WATER & OIL
12/24v DC ELECTRIC
CIRCULATION PUMPS

MOCAL
oil control systems

BAT Inc. ◆ 7630 Matoaka Road., Sarasota, FL. 34243 ◆ (941) 355-0005 fax (941) 355-4683

Heavy Duty Oil Scavenge/Circulation Pump

When high temperature and continuous duty are required: this pump delivers! Designed from the ground up to handle the toughest automotive racing applications for transmission/differential fluid cooling (circulation) and turbocharger oil drain (scavenge) applications.

Key features:

- Continuous use circulation/scavenge pump.
- High temperature capable.
- Specially designed with emphasis on turbo-charger scavenge applications.
- Low noise and vibration.
- Can be mounted -/+ 3 feet above fluid level.
- Military specification fit and finish at an affordable price.

Specifications:

- flow 1-3 GPM / 50 psi max rating
- 350ºf maximum temp rating
- self-priming
- quiet low vibration operation
- 10,000 hour rated bearings & motor brushes
- hardened bronze pump (spur) gear rotors
- black anodized aluminum heatsink
- nickel plated pump head
- stainless pump head fasteners
- 3/8" NPT inlet/outlet
- high temperature internal wiring
- 3 foot wiring lead
- rubber-isolated mounting bracket and feet
- dimensions 6.2" x 4.1" x 4.0"
- weight 6.2 lbs.
- 12 volt, 5-12 amp* nominal (24 volt version optional)

**amperage varies with pressure and fluid viscosity*

Heavy Duty Oil Scavenge/Circulation Pump
PN# 17-530SL $465.00

Optional 24 volt version
PN# 17-530-24V $465.00

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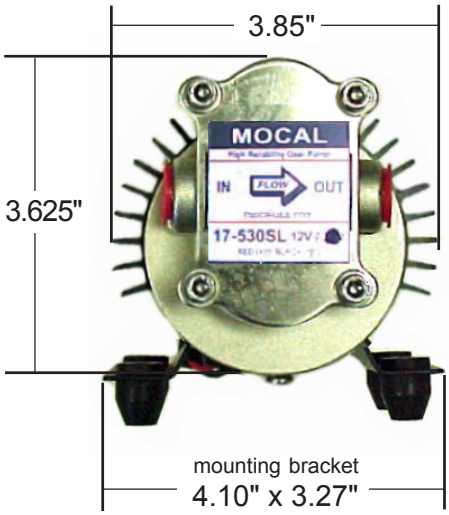

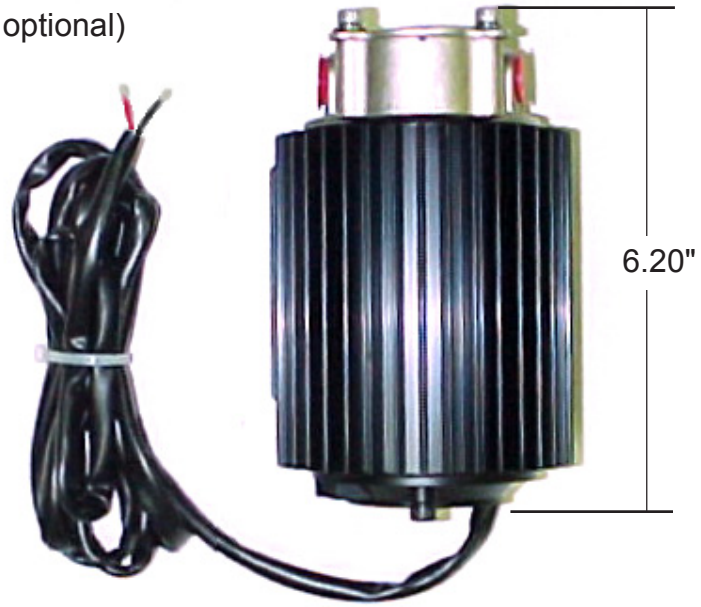

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Micro Oil Scavenge/Circulation Pump

Take the reliability and features of our popular HD gear pump (17-530SL) and scale it down into a smaller package and you have our Micro Gear Pump. Designed from the ground up to handle the tough automotive racing environments for transmission/differential fluid cooling (circulation) and turbo/dual turbocharger oil drain (scavenge) applications. Small size and reduced weight makes the Micro perfectly suited to any space-limited or weight critical application. Also the heatsink mounting allows the entire motor/pump head assembly infinite rotation allowing optimal orientation of the in/out ports.

Micro Oil Scavenge/Circulation Pump
PN# 17-530M $465.00

Optional 24 volt version
PN# 17-530M-24 $465.00

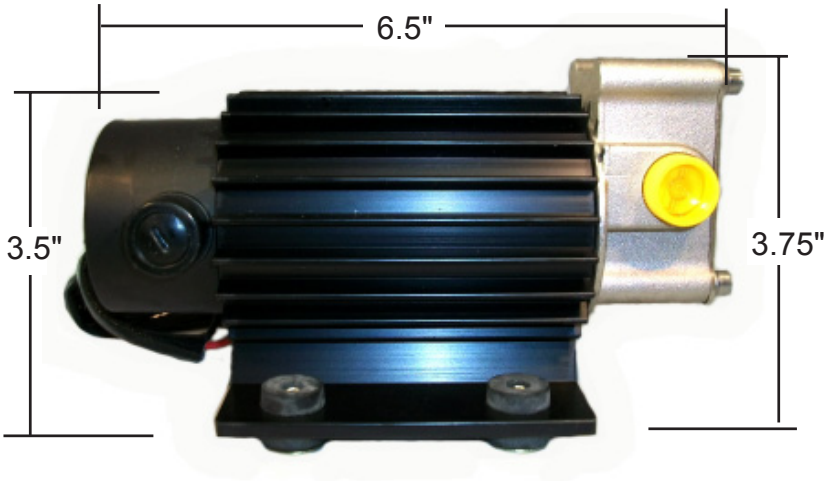
Key features:

- Continuous use circulation/scavenge pump.
- High temperature capable.
- Low noise and vibration.
- Self-priming - can be mounted +3 feet above fluid level.
- Military specification fit and finish

Specifications:

- Flow 1-2 GPM / 30 psi as pressure pump
- 350ºf maximum temperature rating
- 10,000 hour rated bearings
- 2,500 hr externally replaceable motor brushes
- Hardened bronze pump (spur) gear rotors
- Aluminum heatsink w/ adjustable motor position
- Nickel plated pump head
- Stainless pump head fasteners
- 3/8" NPT inlet/outlet
- High temperature (class H or higher) internal wiring
- 3 foot wiring lead w/ insulated cover
- rubber-isolated mounting bracket and feet
- dimensions 6.5" x 3.75" x 2.75"
- weight 4.5 lbs.
- 12 volt, <5 amp* nominal 15 amp max. (optional 24 volt version is available)

**amperage varies with pressure and fluid viscosity*



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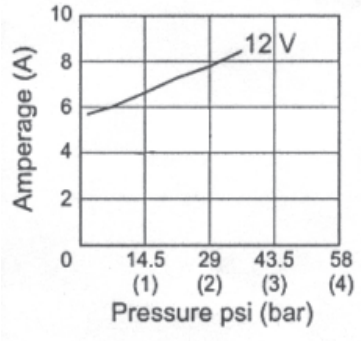
Electric Fluid Circulation Pump

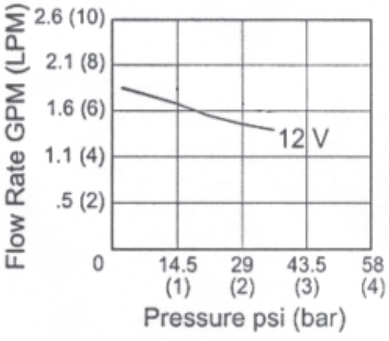
This is our popular mid-sized gear pump which is suitable for transmission/differential cooling, turbo oiling applications. Pump is both compact and durable which makes it a good candidate for longer run-time applications. The brass pump body with bronze gears and stainless steel shaft is ideal for pumping a variety of viscosity oils. Pump is self priming and can be located up to 5 feet above fluid level. Motor body is sealed and meets IP-65 water/dust intrusion specification. Connections for -8AN provided (-6AN and -10AN optional).

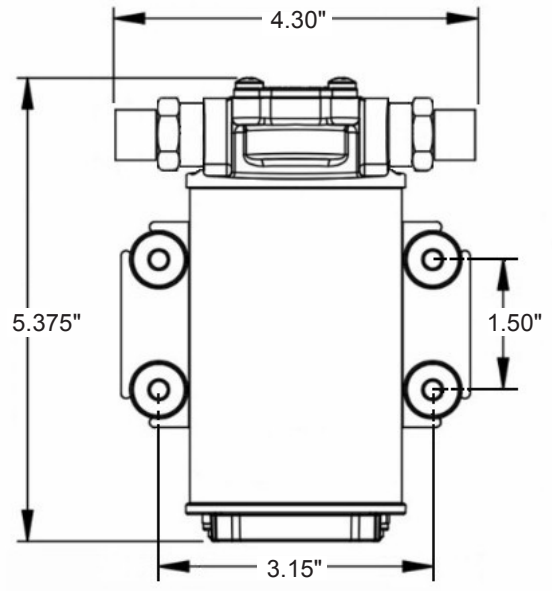
Electric Fluid Pump 12v (-8AN)	**17-311**	**$309.50**
Electric Fluid Pump 12v (-6AN)	**17-311-6**	**$309.50**
Electric Fluid Pump 12v (-10AN)	**17-311-10**	**$314.50**
Electric Fluid Pump 24v (-8AN)	**17-311-24V**	**$319.00**

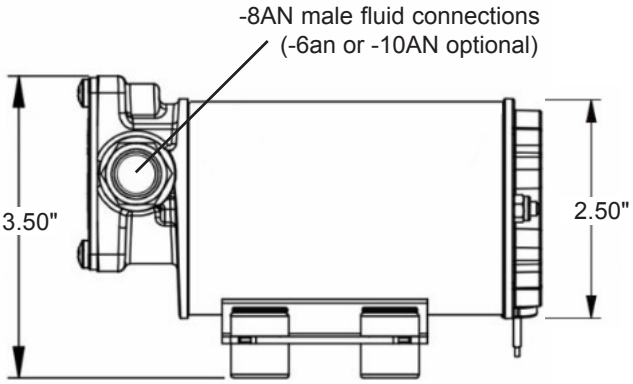
Specifications:

- flow 1-2.1 GPM / 50 psi max rating
- self-priming* 5 foot
  **gears must be wet*
- quiet low vibration operation
- bronze pump body with brass rotor gears
- sealed waterproof motor (meets IP-65 spec.)
- stainless pump shaft w/Floroelastomer seal
- -8AN Male inlet/outlet (optional -6AN or -10AN)
- high temperature internal wiring
- 10" wiring lead
- rubber-isolated mounting bracket and feet
- weight 3.3 lbs.
- 12 volt DC, 6-9 amp nominal (10 amp fuse recommended).
- 24v version is available









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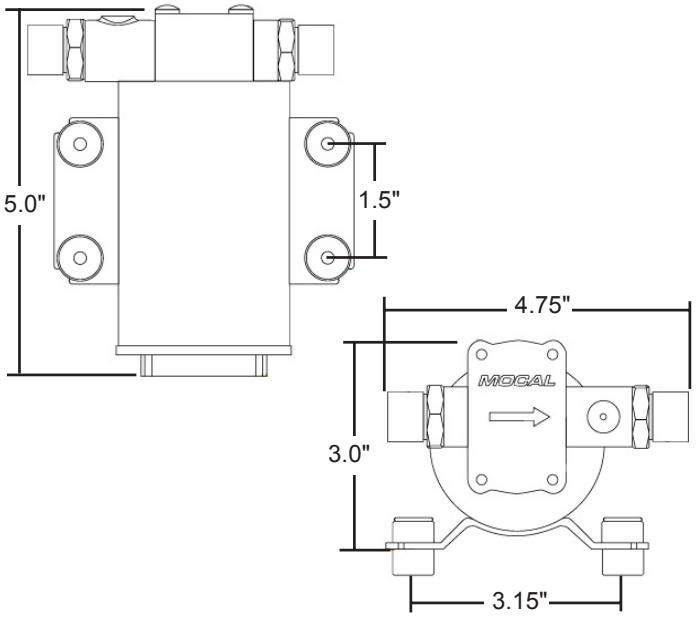
Mini Electric Fluid Circulation Pump

Our newest small format gear pump is suitable for transmission/ differential cooling and turbo oiling applications. This pump is especially well suited to difficult to package installations like motorcycle and other power sports applications as it can also be mounted in any position. The brass pump body with bronze gears and stainless steel shaft is ideal for pumping a variety of viscosity oils. Pump is self priming and can be located up to 3 feet above fluid level. Motor body is sealed and meets IP-67 water/dust intrusion specification. Fluid connections for -6AN or -8AN provided.

Electric Fluid Pump 12v (-8AN) 17-301 $275.50
Electric Fluid Pump 12v (-6AN) 17-301-6 $275.50

Specifications:

- flow 1 GPM / 22 psi max rating
- self-priming* 3 foot
  **gears must be wet*
- quiet low vibration operation
- bronze pump body with brass rotor gears
- sealed waterproof motor (meets IP-67 spec.)
- stainless pump shaft w/Floroelastomer seal
- -8AN Male inlet/outlet (optional -6AN)
- high temperature internal wiring
- 10" wiring lead
- rubber-isolated mounting bracket and feet
- weight 2.6 lbs.
- 12 volt DC, 3-5 amp nominal (7.5 amp fuse recommended).



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In-line Oil Filter for Oil Circulation Pumps

Most in-line filters are not specifically designed to work in circulation/cooling applications; fuel filters are far too restrictive and drysump screen elements can let through particles that can jam gears and tear soft parts (diaphragms). Our specially designed in-line oil filter protects oil pumps circulation from foreign object damage by filtering particles down to 240 micron without restricting oil flow.

Specifications: Housing- anodized 6061 aluminum 1.75" x 6.25", Element- 304 stainless mesh 1.125" x 2.75" (240 micron) rating, stainless steel support spring (150 psi rated), viton o-ring seals on end cap, -8AN or -6AN male fluid connections.

In-line Pump Filter -8AN / 240 micron AF8/240 $75.00
In-line Pump Filter -6AN / 240 micron AF6/240 $75.00

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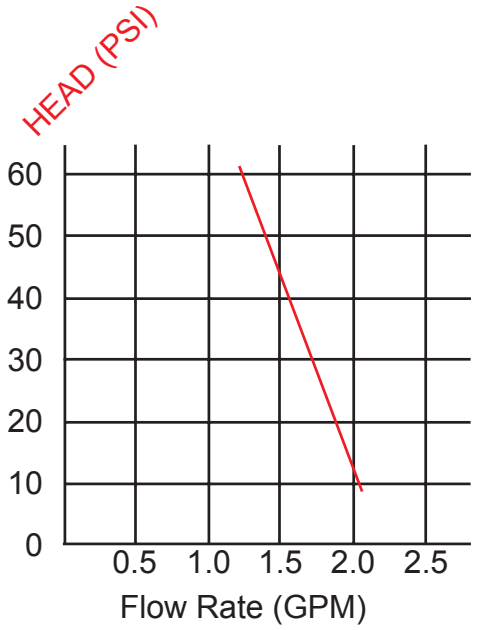
Electric Fluid Circulation Pump

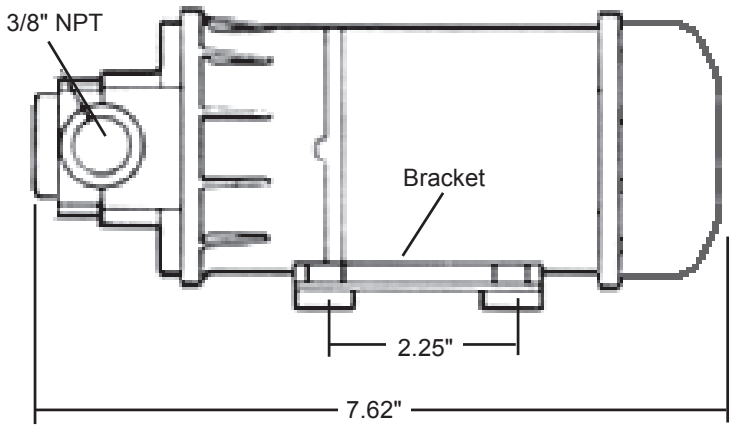
Our standard fluid pump is well suited for circulating oils in transmission and differential cooling systems. They can also be used for other applications like circulating coolant for water radiators, intercoolers and driver cool suits. Motors utilize ball bearing drive throughout and integral cooling fan for long life. Pump is a positive displacement design which is self priming and can be located up to 8 feet above fluid/feed. High temperature capable up to 285 degrees (nylon pump head/housing with Viton diaphragm/ seals). Pump head can be indexed 90 degrees for convenient fluid connection.

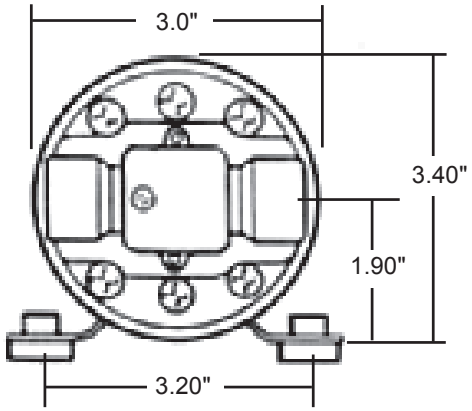
Electric Fluid Pump **17-522HT** **Discontinued**

Specifications:

- Flow rate 1.0-2.0 GPM and up to 50 psi. working pressure
- Positive displacement - flow is proportional to motor speed
- Self Priming and can be run dry without harm
- Incorporated non fluid contact bypass valve (50 psi) prevents over pressure damage (discharge not differential pressure)
- 265ºf maximum temperature rating
- Viton diaphragm can be used with corrosive fluids
- 3/8" NPT female fluid connections
- Rubber-isolated mounting
- Can be mounted in any position
- Intermittent duty rated: cycle on/off as required manually or incorporate temperature switch for automatic pump control
- Recommended filter: 40-50 mesh (400-250 micron) filter
- Dimensions: 7.62" x 3.4" x 3"
- Weight: 3.75 lbs
- Electrical: 12 volt with 8 amp maximum (3-4 amp nominal) 10 amp fuse recommended.







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Water Circulation Pump- Johnson

This small, high volume, 12v fluid circulation pump is very well suited for circulating water through heat exchangers on water intercooled turbo applications. Magnetic drive motor with sealed pump chamber for long life even with continuous use (up to 5000 hrs.). High temperature capable (up to 212 degrees). Pump can also be used as replacement for Bosch 392 020 024, 027, 034, 039, 064 type pumps used in a variety of functions on various European cars. Fluid connections for 3/4" i.d. (19mm) or 5/8" (16mm) hose. *Info: model CM30P7-1, flow rate is up to 7 GPM (5.2 for 16mm) at up to 5 psi. working pressure, Length 7.0", weight 1.2 lbs, current 12 volt 2.2 amp max, bracket included.*

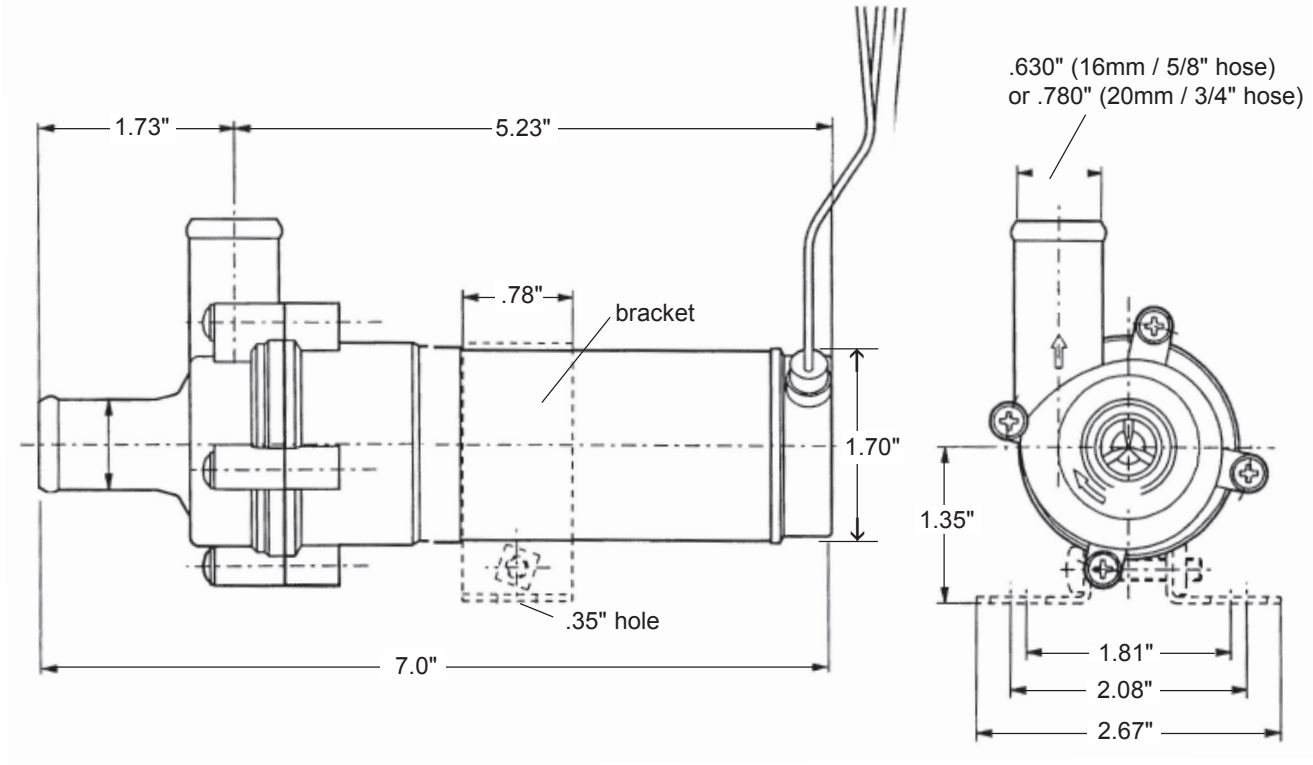
Water Circulation Pump (19mm)	**ACP3**	**$185.00**
Water Circulation Pump (16mm)	**ACP3-16**	**$185.00**

Back Pressure			Flow		Amp
Bar	Psi	foot	l/min	GPM	12V
0.10	1.45	3.3	26.0	6.9	2.2
0.20	2.90	6.6	19.5	5.2	2.0
0.30	4.35	9.8	9.0	2.4	1.7

Specifications:

- Pump Body: PPA thermoplastic
- Pump Impeller: PPS thermoplastic
- Shaft: Stainless steel
- Motor: 12/24 V DC Enclosed (IP67) permanent magnet,
- ball bearing mounted designed for continuous operation
- Liquids: water, fresh/salt, water glycol mix (max 60%)
- Liquid temp.: -40c to +100c
- Connections: 16mm (5/8") or 20mm (3/4") push-on hose

Available in 24v



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Water Circulation Pump- Johnson

This large, high volume (115 or 65 liter), 12v fluid heavy duty centrifugal pump is very well suited for circulating fluid through water intercooled automotive turbocharger heat exchangers, as well as, heating and solar systems. Pump features very high flow and is available in either 38mm or 20mm fluid connections. mfg# CM90P7-1

Water Circulation Pump 38mm (115L) ACP6 $369.00
Water Circulation Pump 20mm (65L) ACP6-20 $369.00

Specifications:

- Pump Body: PPA Glass Fiber Reinforced w/cooling fins
- Seal-less magnetic drive
- Impeller: PPS Thermoplastic
- Shaft: Stainless Steel
- Hose Connections: 38mm (1 1/2") or 20mm (3/4") Hose
- Liquid: Water/glycol mixture; max. 60% glycol
- Liquid temperature: -30°C – +100°C (-22°F – 212°F)
- System pressure: -0.3 to +3.0 bar; stationary max. 4.0 bar
- Motor: enclosed permanent magnet, ball bearing, continuous duty. 5000 hour motor life at normal voltage 10,000 start/stops
- Motor, voltage: Nominal 13.6 V DC for use between 10-16V
- Dimensions: L 244mm (9.6") x W 120mm (4.7") x H 150mm (5.9")
- Weight: 3.0 kg (6.6 pounds)
- Mounting: Separte universal bracket

Available in 24v

	Back Pressure Bar	Psi	foot	Flow l/min	GPM	Amp 13.6V
38mm	0.10	1.45	3.4	115	30.4	10
	0.25	3.62	8.4	85	22.5	9.5
	0.40	5.8	13.4	40	10.6	9
20mm	0.10	1.45	3.4	65	17.2	8.5
	0.25	3.62	8.4	50	13.2	8
	0.40	5.8	13.4	30	7.9	7.5

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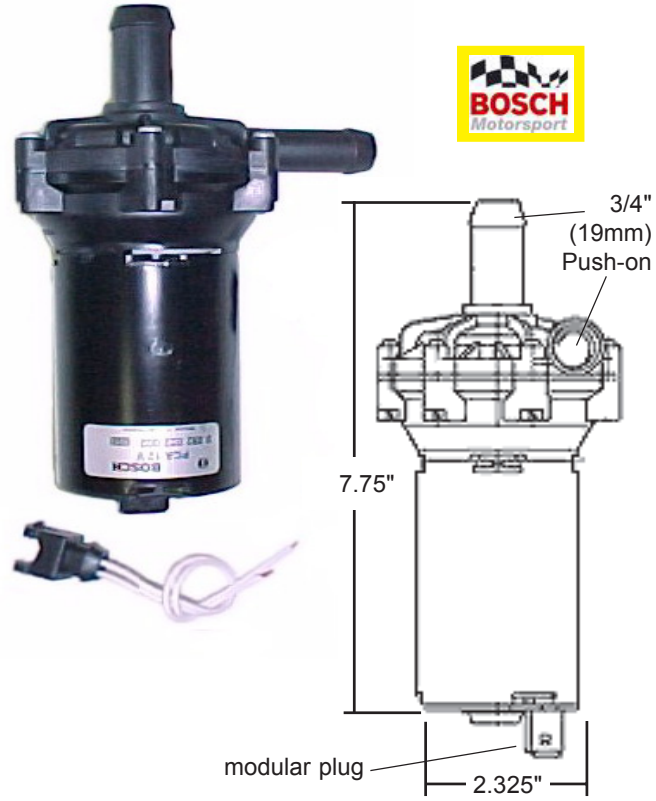

Water Circulation Pump- Bosch 022

This small 12v fluid circulation pump is very well suited for circulating water through heat exchangers on water intercooled turbo applications. Magnetic drive motor with sealed pump chamber for long life even with continuous use (up to 5000 hrs.). Pump is a direct replacement for Ford Lightning and a number of other O.E. turbo water circulation applications. High temperature capable (up to 212 degrees). Fluid connections for 3/4" i.d. (19mm) hose. Flow Rate 5.3GPM at up to 3 psi. working pressure. Length 7 3/4", weight 2.2 lbs, current 12 volt 2.5 amp max.

Water Circulation Pump ACP2 $195.90
Plug Connector H317W $4.70

Back Pressure Bar	Psi	foot	Flow l/min	GPM	Amp 12V
0.10	1.45	3.3	25.0	6.6	3.4
0.25	3.62	8.4	21.6	5.7	3.2
0.40	5.80	13.4	11.3	3.0	2.7

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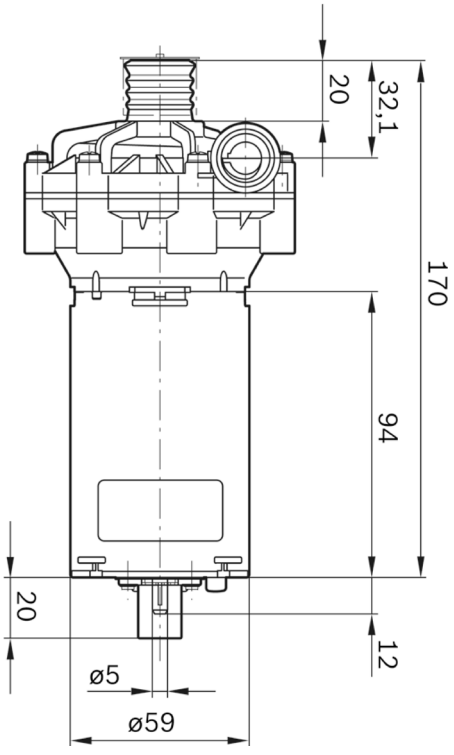
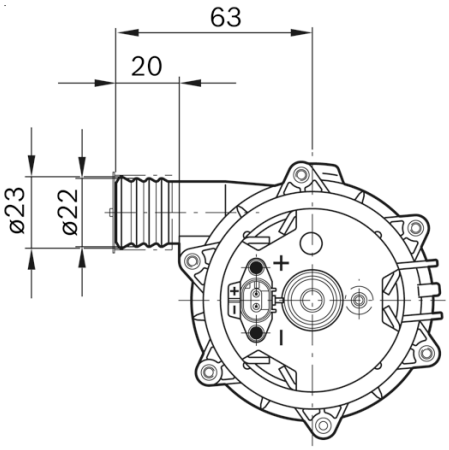
Water Circulation Pump- Bosch 010

This pump is very similar to our ACP2 Bosch 022 pump but with higher flow using larger 22mm i.d. hose. Pump features a magnetic drive motor with sealed pump chamber for long life even with continuous use (up to 5000 hrs.) and is well suited for circulating water through heat exchangers on water intercooled turbo applications. This pump is a direct replacement for many MB & AMG applications for either intercooler charge cooling or other water system circulation tasks. A unique plug terminal is used on this pump and will only "plug and play" into O.E. applications. For this reason we add our own wiring harness that allows for direct wiring into aftermarket applications. If the stock connector is used please advise us at time of sale. *Flow Rate 6.17 GPM at up to 3 psi. working pressure. Length 7 3/4", weight 2.2 lbs, current 12 volt 2.5 amp max.*

Water Circulation Pump ACP1 $185.90





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Water Circulation Pump- Johnson

This mid-size, high volume (100 liter), 12v fluid heavy duty centrifugal pump is very well suited for circulating fluid through water intercooled automotive turbocharger heat exchangers, as well as, heating and solar systems. Pump features both high flow and relatively low electrical demand. mfg# C090P5-1

Water Circulation Pump **ACP5** **$369.00**

Specifications:

- Pump body: Thermoplastic PA66
- Impeller: Thermoplastic PA66
- Shaft: Stainless steel
- Seal: Mechanical seal
- Magnet housing: PSU
- Motor: 12 V DC enclosed permanent magnet, ball bearing mounted for continuous operation.
- Motor body incorporated mounting bracket.
- Liquid temperature: -30°C – +100°C (-22°F – 212°F)
- Designed for fresh water handling - non self priming
- Hose connections: 38mm (1 1/2")
- Amperage Fuse: 12 V 5.9 - 7.4 amp 10.0 amp

Back Pressure			Flow		Amp
Bar	kPa	foot	l/min	GPM	12V
0.10	10	3.4	100	26.4	7.0
0.25	25	8.4	67	17.7	7.2
0.40	40	13.4	32	8.5	6.6

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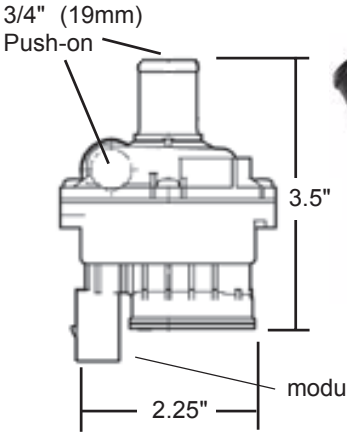
Water Circulation Pump w/Brushless Motor

This extremely compact and lightweight 12volt fluid circulation pump is well suited for circulating water through heat exchangers on water intercooled turbo applications. Pump features a magnetic drive impeller with sealed pump chamber and brushless (up to 20,000 hour) motor for long life even with continuous use. High temperature capable (up to 212 degrees). Fluid connections for 3/4" i.d. (19mm) hose. Flow Rate 3 GPM at up to 2.5 psi. working pressure. Length 3.5", weight .55 lbs, current 12 volt 1.5 amp max. Pump is supplied with plug/connector.

Water Circulation Pump **ACP4** **$177.50**



Back Pressure			Flow		Amp
Bar	Psi	foot	l/min	GPM	12V
0.10	1.45	3.3	14.4	3.8	1.0
0.15	2.17	4.9	8.3	2.2	0.8
0.20	2.90	6.6	3.8	1.0	0.7

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Pump Accessories

Switch: Small preset 180ºf or 190º f degree switch with 1/8" NPT male thread can be fitted to oil coolers or plumbing to activate pumps.

Switches & Associated Parts

Description	part #	price $
Switch 180º Degree	FS180	$21.00
Switch 190º Degree	FS190	$21.00
Switch 200º Degree	FS200	$21.00
-8AN Male/Fermale	GA8MF-2	$12.60
-8AN Male/Male	GA8MM-2	$10.60
-10AN Male/Fermale	GA10MF-2	$16.25
-10AN Male/Male	GA10MM-2	$14.25
-12AN Male/Fermale	GA12MF-2	$19.50
-10AN Male/Male	GA12MM-2	$17.10

Female/Male: Installs over an existing -AN male. Provides (1) 1/8" NPT port for switch or gauge sender. Adds about 1" additional length depending on size.

Male/Male: Installs in hose. Provides (1) 1/8" NPT port for switch or gauge sender. Adds about 1 1/2" additional length to hose depending on size.

In-line Oil FIlter 240 Micron

Description	part #	price $
-6AN In-line 240u filter	AF6/240	$79.50
-8AN In-line 240u filter	AF8/240	$79.50

Filter installs directly in the oil line before an external differential or transmission cooling pump. It's 240 micron stainless element suits all oil types, weights and viscosities. Housing- anodized 6061 aluminum 1.75" x 6.25", Element- 304 stainless mesh 1.125" x 2.75" (240 micron) rating, stainless steel support spring (150 psi rated), Viton o-ring seals on end cap, -8AN or -6AN male fluid connections

-8AN In-line Oil FIlter 150 Micron

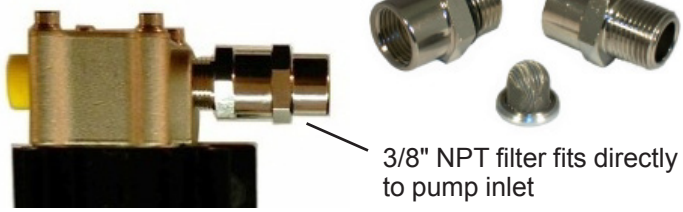
Description	part #	price $
In-line 150u filter	11-IF0808-D	$60.00

Filter installs directly in the oil line before an external differential or transmission cooling pump. A 150 micron (best used with MTL/ATF weight fluids) sintered metal element and magnet combine to protect high-value pump components. Housing measures 4" overall x 1" in diameter. Cleanable/replaceable filter element offers convenience and longevity.

On-Pump Oil FIlter 150 Micron

Description	part #	price $
On-Pump 150u filter	AF3/8-150	$44.50

Compact Male/Female design mounts directly to any 3/8" NPT oil pump. Small but effective 150 micron stainless basket element offers required filtration without impacting flow. Element can be easily removed for cleaning/inspection.



3/8" NPT filter fits directly to pump inlet

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Prices subject to change without notice.

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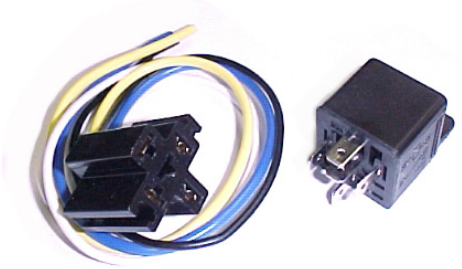
Pump Accessories



Relay 12v with Harness

Description	part #	price $
12v Relay	Relay12	$8.50

Pumps should be supplied power through a relay that provides power directly from 12v source. Use a fan switch (above) or manual switch (you provide) to trigger relay. Harness/plug included, 12 volt 30/40 amp rated.

Pump Motor Speed Controller 12v (PWM)

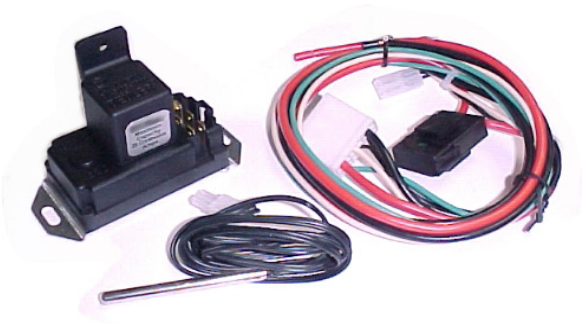
Description	part #	price $
Speed Control	17-PCM	$24.50

Pulse width modulation speed control works by driving the motor with a series of "ON-OFF" pulses and varying the duty cycle, while keeping the frequency constant. The power applied to the motor can be controlled by varying the width of applied pulses varying the average DC voltage applied to the motors terminals. By changing or modulating the timing of these pulses the speed of the motor can be controlled. Also the amplitude of the motor voltage remains constant so the motor is always at full strength. The result is that the motor has linear type of control which results in better speed stability, allowing the motor to turn more slowly without it stalling.

Controller is a assembled circuit board with connection terminals and potentiometer. Controller installs between supplied power +/- and pump +/-. If required, pump polarity can be reversed to switch direction of flow.

Specifications

Product Dimensions: 3" x 3" x 1"
Weight: 2.1 ounces
Working Voltage: DC 12V - DC 40V,
Control Power: 0.01 - 400W
Static Current: 0.02 A (Standby)
PWM Duty Cycle: 10% -100%
PWM Frequency: 13 KHz



Wiring Kit - Adjustable 150f - 240f

Description	part	price $
Wiring Kit Adjustable	AFTR1	$105.00

Adjustable turn-on range 150f - 240f wiring kit uses push-in probe sensor. Turn-off is -10f lower than turn on. Controller has simple potentiometer control for temperature set and incorporates 40amp relay. Override circuit is built in for manual switch. Wiring and fuse holder is included. Sensor is a serviceable part.

DC CONVERTER 24V TO 12V

Description	part #	price $
Speed Control	17-CONV	$39.50

Need to operate a 12 volt motor (pump/fan) in a 24 volt installation? A DC-to-DC step-down converter steps down voltage (while stepping up current) from its input (supply) to its output (load). This type of DC-to-DC converter provides excellent power efficiency (often higher than 90%) with very little heat, making it especially useful for running motors.

Specifications

Input voltage: 24V DC Input range: 12-40V DC
Output voltage: 12V DC Output current: 20A (Max) / 240W
Case material: die-cast aluminum
Dimensions: 3.9 x 3.1 x 1.2 inches Weight :11.2 ounces

Features:

More than 90% power conversion efficiency. Built-in over/under voltage input, overload, overhead, and short circuit full protection. 100% waterproof & anti-shock protection.

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