineered to include the following features:

- 80% thermal efficiency, maximizing seasonal efficiency through the use of a collector box and the power exhauster.
- A power exhaust that can be rotated 180°. The unit can be vented vertically or horizontally.
- A 100% shut-off, intermittent pilot-ignition system with continuous retry, at no extra charge. This ignition system allows for all PDP units to be field-converted to propane, if desired.
- A safety pressure-switch to assure safe venting conditions.
- Designed to utilize the smallest-diameter vent pipe possible.
- PDP models are designed to operate against 0.5 inches of external static pressure.
- "Wing" screws so that the bottom pan can be dropped without a screwdriver or nut driver.
- A level hanging mechanism for easy field adjustments after adding accessories that may change the unit's center of gravity.

| Part Number | Dimensions (in) (2) | | Max. Mounting Height (Ft.) | Heat Throw (Ft.) @ Max Mtg Ht |
|----------------|---------------------|---------|----------------------------|-------------------------------|
| | Input | Ouput | | |
| PDP150AE-01-85 | 150,000 | 120,000 | 16 | 55 |
| PDP175AE-01-85 | 175,000 | 140,000 | 17 | 59 |
| PDP200AE-01-85 | 200,000 | 160,000 | 15 | 51 |
| PDP250AE-01-85 | 250,000 | 200,000 | 19 | 67 |
| PDP300AE-01-85 | 300,000 | 240,000 | 21 | 74 |
| PDP350AE-01-85 | 350,000 | 280,000 | 20 | 70 |
| PDP400AE-01-85 | 400,000 | 320,000 | 19 | 69 |

Propeller Units - Model PDP

Dimensional Drawings



HEATERS & VENTING

HEATERS & VENTING

Modine Heaters

PDP

Model PDP Sizes

LP

Dimensions (inches) — PDP (1)

| Dimension Symbol | Model Number | | | | | | |
|---------------------------|--------------|---------|---------|---------|---------|----------|---------|
| | PDP 150 | PDP 175 | PDP 200 | PDP 250 | PDP 300 | PDP 350 | PDP 400 |
| A | 21 | 23-1/2 | 25-5/8 | 25-5/8 | 28-5/8 | 33-5/8 | 40 |
| B | 35-1/4 | 35-1/4 | 40-1/4 | 40-1/4 | 40-1/4 | 40-1/4 | 40-1/4 |
| C | 22 | 22 | 25 | 25 | 25 | 25 | 25 |
| D | 18-9/16 | 21-1/16 | 23-3/16 | 23-3/16 | 26-3/16 | 31-3/16 | 37-1/2 |
| E | 20 | 20 | 24 | 24 | 24 | 24 | 24 |
| F | 12 | 12 | 13-1/2 | 13-1/2 | 14 | — | — |
| G | 6-9/16 | 6-9/16 | 7-1/2 | 7-1/2 | 7-1/2 | 7-1/2 | 7-1/2 |
| H | 17-3/8 | 19-7/8 | 22 | 22 | 25 | 30 | 36-3/8 |
| J (2) | 5 | 5 | 5 | 6 | 6 | 6 | 6 |
| K (Mounting Holes) (3) | 3/8-16 | 3/8-16 | 3/8-16 | 3/8-16 | 3/8-16 | 3/8-16 | 3/8-16 |
| L (4) | 35-13/16 | 35-9/16 | 40-3/4 | 40-3/4 | 40-3/4 | 40-3/4 | 44-3/16 |
| M | 29-13/16 | 29-9/16 | 34-3/4 | 34-3/4 | 34-3/4 | 34-11/16 | 38-3/16 |
| W | — | — | — | — | — | 5 | 5 |
| X | — | — | — | — | — | 16 | 16 |
| AA | 8 | 8 | 9 | 9 | 9 | 9 | 9 |
| BB | 7-1/4 | 7-1/4 | 7-1/4 | 7-1/4 | 7-1/4 | 7-1/4 | 7-1/4 |
| CC | — | — | — | — | — | — | — |
| DD | 2-3/4 | 2-3/4 | 3-3/8 | 3-3/8 | 3-3/8 | 3-3/8 | 6-13/16 |
| EE | 30-1/2 | 30-1/2 | 32-7/8 | 32-7/8 | 32-7/8 | 32-7/8 | 32-7/8 |
| LL | 31-1/8 | 31-1/8 | 34-7/8 | 34-7/8 | 36-1/8 | 35-1/2 | 40-1/2 |
| Gs Connections (5) | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 3/4 | 3/4 |
| Fan Diameter | 16 | 18 | 20 | 20 | 22 | 22 | 24 |
| Approx. Weight | 168 | 175 | 239 | 239 | 269 | 338 | 418 |

(1) Do not use propeller units with duct work.

(2) For some models, this is the dimension of the vent transition outlet supplied.

(3) PDP 150 through PDP 300 — 2 holes (and the level hanging adjustment feature). PDP 350 through PDP 400 — 4 holes.

(Listed is the hole diameter and threads per inch to accept threaded rod).

(4) Dimension equals overall plus 6”.

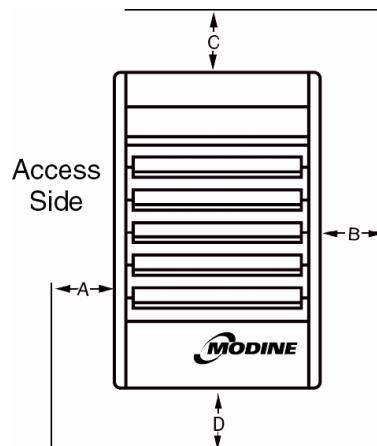
(5) For natural gas; may vary depending on control availability

Combustible Material Clearances (1)

| Model Size | Access Side (A) | Non-Access Side (B) | Top(C) | Bottom (D) | Top of Power Exhauster (Not shown) |
|------------|-----------------|---------------------|--------|------------|---------------------------------------|
| 150-175 | 1 | 1 | 4 | 12 | 2 |
| 200-400 | 1 | 1 | 5 | 12 | 3 |

(1) Provide sufficient room around the heater to allow for proper combustion and operation of fan. Free area around the heater must not be less than 1-1/2 times the discharge area of the unit.

Combustible Material and Service Clearances



HEATERS & VENTING

Modine Heaters

IPT

Low Intensity Infrared Heater



Modine's single-burner positive pressure infrared heater is approved for vented or unvented commercial and industrial applications. A water-resistant control compartment provides weatherproof protection and allows either indoor or outdoor installation.

Each Modine power-exhausted unit heater has been engineered to include the following features:

- Heat-treated 16 gauge aluminized steel heat exchanger provides enhanced corrosion resistance and radiant heat transfer
- Durable 16 gauge aluminized steel combustion chamber
- Blocked intake/exhaust shut-off switch
- Controls located in enclosed, water-resistant compartment for indoor or outdoor installation
- 180° rotatable gas valve, accessible from either side of burner box
- Durable polyester powder paint maintains life-long appearance
- Side access panels for servicing either side of the burner box
- Improved serviceability with sight window for flame viewing, indicator lights for combustion blower operation and a removable cover
- Thermal efficiencies of up to 80% maximize fuel saving

General Performance, Utilities, Clearance To Combustibles

| Part Number | Input MbH | Certified Tube Lengths (ft.) | Recommended Mounting Height (ft.) (1) | Recommended Tube System Application (1) | |
|----------------|-----------|------------------------------|---------------------------------------|---|------------------------|
| | | | | Spot or Area Heating | Total Building Heating |
| IPT 50 | 50 | 20, 30 | 10 - 12 | U-Tube | Straight Tube |
| IPT 60 | 60 | 20, 30, 40 | 10 - 12 | U-Tube | Straight Tube |
| IPT 75 | 75 | 30, 40 | 12 - 14 | U-Tube | Straight Tube |
| IPT 100 | 100 | 30, 40, 50 (2) | 12 - 14 | U-Tube | Straight Tube |
| IPT 125 | 125 | 40, 50, 60 | 15 - 22 | U-Tube | Straight Tube |
| IPT 150 | 150 | 50, 60 | 15 - 22 | U-Tube | Straight Tube |
| IPT 175 | 175 | 50, 60, 70 (3) | 18-28 | U-Tube | Straight Tube |
| IPT 200 | 200 | 50, 60, 70 (3) | 20 - 30 | U-Tube | Straight Tube |

(1) Recommended Mounting Height and Tube System Applications are meant as a general guide and are adjusted to meet the requirements of the actual application.

The applications are as follows:

- Spot or Area Heating is an application where occupant comfort is the goal and occupant(s) are either relatively stationary (Spot - Example: small work cell or dispersed over a slightly wilder range than with Spot Heating (Area - Example: assembly line). Mounting height is typically at the low end of the range shown above.
- Total Building Heating is an application where average space temperature is to be maintained, however due to the significant temperature gradient differences on long straight tube systems, areas may exist where direct occupant comfort is not achieved.

(2) IPT100 not available for Propane Gas operation at 50 ft. tube system length.

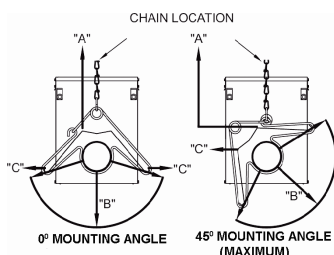
(3) IPT175 and 200 not available for Propane Gas operation at 70 ft. tube system length

Combustible Material Clearances (inches)

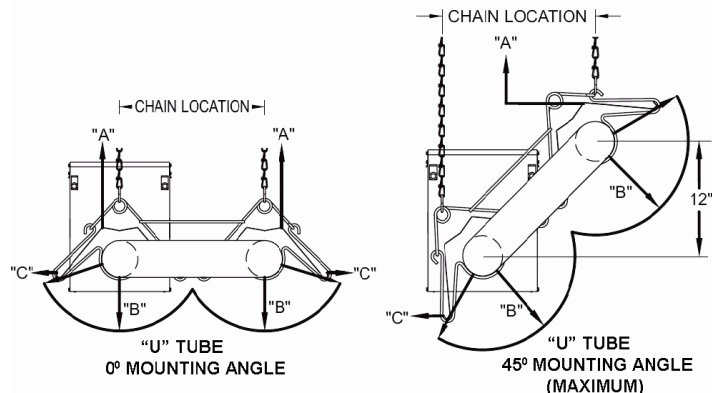
| Input MbH | "A" (1) | "B" (2) | "C" (2) |
|--------------------|---------|---------|---------|
| 50/60 | 9 | 54 | 20 |
| 75 | 9 | 58 | 20 |
| 100/15 | 9 | 76 | 24 |
| 150/175/ 00 | 12 | 106 | 38 |

- (1) Clearance to each end and above the U-Tube is 12 inches.
- (2) In unvented applications, clearance from radiant tube end is 36" in all directions.
- (3) Refer to Figures 4.1 through 4.3

Combustible Material Clearances - Straight Tube



Combustible Material Clearances - U-Tube



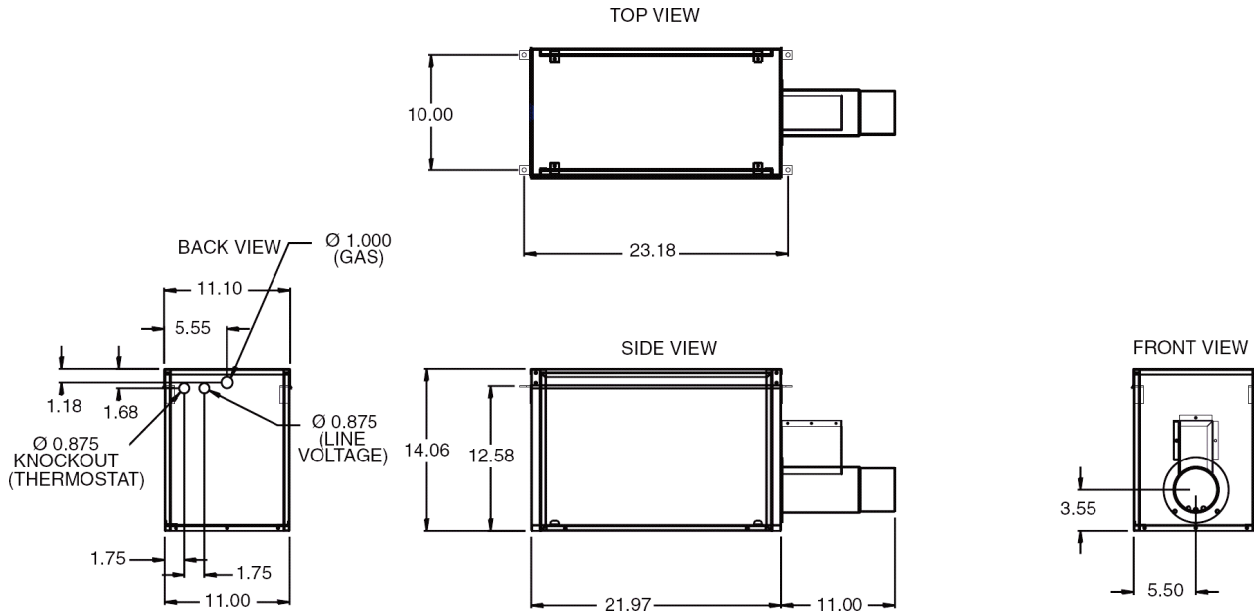
HEATERS & VENTING

Modine Heaters

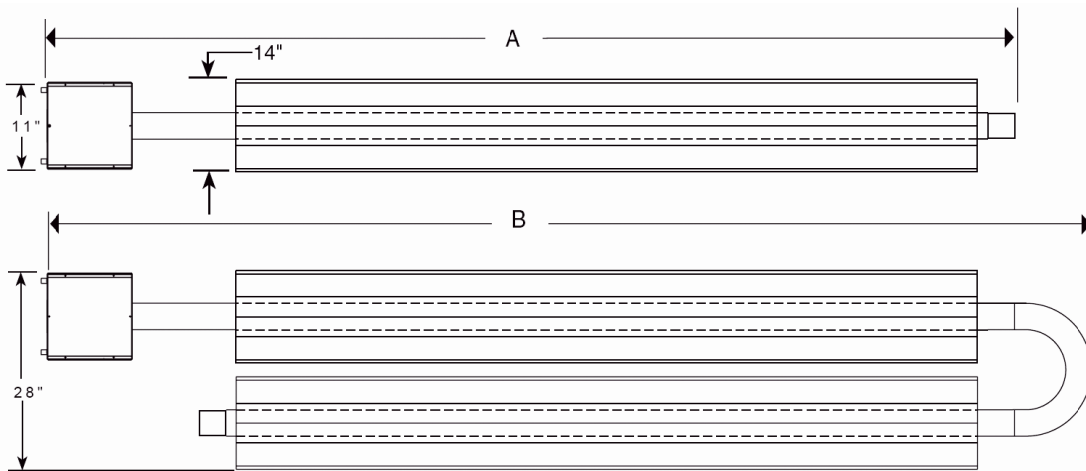
IPT

Low Intensity Infrared Heater

Casing Dimensions



Burner and Tube System Dimensions



Center-to-center of tubes = 16 inches.

Tube Systems Data

| Tube Length (ft.) | Straight Tube | | U-Tube System | |
|-------------------|-------------------------|---------------------|-------------------------|---------------------|
| | System Length "A" (ft.) | System Weight (lb.) | System Length "B" (ft.) | System Weight (lb.) |
| 20 | 23 | 78 | 13 | 89 |
| 30 | 33 | 112 | 18 | 132 |
| 40 | 43 | 146 | 23 | 157 |
| 50 | 53 | 180 | 28 | 200 |
| 60 | 63 | 214 | 33 | 225 |
| 70 | 73 | 252 | 38 | 277 |

HEATERS & VENTING

Venting

Vent Hoods

Tjernlund Wall Vent Hoods



| Part Number | Description |
|-------------|----------------------------------|
| VH1-3 | Tjernlund 3" Side Wall Vent Hood |
| VH1-4 | Tjernlund 4" Side Wall Vent Hood |
| VH1-6 | Tjernlund 6" Side Wall Vent Hood |

Z-Vent



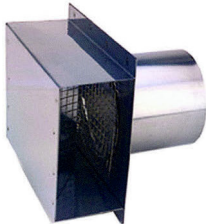
ZV-90ELL



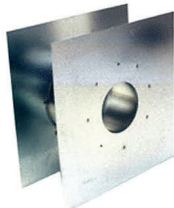
ZV-CONN



ZV-PIPE3X1



ZV-TERMBOX



ZV-THIMBLE

| Part Number | Description |
|--------------|---|
| ZV-45ELL | 3" 45 Degree Z-Vent II Elbow |
| ZV-45ELL-4 | 4" 45 Degree Z-Vent II Elbow |
| ZV-90ELL | 3" 90 Degree Z-Vent II Elbow |
| ZV-90ELL-4 | 4" 90 Degree Z-Vent II Elbow |
| ZV-CONN | 3" Z-Vent II Adaptor |
| ZV-CONN-4 | 4" Z-Vent II Adaptor |
| ZV-DRAIN | 3" Z-Vent II Horizontal Condensation Drain |
| ZV-PIPE3X1 | 3" x 1' Z-Vent II Vent Pipe |
| ZV-PIPE3X3 | 3" x 3' Z-Vent II Vent Pipe |
| ZV-PIPE3X5 | 3" x 5' Z-Vent II Vent Pipe |
| ZV-PIPE4X1 | 4" x 1' Z-Vent II Vent Pipe |
| ZV-PIPE4X3 | 4" x 3' Z-Vent II Vent Pipe |
| ZV-PIPE4X5 | 4" x 5' Z-Vent II Vent Pipe |
| ZV-SEALANT | Z-Vent 3 Oz. Tube Joint Sealant |
| ZV-TERMBOX | 3" Z-Vent II Termination Box |
| ZV-TERMBOX-4 | 4" Z-Vent II Termination Box |
| ZV-THIMBLE | 3" Z-Vent II Wall Thimble- Adustable. 4-7" |
| ZV-THIMBLE-4 | 4" Z-Vent II Wall Thimble- Adjustable 4-7" |
| ZV-THIMBLE-L | 3" Z-Vent II Wall Thimble Adjustable 5"-10" |
| ZV-TUBEKIT | Z-Vent II Condensation Drain Tubing Kit |

HEATER MOUNTS

Quick-Sling Heater Mounts

U-Mount Bracket



| Part Number | Description |
|-------------|------------------------------------|
| QSW1000 | QUICK SLING U-MOUNT SWIVEL BRACKET |

Ductable



| Part Number | Description |
|-------------|------------------------|
| QSWI3000 | SWIVEL FLUSH H BRACKET |



HEATER MOUNTS

RINNAI PRODUCTS

Rinnai Water Heaters & Boilers

Heaters



| Part Number | Description |
|-------------|---|
| EX08CT | Direct Vent Heater - 8,000 BTUs |
| EX11CT | Direct Vent Heater - 11,000 BTUs |
| EX17CT | Direct Vent Heater - 16,700 BTUs |
| EX22CT | Direct Vent Heater - 21,500 BTUs |
| EX22CTW | Direct Vent Heater, White - 21,500 BTUs |
| EX38CT | Direct Vent Heater - 38,400 BTUs |
| EX38CTW | Direct Vent Heater, White - 38,400 BTUs" |
| FC510 | Fan Convector, Vent Free Heater - 10,000 BTUs |
| FC824 | Fan Convector, Vent Free Heater - 24,000 BTUs |

Tankless Boilers



| Part Number | Description |
|-------------|--|
| 807000212 | Plumbing Kit (Combination Units) |
| 807000213 | Plumbing Kit (Heat Only Units) |
| IP060160C | Combi Boiler 60K BTU HTG & 160K BTU DHW |
| IP060S | Solo Boiler 60K BTU HTG |
| IP090099C | Combi Boiler 90K BTU HTG & 99K BTU DHW |
| IP090160C | Combi Boiler 90K BTU HTG & 160K BTU DHW |
| IP090199C | Combi Boiler 90K BTU HTG & 199K BTU DHW |
| IP090S | Solo Boiler 90K BTU HTG |
| IP120199C | Combi Boiler 120K BTU HTG & 199K BTU DHW |
| IP120S | Solo Boiler 120K BTU HTG |
| IP150199C | Combi Boiler 150K BTU HTG & 199K BTU DHW |
| IP150S | Solo Boiler 150K BTU HTG |
| IP175199C | Combi Boiler 175K BTU HTG & 199K BTU DHW |
| IP175S | Solo Boiler 175K BTU HTG |
| IP199199C | Combi Boiler 199K BTU HTG & 199K BTU DHW |
| IP199S | Solo Boiler 199K BTU HTG |

Tankless Water Heaters



| Part Number | Description |
|-------------|--|
| RX130IN | 15,000 - 130,000 BTUs |
| RX160IN | 15,000 - 160,000 BTUs |
| RX180IN | 15,000 - 180,000 BTUs |
| RX199IN | 15,000 - 199,000 BTUs |
| RXP160IN | 15,000 - 160,000 BTUs, Recirculating with Pump |
| RXP199IN | 15,000 - 199,000 BTUs, Recirculating with Pump |

Rinnai Accessories



| Part Number | Description |
|-------------|--|
| 103000038 | Scale Cutter |
| 103000039 | Replacement Cartridge - Scale Cutter |
| 107000639 | Dedicated Return & Isolation Valve Kit |
| 804000074 | Condensate Neutralizer |
| 809000114 | Refill - Condensate Neutralizer |
| MIVK-T-LW | Isolation Valve Kit |

RINNAI PRODUCTS

DECALS & SIGNS

Anhydrous Ammonia Decals

ANHYDROUS AMMONIA

2AA

INHALATION HAZARD

4INHAZARD

EMERGENCY FIRST AID
HAZARD LIQUID IN VAPORS OF THIS PRODUCT COME IN CONTACT WITH EYES OR SKIN.

1. FLUSH AFFECTED AREA THOROUGHLY WITH WATER FOR 15 MINUTES.
7. REMOVE IMMEDIATELY AND CONTAMINATED CLOTHING.
3. DO NOT APPLY SALVES OR OINTMENTS TO BURNS.
- SEE A DOCTOR AS SOON AS POSSIBLE.

CAUTION
ANHYDROUS AMMONIA (Under Pressure)
READ CAREFULLY

1. KEEP AWAY FROM POP-OFF VALVE MARKED ⚠ THIS IS A SAFETY DEVICE AND SHOULD NOT BE TAMPERED WITH OR ADJUSTED.
2. STAND UP WIND WHEN WORKING AROUND EQUIPMENT.
3. WEAR GOGGLES AND RUBBER GLOVES WHEN TRANSFERRING PRODUCT AND BLEEDING HOSES.
4. DO NOT FILL TANK IN EXCESS OF 85% FULL.
5. NEVER PLACE ANY PART OF BODY IN LINE WITH TANK OR HOSE OPENINGS. USE EXTREME CARE IN HANDLING HOSES.
6. SLOWLY BLEED HOSES AFTER TRANSFERRING PRODUCT.
7. CLOSE VALVES FIRMLY BUT DO NOT WRENCH.
8. DO NOT PERMIT CHILDREN NEAR THIS EQUIPMENT.
9. PARK EQUIPMENT AWAY FROM BUILDINGS OR ANY OTHER FIRE HAZARDS. NEVER ALLOW TANKS TO BE SUBJECTED TO EXTREME HEAT.
10. DO NOT ATTEMPT ANY REPAIRS OF THIS EQUIPMENT. IN EVENT OF ANY FAILURE CALL YOUR DEALER IMMEDIATELY.
11. DO NOT OPERATE THIS EQUIPMENT UNTIL YOU HAVE RECEIVED INSTRUCTIONS FROM YOUR DEALER.

V-9



RAA



1005

LIQUEFIED

V-41

| Part Number | Description |
|-------------|--------------------------------------|
| 1005 | NH3 Diamond Decal |
| 2AA | 2" Anhydrous Ammonia Decal |
| 4AA | 4" Anhydrous Ammonia Decal 10" x 24" |
| 4INHAZARD | 4" Inhalation Hazard Decal |
| 6AA | 6" Anhydrous Ammonia Decal |
| 6INHAZARD | 6" Inhalation Hazard Decal |
| INHAZARD | 2" Inhalation Hazard Decal |
| RAA | Round Nh3 Decal |
| SCAA | Sfty. Command. NH3 Decals |
| V-41 | 2" Liquefied - Green On White |
| V-9 | 3 Part Caution & First Aid |

DECALS & SIGNS

DECALS & SIGNS

Cylinder Decals



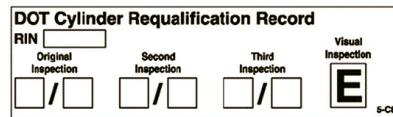
17# STICKER



A-53



NO-OPD



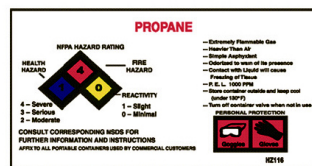
RIN



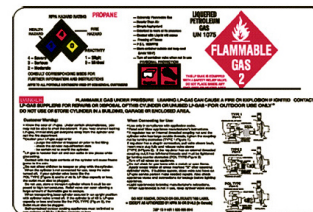
CS-33



CYLDEC



HZ-116



V-44

| Part Number | Description |
|--------------|---|
| 17# STICKER | 17 Lb. Net Cylinder Sticker (250 Per Pk.) |
| A-53 | 1.5" x 5" Cylinder Decal (100 Per Pk.) |
| CS-33 | Dot Cylinder Decal-Curved (100 Per Pk.) |
| CYLDEC | Dot Cylinder Decal (100 Per Pk.) |
| HZ-116 | Hazard Rating Decal (704) |
| NO-OPD | 4" x 4" Cylinder Not Equipped w/Opd Valve Decal |
| RIN | Dot Cylinder Requalification Record Decal (100 Per Pk.) |
| V-44 | Dot 1075 / Comp Gas / Nfpa Hazard (100 Per Pk.) |
| V-55 | Dot 1075 / Comp Gas Decal (100 Per Pk.) |
| 12-CS-33-GHS | Dot Cylinder Decal- Curved-GHS Compliant |
| 8-V56-R-GHS | Dot Cylinder Decal-GHS Compliant |
| 13-V44-R-GHS | Dot 1075/COMP Gas / NFPA Hazard-GHS Compliant |
| HZ116-GHS | Hazard Rating Decal- GHS Compliant |
| 8-V55-R-GHS | Dot 1075/ Comp Gas - GHS Compliant |
| 8-V58-R-GHS | Dot 1075/ Comp Gas - GHS Compliant |

DECALS & SIGNS

Cylinder Exchange Decals & Signs



M-93-AX



M-97-A

| CYLINDER FILLING CAPACITY CHART | | | |
|---------------------------------|--------------|------|--------------|
| W.G. | U.S. PROPANE | M.T. | U.S. PROPANE |
| 2.39 | 1 | 35.8 | 15 |
| 4.78 | 2 | 38.2 | 16 |
| 7.17 | 3 | 40.6 | 17 |
| 9.56 | 4 | 43.0 | 18 |
| 11.9 | 5 | 45.4 | 19 |
| 14.3 | 6 | 47.8 | 20 |
| 16.7 | 7 | 50.2 | 21 |
| 19.1 | 8 | 52.6 | 22 |
| 21.5 | 9 | 55.0 | 23 |
| 23.9 | 10 | 57.4 | 24 |
| 26.3 | 11 | 59.8 | 25 |
| 28.7 | 12 | 62.2 | 26 |
| 31.0 | 13 | 64.6 | 27 |
| 33.4 | 14 | 67.0 | 28 |

P-101



PURGE



P-102

| OPD Retrofit Guidelines | | | | |
|-------------------------|--------|-----------------|------------------------|--------------------|
| Cylinder Size | Weight | Capacity (Lbs.) | Filler Capacity (Lbs.) | Replacement (Lbs.) |
| 4.78 | 10 | 35.8 | 35.8 | 35.8 |
| 9.56 | 20 | 38.2 | 38.2 | 38.2 |
| 14.34 | 30 | 40.6 | 40.6 | 40.6 |
| 19.12 | 40 | 43.0 | 43.0 | 43.0 |
| 23.90 | 50 | 45.4 | 45.4 | 45.4 |
| 28.68 | 60 | 47.8 | 47.8 | 47.8 |
| 33.46 | 70 | 50.2 | 50.2 | 50.2 |
| 38.24 | 80 | 52.6 | 52.6 | 52.6 |
| 43.02 | 90 | 55.0 | 55.0 | 55.0 |
| 47.80 | 100 | 57.4 | 57.4 | 57.4 |
| 52.58 | 110 | 59.8 | 59.8 | 59.8 |
| 57.36 | 120 | 62.2 | 62.2 | 62.2 |
| 62.14 | 130 | 64.6 | 64.6 | 64.6 |
| 66.92 | 140 | 67.0 | 67.0 | 67.0 |

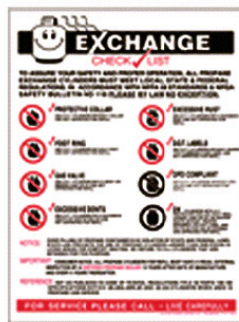
P-114



INST



P-111



V-14

| Part Number | Description |
|-------------|--|
| INST | Cylinder Filling Inst. Decal |
| M-93-AX | 2' x 4' Propane Cylinder Exchange Sign (1-Sided) |
| M-93-AX-D | 2' x 4' Propane Cylinder Exchange Sign (2-Sided) |
| M-97-A | 2' x 4' Propane Filling Station Sign (1-Sided) |
| M-97-A-D | 2' x 4' Propane Filling Station Sign (2-Sided) |
| M-97-FR | Frame For 2' x 4' Metal Signs |
| P-101 | Cylinder Filling Capacity Chart/Poly 12" x 12" |
| P-102 | Notice For Your Safety Sign/Poly 12" x 12" |
| P-111 | Opd Consumer Warning Sign/Poly 16" x 20" |
| P-114 | Opd Retrofit Chart 18" x 24" |
| PURGE | 1" Purge Decal 1" x 4 1/2" |
| V-14 | 12" x 16" Cylinder Exchange Checklist Decal |

DECALS & SIGNS

DECALS & SIGNS

Heavy Gauge Metal Signs



APO



DNS



DNT



DP



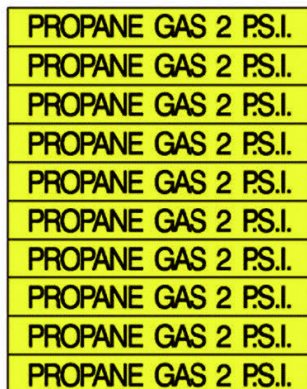
ICOE



STCC

| Part Number | Description |
|-------------|--|
| APO | Authorized Personnel Only Sign 10" x 14" |
| DNS | Danger No Smoking Sign 10" x 14" |
| DNT | Danger No Trespassing Sign 10" x 14" |
| DP | Danger Propane Sign 10" x 14" |
| ICOE | In Case Of Emergency Sign 14" x 20" |
| STCC | Stop Tank Car Connected 12" x 15" Sign |

Cylinder Decals



2PSI



V-90-5



V-91-5

| Part Number | Description |
|-------------|--|
| 2PSI | Sheet Of 10 "Propane Gas 2 P.S.I." 3/8" x 3" |
| V-90-5 | 5-Part 1" Liquid Decal |
| V-91-5 | 5-Part 1" Vapor Decal |

DECALS & SIGNS

Storage Tank Decals

FLAMMABLE

2FLAM

NO SMOKING

2NS

PROPANE

2P

LIQUEFIED PETROLEUM GAS

V-302c



NFPA-704



P-81



P-82



PULL



PUSH



V-134



P-127

| Part Number | Description |
|-------------|---|
| 2FLAM | 2" Flammable Decal |
| 2NS | 2" No Smoking Decal (3" x 14") |
| 2P | 2" Propane Decal (3" x 12") |
| 4FLAM | 4" Flammable Decal |
| 4NS | 4" No Smoking Decal |
| 4P | 4" Propane Decal |
| 6FLAM | 6" Flammable Decal |
| 6P | 6" Propane Decal |
| NFPA-704 | 15" x 15" Hazard Rating Propane Decal |
| NFPA-704-1 | 7.5" x 7.5" Hazard Rating Propane Decal |
| NS | 6" No Smoking Decal |
| P-127 | 12" x 30" Poly Propane Container Liq.VIV.Emerg.Shut Off |
| P-81 | Emergency Pull Poly Sign |
| P-82 | Emergency Push Poly Sign |
| PULL | 2" Pull Decal |
| PUSH | 2" Push Decal |
| V-134 | 6" x 2-1/2" Emergency Shutoff Decal |
| V-302C | 2" Liquid Petroleum Gas |

DECALS & SIGNS

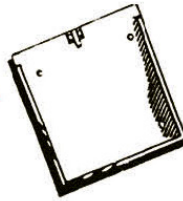
Vehicle Decals & Placards



50



1075



1075-PH



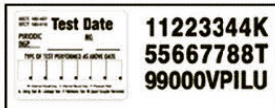
1075-STRAP



F-1075



SLOW-MD



V-31



V-32



NQT



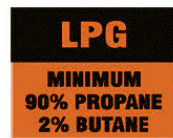
V-81



V-45



V-52



V-58



SHIP PAPER-CYL



SHIP PAPER NH3



SHIP PAPER

| Part Number | Description |
|----------------|--|
| 1075 | D.O.T. 1075 Placard Decal |
| 1075-PH | Placard Holder / 1075 |
| 1075-STRAP | 1075 Placard Strap System |
| 50 | 2" Black Propane Diamond Decal |
| CLAMP | Portable Clamp-On-Rail Holder For Stcc Sign |
| F-1075 | CG-126 Folding 1075 Placard |
| M-1075 | Magnetic 1075 D.O.T. Placard |
| NQT | 2" NQT Decal |
| P-1075 | Poly 1075 D.O.T. Placard |
| RR-L | Vehicle Stops At All RR Crossings Decal |
| SHIP PAPER | D.O.T. Shipping Paper |
| SHIP PAPER-CYL | D.O.T. Cylinder Truck Shipping Paper |
| SLOW MD | Reflective Slow Moving Triangle Decal |
| V-31 | Periodic Inspection Kit (Test Date) |
| V-32 | 5-Year Inspection Kit (Retest Date) |
| V-45 | Label Sheet For Bulk Trucks/Transports 10" x 10" |
| V-52 | Flammable Gas Diamond Decal |
| V-58 | Alt. Fuel Label - Single Component |
| V-81 | Emergency Pull 10" x 12" Decal |

PAINT & SUPPLIES

Paint



4002- White Tank Enamel- Durable and Economical- Can be applied with a brush, roller, or spray equipment. Dries to a high gloss non-chalking finish that weathers above comparably priced coatings.

6651- American Gray Tank Enamel- A durable industrial tank enamel that dries to a high gloss.

8096- Light Gray Primer- A quick drying metal primer with rust inhibitors. Dries to a hard, durable, flat finish.

| Part Number | Description |
|-------------|--------------------------------------|
| 4002-1 | White Tank Enamel- 1 Gallon |
| 4002-5 | White Tank Enamel- 5 Gallons |
| 8096-1 | Light Gray Primer- 1 Gallon |
| 8096-5 | Light Gray Primer- 5 Gallons |
| 6651A-1 | American Gray Tank Enamel- 1 Gallon |
| 6651A-5 | American Gray Tank Enamel- 5 Gallons |

Notes:

- 15 to 30 minutes of drying time — 350-400 Sq Ft/ Gallon Coverage.
- For spraying, use four parts paint to one part thinner.

Paint Supplies



2BRSH



2LHBRSH



BB3



WBRSH



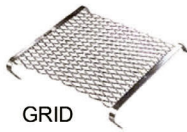
7CROLC



9PAN



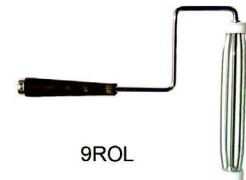
7CROL



GRID



9ROLC



9ROL



EXTP

| Part Number | Description |
|-------------|------------------------------------|
| 2BRSH | 2" Trim Brush |
| 2LHBRSH | 2" Paint Brush w/ 15" Handle |
| 7CROL | 7" Curved Roller Handle w/ Cover |
| 7CROLC | 7" Curved Roller Cover |
| 9PAN | 9" Roller Pan |
| 9ROL | 9" Paint Roller - Heavy Duty |
| 9ROLC | 9" Roller Cover - 3/8" NAP |
| 9ROLC.50 | 9" Roller Cover - 1/2" NAP |
| BB3 | Bucket Bonnet - Package of One |
| EXTP | 3 Piece Extension Pole |
| GRID | Paint Bucket Grid |
| WBRSH | Wire Brush |
| TW90 | Tub-O Towels 90 Count Hand Cleaner |

SERVICE & INSTALLATION EQUIPMENT

Presto-Tap



The RVL low pressure fitting is designed to obtain pressure readings at first and second stage regulators. Compatible with all Presto-Tap® gauge products when used at correct locations.

| Part Number | Description |
|-------------|---|
| 2000/RV-L | Regulator Valve - Low Pressure Test (10# Max) |
| VB1 | Type B Pressure Tap Valve 1/8" NPT X 1/4" Flare |
| HM | 0-15 PSI Leak Test Kit W/RV/QA & Bleeder Assm |
| HM-LOW | HM With 0-35"WC Gauge |
| HM-15LF | HM With 0-15 PSI Liquid Filled Gauge |
| HM-90 | 0-15PSI Leak Test Kit W/ Elbow RV/QA-90 & Bleeder |
| HM-90-LOW | 0-35"WC Leak Test Kit W/Elbow |
| HM-KIT | Leak Testing Kit w/HM, Valves, Wrenches, Case |
| HM-KIT-LOW | Leak Teasting Kit W/ HM-Low/Valves/Wrenches/Case |
| RV/QA-90 | 90 degree quick Couple Adapter |
| RV/QA | LDS 2000/RV Quick Adaptor |
| 6800 | PRESTO-TAP LDS Ambient Temp Gauge w/ Coupler |
| 1402 | 12" PRESTO-TAP Pigtail MPOL x 1/4" MPT, 1/4" Tube |
| PT912PS12 | 12" PRESTO-TAP Pigtail MPOL x MPOL,1/4" Tube |
| PTU-KIT | KIT, UNIVERSAL, PRESTO TAP |

Presto-Link Bluetooth Transducers

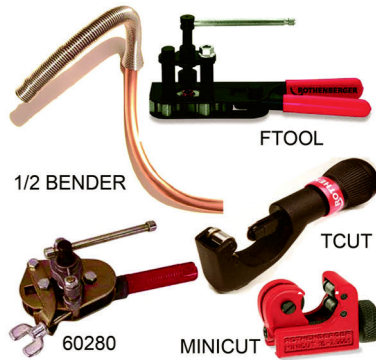


| Part Number | Description |
|---------------|---|
| PTLINKC-36KIT | COMBINATION KIT 0-250 PSIG & 0 - 50" WC |
| PTLINKC-KGA | COMBINATION KIT 0-250 PSIG & 0-50" WC |
| PTLINKC-KIT | COMBINATION KIT 0-250 PSIG & 0-50: WC |
| PTLINKH-36KIT | HIGH PRESSURE KIT 0-250 PSIG |
| PTLINKH-KGA | HIGH PRESSURE KIT 0-250 PSIG |
| PTLINKH-KIT | HIGH PRESSURE KIT 0 - 250 PSIG |
| PTLINKL-36KIT | LOW PRESSURE KIT 0 - 50" WC |
| PTLINKL-KGA | LOW-PRESSURE KIT, 0-50" WC |
| PTLINKL-KIT | LOW PRESSURE KIT 0 - 50" WC |

SERVICE & INSTALLATION EQUIPMENT

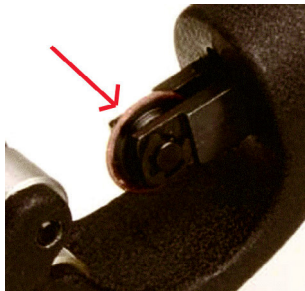
SERVICE & INSTALLATION EQUIPMENT

Copper Tube Cutters, Benders, And Flaring Tools



| Part Number | Description |
|-------------|--|
| 1/2 BENDER | Spring Bender For 1/2 OD Tube |
| 3/8 BENDER | Spring Bender For 3/8 OD Tube |
| 5/8 BENDER | Spring Bender For 5/8 OD Tube |
| 60280 | Deluxe 45 Degree Flaring Tool |
| 60290 | Large Size 45 Degree Flare Tool 3/4" - 1-1/8" OD |
| FTOOL | Rothenberger Flaring Tool |
| 41330 | E-47 3/4" I.D. Hammer Type Flare Tool |
| MINICUT | 1/8" - 7/8" Mini Tubing Cutter |
| TCUT | Rothenberger Tube Cutter (1-1/8" O.D.) |
| TCUT-35 | Enclosed Feed Tube Cutter |

Copper Tube Cutters, Benders, And Flaring Tools



| Part Number | Description |
|-------------|---|
| 60282 | Yoke Assembly For 60280 Flaring Tool |
| 642764 | Handle For 60280 Flare Tool |
| 99017 | Rothenberger Reamer Blade |
| 99028 | Rothenberger Compression Screw w/ Handle |
| 99039 | Nut/Flaring Tool Handle Bolt |
| 99061 | Roller/Pin Rothenberger Flare Tool |
| 99062 | Roller/Rothenberger Flare Tool |
| 99105 | Strap Assembly/Rothenberger Flare Tool |
| 99107 | Rothenberger 45 Degree Flaring Cone |
| 99108 | Handle Bolt/Flare Tool |
| TCUTW | Cutter Wheel, Pin & Clip R13170007R, R13199015R |
| TCUTW-35 | Cutter Wheel For TCUT-35 |
| 73548 | Axle & Screw For TCUT-35 Cutter Wheel |

Leak Detector



Non-flammable, non-injurious to skin, eyes, clothing, or finishes. Dries clean, no mess.

| Part Number | Description |
|-------------|---------------------------------------|
| SLD | 1 Gal Sherlock Low Temp Leak Detector |
| BTB | Pint Size Brush Top Bottle |
| LS16 | 16 OZ. Spray Bottle Leak Detector |

SERVICE & INSTALLATION EQUIPMENT

SERVICE & INSTALLATION EQUIPMENT

Pressure Testing Equipment



EM700



EM720



CD100A



Low pressure testing equipment.

| Part Number | Description |
|-----------------|--|
| EM700 | Electronic Manometer w/Case |
| EM720 | Hi-Res Differential Manometer |
| LP KIT | CD100A & EM700 LEAK Pressure Kit W/ Case |
| AC319 | Soft Carry Case For EM700 |
| 2020PORT | 0-20 " W.C. MAG. Gage, Buna Dia.,w/ Carry Case |
| 1212KIT | Manometer Kit |
| A-432 | Carry Case For 2020 Magnehelic Gage |
| 1200 | Rigid Manometer |
| 1212 ELBOW | Rubber Elbow For 1212 (410134-00) |
| 1212 GAGE FLUID | Fluorescein Green Color Concentrate (3/4 OZ.) |
| 1212 HOSE | 3' Hose For 1212 Manometer A-201 |
| 30VAC-TEST | 30" WC Steel Gauge w/ Pol Elbow Adapter |

Gloves



23-173T



23-193T



23-202L



2520



52-547T



6127XL



E3260Q

| Part Number | Description |
|-------------|---|
| 23-173T | Winter Monkey Grip w/ Safety Cuff/Rough Texture |
| 23-193T | Winter Monkey Grip w/ Safety Cuff/Smooth Texture |
| 23-202M | Versatouch Medium LP Glove |
| 23-202L | Versatouch Large LP Glove |
| 23-202XL | Versatouch Extra Large LP Glove |
| 2520 | PVC Coated Foam Lined Orange Glove w/Safety Cuff |
| 52-547T | Summer HYD-TUF Driver Glove |
| 6127XL | X-Large Premium Grain Leather Driver Glove w/ Shirred Wrist |
| E3260Q | Leather Palm Glove w/2-1/2" Rubberized Safety Cuff |

SERVICE & INSTALLATION EQUIPMENT

SERVICE & INSTALLATION EQUIPMENT

Line Detector

501 Tracker II Line Detector



501 Tracker II Features :

- Three ways of connecting to pipes or cables.
- Traces over distances to 4,000 feet and depths to 7 feet.
- Adjustable Sensitivity.
- Durable Carrying Case.
- Battery-operated (8 - AA and 1 - 9V included).
- 1-year warranty.

501 Tracker II Features :

- Long-Range Wire Locating
- Work on Active or Dead Systems
- Fast, Simple Operation

Optional headset HS-1 is available for use in high traffic areas or other noisy environments.

| Part Number | Description |
|----------------|---------------------------------------|
| 501 TRACKER II | Greenlee 501 Tracker II Cable Locator |
| HS-1 | Headset For 501 Tracker II |



SERVICE & INSTALLATION EQUIPMENT

Tank Gauge Repair Kit



Kit Includes

- One drill guide block that accommodates both JR & SR tank gauges.
- Bolts for securing the block to the gauge flange on the tank
- Drill bits for drilling out the broken bolts
- Taps to re-thread the bolt holes.
- FREE 50 piece starter kit of new gauge bolts & gaskets for both JR & SR gauges.

| Part Number | Description |
|--------------|-------------------------------------|
| GAUGE DOCTOR | Repair Kit For Jr & Sr Gauge Mounts |

Acme Test Gauges



The importance of secure ACME connections during the transfer of gas cannot be overemphasised. LPG transfer hoses are covered by statutory yearly inspection yet no such provision exists for the connectors although they are subjected to constant use and occasional abuse. Determining the point when they should be replaced is usually based on a visual check, an estimated service life or coupling failure. Couplings should be regularly checked for

- Wear
- Splits
- Cracks
- Ovality
- Corrosion

In operation the wear gauges are used to determine the wear limit of an ACME coupling thread by simply attempting to screw the gauge & coupling together.

An engagement of more than one turn of the thread indicates that the coupling should be replaced.

Available as boxed sets or individual items

Full instructions included.

RH sets include 1 3/4", 2 1/4" & 3 1/4" plug and ring gauges for checking right hand threads

LH sets include 1 3/4" & 2 1/4" plug and ring gauges for checking left hand threads Available exclusively from RMS our ACME wear gauges provide a reassuring way to ensure you stay on the right side of safety.

| Part Number | Description |
|-------------|--|
| 253578 | 3-1/4" Acme Thread Test Plug Gauge W/ Papers |
| 253566 | 3-1/4" Acme Thread Test Ring Gauge W/ Papers |
| 253570 | 2-1/4" Acme Thread Test Ring Gauge W/ Papers |
| 253581 | 2-1/4" Acme Thread Test Plug Gauge W/ Papers |
| 253568 | 1-3/4" Acme Thread Test Ring Gauge W/Papers |
| 253569 | 1-3/4" Acme Thread Test Plug Gauge W/ Papers |

SERVICE & INSTALLATION EQUIPMENT

SERVICE & INSTALLATION EQUIPMENT

Thermocouples



| Part Number | Description |
|-------------|---|
| K15DS-18 | 18" Johnson Controls Thermocouple |
| K15DS-24 | 24" Johnson Controls Thermocouple |
| K15DS-30 | 30" Johnson Controls Thermocouple |
| K15DS-36 | 36" Johnson Controls Thermocouple |
| K15FS-24 | 24" Johnson Controls (Snap-In) Thermocouple |
| K15FS-36 | 36" Johnson Controls (Snap-In) Thermocouple |
| K16BT-18 | Husky 18" Johnson Controls Thermocouple |
| K16BT-24 | Husky 24" Johnson Controls Thermocouple |
| K16BT-30 | Husky 30" Johnson Controls Thermocouple |
| K16BT-36 | Husky 36" Johnson Controls Thermocouple |
| K16WT-48 | Husky 48" Johnson Controls Thermocouple |
| K16WT-60 | Husky 60" Johnson Controls Thermocouple |
| K19AT-18 | 18" Johnson Controls Universal Thermocouple Kit |
| K19AT-24 | 24" Johnson Controls Universal Thermocouple Kit |
| K19AT-30 | 30" Johnson Controls Universal Thermocouple Kit |
| K19AT-36 | 36" Johnson Controls Universal Thermocouple Kit |
| K19AT-48 | 48" Johnson Controls Universal Thermocouple Kit |
| K19AT-60 | 60" Johnson Controls Universal Thermocouple Kit |
| Q340A1066 | 18" Honeywell Thermocouple |
| Q340A1074 | 24" Honeywell Thermocouple |
| Q340A1082 | 30" Honeywell Thermocouple |
| Q340A1090 | 36" Honeywell Thermocouple |
| Q340A1108 | 48" Honeywell Thermocouple |
| 10-038 | Thermocouple Junction Block Test Adaptor |
| 10-238 | Thermopile Junction Block Test Adaptor |

Methanol & Injector



| Part Number | Description |
|-------------|---------------------------------|
| DM5 | 5 Gal Can Dehydrated Methanol |
| DM55 | 55 Gal Drum Dehydrated Methanol |
| MEP700 | Methanol Injector |

SERVICE & INSTALLATION EQUIPMENT

Misc Tools And Equipment

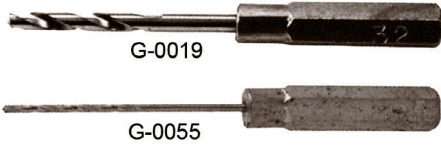


| Part Number | Description |
|-----------------|--|
| FIGURE SET | Steel 1/4" # 0 thru 8 w/ Letter E & Case |
| LETTER E | 1/4" Letter "E" Stamp |
| 7/8-HEX | 7/8" x 3" Fill Valve Tool |
| FILLVALV-WRENCH | 7/8" Allen Wrench For 6579 & 7579 |
| QA-WRENCH | 1/2DR. x 17MM Allen Wrench For A7797A Valve |
| JWRENCH | 3-1/4" ACME J-Wrench |
| TELE-LITE | Telescopic Lighter |
| BG-3 | Crimping Tool; 3/16", 1/4" & 3/8" |
| TS4000T | Bernzomatic Self Igniting Torch For DISP. Bottle |
| LITMUS | Vial w/100 Litmus Strips (#23242) |
| PK-1 | Hannay Swivel Joint Seal |
| 341-1 | 2-1/2 oz. Y70AA-1 Baso Valve Grease |
| TW90 | TUB-O Towels 90 Count Hand Cleaner |

SERVICE & INSTALLATION EQUIPMENT

ORIFICES

**Anderson & Forrester
Pressure-Bonded Metal Gauging Drills**



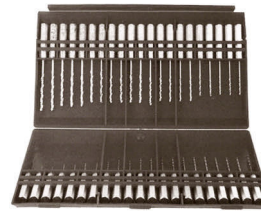
A & F's exclusive pressure-bonding eliminates obsolete two-piece construction. Drill and drill handle are permanently bonded to give you one-piece, trouble-free operation and longer drill life. Sizes #19 through #80 (larger sizes available). Drill sizes are stamped on side of handle.

G-0019 (#19 Drill) through **G-0080** (#80 Drill)

| Part Number | Drill Size |
|-------------|------------|
| G-0019 | 19 |
| G-0020 | 20 |
| G-0021 | 21 |
| G-0022 | 22 |
| G-0023 | 23 |
| G-0024 | 24 |
| G-0025 | 25 |
| G-0026 | 26 |
| G-0027 | 27 |
| G-0028 | 28 |
| G-0029 | 29 |
| G-0030 | 30 |
| G-0031 | 31 |
| G-0032 | 32 |
| G-0033 | 33 |
| G-0034 | 34 |
| G-0035 | 35 |
| G-0036 | 36 |
| G-0037 | 37 |
| G-0038 | 38 |
| G-0039 | 39 |
| G-0040 | 40 |
| G-0041 | 41 |
| G-0042 | 42 |
| G-0043 | 43 |
| G-0044 | 44 |
| G-0045 | 45 |
| G-0046 | 46 |
| G-0047 | 47 |
| G-0048 | 48 |
| G-0049 | 49 |
| G-0050 | 50 |
| G-0051 | 51 |
| G-0052 | 52 |
| G-0053 | 53 |
| G-0054 | 54 |
| G-0055 | 55 |
| G-0056 | 56 |
| G-0057 | 57 |
| G-0058 | 58 |
| G-0059 | 59 |

| | |
|--------|----|
| G-0060 | 60 |
| G-0061 | 61 |
| G-0062 | 62 |
| G-0063 | 63 |
| G-0064 | 64 |
| G-0065 | 65 |
| G-0066 | 66 |
| G-0067 | 67 |
| G-0068 | 68 |
| G-0069 | 69 |
| G-0070 | 70 |
| G-0071 | 71 |
| G-0072 | 72 |
| G-0073 | 73 |
| G-0074 | 74 |
| G-0075 | 75 |
| G-0076 | 76 |
| G-0077 | 77 |
| G-0078 | 78 |
| G-0079 | 79 |
| G-0080 | 80 |

Drill Sets



G-4080

#40 Drill through #80 Drill (LP)

Patented heavy duty plastic case with clasp, contains set of 42 gauging drills, sizes #40 through #80, including tape broach. Spring loaded drill carriers pop up for easy drill removal and replacement

GDK-1939

#19 Drill through #39 Drill (NG)

Same durable, patented construction features as G-4080. Contains 21 drill sets, #19 through #39

| Part Number | Description |
|-------------|-----------------------------|
| G-4080 | #40 Drill through #80 Drill |
| GDK1939 | #19 Drill through #39 Drill |

ORIFICES

Anderson & Forrester Orifice Assortments

Gas Serviceman's Kits

MI-131 - Serviceman's Orifice Assortment



MI-131

To get only the case, order **MI-134**
Dimensions: 9 1/4" wide 13 1/2" long 2" deep
Orifices Included :-

| Part Number | No. of Pcs |
|-------------|------------|
| PO-529 | 15 pcs |
| PO-511 | 10 pcs |
| PO-508 | 20 pcs |
| PO-523 | 12 pcs |
| PO-530 | 12 pcs |
| PO-557 | 10 pcs |
| PO-515 | 12 pcs |
| PO-520 | 10 pcs |
| PO-501 | 12 pcs |
| PO-554 | 8 pcs |
| PO-519 | 15 pcs |
| PO-559 | 8 pcs |
| PO-533 | 10 pcs |
| PO-558 | 10 pcs |
| PO-516 | 15 pcs |
| PO-543 | 10 pcs |
| PO-539 | 15 pcs |
| PO-538 | 10 pcs |
| MI-108 | 10 pcs |
| MI-109 | 10 pcs |
| MI-110 | 10 pcs |
| MI-100 | 30 pcs |
| CO-400 | 25 pcs |

MI-132 - Pilot Orifice Assortment

Orifices Included :-

| Part Number | No. of Pcs |
|-------------|------------|
| GR-804 | 6 pcs |
| GR-803 | 5 pcs |
| GR-805 | 3 pcs |
| GR-806 | 4 pcs |
| GR-807 | 4 pcs |
| GR-820 | 5 pcs |
| GR-818 | 6 pcs |
| GR-801 | 7 pcs |
| GR-813 | 5 pcs |

| | |
|--------|-------|
| MH-854 | 4 pcs |
| MH-857 | 6 pcs |
| MH-856 | 4 pcs |
| GE-757 | 9 pcs |
| GE-751 | 1 pc |
| GE-752 | 2 pcs |
| GE-753 | 3 pcs |
| WR-900 | 3 pcs |
| WR-901 | 1 pc |
| WR-902 | 2 pcs |
| WR-903 | 2 pcs |
| WR-904 | 1 pc |
| WR-905 | 2 pcs |
| BA-718 | 6 pcs |
| BA-719 | 3 pcs |
| BA-720 | 4 pcs |
| BA-701 | 3 pcs |
| BA-702 | 2 pcs |
| BA-703 | 3 pcs |

MI-135 - Special LP Plug and Cap Orifice Assortment

Orifices Included :-

| Part Number | No. of Pcs |
|-------------|------------|
| CO-400 | 25 pcs |
| MI-110 | 10 pcs |
| MI-108 | 10 pcs |
| CO-401 | 10 pcs |
| PO-501 | 10 pcs |
| MI-109 | 10 pcs |
| CO-402 | 10 pcs |
| PO-508 | 20 pcs |
| PO-519 | 15 pcs |
| CO-403 | 10 pcs |
| PO-531 | 10 pcs |
| PO-520 | 10 pcs |
| MI-100 | 30 pcs |
| PO-538 | 10 pcs |
| PO-527 | 10 pcs |
| PO-529 | 15 pcs |
| CO-405 | 5 pcs |
| PO-533 | 15 pcs |
| PO-536 | 10 pcs |
| PO-511 | 10 pcs |
| PO-539 | 15 pcs |
| PO-543 | 10 pcs |
| PO-518 | 10 pcs |

ORIFICES

ORIFICES

Anderson & Forrester Plug Orifices

PO-501 - 16 x 36 Thread

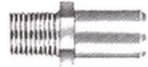
For:
Kennedy Sheet Flame Room Heater No.10
Garland Water Heater Vulcan Smooth
Top Range Water Heater
Reliable Range Roper Range
Eclipse Ideal
Estate Quality

| Part Number | Drill Sizes | Description |
|-------------|-------------|----------------|
| PO-501 | LP-72 | 16 x 36 Thread |



PO-505 - 1/8" Pipe Thread

| Part Number | Drill Sizes | Description |
|-------------|-------------|---|
| PO-505 | LP-72 | 1/2" Hex plug orifice. 1/8" pipe thread. Drill size- 72 |



PO-501 - 16 x 36 Thread

This popular orifice has many applications.

| Part Number | Drill Sizes | Description |
|-------------|-------------|------------------------------|
| PO-507 | LP-80 | Bullet Nose 1/4" x 28 Thread |



PO-508 - 1/4" x 28 Thread

For:
Crescent Range and Plate Lorain Plate
Griswold Plate Quick Meal Plate
Clark Jewel Water Heater Reliable Range

| Part Number | Drill Sizes | Description |
|-------------|-------------|------------------|
| PO-508 | LP-72 | 1/4" x 28 Thread |



PO-510 - Flat End 1/8" Pipe Thread

Used on lower Urn Burners.

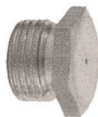
| Part Number | Drill Sizes | Description |
|-------------|---|---------------------------|
| PO-510 | 72 is furnished for both LP and Nnatural unless ordered otherwise | Flat End 1/8" Pipe Thread |



PO-511 - 7/16" x 27 Thread

For:
Golden Glow Heater Bryant Boilers
Welsbach Heaters Rex Water Heater

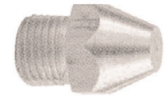
| Part Number | Drill Sizes | Description |
|-------------|-------------|-------------------|
| PO-511 | LP-72 | 7/16" x 27 Thread |



PO-512 - 5/16" x 32 Thread

For: Humphrey, Radiantfire and others.

| Part Number | Drill Sizes | Description |
|-------------|-------------|-------------------|
| PO-512 | LP-72 | 5/16" x 32 Thread |



PO-515 - 1/4" x 32 Thread

For: Many instantaneous water heaters.

| Part Number | Drill Sizes | Description |
|-------------|-------------|------------------|
| PO-515 | LP-72 | 1/4" x 32 Thread |



PO-516 - 6 x 32 Thread

For: Lorain Oven Heat Control

| Part Number | Drill Sizes | Description |
|-------------|-------------|---------------|
| PO-516 | LP-.010 | 6 x 32 Thread |



PO-518 - 11/32" x 32 Thread

For: Widely used popular orifice

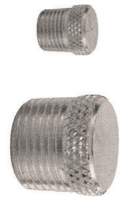
| Part Number | Drill Sizes | Description |
|-------------|-------------|--------------------|
| PO-518 | LP-72 | 11/32" x 32 Thread |



Pipe Thread

These four plug orifices will be furnished blank unless drill size is specified when ordered. Drilling made easy through inside cone shaped design. May be used as a plug or as an orifice.

| Part Number | Description |
|-------------|------------------|
| PO-519 | 1/8" Pipe Thread |
| PO-520 | 1/4" Pipe Thread |
| PO-521 | 3/8" Pipe Thread |
| PO-522 | 1/2" Pipe Thread |



PO-523 - 1/8" Taper Pipe Thread Manifold Plug

This part is supplied blank unless otherwise specified.

| Part Number | Description |
|-------------|--------------------------------------|
| PO-523 | 1/8" Taper Pipe Thread Manifold Plug |



PO-527 - 5/16" x 32 Thread

For: Electrolux and Servel refrigerators. Has flat head as used on new type burners.

| Part Number | Drill Sizes | Description |
|-------------|-------------|-------------------|
| PO-527 | LP-80 | 5/16" x 32 Thread |



PO-529 - 5/16" x 27 Thread

| Part Number | Drill Sizes | Description |
|-------------|-------------|-------------------|
| PO-529 | LP-80 | 5/16" x 27 Thread |



PO-530 - 5/16" x 24 Thread

For: Rudd #25 Heaters

| Part Number | Drill Sizes | Description |
|-------------|-------------|-------------------|
| PO-530 | LP-72 | 5/16" x 24 Thread |



ORIFICES

ORIFICES

Anderson & Forrester Plug Orifices

PO-531 - 11/32" x 27 Thread

For: Coleman Heaters

| Part Number | Drill Sizes | Description |
|-------------|-------------|--------------------|
| PO-531 | LP-72 | 11/32" x 27 Thread |



PO-532 - 5/8" x 18 Thread

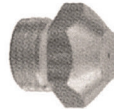
| Part Number | Drill Sizes | Description |
|-------------|-------------|------------------|
| PO-532 | LP-72 | 5/8" x 18 Thread |



PO-533 - 5/16" x 32 Thread

For: Electrolux refrigerators and Kenmore Whirlpool dryers. Length 3/8"

| Part Number | Drill Sizes | Description |
|-------------|-------------|-------------------|
| PO-533 | LP-72 | 5/16" x 32 Thread |



More Anderson & Forrester Plug Orifices

PO-536 - 3/8" x 27 Thread

| Part Number | Drill Sizes | Description |
|-------------|-------------|------------------|
| PO-536 | LP-72 | 3/8" x 27 Thread |



PO-538 - 3/8" x 32 Thread

| Part Number | Drill Sizes | Description |
|-------------|-------------|------------------|
| PO-538 | LP-72 | 3/8" x 32 Thread |



PO-539 - Reverse Plug 10 x 32 Thread

For the hard-to-get-to places, has 3/32" hex hole for Allen wrench.



| Part Number | Drill Sizes | Description |
|-------------|-------------|-----------------------------|
| PO-539 | LP-010 | Reverse Plug 10 x 32 Thread |

PO-542 - 3/8" x 24 Thread

| Part Number | Drill Sizes | Description |
|-------------|-------------|------------------|
| PO-542 | LP-72 | 3/8" x 24 Thread |



PO-543 - 7/16" x 24 Thread

| Part Number | Drill Sizes | Description |
|-------------|-------------|-------------------|
| PO-543 | LP-72 | 7/16" x 24 Thread |



PO-544 - 5/16" x 18 Thread

| Part Number | Drill Sizes | Description |
|-------------|-------------|--|
| PO-544 | LP-72 | 5/16" Hex plug orifice. 5/16" x 18 Thread. Drill size -72. |



PO-553 - 1/2" x 20 Thread



| Part Number | Drill Sizes | Description |
|-------------|-------------|------------------|
| PO-553 | LP-72 | 1/2" x 20 Thread |

PO-554 - 1/2" x 24 Thread



| Part Number | Drill Sizes | Description |
|-------------|-------------|------------------|
| PO-554 | LP-72 | 1/2" x 24 Thread |

PO-556 - 1/2" x 27 Thread



| Part Number | Drill Sizes | Description |
|-------------|-------------|------------------|
| PO-556 | LP-72 | 1/2" x 27 Thread |

PO-557 - 9/16" x 18 Thread



| Part Number | Drill Sizes | Description |
|-------------|-------------|-------------------|
| PO-557 | LP-72 | 9/16" x 18 Thread |

PO-558 - 9/16" x 27 Thread



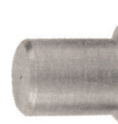
| Part Number | Drill Sizes | Description |
|-------------|-------------|-------------------|
| PO-558 | LP-72 | 9/16" x 27 Thread |

PO-559 - 5/8" x 27 Thread



| Part Number | Drill Sizes | Description |
|-------------|-------------|------------------|
| PO-559 | LP-72 | 5/8" x 27 Thread |

CO-400 - Standard Flat End 3/8" x 27 Thread



All caps have a variable thread to compensate for large and small threads found on valves.

| Part Number | Drill Sizes | Approx. Length | Description |
|-------------|-------------|----------------|------------------------------------|
| CO-400 | LP-72 | 23/32" | Standard Flat End 3/8" x 27 Thread |

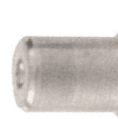
CO-401 - Standard Flat End 1/8" Taper Pipe Thread



Used on coffee urns, steam tables and many other applications.

| Part Number | Drill Size | Approx. Length | Description |
|-------------|------------|----------------|--|
| CO-401 | LP-72 | 11/16" | Standard Flat End 1/8" Taper Pipe Thread |

CO-403 - Standard Counter-Bored End 3/8" x 27 Thread



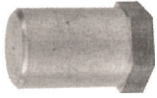
Counter-bored end protects orifice from congesting when housewife removes and replaces burner. Will fit about 95 percent of the domestic ranges.

| Part Number | Drill Size | Approx. Length | Description |
|-------------|------------|----------------|---|
| CO-403 | LP-72 | 3/4" | Standard Counter-Bored End 3/8" x 27 Thread |

ORIFICES

More Anderson & Forrester Plug Orifices

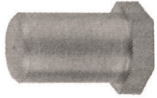
CO-405 - Standard Flat End 1/2" x 20 Thread



For: Most restaurant ranges

| Part Number | Drill Sizes | Approx. Length | Description |
|-------------|-------------|----------------|------------------------------------|
| CO-405 | LP-72 | 5/16" | Standard Flat End 1/2" x 20 Thread |

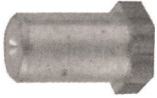
CO-406 - Standard Flat End 3/8" x 27 Thread



Used where medium length cap orifice is required

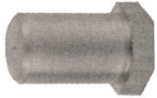
| Part Number | Drill Sizes | Approx. Length | Description |
|-------------|-------------|----------------|------------------------------------|
| CO-406 | LP-72 | 13/16" | Standard Flat End 3/8" x 27 Thread |

CO-408 - Standard Counter Bored 3/8" x 27 Thread



| Part Number | Drill Sizes | Approx. Length | Description |
|-------------|-------------|----------------|---|
| CO-408 | LP-72 | 13/16" | Standard Counter Bored 3/8" x 27 Thread |

CO-409 - Standard Flat End 3/8" x 40 Thread



| Part Number | Drill Sizes | Approx. Length | Description |
|-------------|-------------|----------------|------------------------------------|
| CO-409 | LP-72 | 13/16" | Standard Flat End 3/8" x 40 Thread |

Anderson & Forrester Baso Replacement

BA-701 - 1/8" Male Pipe Thread to 7/16" x 27 Thread



| Part Number | Drill Sizes | Description |
|-------------|-------------|--|
| BA-701 | LP-.010 | 1/8" Male Pipe Thread to 7/16" x 27 Thread |

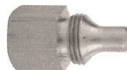
BA-702 - 1/4" Compression Connection to 7/16" x 27 Thread

For LP gas only. Used for Baso series 19119 (22FLP)



| Part Number | Drill Sizes | Description |
|-------------|-------------|--|
| BA-702 | LP-.010 | 1/4" Compression Connection to 7/16" x 27 Thread |

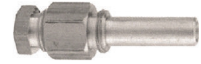
BA-703 - 1/8" Female Pipe Thread to 7/16" x 27 Thread



| Part Number | Drill Sizes | Description |
|-------------|-------------|--|
| BA-703 | LP-.010 | 1/8" Female Pipe Thread to 7/16" x 27 Thread |

BA-715 - 1/4" Compression Connection to 7/16" x 27 Thread

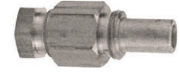
Replaces Baso No. 13



| Part Number | Drill Sizes | Description |
|-------------|-------------|--|
| BA-715 | LP-.012 | 1/4" Compression Connection to 7/16" x 27 Thread |

BA-718 - 1/4" Compression Connection to 7/16" x 27 Thread Double Orifice

Replaces Baso No. 2 Orifice. Fits Baso B, C, D, F, and R



| Part Number | Drill Sizes | Description |
|-------------|-------------|---|
| BA-718 | LP-.012 | 1/4" Compression Connection to 7/16" x 27 Thread Double Orifice |

BA-719 - 1/8" Female Pipe Thread to 7/16" x 27 Thread

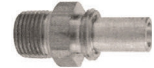
Replaces Baso No. 4 orifice. Fits Baso B, C, D, F and R



| Part Number | Drill Sizes | Description |
|-------------|-------------|--|
| BA-719 | LP-.012 | 1/8" Female Pipe Thread to 7/16" x 27 Thread |

BA-720 - 1/8" Male Pipe Thread to 7/16" x 27 Thread Double Orifice

Replaces Baso No. 3 orifice. Fits Baso B, C, D, F and R

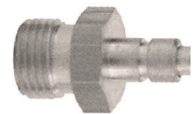


| Part Number | Drill Sizes | Description |
|-------------|-------------|---|
| BA-720 | LP-.012 | 1/8" Male Pipe Thread to 7/16" x 27 Thread Double Orifice |

Anderson & Forrester General Controls

GE-752 - Pilot Tip 1/4" Compression Connection

Replacement for General Controls old 260, PG-9 and PG-1, L Model.



| Part Number | Drill Sizes | Description |
|-------------|-------------|---------------------------------------|
| GE-752 | LP-.011 | Pilot Tip 1/4" Compression Connection |

GE-753 - Pilot Orifice Fitting 1/4" Compression Connection to 5/16" x 32 Thread

Replacement Controls 1260, 26T, PC, PG9, and current PG1, T Model.



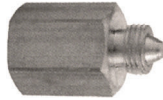
| Part Number | Drill Sizes | Description |
|-------------|-------------|--|
| GE-753 | LP-.010 | Pilot Orifice Fitting 1/4" Compression Connection to 5/16" x 32 Thread |

ORIFICES

Anderson & Forrester General Controls

GE-754 - Orifice Fitting 1/4" Compression Connection to 5/16" x 32 Thread

Replacement for General Controls 26T and PG-9.



| Part Number | Drill Sizes | Description |
|---------------|-------------|--|
| GE-754 | LP-.010 | Orifice Fitting 1/4" Compression Connection to 5/16" x 32 Thread |

Anderson & Forrester Grayson-Robertshaw

GR-801 - Pilot Orifice — Short Type

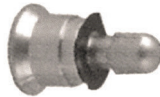
Fits Grayson-Robertshaw pilots.



| Part Number | Drill Sizes | Length | Description |
|---------------|-------------|--------|----------------------------|
| GR-801 | LP-.009 | 21/64" | Pilot Orifice — Short Type |

GR-803 - Pilot Orifice for 1/4" Compression Connection

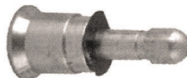
Replacement pilot orifice for Grayson-Robertshaw A1800 pilot (9B). Also used in our GR827 and GR828.



| Part Number | Drill Sizes | Approx. Length | Description |
|---------------|-------------|----------------|---|
| GR-803 | LP-.009 | 1/2" | Pilot Orifice for 1/4" Compression Connection |

GR-804 - Pilot Orifice for 1/4" Compression Connection

Replacement pilot orifice for Grayson-Robertshaw A1810 pilot (2B). Also used in our GR814.



| Part Number | Drill Sizes | Approx. Length | Description |
|---------------|-------------|----------------|---|
| GR-804 | LP-.008 | 57/64" | Pilot Orifice for 1/4" Compression Connection |

GR-805 - Pilot Orifice for 1/4" Compression Connection

Replacement pilot orifice for Grayson-Robertshaw A1840 pilot (2B Target).



| Part Number | Drill Sizes | Approx. Length | Description |
|---------------|-------------|----------------|---|
| GR-805 | LP-.007 | 115/16" | Pilot Orifice for 1/4" Compression Connection |

GR-806 - Pilot Orifice for 3/16" Compression Connection

Replacement pilot orifice for Grayson-Robertshaw A1800 pilot (9B). Also used in our GR825 and GR826.



| Part Number | Drill Sizes | Approx. Length | Description |
|---------------|-------------|----------------|--|
| GR-806 | LP-.008 | 9/16" | Pilot Orifice for 3/16" Compression Connection |

GR-807 - Pilot Orifice for 3/16" Compression Connection

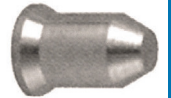
Replacement pilot orifice for Grayson-Robertshaw A1810 pilot (2B). Also used in our GR814.



| Part Number | Drill Sizes | Approx. Length | Description |
|---------------|-------------|----------------|--|
| GR-807 | LP-.008 | 57/64" | Pilot Orifice for 3/16" Compression Connection |

GR-813 - Pilot Orifice for 1/4" Compression Connection

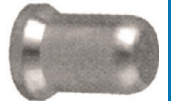
Replacement orifice for Grayson-Robertshawpilots A1820 (2C) and A1830 (2CH).



| Part Number | Drill Sizes | Description |
|---------------|-------------|---|
| GR-813 | LP-.010 | Pilot Orifice for 1/4" Compression Connection |

GR-821 - Pilot Orifice — 1/4" Tube Size

Replacement orifice for A1820 and A1830pilots.



| Part Number | Drill Sizes | Description |
|---------------|-------------|--------------------------------|
| GR-821 | LP-.010 | Pilot Orifice — 1/4" Tube Size |

Anderson & Forrester Honeywell

MH-851 - Orifice Fitting 1/4" Compression Connection to 7/16" x 27 Male Thread



Replacement for 3881147-JE, AC and AA Minneapolis-Honeywell Pilot Fitting. For Q-314 and Q-320A pilot burner

| Part Number | Drill Sizes | Description |
|---------------|-------------|---|
| MH-851 | LP-.011 | Orifice Fitting 1/4" Compression Connection to 7/16" x 27 Male Thread |

MH-854 - Orifice Fitting 1/4" Compression Connection to 7/16" x 27 Male Thread



Replacement for Honeywell 388468-H. Used for Pilot Burners 303, 305 and Q308-A.

| Part Number | Drill Sizes | Description |
|---------------|-------------|---|
| MH-854 | LP-.010 | Orifice Fitting 1/4" Compression Connection to 7/16" x 27 Male Thread |

ORIFICES

Anderson & Forrester Honeywell

MH-856 - Pilot Orifice



Replacement for M-H Power Pile Pilot.

| Part Number | Drill Sizes | Description |
|-------------|-------------|---------------|
| MH-856 | LP-.010 | Pilot Orifice |

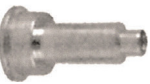
MH-857 - Bullet Nose Pilot Orifice



Replacement for M-H Power Pile Pilot, 388256G.

| Part Number | Drill Sizes | Description |
|-------------|-------------|---------------------------|
| MH-857 | LP-.010 | Bullet Nose Pilot Orifice |

MH-858 - Pilot Orifice



Insert orifice for M-H Q-308, Q-314.

| Part Number | Drill Sizes | Description |
|-------------|-------------|---------------|
| MH-858 | LP-.010 | Pilot Orifice |

Anderson & Forrester White-Rodgers

WR-900 - 1/4" Compression Connection to 1/2" x 20 Thread



Replacement for White-Rodgers style X orifice.

| Part Number | Drill Sizes | Description |
|-------------|-------------|---|
| WR-900 | LP-.012 | 1/4" Compression Connection to 1/2" x 20 Thread |

WR-902 - Elbow 1/4" Compression Connection to 1/2" x 20 Thread with swivel



Replacement for White-Rodgers style Z orifice

| Part Number | Drill Sizes | Description |
|-------------|-------------|---|
| WR-902 | LP-.012 | Elbow 1/4" Compression Connection to 1/2" x 20 Thread with swivel |

WR-903 - 1/4" Compression Connection to 7/16" x 20 Thread



Replacement for White-Rodgers style U orifice.

| Part Number | Drill Sizes | Description |
|-------------|-------------|--|
| WR-903 | LP-.010 | 1/4" Compression Connection to 7/16" x 20 Thread |

WR-904 - 1/8" Compression Connection to 7/16" x 20 Thread



Replacement for White-Rodgers style V orifice

| Part Number | Drill Sizes | Description |
|-------------|-------------|--|
| WR-904 | LP-.010 | 1/8" Compression Connection to 7/16" x 20 Thread |

WR-906 - Swivel type Pilot Orifice 1/4" Compression Connection to 7/16" x 20 Thread



Replacement for White-Rodgers orifice fitting number E-31.

| Part Number | Drill Sizes | Description |
|-------------|-------------|--|
| WR-906 | LP-.010 | Swivel type Pilot Orifice 1/4" Compression Connection to 7/16" x 20 Thread |

Anderson & Forrester Misc.

BJ-216 - Slotted Cap Jet 1/8" Pipe Thread



Will also fit 1/4" compression connection.

| Part Number | Description |
|-------------|----------------------------------|
| BJ-216 | Slotted Cap Jet 1/8" Pipe Thread |

BJ-217, BJ-218 - Slotted Cap Jet 7/16" x 24 Thread



BJ218 will also fit a 1/4" compression connection.

| Part Number | Description |
|-------------|-----------------------------------|
| BJ-217 | Slotted Cap Jet 7/16" x 24 Thread |
| BJ-218 | Slotted Cap Jet 7/16" x 24 Thread |

MI-108 - Drop In Needle



Not drilled. **MI109, MI110** are also in stock.

| Part Number | Description |
|-------------|----------------|
| MI-108 | Drop In Needle |

Anderson & Forrester Special Tools

Broaches

G-3015 - Three-Cornered Broach



Tapered broach. Tapers from .003" to .013". Useful to clean pilot orifices and for the fine jewelry work

| Part Number | Description |
|-------------|-----------------------|
| G-3015 | Three-Cornered Broach |

G-3020 - Three-Cornered Broach



Same as G3015 with hexagonal brass handle.

| Part Number | Description |
|-------------|-----------------------|
| G-3020 | Three-Cornered Broach |

Four-Cornered Broach

| Part Number | Description |
|-------------|--|
| G-1008 | Four-Cornered Broach Tapers from .008" to .017". |
| G-1010 | Four-Cornered Broach Tapers from .010" to .017". |
| G-1012 | Four-Cornered Broach Tapers from .012" to .017". |
| G-5070 | Five-Cornered Broach, #70 reamer |
| G-5080 | Five-Cornered Broach, #80 reamer |
| G-5090 | Five-Cornered Broach, #90 reamer |

Orifices

Anderson & Forrester Special Tools

MI-100 Adaptor & Tools

MI-100 - Adaptor

This adaptor will renew from 80 to 90 percent of all orifices. #72 drill size is supplied unless otherwise specified

| Part Number | Description |
|-------------|-------------|
| MI-100 | Adaptor |



TL-061- Handpiece

Fits large reamer TL070, TL071, industrial reamer, and TL050 burner broach

| Part Number | Length | Description |
|-------------|--------|-------------|
| TL-061 | 4 1/4" | Handpiece |



TL-062 - Adaptor Crimping Tool

For crimping MI-100 adaptor.

| Part Number | Description |
|-------------|-----------------------|
| TL-062 | Adaptor Crimping Tool |



TL-063 - Adaptor Driving Tool

To drive MI-100 adaptor.

| Part Number | Description |
|-------------|----------------------|
| TL-063 | Adaptor Driving Tool |



TL-064 - Orifice Tool

To drive MI-100 adaptor.

| Part Number | Description |
|-------------|----------------------------------|
| TL-064 | Crimping Tool For Smaller Plugs. |



TL-069 - Orifice Tool

| Part Number | Description |
|-------------|---|
| TL-069 | Medium Reamer- 1/8" Diameter For Larger Orifice Sizes. Double Cutting Edge. |



TL-070 - Large Reamer

5/32" diameter blade reams proper size hole to allow press fit for MI-100 adaptor. Two fast cutting edges. Use TL-061 reamer handpiece. Turn in one direction when reaming.

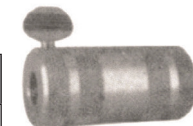
| Part Number | Description |
|-------------|--------------|
| TL-070 | Large Reamer |



TL-074 - Safety Anvil

Orifice caps can be held in this anvil while reaming size for the adaptors. This tool is used to install MI-100 adaptor.

| Part Number | Length | Description |
|-------------|--------|--------------|
| TL-074 | 2 1/2" | Safety Anvil |



TL-050 - Burner Broach

For reaming and cleaning ports. Will fit either TL-061 handpiece or TL-072 pin vice

| Part Number | Description |
|-------------|---------------|
| TL-050 | Burner Broach |



TL-051 - Serviceman's Friend

For use with flow meter and other applications. One end of fitting has 1/8" pipe thread, 1/4" pipe thread and special 5/16" x 32 thread. Opposite end has regular hose fitting, also 1/8" straight pipe thread.



| Part Number | Description |
|-------------|--------------|
| TL-070 | Large Reamer |

MI-100-K - Adaptor Tool Kit

The kit includes 100 MI-100 adaptors, one TL-062, one TL-063, one TL-070, one TL-074, and one TL-061. Everything contained in a clear plastic case.



| Part Number | Description |
|-------------|--------------|
| TL-070 | Large Reamer |

Miscellaneous Tools

TL-072 - Pin Vice

For holding large gauging drills securely while reaming, prevents spinning. This tool is a must when using large gauging drills.



| Part Number | Description |
|-------------|-------------|
| TL-072 | Pin Vice |

TL-068 - Small Reamer

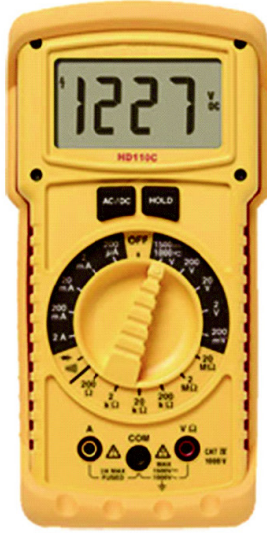
3/32" diameter for reaming orifices. Tapered point allows fine adjustment of large or small burners. Short stubby construction ensures long life. Double cutting edge.



| Part Number | Description |
|-------------|--------------|
| TL-068 | Small Reamer |

Miscellaneous

Cathodic Protection



HD-110C



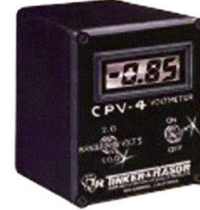
**Model 2A
"Pencil"**



Model 6B



ANODE



CPV-4

| Part Number | Description |
|---------------|--|
| 6B | T&R Copper Sulfate Electrode w/ Booklet |
| 6B-TIP | Replacement Ceramic Tip For 6B Electrode |
| CRYSTALS | Copper Sulfate Crystals (1Lb 3Oz) |
| HD-110C | Wave Tek Digital Multimeter |
| UG PIPE CLAMP | Anode Riser Pipe Clamp |
| 2A | Tinker & Rasor Pocket Half Cell w/ Book |
| CPV-4 | Tinker & Rasor Cathodic Prot. Voltmeter |
| ANODE | 17 Lb Magnesium Anode |

MISCELLANEOUS

MISCELLANEOUS

Gasoil PLS 2 Pipe Thread And Gasket Sealer



JC1LB

PLS 2 is a lead-free, non-hardening, opaque gray paste for natural and LP gas and other services. LP gas industry's leading compound for sealing pipe joints. UL listed for propane. Spreads easily.

| Part Number | Description |
|-------------|---|
| JC1LB | PLS 2 Pipe Thread Seal (1/4 Pt.) Pb04/Case=24 |
| JC5LB | PLS 2 Pipe Thread Seal (1 Pt.) Case=6 |

Rectorseal No. 5 Pipe Thread Sealant



RS525



RS525-SZ

General purpose, nonhardening, non-seizing compound-slow dry and soft set. Used extensively for threaded connections on gas appliances, gas meters, water heaters, etc. Sub-zero is low odor and good for low temperature applications..

| Part Number | Description |
|---------------|-----------------------------------|
| RS5100 | 1 PT. Rectorseal No. 5 |
| RS525 | 1/4 PT. Rectorseal No. 5 |
| RS550 | 1/2 PT. Rectorseal No. 5 |
| RS525-SZ | 1/4 PT. Rectorseal No. 5 Sub-Zero |
| RS550-SZ | 1/2 PT. Rectorseal No.5 Sub-Zero |
| TRU-BLU 1/4PT | 1/4 PT. Rectorseal TRU-BLU |
| TRU-BLU 1/2PT | 1/2 PT. Rectorseal TRU-BLU |

Jomar TEF/Seal PTFE Thread Sealant



Jomar Tef/Seal is slow dry, soft set and non-hardening. Recommended for all applications where cleanliness is essential. Lubricates and protects all threads. May be used on steel, copper, brass, aluminum, ABS, PVC, and fiberglass piping.

| Part Number | Description |
|-----------------|----------------------------------|
| TEF/SEAL 1/2 PT | Jomar 1/2PT Teflon Pipe Compound |
| TEFLON/SEAL | Jomar 1/4PT Teflon Pipe Compound |

High Density Thread Tape



TT41

For use on thread joints of metal pipe in assemblies handling gasoline, petroleum oils, natural gas, butane and propane.

| Part Number | Description |
|-------------|--------------------------------------|
| TT25 | 1/4" x 520" High Density Teflon Tape |
| TT33 | 3/4" x 576" High-Density Teflon Tape |
| TT41 | 1/2" x 520" High-Density Teflon Tape |

Economy Pipe Thread Tape



TT50

| Part Number | Description |
|-------------|--------------------------|
| TT50 | 1/2" x 1296" Teflon Tape |
| TT75 | 3/4" x 520" Teflon Tape |

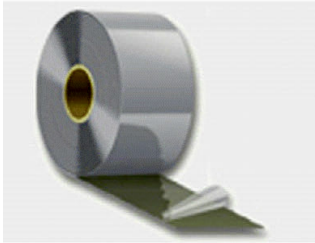
Miscellaneous

Blue Monster Thread Tape & Sealant



| Part Number | Description |
|-------------------------------|---|
| BLUE MONSTER 1/2" TAPE | 1/2" X 1429" BLUE MONSTER THREAD SEAL TAPE(45 PER CASE) |
| BLUE MONSTER 3/4" TAPE | 3/4" X 1429" BLUE MONSTER THREAD SEAL TAPE(27 PER CASE) |
| BLUEMON 1/2 PINT | 1/2 PINT BLUE MONSTER COMPOUND |
| BLUEMON 1/4 PINT | 1/4 PINT BLUE MONSTER COMPOUND |

Tapecoat



H35G-2

Tapecoat H50 Gray Cold-applied above and below ground coating in tape form with an integrated primer. Tapecoat H35 Gray and Tapecoat H50 Gray are designed to protect above and below ground metal surfaces from corrosion and electrolysis. They are used for coating pipe, girth welds, fittings, couplings, tanks, pipe type cable, conduit, tie rods, elevator casings and other metal surfaces. Their unique MAF® backing has been specially formulated to provide strength that allows it to be pulled tightly around fittings and other irregular shapes with minimal pull back due to memory. Tapecoat H35 Gray and Tapecoat H50 Gray employ an integrated primer and are resistant to UV rays, thermal expansion, impact and abrasion. Both tapes can be applied over a wide range of ambient temperatures.

| Part Number | Description |
|---------------|--------------------------------------|
| H35G-2 | 2" x 75' Roll Tapecoat Gray Coldwrap |

Rigid PVC Regulator Venting



| Part Number | Description |
|-----------------------|------------------------------------|
| 3/4CONNECTOR | 3/4" FPT x Socket PVC Connector |
| 3/4COUPLING | 3/4" Socket PVC Coupling |
| 3/4TERMINATION | 3/4" MPT x Socket PVC Termination |
| 3/4VENT | 3/4" UL651 PVC Sch. 40 Vent Tubing |
| CEMENT | 1/2 Pint Clear PVC Cement |

Flexible Regulator Venting Kits



Features:

- Quick, easy pipe-away from building openings or sources of ignition.
- Meets 2011 NFPA 58 requirements.
- UL 1660 listed tubing is UV and temperature resistant.
- Mounting clamps and screws provided with each kit.
- 4', 6' and 10' kits in stock, custom sized lengths can be made for next day delivery.
- Kits in stock for Rego Regulators, and available for other major regulator brands.
- Removable ends so tubing can be cut for field adjustability!

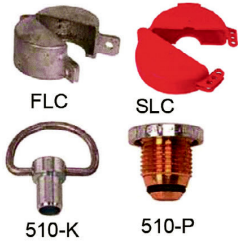


| Part Number | Description |
|-------------------|--|
| LV960-48 | 4' Flexible Rego Vent Kit |
| LV960-72 | 6' Flexible Rego Vent Kit |
| LV960-120 | 10' Flexible Rego Vent Kit" |
| Flex Vent | 100' Roll, 3/4" Type NM Flexible Conduit |
| NMLT7 | 3/4" Straight Non-Metalic Fitting |
| 3/4CLAMP | Clamp for FLEXVENT |
| SCREW | Screw for 3/4 Clamp for Vent Kits |
| VENT ELBOW | Vent Elbows For Rego Vent Kits |

MISCELLANEOUS

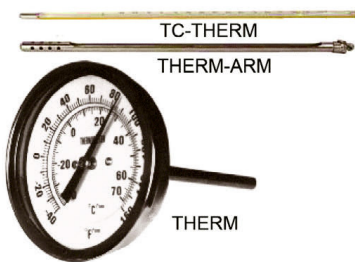
Miscellaneous

Valve Locks



| Part Number | Description |
|-------------|-------------------------------------|
| FLC | 1-3/4" Fill Val Lock Cap |
| LLC | 6-1/2" To 10" Valve Lock-Out Device |
| SLC | 2-1/2" To 5" Valve Lock-Out Device |
| 510-K | Saf-T-Lok Key |
| 510-P | Pol Saf-T-Lok |

Thermometers



| Part Number | Description |
|---------------|---|
| TC-THERM | ASTM 58F Refill/Tank Car Thermometer -30 To 120 DEG |
| THERM-ARM | #210-904 Armor For Tank Car Thermometer |
| THERM | 4" Stem Tank Thermometer |
| THERM-12 | 12" Tank Thermometer |
| THERM-6 | 6" Stem Tank Thermometer |
| THERM-9 | 9" Tank Thermometer |
| THERMOWELL | 4" Brass Thermowell for 3/4" Bung |
| SS-THERMOWELL | 4" #304 Stainless Steel Thermowell for 3/4" Bung |

Gas Matches



| Part Number | Description |
|-------------|---|
| GM-3X | Olympian Gas Match w/Flex & Continuous Ignition |

Bulkheads



BULKHEAD4832

Custom built bulkheads designed and field tested meeting all requirements of NFPA #58. The bulkhead is constructed of a heavy 3" x 8" x 3/8" rectangular tube saddled and welded between two 4" schedule 40 pipes. The couplings consist of 3000 lbs. forged steel installed in accordance with your specifications. The bulkhead is to be installed in concrete with the pipe legs filled with concrete. Double elbows are required on the front side of the bulkhead to insure a predictable shear point.

| Part Number | Description |
|----------------|--|
| BULKHEAD3220 | 2" & 1-1/4" FS Couplings Welded Into Bulkhead |
| BULKHEAD4820 | 3" & 1-1/4" FS Couplings Welded Into Bulkhead |
| BULKHEAD4832 | 3" & 2" FS Couplings Welded Into Bulkhead |
| BULKHEAD483220 | 3" & 2" & 1-1/4" FS Couplings Welded Into Bulkhead |
| BULKHEAD483232 | 3" & 2" & 2" FS Couplings Welded Into Bulkhead |
| BULKHEAD484832 | 3" & 3" & 2" FS Couplings Welded Into Bulkhead |

Cable Pull Systems



351



SSCABLE

| Part Number | Description |
|-------------|---|
| 351 | Destaco Over Center Latch (8-11/16" Long) |
| 371 | Destaco Over Center Latch (11-5/8" Long) |
| SSCABLE | 1/16" SS Aircraft Cable |
| CRIMP | 1/16" Copper Oval Crimp |

Miscellaneous

Raincaps



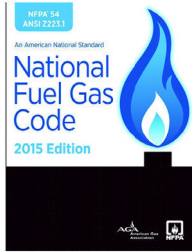
For protection of vertical relief valve riser pipes.

| Part Number | Description |
|-------------|-------------------------|
| WC0 | Size 0 Rain Cap 3/4" |
| WC1 | Size 1 Rain Cap 1" |
| WC2 | Size 2 Rain Cap 1-1/4" |
| WC3 | Size 3 Rain Cap 1-1/2" |
| WC4 | Size 4 Rain Cap 1-1/2" |
| WC5 | Size 5 Rain Cap 2" |
| WC6 | Size 6 Rain Cap 2" |
| WC7 | Size 7 Rain Cap 2-1/2" |
| WC8 | Size 8 Rain Cap 2-1/2" |
| WC9 | Size 9 Rain Cap 2-1/2" |
| WC10 | Size 10 Rain Cap 3" |
| WC12 | Size 12 Rain Cap 3-1/2" |
| WC14 | Size 14 Rain Cap 4" |

NFPA LP Standards



NFPA58-2014



NFPA54-2015

| Part Number | Description |
|-------------|---|
| NFPA54-2015 | National Fuel Gas Code 2015 Edition |
| NFPA58-2014 | Liquefied Petroleum Gas Code 2014 Edition |

Dandi-Blocks



| Part Number | Description |
|-------------|--|
| DB22626 | Vertical Cylinder Base (100# - 420# and 150# and smaller DOT Cylinders). |
| DB51026 | ASME Tank Block (up to 500 GWC) - 5" H x 26.5" L x 10" W. . |
| DB71130 | ASME Tank Block (up to 1,000 GWC) - 7" H x 30" L x 11" W. |



MISCELLANEOUS

First Aid Kits



| Part Number | Description |
|-------------|---|
| 10UK | Marshall 4PSI 1/4" FNPT x 1/4" FNPT Reg |
| 16UK | Marshall Z-Bracket |
| 24UK | Auto Change Marshall Reg. w/2 Screws |

Safety



| Part Number | Description |
|-------------|---|
| SY-2024 | 20# Purple-K Ansul Fire Extinguisher (No UPS) |
| COVER | Cover For 15-30# Fire Extinguishers |
| CHOCKBLOCK | Aluminum Chockblock (One Single Block) |
| 1259D | Explosion Proof Flashlight |
| 13000 | Emergency Warning Triangle Kit |

Alternate Valves



| Part Number | Description |
|-------------|--|
| 1428M | Male Lift Truck Connector |
| 3865 | 1/4" Hydro Relief Valve |
| GFIP1.25A | Stainless Actuator For Fisher 1-1/4" Internal VLV. |
| PV1447C | Motor Fuel Serv Valve w/1.7 Gpm Excess Flow |
| 289H-42 | 1 Npt Relief VLV, 4-15 PSI |
| 289H-43 | 1"NPT Relief VLV 10-20 PSI |
| 98H-30 | 1" FNPT Relief Valve, 70-140 PSI |
| M570 | 1-3/4" F. ACME x 1-3/4" NPT Hose Adapter |
| M611 | 2 1/4 x 1 3/4 ACME Adpt. (5774) |
| N550-10 | 1.25 NPT Emerg. Shutoff VLV |
| N550-16 | 2 NPT Emerg. Shutoff VLV |
| N550-24 | 3 Npt Emerg. Shutoff VLV |
| N562-26 | Tank Car ESV, 2"FNPT x 3-1/4" M ACME |
| P327D | Air CYL. For N550 (Close Only) |
| P539 | Pneumatic Actuator Kit For N550 (Open & Close) |
| P614 | Pneumatic Actuator For C404-32 |
| P623 | Pneumatic Actuator Kit For C403-24 |
| P639 | Pneumatic Actuator Kit For C402, C421, C427 |
| Y602-9 | 3/4 NPT Angle Vent ASSM. |

MISCELLANEOUS

MISCELLANEOUS

Dormont Flexible Appliance Connectors



| Part Number | Description |
|-------------|---|
| 10-2222-18 | 3/8" FIP x 3/8" FIP SS Appliance Connector - 18" Long |
| 10-3131-12 | 1/2" MIP x 1/2" MIP SS Appliance Connector - 12" Long |
| 10-9898-16 | 3/8" OD SS Appliance Connector with 3/8 Flare Nuts - 16" Long |
| 20-3131-18 | 1/2" MIP x 1/2" MIP SS Appliance Connector - 18" Long |
| 20-3132-18 | 1/2" MIP x 1/2" FIP SS Appliance Connector - 18" Long |
| 20-3132-36 | 1/2" MIP x 1/2" FIP x 36" Appliance Connector |
| 20-3132-48 | 1/2" MIP x 1/2" FIP x 48" Appliance Connector |
| 20-3132-60 | 1/2" MIP x 1/2" FIP x 60" Appliance Connector |
| 30-3132-36 | 1/2" MIP x 1/2" FIP SS Appliance Connector - 36" Long |
| 30-3132-48 | 1/2" MIP x 1/2" FIP SS Appliance Connector - 48" Long |

Note: Other sizes of Industrial / Commercial Dormont connectors for multiple applications.

ECII® Technical Guide 109

Regulator Lock-Up Troubleshooting

The Problem:

A new, properly installed ECII® LV4403 Series regulator has a high lock-up, does not lock up, or is creeping.

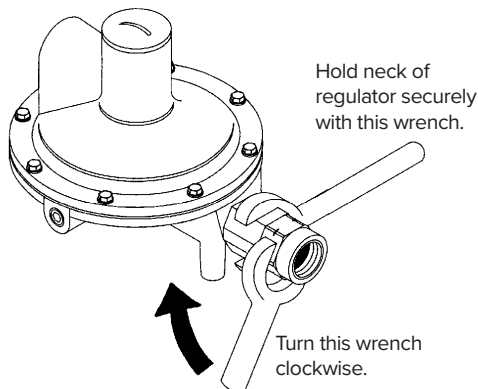
This is often caused by foreign material on the regulator seat disc. Foreign material usually comes from system piping upstream of the regulator. This material prevents the inlet nipple from properly seating on the seat disc.

The Solution:

There is a simple procedure that can be completed in the field that will resolve the problem in most cases. This procedure should be done by qualified service personnel only.

Once it has been determined that a new regulator has not prop-erly locked-up, the following steps should be followed:

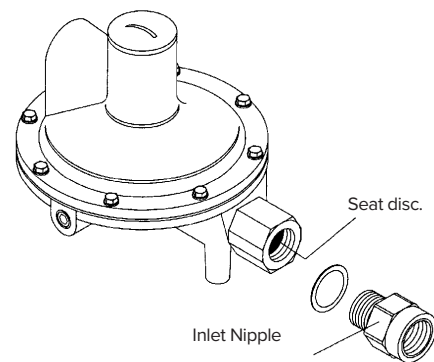
Step 1



Hold the neck of the regulator body securely with a wrench. Remove the inlet with a second wrench by turning clockwise (left hand thread).

Save the inlet nipple and gasket for reassembly.

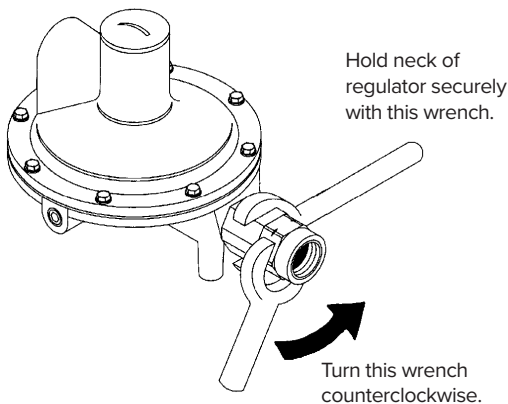
Step 2



Inspect the regulator seat disc. Wipe it clean using a dry, clean cloth.

Inspect the inlet nipple to be sure the seating surface is clean and not damaged.

Step 3



Re-install the inlet nipple and gasket by turning counterclockwise into neck of regulator (left hand thread). Hold the neck of the regulator body secure with a wrench. Tighten the inlet nipple into the regulator with a second wrench. Tighten to 35 ft/lbs torque — do not over tighten.

Be careful not to damage threads.

After completing these steps, be sure system piping is clean and that new pigtailed are being used.

Re-install the regulator, check for leaks, and properly check the system.

If the regulator still fails to lock-up, it should be replaced.

ECII suggests referring to NFPA Pamphlet 58, NPGA Pamphlet 306, ECII WB #1, ECII Catalog L-500 and the ECII Service-man's Manual for additional regulator, piping system, and leak checking/pressure testing information.

Determining Total Load

In order to properly size the storage container, regulator, and piping, the total BTU load must be determined. The total load is the sum of all gas usage in the installation. It is arrived at by adding up the BTU input of all appliances in the installation. The BTU input may be obtained from the nameplate on the appliance or from the manufacturers' literature.

Future appliances which may be installed should also be considered when planning the initial installation to eliminate the need for a later revision of piping and storage facilities.

Where it may be more desirable to have ratings expressed in CFH, divide the total BTU load by 2488 for CFH of propane.

Approximate BTU Input For Some

| Appliance | Approx. Input (BTU per Hour) |
|---|---------------------------------|
| Range, free Standing, domestic | 65,000 |
| Built-in oven or broiler unit, domestic | 25,000 |
| Built-in top unit, domestic | 40,000 |
| Water Heater, (Quick Recovery) | |
| automatic storage- | |
| 30 Gallon Tank | 30,000 |
| 40 Gallon Tank | 38,000 |
| 50 Gallon Tank | 50,000 |
| Water Heater, automatic instantaneous | |
| (2 gal. per minute) | 142,800 |
| Capacity (4 gal. per minute) | 285,000 |
| (6 gal. per minute) | 428,400 |
| Refrigerator | 3,000 |
| Clothes Dryer, Domestic | 35,000 |
| Gas Light | 2,500 |
| Gas Logs | 30,000 |

100 LB. Cylinders

How Many Are Required

“Rule of Thumb” Guide for
Installing 100 Lb. Cylinders

For continuous draws where temperatures may reach 0°F. Assume the vaporization rate of a 100 lb. cylinder as approximately 50,000 BTU per hour.

$$\text{Number of cylinders per side} = \frac{\text{Total load in BTU}}{50,000}$$

Example:

Assume total load = 200,000 BTU/hr.

$$\text{Cylinders per side} = \frac{200,000}{50,000} = 4 \text{ cylinders per side}$$

Vaporization Rate 100 Lb. Propane Cylinders (Approximate)

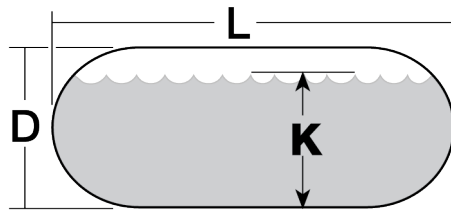
| Lbs. of Propane In Cyl. | Maximum Continuous Draw In BTU Per Hour At Various Temperatures In Degrees F. | | | | |
|-------------------------|--|---------|---------|---------|---------|
| | 0°F | 20°F | 40°F | 60°F | 70°F |
| 100 | 113,000 | 167,000 | 214,000 | 277,000 | 300,000 |
| 90 | 104,000 | 152,000 | 200,000 | 247,000 | 277,000 |
| 80 | 94,000 | 137,000 | 180,000 | 214,000 | 236,000 |
| 70 | 83,000 | 122,000 | 160,000 | 199,000 | 214,000 |
| 60 | 75,000 | 109,000 | 140,000 | 176,000 | 192,000 |
| 50 | 64,000 | 94,000 | 125,000 | 154,000 | 167,000 |
| 40 | 55,000 | 79,000 | 105,000 | 131,000 | 141,000 |
| 30 | 45,000 | 66,000 | 85,000 | 107,000 | 118,000 |
| 20 | 36,000 | 51,000 | 68,000 | 83,000 | 92,000 |
| 10 | 28,000 | 38,000 | 49,000 | 60,000 | 66,000 |

This chart shows the vaporization rate of Containers in terms of the temperature of the liquid and the wet surface area of the Container. When the temperature is lower or if the Container has less liquid in it, the vaporization rate of the Container is a lower value.

ASME STORAGE CONTAINERS

Determining Propane Vaporization Capacity

“Rule of Thumb” Guide for ASME LP-Gas Storage Containers



Where

D = Outside diameter in inches

L = Overall length in inches

K = Constant for percent volume of liquid in container

| Percentage of Container Filled | K Equals | *Propane Vaporization Capacity at 0oF (in BTU/hr.) |
|--------------------------------|----------|--|
| 60 | 100 | D X L X 100 |
| 50 | 90 | D X L X 90 |
| 40 | 80 | D X L X 80 |
| 30 | 70 | D X L X 70 |
| 20 | 60 | D X L X 60 |
| 10 | 45 | D X L X 45 |

*These formulae allow for the temperature of the liquid to refrigerate to -20oF (below zero), producing a temperature differential of 20oF for the transfer of heat from the air to the container’s “wetted” surface and then into the liquid. The vapor space area of the vessel is not considered. Its effect is negligible.

VAPORIZING CAPACITIES FOR OTHER AIR TEMPERATURES

Multiply the results obtained with the above formulae by one of the following factors for the prevailing air temperature.

| Prevailing Air Temperature | Multiplier | Prevailing Air Temperature | Multiplier |
|----------------------------|------------|----------------------------|------------|
| -15°F | 0.25 | +5°F | 1.25 |
| -10°F | 0.50 | +10°F | 1.50 |
| -5°F | 0.75 | +15°F | 1.75 |
| 0°F | 1.00 | +20°F | 2.00 |

PROPER PURGING OF LP-GAS CONTAINERS

The Importance of Purging

A very important step which must not be overlooked by LP-Gas distributors is the importance of properly purging new LP-Gas Containers. Attention to this important procedure will promote customer satisfaction and greatly reduce service calls on new installations. Consider the following:

- Both ASME and DOT specifications require hydrostatic testing of vessels after fabrication. This is usually done with water.
- Before charging with propane, the vessel will contain the normal amount of air.

Both water and air are contaminants

They seriously interfere with proper operation of the system and the connected appliances. If not removed, they will result in costly service calls and needless expense far exceeding the nominal cost of proper purging.

Neutralizing Moisture

Even if a careful inspection (using a pen flashlight) reveals no visible moisture, the container must still be neutralized, since dew may have formed on the walls; additionally, the contained air may have relative humidity up to 100%.

A rule of thumb for neutralizing moisture in an ASME container calls for the introduction of at least one pint of genuine absolute anhydrous methanol* (99.85% pure) for each 100 gal. of water capacity of the container. On this basis, the minimum volumes for typical containers would be as shown below:

| Container Type | Minimum Volume Methanol Required |
|----------------------|----------------------------------|
| 100 lb. ICC cylinder | 1/8 pt. (2 fl. ozs.) |
| 420 lb. ICC cylinder | 1/2 pt. (8 fl. ozs.) |
| 500 gal. tank | 5 pts. (2 1/2 qts.) |
| 1000 gal. tank | 10 pts. (1 1/4 gal.) |

* **IMPORTANT**-Avoid substitutes - they will not work. The secret of the effectiveness of methanol over all other alcohols is its high affinity for water plus a boiling point lower than all other alcohols, and most important: a boiling point lower than water.

PROPER PURGING OF LP-GAS CONTAINERS

The Importance of Purging Air

If the natural volume of atmosphere in the vessel is not removed before the first fill, these problems will result:

- Installations made in spring and summer will experience excessive and false Container pressures. This will cause the safety relief valve to open, blowing off the excess pressure.
- The air mixture present in the vapor space will be carried to the appliances. This may result in as many as 5 or more service calls from pilot light extinguishment.
- If a vapor return equalizing hose is not used, the contained air will be compressed above the liquid level, resulting in slow filling.
- If a vapor equalizing hose is used, the air, and any moisture it contains, will be transferred from the storage tank to the transport.

Additionally, if atmospheric air is properly purged from the storage tank;

- the storage tank will fill faster,
- appliances will perform more consistently
- relief valves will be less likely to pop off at consumer installations.

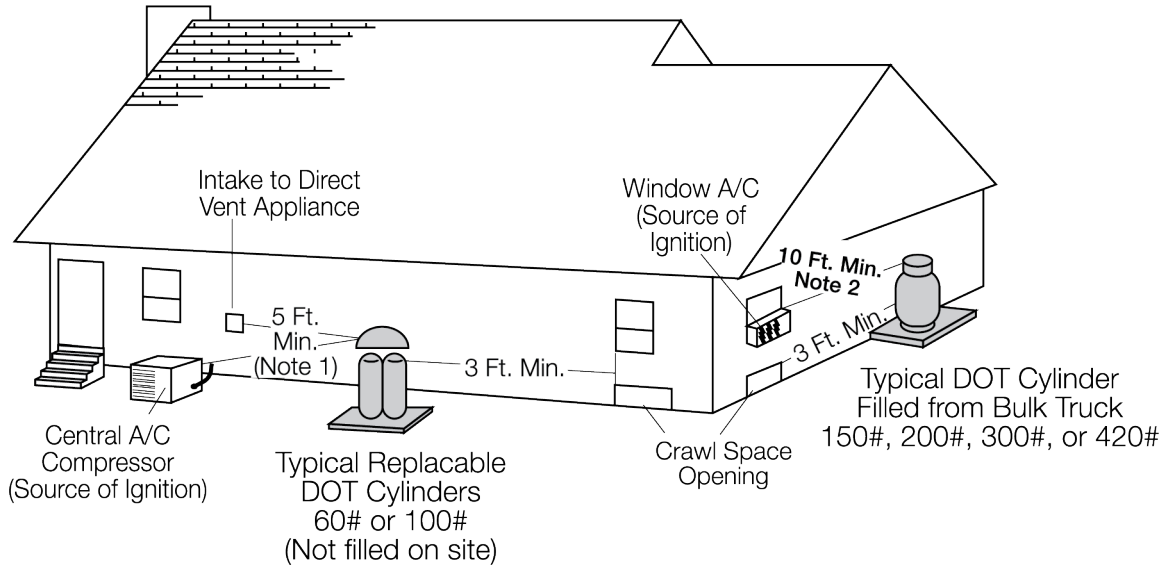
Never Purge with Liquid

The wrong way is of course the easiest way. Never purge a container with liquid propane. To do so causes the liquid to flash into vapor, chilling the container, and condensing any moisture vapor on the walls where it remains while the pressure is being blown down. Additionally, less than 50% or as little as 25% of the air will be removed by this easy but wrong method.

Location of DOT Containers

From NFPA 58, Appendix I

Federal, state, and local ordinances and regulations should be observed at all times.

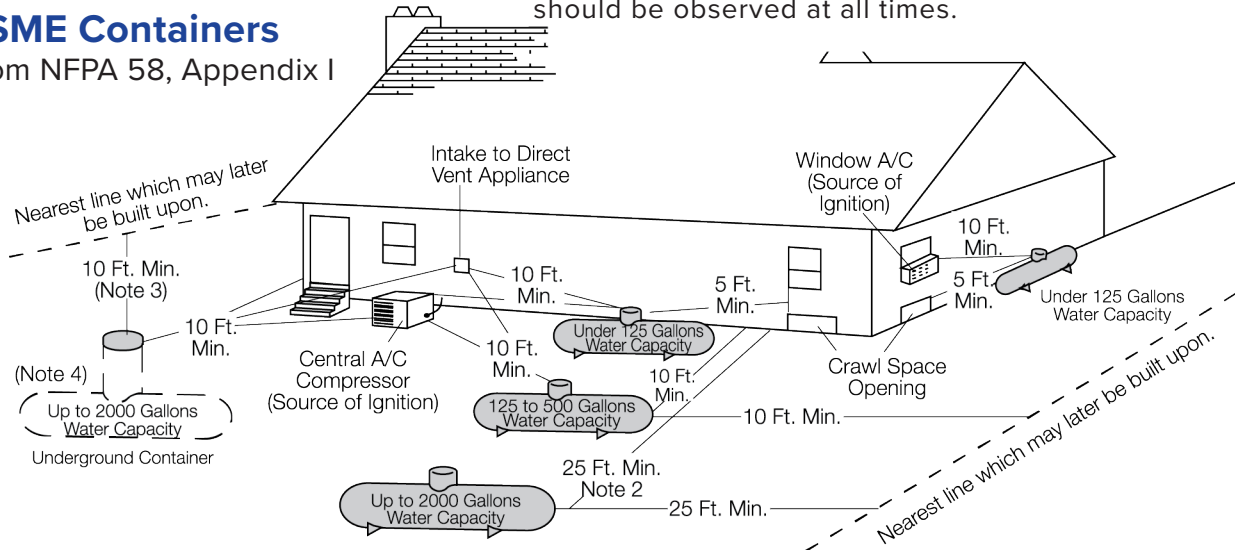


- Notes: 1) 5 foot minimum between relief valve discharge and external source of ignition (air conditioner), direct vent, or mechanical Ventilation system. (attic fan).
2. If the DOT cylinder is filled on-site from a bulk truck, the filling connection and vent valve must be at least 10 feet from any external source of ignition, direct vent. or mechanical ventilation system.

Location of ASME Containers

From NFPA 58, Appendix I

Federal, state, and local ordinances and regulations should be observed at all times.



Notes:

- 1) Regardless of its size, any ASME tank filled on-site must be located so that the filling connection and fixed liquid level gauge are at least 10 feet from external source of ignition (i.e. open flame, window A/C, compressor, etc.), intake to direct vented gas appliance, or intake to a mechanical Ventilation system.
- 2) May be reduced to 10 feet minimum for a single container of 1200 gallons water capacity or less if it is located at least 25 feet from any other LP-Gas container of more than 125 gallons water capacity.
- 3) Minimum distances from underground containers shall be measured from the relief valve and filling or level gauge vent connection at the container, except that no part of an underground container shall be less than 10 feet from a building or line of adjoining property which may be built upon.
- 4) Where the container may be subject to abrasive action or physical damage due to vehicular traffic or other causes it must be either a) placed not less than 2 feet below grade or b) otherwise protected against such physical damage.

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LP-GAS REGULATORS

Selecting LP-Gas Regulators

| Type of System | Maximum Load BTU/hr. | Suggested Regulator |
|---------------------------------------|-------------------------|------------------------------------|
| First Stage in a Two Stage System | 1,500,000 (a) | LV3303TR |
| | 2,500,000 (b) | LV4403SR Series LV4403TR Series |
| Second Stage in a Two Stage System | 935,000 (c) | LV4403B Series |
| | 1,600,000 (c) | LV5503B4/B6 |
| | 2,300,000 (c) | LV5503B8 |
| | 9,800,000 | LV6503B Series |
| Second Stage in a Two PSIG System | 1,000,000 | LV4403Y4/Y46R |
| | 2,200,000 | LV5503Y6/Y8 |
| Integral Twin Stage | 200,000 (d) | LV404B23 Series |
| | 525,000 (d) | LV404B4 Series LV404B9 Series |
| Automatic Chnageover | 200,000 (d) | 7525B23 Series |
| | 450,000 (d) | 7525B4 Series |

- (a) Maximum load based on 25 PSIG inlet, 8 PSIG delivery pressure.
- (b) Maximum load based on inlet pressure 20 PSIG higher than setting and delivery pressure 20% lower than setting.
- (c) Maximum load based on 10 PSIG inlet, 9" w.c. delivery pressure.
- (d) Maximum load based on 25 PSIG inlet, 9" w.c. delivery pressure.

See RegO® Products Catalogs for complete ordering information.

LINE SIZING CHART FOR LIQUID PROPANE

(Based on Pressure Drop of 1 PSI)

| Liquid Propane Flow GPH | Iron Pipe (Feet) | | | | | | | | | | | | | | | |
|-------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 1/4" | | 3/8" | | 1/2" | | 3/4" | | 1" | | 1-1/4" | | 1-1/2" | | 2" | |
| | Schedule 40 | Schedule 80 | Schedule 40 | Schedule 80 | Schedule 40 | Schedule 80 | Schedule 40 | Schedule 80 | Schedule 40 | Schedule 80 | Schedule 40 | Schedule 80 | Schedule 40 | Schedule 80 | Schedule 40 | Schedule 80 |
| 10 | 729 | 416 | | | | | | | | | | | | | | |
| 15 | 324 | 185 | | | | | | | | | | | | | | |
| 20 | 182 | 104 | 825 | 521 | | | | | | | | | | | | |
| 40 | 46 | 26 | 205 | 129 | 745 | 504 | | | | | | | | | | |
| 60 | 20 | 11 | 92 | 58 | 331 | 224 | | | | | | | | | | |
| 80 | 11 | 6 | 51 | 32 | 187 | 127 | 735 | 537 | | | | | | | | |
| 100 | 7 | 4 | 33 | 21 | 119 | 81 | 470 | 343 | | | | | | | | |
| 120 | | | 23 | 15 | 83 | 56 | 326 | 238 | | | | | | | | |
| 140 | | | 15 | 9 | 61 | 41 | 240 | 175 | 813 | 618 | | | | | | |
| 160 | | | 13 | 8 | 47 | 32 | 184 | 134 | 623 | 473 | | | | | | |
| 180 | | | | | 37 | 25 | 145 | 106 | 491 | 373 | | | | | | |
| 200 | | | | | 30 | 20 | 118 | 86 | 399 | 303 | | | | | | |
| 240 | | | | | 21 | 14 | 81 | 59 | 277 | 211 | | | | | | |
| 280 | | | | | 15 | 10 | 60 | 44 | 204 | 155 | | | | | | |
| 300 | | | | | 13 | 9 | 52 | 38 | 177 | 135 | 785 | 623 | | | | |
| 350 | | | | | | | 38 | 28 | 130 | 99 | 578 | 459 | | | | |
| 400 | | | | | | | 30 | 22 | 99 | 75 | 433 | 344 | 980 | 794 | | |
| 500 | | | | | | | 19 | 14 | 64 | 49 | 283 | 225 | 627 | 508 | | |
| 600 | | | | | | | | | 44 | 33 | 197 | 156 | 435 | 352 | | |
| 700 | | | | | | | | | 32 | 24 | 144 | 114 | 320 | 259 | | |
| 800 | | | | | | | | | 25 | 19 | 110 | 87 | 245 | 198 | 965 | 795 |
| 900 | | | | | | | | | 19 | 14 | 87 | 69 | 194 | 157 | 764 | 630 |
| 1000 | | | | | | | | | 16 | 12 | 71 | 56 | 157 | 127 | 618 | 509 |
| 1500 | | | | | | | | | | | 31 | 25 | 70 | 57 | 275 | 227 |
| 2000 | | | | | | | | | | | 18 | 14 | 39 | 32 | 154 | 127 |
| 3000 | | | | | | | | | | | 8 | 6 | 17 | 14 | 69 | 57 |
| 4000 | | | | | | | | | | | | | 10 | 8 | 39 | 32 |
| 5000 | | | | | | | | | | | | | | | 25 | 21 |
| 10000 | | | | | | | | | | | | | | | 6 | 5 |

To Use Chart

1. Having determined the required flow at point of use, locate this flow in the left hand column. If this falls between two figures, use the larger of the two.
2. Determine total length of piping required from source to point of use.
3. Read across chart from left (required flow) to right to find the total length which is equal to or exceeds the distance from source to use.
4. From this point read up to find the correct size of pipe required.

| Physical Properties of Commercial Propane & Butane | Commercial Propane | Commercial Butane |
|---|--------------------|-------------------|
| Formula | C3H8 | C4H10 |
| Normal State, 60»F. 30" Mercury | Gas | Gas |
| Freezing Point (or Melting), »F | -310 | -210 |
| Boiling Point, »F. at 30" Mercury | 44 | 32 |
| Specific Gravity of Gas (Air = 1) at 60»F., 30" Hg. | 1.52 | 2.00 |
| Specific Gravity of Liquid (Water = 1) 60»/60»F. | 0.51 | 0.58 |
| Weight Per Gallon of Liquid at 60»F., lbs. | 4.24 | 4.85 |
| Gallons Per Pound of Liquid at 60»F. | 0.236 | 0.206 |
| BTU Per Gallon (Vaporized) | 91,500 | 102,600 |
| BTU Per Pound (Vaporized) | 21,560 | 21,180 |
| BTU Per Cubic Foot (Vaporized) | 2,520 | 3,260 |
| Latent Heat of Vaporization at Boiling Point, BTU/lb. | 185 | 166 |
| Latent Heat of Vaporization at Boiling Point, BTU/Gal. | 785 | 807 |
| Specific Heat of Gas, BTU/Lb./»F. at 60»F | 0.405 | 0.385 |
| Specific Heat of Liquid, BTU/Lb./»F. at 60»F. | 0.0590 | 0.550 |
| Density of Gas, Pounds per cubic foot | 0.116 | 0.153 |
| Density of Liquid, Pounds per cubic foot | 31.7 | 36.0 |
| Cu. Ft. of Gas/Gal. Liquid at 60»F., 30" Hg. | 36.5 | 31.0 |
| Cu. Ft. of Gas/Lb. Liquid at 60»F, 30" Hg. | 8.55 | 6.51 |
| Vapor Pressure, Lbs./sq. in. Gauge | | |
| Temperature | -10 F | |
| | 0F | |
| | 10F | |
| | 32F | |
| | 60F | 12 |
| | 80F | 22.5 |
| | 100F | 37 |
| | 120F | 55 |
| Combustion Data: | | |
| Cu. Ft. Air Required to Burn 1 cu. ft. Gas | 23.5 | 30.0 |
| Cu. Ft. Oxygen Required to Burn 1 cu. ft. Gas | 5 | 6.25 |
| Cu. Ft. Air Required to Burn 1 lb. of Gas | 200 | 195 |
| Ignition Temperature | 920-1020 | 900-1000 |
| Maximum Flame Temperature | 3600 | 3625 |
| Per cent Gas in Air for Max. Flame Temp. | 4.4 | 3.5 |
| Max. Rate of Flame Propagation in 1" Tube, inches/sec. | 32 | 33 |
| Limits of Inflammability, Percentage of Gas in Air Mixture | | |
| Percent at Lower Limit | 2.4 | 1.9 |
| Percent at Maximum Rate of Flame Propagation | 4.8 | 3.8 |
| Percent at Upper Limit | 9.5 | 8.5 |
| Octane Number (Iso-Octane 100) | 125 | 91 |
| Products of Complete Combustion: | | |
| Cu. Ft. CO2 per Cu. Ft. Gas | 3.0 | 3.9 |
| Cu. Ft. Water Vapor per Cu. Ft. Gas | 4.0 | 5.0 |
| Cu. Ft. N2 per Cu. Ft. Gas | 18.5 | 23.6 |
| Lbs. CO2 per Lbs. Gas | 3.0 | 3.1 |
| Lbs. H2O per Lbs. Gas | 1.6 | 1.5 |
| Lbs. N2 per Lbs. Gas | 12.0 | 11.8 |
| Ultimate CO2 Per cent by Volume | 13.9 | 14.1 |

ORIFICE CAPACITIES

| NO | SIZE | NATURAL | | | | | LP |
|-------|--------|---------|--------|--------|--------|--------|--------|
| | | 3.0 | 3.5 | 4.0 | 4.5 | 7.0 | |
| | | 3.0 | 3.5 | 4.0 | 4.5 | 7.0 | 11.0 |
| 80 | 0.0135 | 428 | 463 | 495 | 525 | 654 | 1273 |
| 79 | 0.0145 | 494 | 534 | 571 | 605 | 755 | 1469 |
| 1/64 | 0.0156 | 572 | 618 | 661 | 701 | 874 | 1700 |
| 78 | 0.016 | 602 | 650 | 695 | 737 | 919 | 1788 |
| 77 | 0.018 | 762 | 823 | 879 | 933 | 1163 | 2263 |
| 76 | 0.02 | 940 | 1016 | 1086 | 1152 | 1436 | 2794 |
| 75 | 0.021 | 1037 | 1120 | 1197 | 1270 | 1583 | 3081 |
| 74 | 0.0225 | 1190 | 1285 | 1374 | 1457 | 1818 | 3536 |
| 73 | 0.024 | 1354 | 1462 | 1563 | 1658 | 2068 | 4024 |
| 72 | 0.025 | 1469 | 1587 | 1696 | 1799 | 2244 | 4366 |
| 71 | 0.026 | 1589 | 1716 | 1835 | 1946 | 2427 | 4722 |
| 70 | 0.028 | 1843 | 1991 | 2128 | 2257 | 2815 | 5476 |
| 69 | 0.0292 | 2004 | 2165 | 2314 | 2455 | 3062 | 5956 |
| 68 | 0.031 | 2259 | 2440 | 2608 | 2767 | 3451 | 6713 |
| 1/32 | 0.0313 | 2303 | 2487 | 2659 | 2820 | 3518 | 6843 |
| 67 | 0.032 | 2407 | 2600 | 2779 | 2948 | 3677 | 7153 |
| 66 | 0.033 | 2560 | 2765 | 2956 | 3135 | 3910 | 7607 |
| 65 | 0.035 | 2880 | 3110 | 3325 | 3527 | 4399 | 8557 |
| 64 | 0.036 | 3046 | 3291 | 3518 | 3731 | 4654 | 9053 |
| 63 | 0.037 | 3218 | 3476 | 3716 | 3941 | 4916 | 9563 |
| 62 | 0.038 | 3394 | 3666 | 3919 | 4157 | 5185 | 10087 |
| 61 | 0.039 | 3575 | 3862 | 4128 | 4379 | 5461 | 10625 |
| 60 | 0.04 | 3761 | 4062 | 4343 | 4606 | 5745 | 11176 |
| 59 | 0.041 | 3951 | 4268 | 4563 | 4840 | 6036 | 11742 |
| 58 | 0.042 | 4147 | 4479 | 4788 | 5078 | 6334 | 12322 |
| 57 | 0.043 | 4346 | 4695 | 5019 | 5323 | 6639 | 12916 |
| 56 | 0.0465 | 5083 | 5490 | 5869 | 6225 | 7764 | 15104 |
| 3/64 | 0.0469 | 5171 | 5585 | 5970 | 6333 | 7898 | 15365 |
| 55 | 0.052 | 6356 | 6865 | 7339 | 7785 | 9709 | 18888 |
| 54 | 0.055 | 7111 | 7680 | 8211 | 8709 | 10862 | 21131 |
| 53 | 0.0595 | 8322 | 8989 | 9609 | 10192 | 12712 | 24730 |
| 1/16 | 0.0625 | 9182 | 9918 | 10603 | 11246 | 14026 | 27286 |
| 52 | 0.0635 | 9478 | 10238 | 10945 | 11609 | 14479 | 28167 |
| 51 | 0.067 | 10552 | 11398 | 12184 | 12924 | 16119 | 31357 |
| 50 | 0.07 | 11518 | 12441 | 13300 | 14107 | 17594 | 34228 |
| 49 | 0.073 | 12527 | 13530 | 14464 | 15342 | 19135 | 37225 |
| 48 | 0.076 | 13577 | 14665 | 15678 | 16629 | 20740 | 40347 |
| 5/64 | 0.0781 | 14338 | 15487 | 16556 | 17560 | 21902 | 42608 |
| 47 | 0.0785 | 14485 | 15646 | 16726 | 17741 | 22127 | 43045 |
| 46 | 0.081 | 15423 | 16658 | 17809 | 18889 | 23558 | 45831 |
| 45 | 0.082 | 15806 | 17072 | 18251 | 19358 | 24144 | 46969 |
| 44 | 0.086 | 17385 | 18778 | 20075 | 21293 | 26557 | 51663 |
| 43 | 0.089 | 18620 | 20111 | 21500 | 22804 | 28442 | 55331 |
| 42 | 0.0935 | 20550 | 22197 | 23729 | 25168 | 31391 | 61067 |
| 3/32 | 0.0938 | 20682 | 22339 | 23882 | 25330 | 31592 | 61460 |
| 41 | 0.096 | 21664 | 23399 | 25015 | 26532 | 33092 | 64377 |
| 40 | 0.098 | 22576 | 24384 | 26068 | 27649 | 34485 | 67087 |
| NO | SIZE | NATURAL | | | | | LP |
| | | 3.0 | 3.5 | 4.0 | 4.5 | 7.0 | |
| 39 | 0.0995 | 23272 | 25137 | 26872 | 28502 | 35549 | 69156 |
| 38 | 0.1015 | 24217 | 26157 | 27963 | 29660 | 36992 | 71964 |
| 37 | 0.104 | 25425 | 27462 | 29358 | 31139 | 38837 | 75553 |
| 36 | 0.1065 | 26662 | 28798 | 30786 | 32654 | 40726 | 79229 |
| 7/64 | 0.1094 | 28133 | 30388 | 32486 | 34456 | 42975 | 83603 |
| 35 | 0.11 | 28443 | 30722 | 32843 | 34835 | 43447 | 84522 |
| 34 | 0.111 | 28962 | 31283 | 33443 | 35472 | 44241 | 86066 |
| 33 | 0.113 | 30015 | 32420 | 34659 | 36761 | 45849 | 89195 |
| 32 | 0.116 | 31630 | 34165 | 36524 | 38739 | 48316 | 93994 |
| 31 | 0.12 | 33849 | 36562 | 39086 | 41457 | 51706 | 100588 |
| 9/64 | 0.125 | 36729 | 39672 | 42411 | 44984 | 56104 | 109145 |
| 30 | 0.1285 | 38815 | 41924 | 44819 | 47538 | 59290 | 115343 |
| 29 | 0.136 | 43478 | 46961 | 50204 | 53249 | 66413 | 129200 |
| 28 | 0.1405 | 46402 | 50120 | 53581 | 56831 | 70881 | 137892 |
| 5/32 | 0.1406 | 46469 | 50192 | 53657 | 56912 | 70982 | 138088 |
| 27 | 0.144 | 48743 | 52649 | 56284 | 59698 | 74456 | 144847 |
| 26 | 0.147 | 50795 | 54865 | 58653 | 62211 | 77591 | 150946 |
| 25 | 0.1495 | 52538 | 56747 | 60665 | 64345 | 80253 | 156123 |
| 24 | 0.152 | 54309 | 58661 | 62711 | 66515 | 82959 | 161389 |
| 23 | 0.154 | 55748 | 60215 | 64372 | 68277 | 85157 | 165664 |
| 5/32 | 0.1563 | 57426 | 62027 | 66309 | 70332 | 87719 | 170649 |
| 22 | 0.157 | 57941 | 62584 | 66905 | 70963 | 88507 | 172181 |
| 21 | 0.159 | 59427 | 64188 | 68620 | 72783 | 90776 | 176596 |
| 20 | 0.161 | 60931 | 65813 | 70357 | 74625 | 93074 | 181066 |
| 19 | 0.166 | 64775 | 69965 | 74795 | 79332 | 98945 | 192487 |
| 18 | 0.1695 | 67535 | 72946 | 77982 | 82713 | 103161 | 200690 |
| 11/64 | 0.1719 | 69461 | 75026 | 80206 | 85072 | 106103 | 206413 |
| 17 | 0.173 | 70353 | 75990 | 81236 | 86164 | 107465 | 209063 |
| 16 | 0.177 | 73644 | 79544 | 85036 | 90195 | 112492 | 218843 |
| 15 | 0.18 | 76161 | 82263 | 87943 | 93278 | 116338 | 226324 |
| 14 | 0.182 | 77863 | 84102 | 89908 | 95362 | 118938 | 231381 |
| 13 | 0.185 | 80451 | 86897 | 92897 | 98532 | 122891 | 239072 |
| 3/16 | 0.1875 | 82640 | 89261 | 95425 | 101213 | 126235 | 245577 |
| 12 | 0.189 | 83968 | 90695 | 96957 | 102839 | 128263 | 249522 |
| 11 | 0.191 | 85754 | 92625 | 99020 | 105027 | 130992 | 254831 |
| 10 | 0.1935 | 88014 | 95066 | 101629 | 107794 | 134443 | 261546 |
| 9 | 0.196 | 90303 | 97538 | 104272 | 110598 | 137940 | 268348 |
| 8 | 0.199 | 93088 | 100547 | 107489 | 114009 | 142194 | 276625 |
| 7 | 0.201 | 94969 | 102578 | 109660 | 116312 | 145067 | 282213 |
| 13/64 | 0.2031 | 96963 | 104732 | 111964 | 118755 | 148114 | 288141 |
| 6 | 0.204 | 97825 | 105663 | 112958 | 119810 | 149430 | 290701 |
| 5 | 0.2055 | 99269 | 107222 | 114626 | 121579 | 151635 | 294991 |
| 4 | 0.209 | 102679 | 110906 | 118563 | 125755 | 156844 | 305125 |
| 3 | 0.213 | 106647 | 115192 | 123145 | 130615 | 162906 | 316916 |
| 7/32 | 0.2188 | 112534 | 121550 | 129943 | 137825 | 171898 | 334411 |
| 2 | 0.221 | 114808 | 124007 | 132569 | 140611 | 175372 | 341169 |
| 1 | 0.228 | 122196 | 131987 | 141100 | 149659 | 186658 | 363124 |

Natural- Based on 1050 BTU/Cubic Foot. 0.65 Specific Gravity
Propane- Based on 2500 BTU/ Cubic Foot. 1.53 Specific Gravity

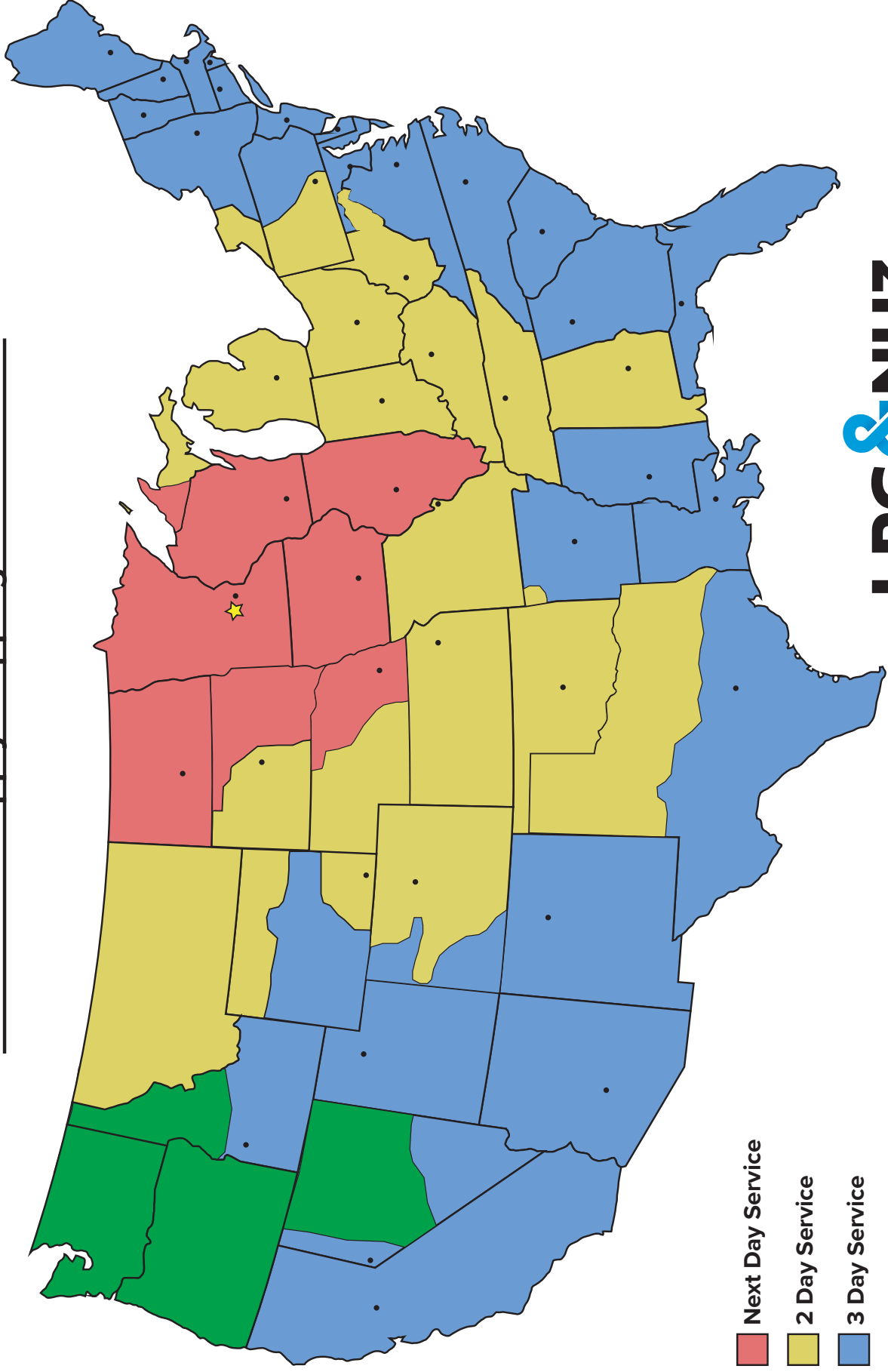
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LPG & NH3 Supply Shipping Service Area



- Next Day Service
- 2 Day Service
- 3 Day Service
- 4 Day Service

★ Buffalo, MN Headquarters

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