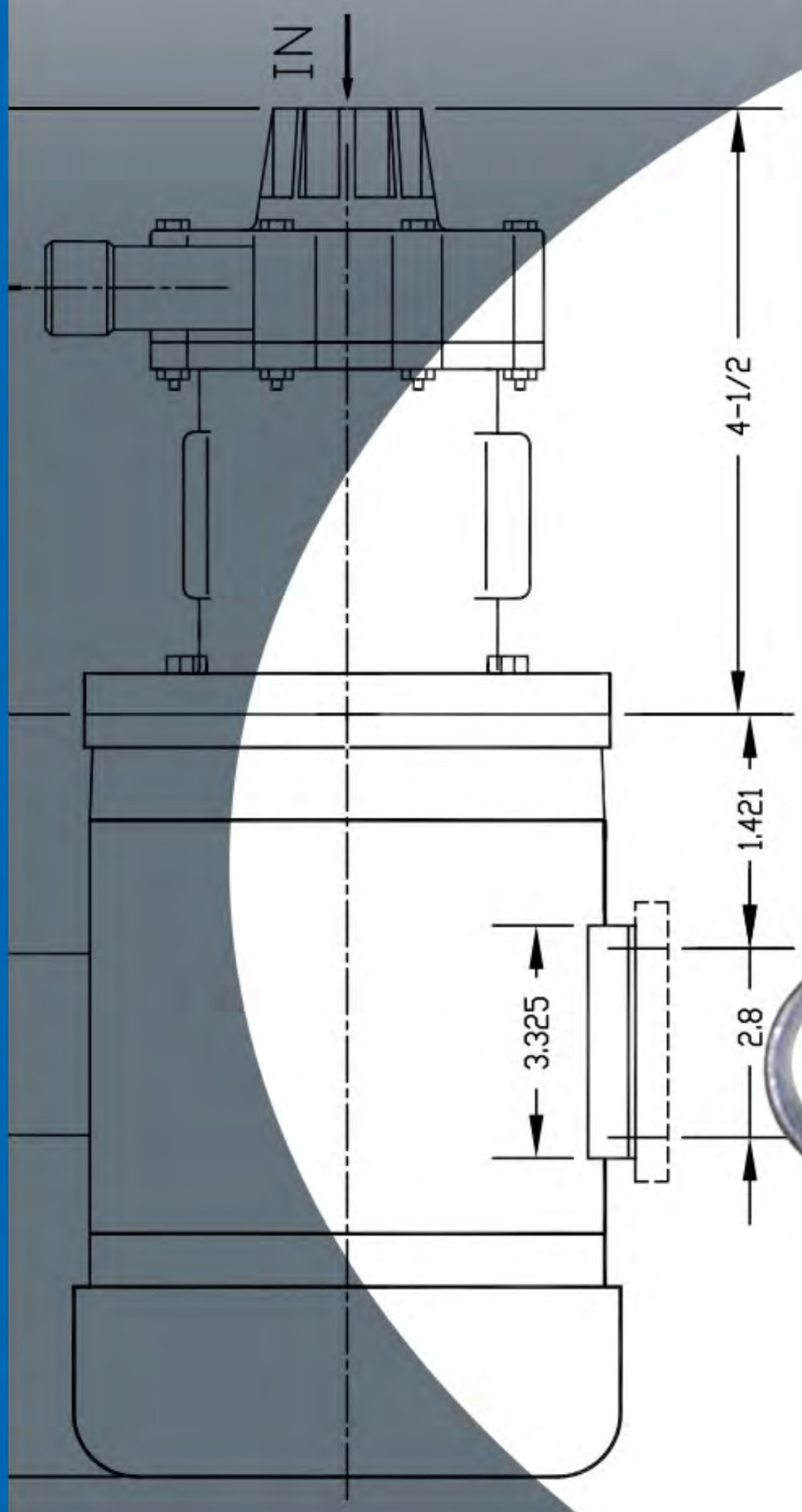
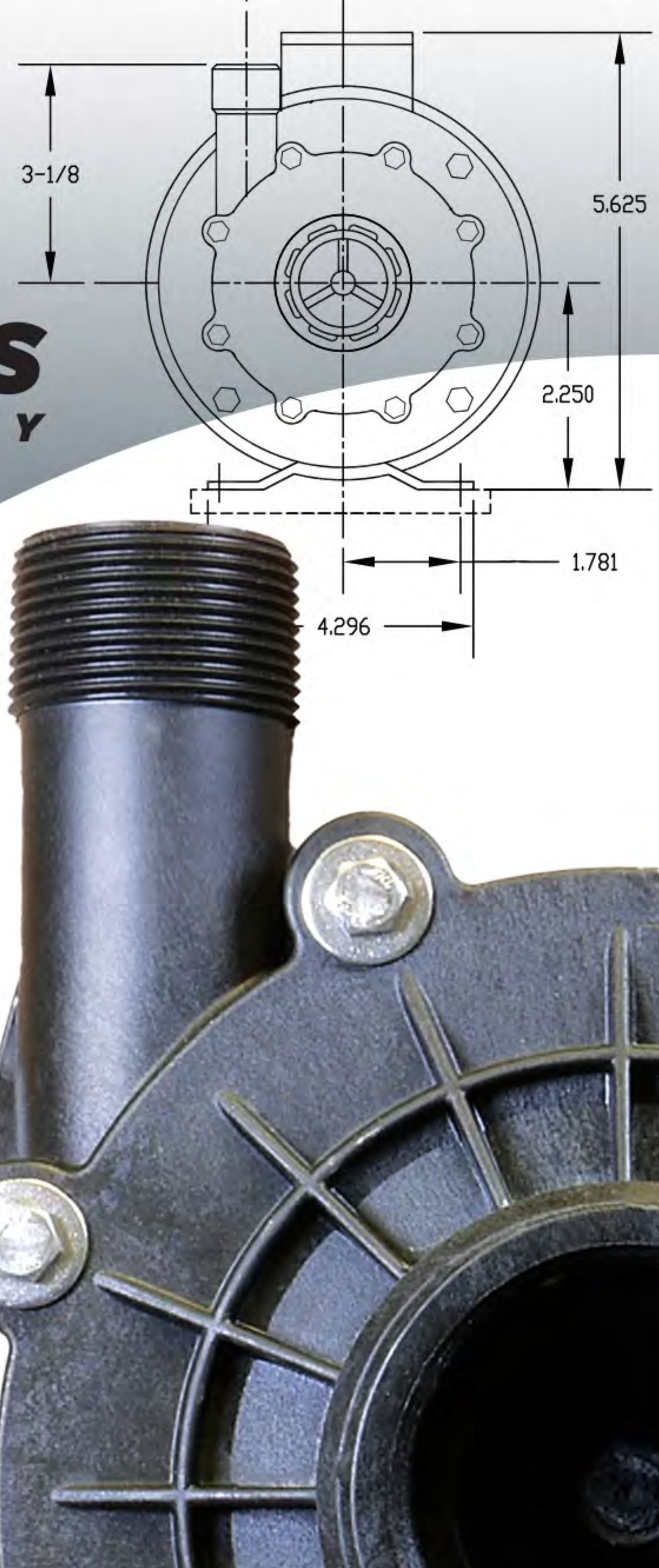
SEAL-LESS MAG-DRIVE PUMPS

SEAL-LESS
PUMP COMPANY





TECH-MAG

SEAL-LESS.COM

TECH-MAG

Alloy versions of TECH-MAG pumps available. Please call for specifications.

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SEAL-LESS MAG-DRIVE PUMP SPECIALISTS™

From Seal-Less Pump Co.- The Leader in Magnetic Drive Pump Technology: 21st Century Design, Materials and Engineering.

The Seal-Less Pump Co. specializes in the application, testing, engineering, manufacturing and distribution of technically advanced, hermetically sealed, magnetic drive, seal-less pumping systems and monitoring equipment.

Seal-Less Pump Co. markets its broad line of high quality seal-less magnetic pumps throughout North America. TECH-MAG pumps are used in a diverse range of industries, including metal finishing, printed circuit board, electronics manufacturing, semiconductor, chemical processing, pharmaceutical, water treatment and OEM system manufacturers. TECH-MAG pumps offer an extensive range of pump designs and materials to serve our customers needs.

TECH-MAG SEAL-LESS MAG-DRIVE PUMPS

TECH-MAG centrifugal magnetic-drive pumps have been engineered for efficient, reliable, zero leakage pumping in a wide range of chemical processes and OEM system applications. TECH-MAG pumps may look similar to competitive designs but the features and perfomance capabilities of TECH-MAG far exceed other manufacturers. The compact design of TECH-MAG allows for retrofitting many existing systems without costly re-piping modifications.

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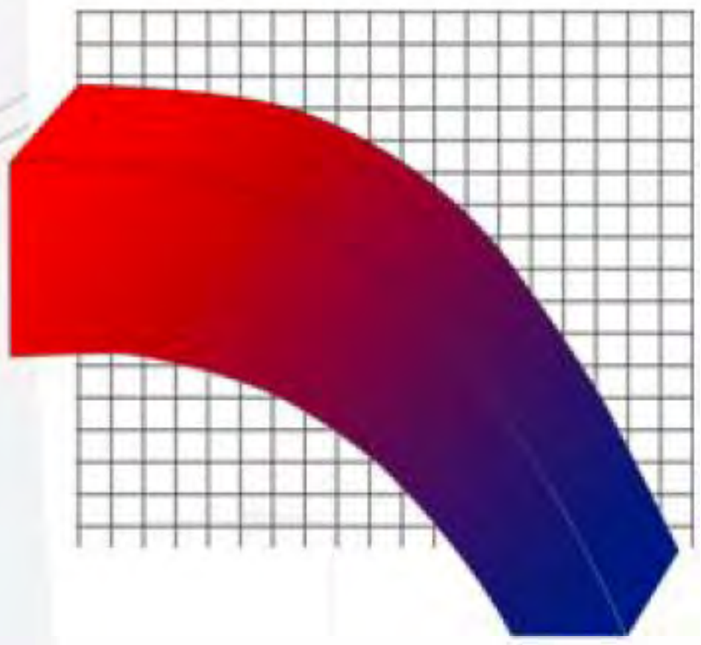
FEATURES



Wider Performance Range

Larger diameter shafts, and heavy duty internal bearings allow TECH-MAG pumps to operate across the entire performance curve in a continuous service mode. TECH-MAG pumps are particularly suited for trouble-free operation in filtration, spray systems and other high head applications.

Standard NEMA Motors

TECH-MAG **pumps are fitted with standard NEMA frame 56-C,** 143-TC or 182-TC motors for minimizing replacement costs. A wide range of specifications can be met, including high efficiency, TEFC, UL, Explosion Proof, Washdown Duty, and Mill & Chemical Duty.

Modular Impellers Match Hydraulic Requirements

An interchangeable impeller design, independent of the internal magnet, is standard on all TECH-MAG pumps. Standard impeller sizes are available from stock for matching performance requirements. Five standard sizes accommodate up to 1.8 specific gravity liquids, preventing motor overloading.

FEATURES

Competition

TECH-MAG

TECH-MAG Construction

All TECH-MAG pumps employ a volute casing design for optimal efficiencies and higher head capacities. Oversized internal components are built to withstand maximum axial and radial shaft loads. Heavy casing wall thickness adds strength, chemical resistance and temperature capability.

Advanced Magnet Technology

Segmented magnets provide high torque with low mass that resists uncoupling and reduces bearing wear. Dual rare earth magnets provide reliable performance, even in high specific gravity services.

Rugged Design

High capacity M31H design equipped with ceramic shaft and bearings for abrasive services.

M SERIES

"M" Series seal-less mag-drive thermoplastic centrifugal pumps provide high reliability, with emphasis on optimum chemical compatibility. Interchangeable impellers provide flexibility for precisely matching head and flow capacities. TECH-MAG can be used in a wide range of acids and alkaline solutions up to temperatures of 180° F.

Standard Features Include:

- Oversized internal shaft, sleeve and thrust bearings
- Interchangeable impellers, independent of internal magnets
- Standard NEMA frame motors
- Volute casing for optimum efficiencies and performances
- Heavy walled casings for added strength, pressure and temperature resistance
- High torque, low mass magnetic couplings resist uncoupling
- 5 models available with flows to 175 GPM
- Constructed in Polypropylene (PP), or Polyvinylidene Fluoride (PVDF)

Typical Applications:

- Electroplating, Printing Circuit Board & Electronics Manufacturing
- Semiconductor/ Ultra-pure
- Water Conditioning & Waste Treatment
- Photo Imaging & Photo Processing
- Chemical Processing & Distribution
- Pulp & Paper Processing
- Pharmaceutical
- Textile
- OEM Systems

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M SERIES CONTINUED

The TECH-MAG M31 has the most rugged design in its class. It is specifically designed to withstand the higher loads associated with higher capacities. This pump is a cost effective solution for meeting zero emissions with in high flow systems.

Technical Data

Flow: 2-175 GPM (.45-40 M³/H)

Head: To 110 Feet (33 M)

Temp: To 180°F (85°C)

System Pressures: 75 PSIG (5 Bar)

MATERIALS OF CONSTRUCTION	
PP	Polypropylene w/ glass fiber
PVDF	Polyvinylidene fluoride w/ carbon fiber
Ceramic	99.7% Alumina free oxide
PTFE-C	PTFE with 20% carbon

MODEL*	MAX. GPM	MAX. HEAD (FEET)	SUCTION PORT	DISCHARGE PORT	WETTED MATERIALS	MAX. PSI	MAX. TEMP	HP	MAX HP	APPROX. WT. W/O MOTOR	NEMA FRAME
M6.0H-PP	34	43	1" FPT	3/4" MPT	PP, Ceramic, PTFE-C, EPDM	100	140	1/2	1	7 lbs.	56 C
M6.0H-PV	34	43	1" FPT	3/4" MPT	PVDF, Ceramic, PTFE-C, Viton	100	180	1/2	1	8 lbs.	
M10H-PP	66	58	1-1/2" FPT	1" MPT	PP, Ceramic, PTFE-C, EPDM	100	140	1	2	9 lbs.	56 C
M10H-PV	66	58	1-1/2" FPT	1" MPT	PVDF, Ceramic, PTFE-C, Viton	100	180	1	2	10 lbs.	
M15H-PP	125	95	2" FPT	1-1/4" MPT	PP, Ceramic, PTFE-C, EPDM	100	140	3	3	16 lbs.	56 C or 143/5 TC
M15H-PV	125	95	2" FPT	1-1/4" MPT	PVDF, Ceramic, PTFE-C, Viton	100	180	3	3	17 lbs.	
M31H-PP	145	85	2" FPT	1-1/2" MPT	PP, Ceramic, PTFE-C, EPDM	100	140	5	7.5	23 lbs.	143/5 TC or 182/4 TC
M31H-PV	145	85	2" FPT	1-1/2" MPT	PVDF, Ceramic, PTFE-C, Viton	100	180	5	7.5	24 lbs.	

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* All performances rated at 3500 RPM

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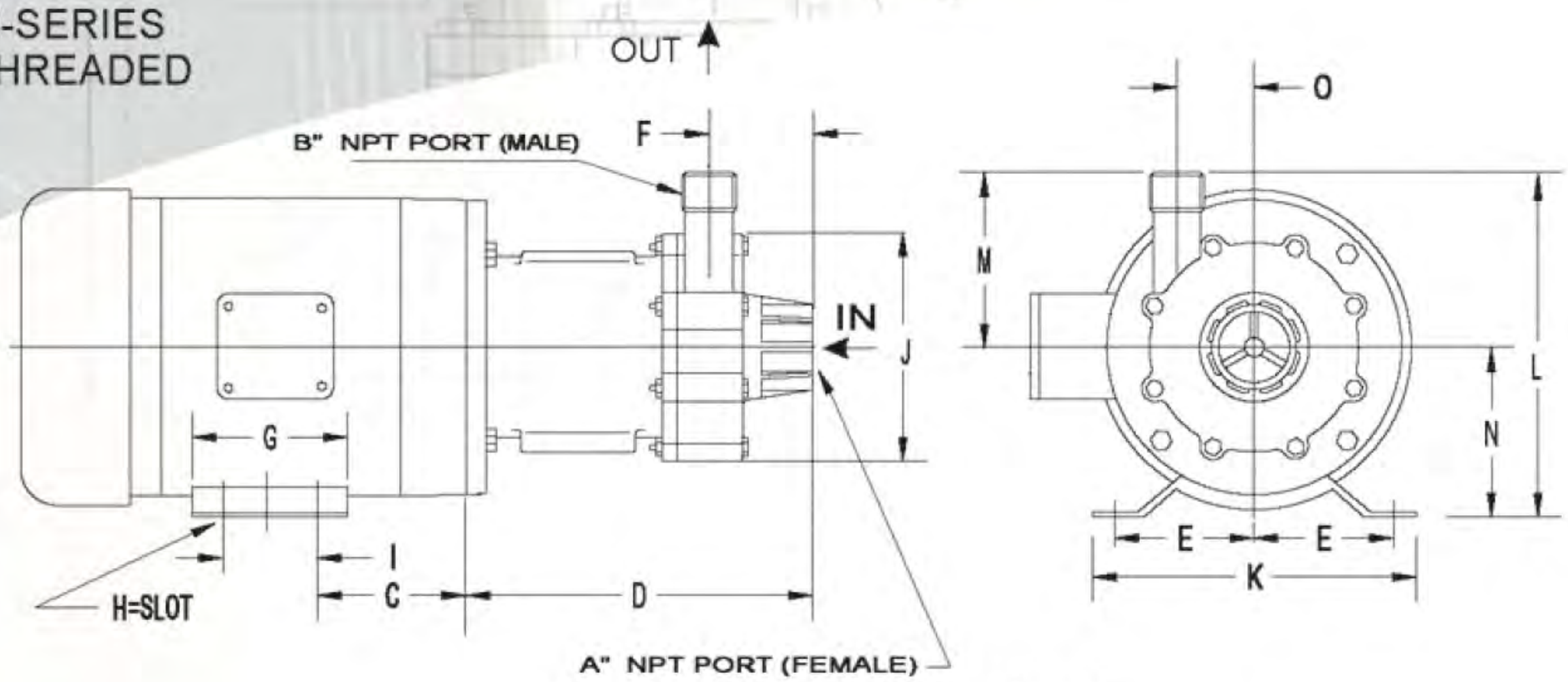
SEAL-LESS PUMP COMPANY

M-SERIES
THREADED



DIMENSIONS (inches)

		Dimensions (inches)														
PUMP MODEL	NEMA FRAME	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
M6H	56 C	1	3/4	2-3/4	6-3/4	2-7/16	2-5/16	4-1/2	11/32	3	5-5/8	6-1/2	7-1/8	3-5/8	3-1/2	1-13/16
M10H	56 C	1-1/2	1	2-3/4	8	2-7/16	2-5/8	4-1/2	11/32	3	5-3/4	6-1/2	7-1/2	3-15/16	3-1/2	1-3/4
M15H	56 C	2	1-1/4	2-3/4	9-1/2	2-7/16	3-1/4	4-1/2	11/32	3	7-7/8	6-1/2	8-7/16	4-15/16	3-1/2	2-1/2
	145 TC	1-1/2		2-3/4		2-3/4		6	11/32	5			8-3/4			
M31H	143/5 TC	2	1-1/2	3-1/4	11	2-3/4	3-5/8	6	11/32	5	8	6-1/2	9-5/8	4-1/4	3-1/2	3
	184 TC			3-1/2		3-3/4		6-1/2		5-1/2		8-1/2	10-1/8		4-1/2	

MV SERIES

The "MV" Series vertical seal-less mag-drive thermoplastic centrifugal pumps, ideally suited for filtration & spray systems, provide high reliability for in-tank and sump applications. The "MV" mag-drive liquid end is a true seal-less pump, free of lip or labyrinth seals. The hermetically sealed column ensures trouble free operation - complete isolation of the motor from the process liquid prevents internal motor corrosion and/or entrained air in the process. Interchangeable impellers provide process flexibility for precisely matching head and flow capacities. Also, the standard enclosed centrifugal impeller design delivers maximum efficiencies, eliminating the need for repellers that increase power requirements and reduce performance.

Standard Features Include:

- Oversized internal shaft, sleeve and thrust bearings
- Interchangeable impellers, independent of internal magnets
- Standard 56-C & 143-TC NEMA frame motors
- Volute casing for optimum efficiencies and performances
- Heavy walled casings for added strength, pressure and temperature resistance
- High torque, low mass magnetic couplings resist uncoupling
- 3 models available with flows to 125 GPM
- All non-metallic, solid Polypropylene or PP/PVDF construction
- 316-SS, or Titanium casing bolts available

Typical Applications:

- Intank filters/filtration
- Precious metal solutions
- Filtration systems
- Carbon treatment
- Spray systems
- Mixing/recirculating
- Water treatment
- OEM systems

MODEL*	MAX. GPM	MAX. HEAD (FEET)	SUCTION PORT	DISCHARGE PORT	WETTED MATERIALS	MAX. PSI	MAX. TEMP	HP	MAX HP	APPROX. WT. W/O MOTOR	NEMA FRAME
M 6.0H-PP	34	43	1" FPT	3/4" MPT	PP, Ceramic, PTFE-C, EPDM	100	140	1/2	1	7 lbs.	56 C
M 6.0H-PV	34	43	1" FPT	3/4" MPT	PVDF, Ceramic, PTFE-C, Viton	100	180	1/2	1	8 lbs.	
M10H-PP	65	58	1-1/2" FPT	1" MPT	PP, Ceramic, PTFE-C, EPDM	100	140	1	2	9 lbs.	56 C
M10H-PV	65	58	1-1/2" FPT	1" MPT	PVDF, Ceramic, PTFE-C, Viton	100	180	1	2	10 lbs.	
M15H-PP	125	95	2" / 1-1/2" FPT	1-1/4" MPT	PP, Ceramic, PTFE-C, EPDM	100	140	3	3	16 lbs.	56 C or 143/5 TC
M15H-PV	125	95	2" / 1-1/2" FPT	1-1/4" MPT	PVDF, Ceramic, PTFE-C, Viton	100	180	3	3	17 lbs.	

* All performances rated at 3500 RPM

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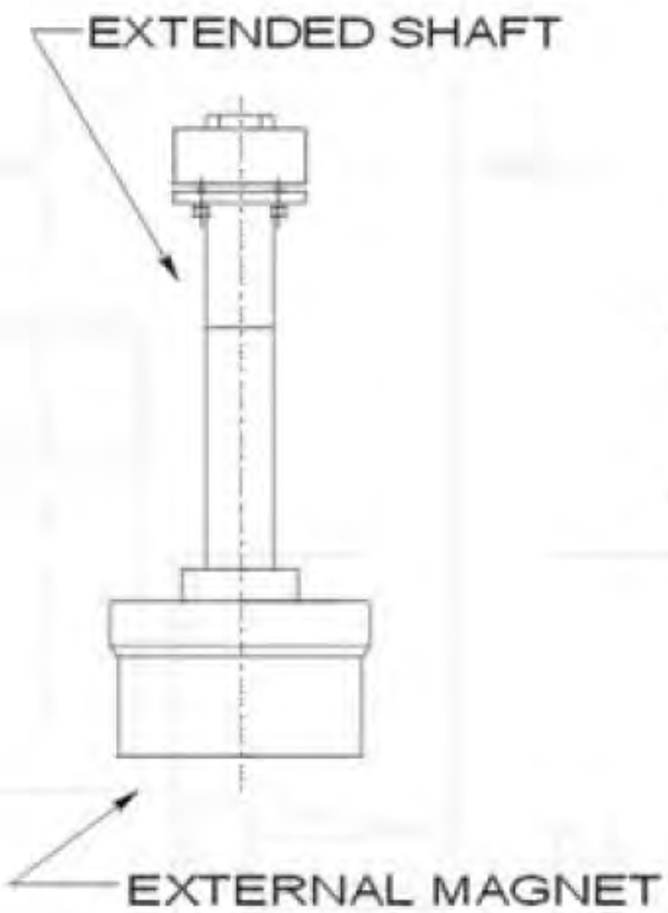
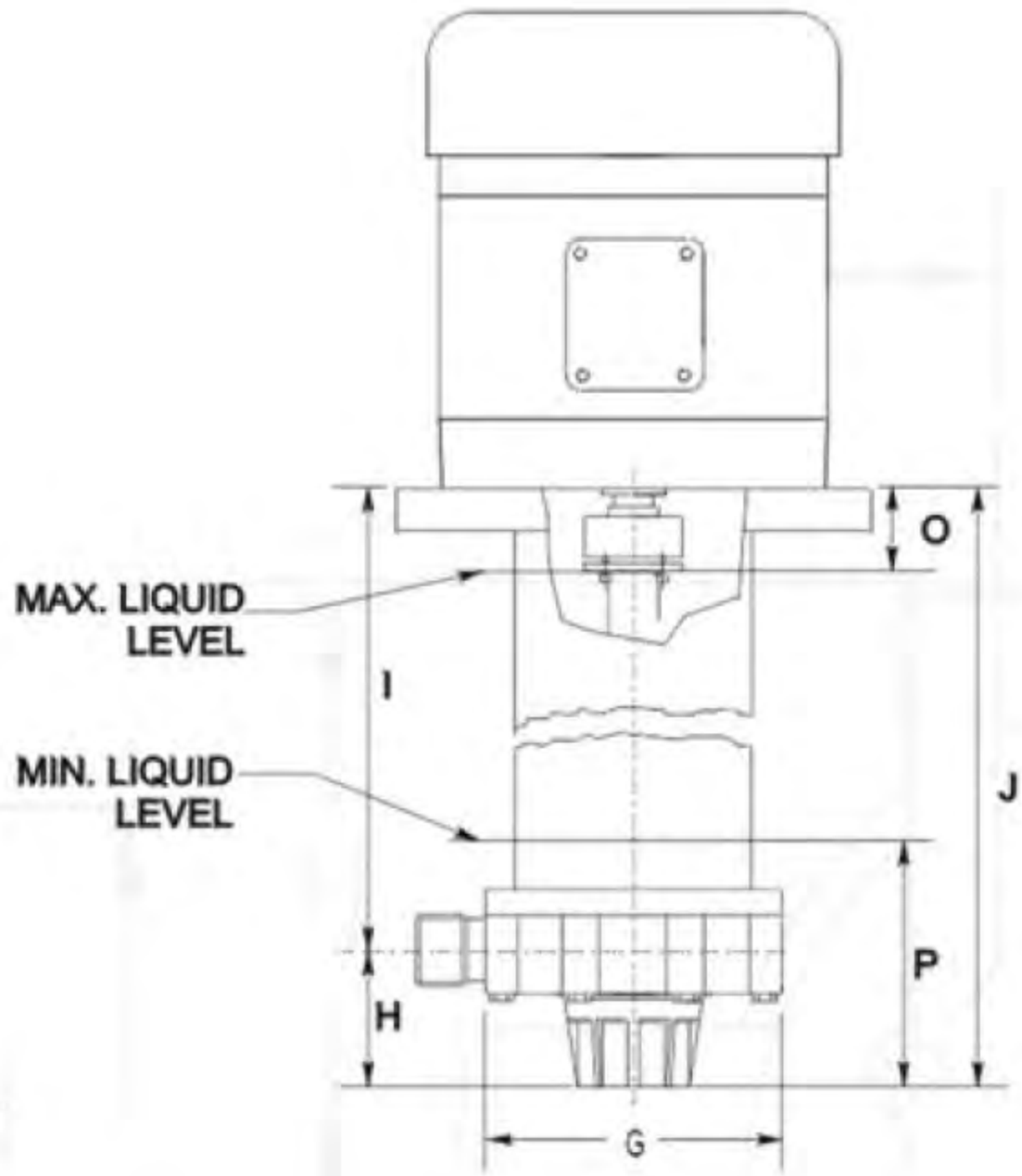
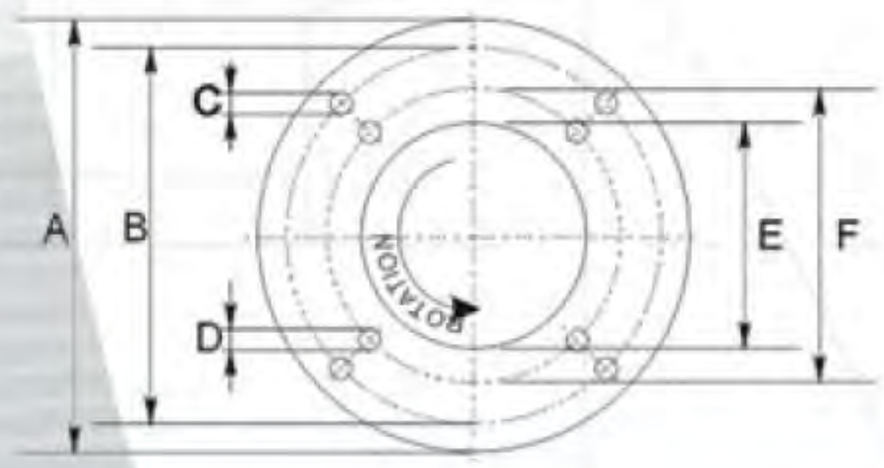
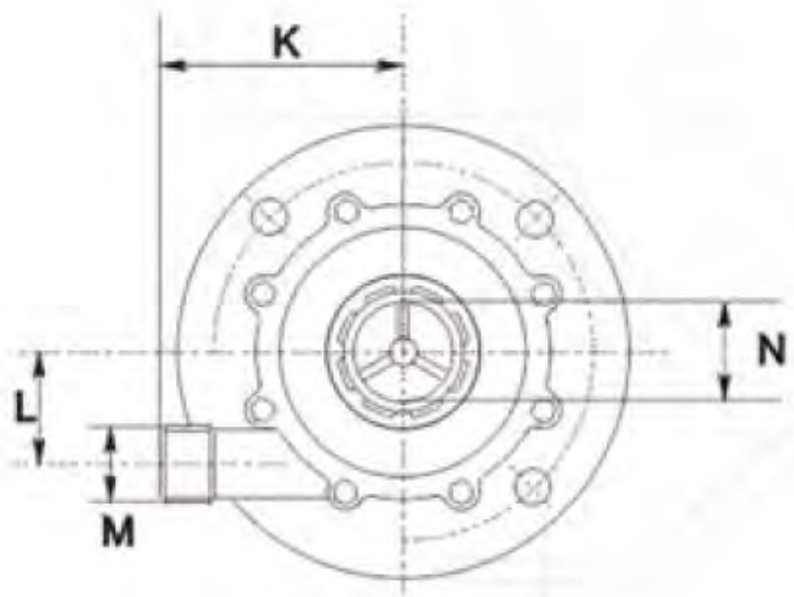
MV-SERIES



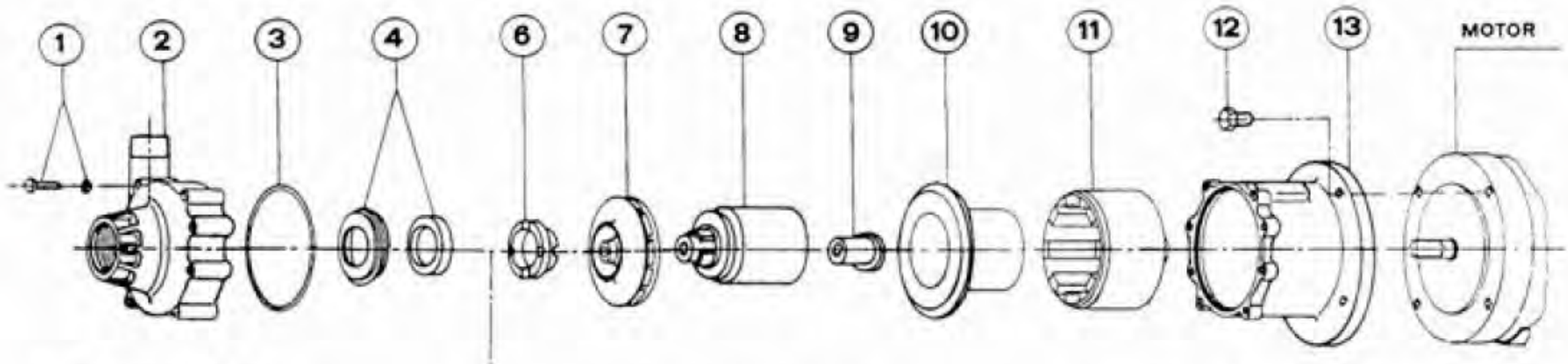






Dimensions (inches)																	
Pump Model	NEMA Frame	A	B	C	D	E	F	G	H	I*	J*	K	L	M MPT	N FPT	O*	P*
MV6.0H	56 C	8-5/8	7-7/16	3/8	7/16	4-1/2	5-7/8	5-5/8	2-5/16	9-9/16	12-3/8	3-5/8	1-13/16	3/4	1	2-5/8	5
MV10H	56 C	8-5/8	7-7/16	3/8	7/16	4-1/2	5-7/8	6-1/8	2-3/4	9-9/16	12-7/8	3-15/16	1-3/4	1	1-1/2	2-5/8	6
MV15H	145 TC	11	7-1/2	7/16	7/16	4-1/2	5-7/8	7-7/8	3-3/8	9-9/16	13-11/16	4-15/16	2-1/2	1-1/4	2	2-5/8	8

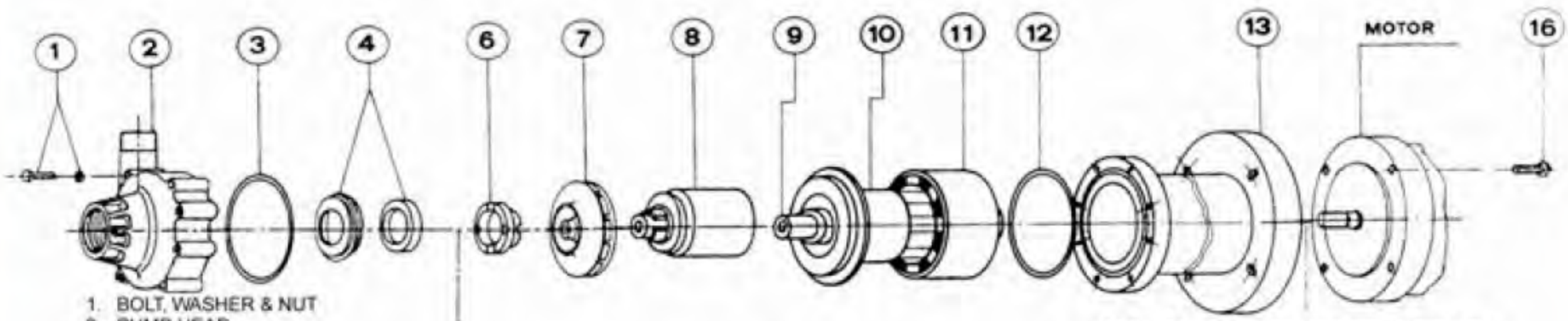
*Consult with factory for longer column lengths

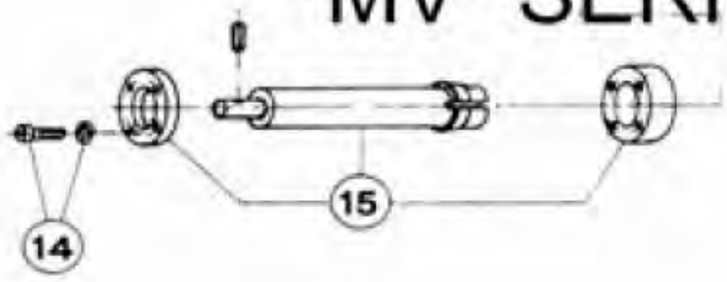


1. BOLT WASHER & NUT
2. PUMP HEAD
3. O-RING
4. THRUST BEARING & SLEEVE
5. SHAFT & RING
6. IMPELLER THRUST BEARING
7. IMPELLER
8. INTERNAL MAGNET
9. BEARING
10. REAR CASING
11. EXTERNAL MAGNET
12. SCREW (4PCS)
13. BRACKET

Note: Please consult factory for a parts breakdown

"M" SERIES





1. BOLT, WASHER & NUT
2. PUMP HEAD
3. O-RING
4. THRUST BEARING & SLEEVE
5. SHAFT & RING
6. IMPELLER THRUST BEARING
7. IMPELLER
8. INTERNAL MAGNET
9. BEARING
10. REAR CASING
11. EXTERNAL MAGNET
12. O-RING
13. BRACKET
14. BOLT & LOCK WASHER
15. MOTOR SHAFT EXTENSION
16. SCREW

"MV" SERIES

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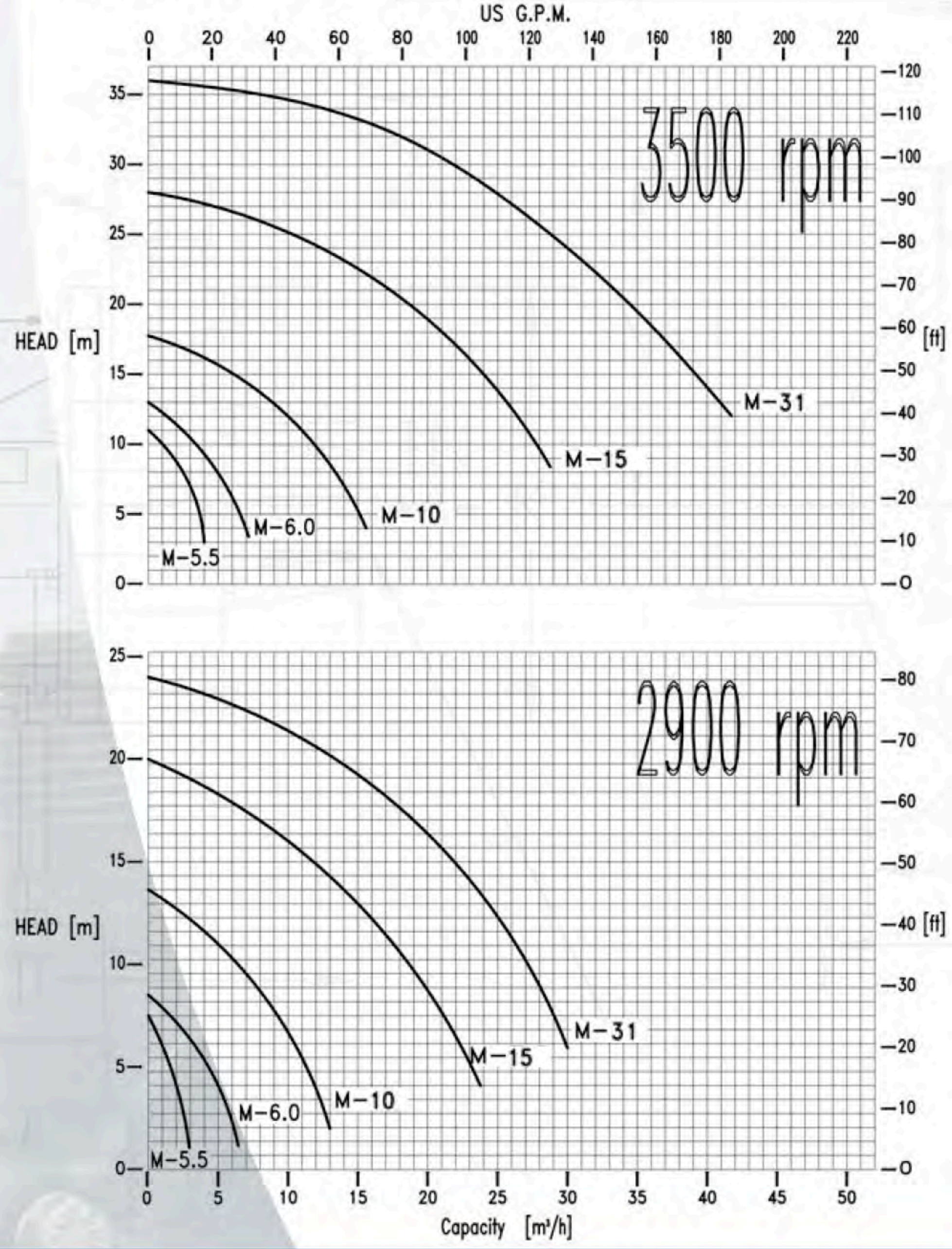
family—composite curves	
MODEL: TECH-MAG M	Curve N°: 10396
ITEM:	
Project:	



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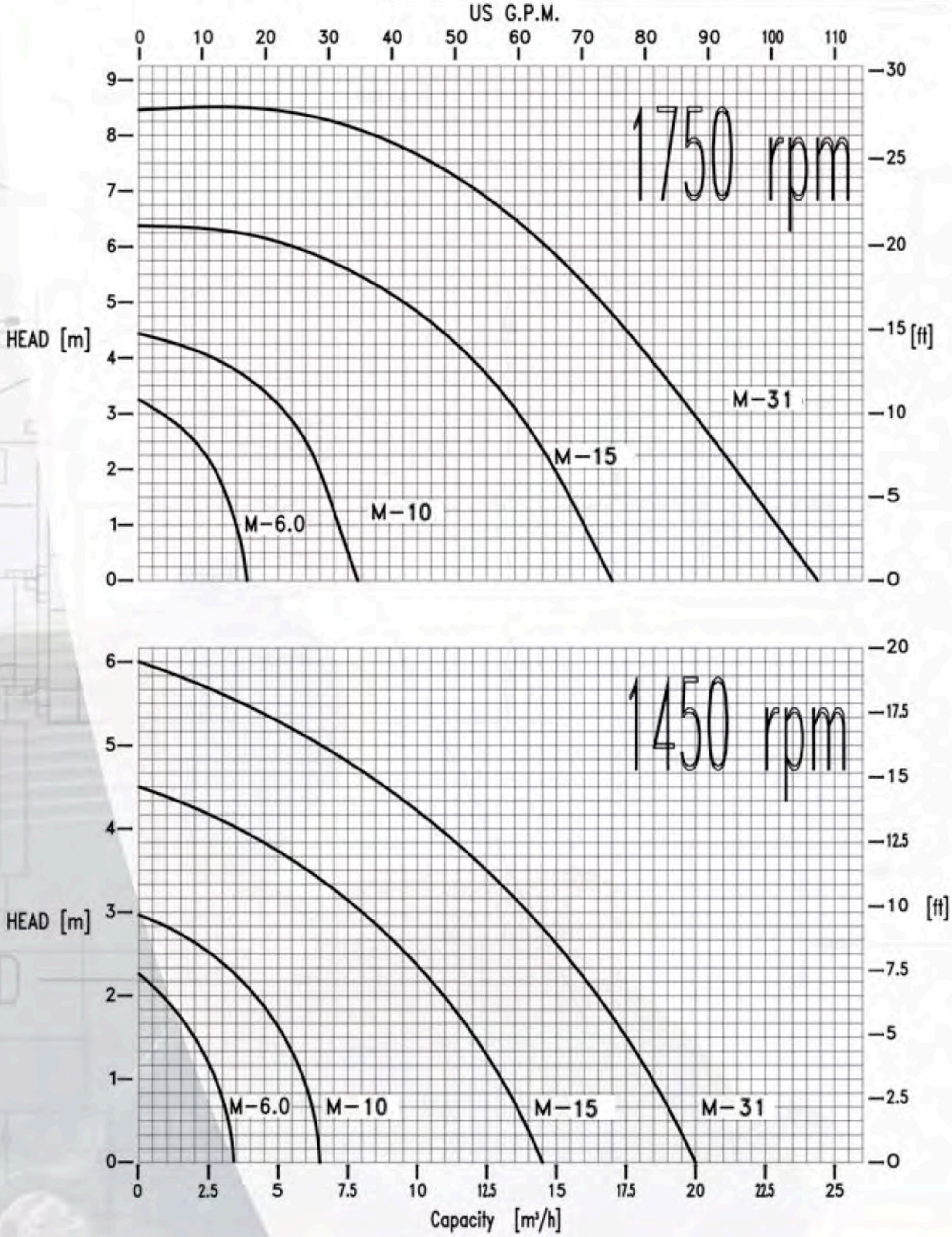
family—composite curves	
MODEL:TECH-MAG M	Curve N°: 10405
ITEM:	
Project:	



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Series "M" model selection and impeller sizing

____Quantity

_M__Pump Series

____Pump Size (6.0 / 10 / 15 / 31)

____Mag Coupling (H= High Torque)

____Bearing Material & Shaft (1=PTFE-C & Cer / 2=PTFE-G & Cer / 3=Carbon & Cer)

____Impeller Size (A/ B/ C/ D/ E /F / G) *consult factory for impeller size

____Pump Casing & Impeller (P=Polypropylene / V=PVDF (Kynar) / T=ETFE (Tefzel) / K=**)

____Pipe Connections (T=Threaded / F=Flanged) *note: Flanged not available on M4.0 or M8.5

____Motor type (T=TEFC / X=Explosion proof / C=Chem Duty / W=without)

____Motor Voltage (1=115/230/60-Single Phase / 3=208/230/460/60-Three Phase / 5=Alternate)

____Motor RPM (1=3450 / 2=1750)

**Polypropylene casing with PVDF internal components

Series "MV" Model Selection & Impeller Sizing

____Quantity

_MV__Pump Series

____Pump Size (6.0 / 10 / 15)

____Mag Coupling (H= High Torque)

____Impeller Size (A/ B/ C/ D/ E /F / G) *consult factory for impeller size

____Pump Casing & Impeller (P=Polypropylene / V=PVDF (Wet End) / PP (Column) / K=**)

____Motor type (T=TEFC / X=Explosion proof / C=Chem Duty / W=without)

____Motor Voltage (1=115/230/60-Single Phase / 3=208/230/460/60-Three Phase / 5=Alternate)

____Motor RPM (1=3450 / 2=1750)

**Polypropylene casing with PVDF internal components

Date: _____

Customer: _____

Location: _____

Contact: _____

Phone: _____

Fax: _____

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DATA SHEET

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SEAL-LESS™ PUMP COMPANY

Date of Request: _____

Company Name: _____
Address: _____
City/State/Zip: _____
Contact: _____
Phone: _____
Fax: _____
E-mail: _____

Distributor: _____
Contact: _____

Process/Project Description _____

_____

Time Needed: ☐ Immediately ☐ 1-3 Months ☐ 3-6 Months ☐ More than 6 months

Due Date:

Fluid & Process Conditions	**Design**	**Max**	**Min**
Liquid & Percentage:			
Temp (F):			
Flow (GPM):			
TDH:			
Suction Head:			
Suction Pressure:			
Discharge Pressure:			
NPSHa:			
Specific Gravity:			
Viscosity:			
Vapor Pressure			
Specific Heat:			
pH:			
Particles (% by vol.)			
Particle Size:			
Liquid Level (Ft):			
Suction Lift:			

Current Installation _____

Manufacturer: _____
Design: _____
Pump Size: _____
Model No. _____
Impeller Diameter: _____
Material: _____
Suction Port Diameter: _____
Discharge Port Diameter: _____
Motor HP: _____
RPM: _____

Notes:

System Design

Tank Material: _____
Tank Volume: _____
Piping Material: _____
Suction Pipe Diameter: _____
Discharge Pipe Diameter: _____

Electronic Flow meters ☐ Yes ☐ No
Liquid Level Controls ☐ Yes ☐ No
Will system be flushed ☐ Yes ☐ No
Can pump run dry? ☐ Yes ☐ No
Can pump dead-head? ☐ Yes ☐ No

NPT Pump Ports: ☐
Flanged Pump Ports: ☐

Preliminary Pump Selection:

☐ Horizontal **☐ Vertical**

Motor Specifications

Enclosure ☐ TEFC ☐ Chem Duty ☐ Exp ☐ DC
Mounting ☐ Close Coupled ☐ Long Coupled
Preferred RPM ☐ 1750 ☐ 3500
Hertz ☐ 50 Hz ☐ 60 Hz
Phase ☐ Single ☐ Three
Voltage ☐ 115 V ☐ 208 V ☐ 230 V
☐ 380 V ☐ 460 V ☐ 575 V
☐ 12 V ☐ 24 V

Options & *Monitoring:

Power Monitor ☐ Single Trip ☐ Dual Trip ☐ Dual Trip w/4-20 mA
Thermocouple Probe ☐ Yes ☐ No
Welded Steam Jackets ☐ Casing ☐ Bracket ☐ Internal Bearings
☐ Self-Cleaning Discharge Strainer (WMCA models only)

Pump Model: _____ Pump Material: _____

* NOTE: Pump warranty is contingent upon an approved electronic monitoring device.

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TECH-MAG PUMPS by SEAL-LESS

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