



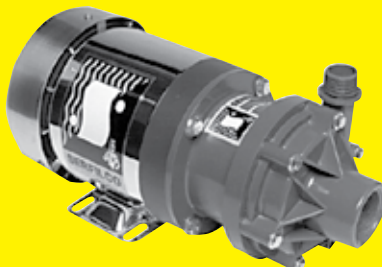
# SERIES 'M' MAGNETIC COUPLED PUMPS

72

P-509F

**EFFICIENT & DEPENDABLE, TROUBLE-FREE  
PERFORMANCE FOR:**

MODEL 1 x ¾



MODEL 1 ½ x 1

**ACID / CAUSTIC / CHEMICAL  
PHOTOGRAPHIC / PLATING  
WATER / WASTE WATER**

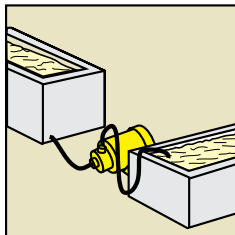
- **Flows to 70 GPM or 56 ft. TDH @ 60 Hz**  
*(220 LPM or 12m @ 50 Hz)*
- **Non-metallic solution contact**  
Glass reinforced polypropylene or  
carbon reinforced PVDF  
*(See a chemical resistance chart)*
- **Extended dry run**  
Unique design helps prevent pump damage
- **Powerful rare-earth magnets**  
Provide sure coupling to 1.6 S.G. @ 30 CPS
- **Connections -NPT or BSP**  
Optional: ¼" NPT drain
- **Accepts standard motors**  
NEMA or IEC metric

Series 'M' Magnetic-Coupled Pumps are seal-less and "leak-proof", providing total solution and vapor containment. They are available in two different materials of construction for a wide range of chemical and temperature compatibility.

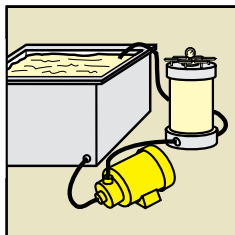
The relationship of the impeller magnet to the liner reflects an advanced design which allows extended operation at dry run or during loss of prime without causing damage to the pump. The impeller head is separate from the impeller magnet hub for field interchangeability. The mouth ring design eliminates the need for a front thrust washer. By using rare-earth magnets, this pump provides flow and

pressure equal to that of a physically much larger pump. This powerful coupling allows the pump to operate at full flow with the full size impeller while handling liquids up to 1.6 S.G. @ 30 CPS.

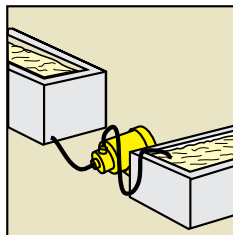
The balanced magnetic field eliminates loading on bearing surfaces, thus providing an extended life span of the bushing compared to that of other magnetic coupled pumps. The fluted bushing provides positive internal liquid circulation/flush along the shaft spindle. These pumps utilize a high-purity silica-free ceramic stub-shaft which eliminates breakage and is compatible with fluoride solutions.



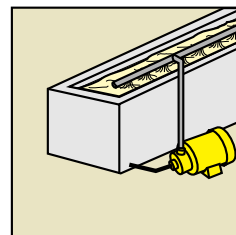
WASTE TREATMENT



FILTER SYSTEM



MIXING and TRANSFER  
PUMPING



RECIRCULATION

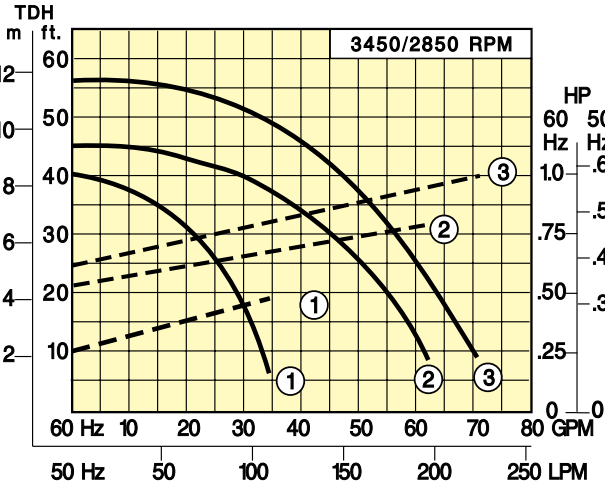


Standard models are constructed of chemically coupled, glass-reinforced polypropylene or carbon-reinforced PVDF for suction casing, impeller-magnet assembly and liner. The casing "O"-ring is Viton. The spindle bushing is carbon with a flush groove for positive lubrication. The spindle, thrust button and mouth ring are high purity, fluoride resistant ceramic. The "thrust ring" is carbon filled Teflon®.

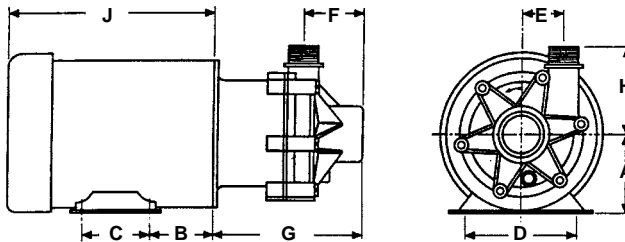
External fasteners are 304SS. The inlet and outlet are designed to accommodate an "O"-ring to provide a leak tight seal at these connections. The pump casing includes a blind boss for the 1/4" NPT drain (optional). The inlet O.D. on the 1 1/2 x 1 model will accommodate a 150mm I.D. socket flange. Maximum pump pressure is 65 PSI (4.4 BAR).

Pumps operating at all flow curves are capable of handling solutions of 1.6 S.G. at 75°F (24°C) with maximum 30 CPS. U.S. motors are NEMA 56C face, 1/2, 3/4, and 1 HP continuous duty. They are painted with two part epoxy gray enamel and have a 1.15

service factor. Single phase motors are supplied with an 8 ft. (2.4m) 3-wire cord and plug. Three phase motors are not supplied with cord or plug.



**DIMENSIONS<sup>1</sup>**



MODEL	SUCTION & DISCHARGE	MOTOR	DIMENSIONS								
			A	B	C	D	E	F	G	H	J <sup>2</sup>
1 x 3/4	1" FNPT 3/4" MNPT	NEMA 56C	3.5 (89)	2.75 (70)	3.0 (76)	4.87 (124)	1.81 (46)	2.06 <sup>1</sup> (52)	6.0 <sup>1</sup> (152)	3.5 (89)	80 (203)
	or 1" FBSP 3/4" MBSP	METRIC 71 B3/B14	2.8 (71)	1.8 (45)	3.5 (89)	4.4 (112)					
1 1/2 x 1	1 1/2" FNPT 1" MNPT	NEMA 56C	3.5 (89)	2.75 (70)	3.0 (76)	4.87 (124)	1.87 (47)	2.75 (70)	6.69 (170)	3.87 (98)	90 (228)
	or 1 1/2" FBSP 1" MBSP	METRIC 80 B3/B14	3.15 (80)	2.0 (50)	3.9 (100)	4.9 (125)					

<sup>1</sup> BSP dimension for F: 2.47 (63), for G: 6.41 (163)

<sup>2</sup> Varies with motor size and manufacturer. Dimensions are for reference only.



**ORDERING INFORMATION**

**TABLE I** Select flow curve number providing the desired performance. Then select either polypropylene or PVDF construction. Use Price Code Number to order.

Materials in solution contact include Viton, carbon, silica-free ceramic. See TABLE II for other models.

SPECIFIC GRAVITY <sup>1</sup>	MODEL (POLYPROPYLENE PUMP / MOTOR)	PRICE CODE NUMBER	MODEL (PVDF PUMP / MOTOR)	PRICE CODE NUMBER
1.5	1 x ¾ MPVCR 1A C.75	51-4111 B	1 x ¾ MKVCR 1A C.75	51-5111 B
1.3	1½ x 1 MPVCR 2B D1.0	51-6221 F	1½ x 1 MKVCR 2B D1.0	51-7221 F
1.5	1½ x 1 MPVCR 3C D1.5	51-6331 P	1½ x 1 MKVCR 3C D1.5	51-7331 P

<sup>1</sup> Motor HP shown will handle full flow to the listed S.G.

**TABLE II** To determine pump model for use with elevated specific gravity at specified GPM, TDH, or material, select performance point on curve. Move vertically to the corresponding dotted line, then horizontally to

HP ordinate. Multiply by specific gravity to determine the required horsepower. Select the pump impeller, magnet coupling and motor to construct the model. Use Price Code No. to order.

PUMP <sup>2</sup>			IMPELLER			MAGNETIC COUPLING			
MODEL NUMBER	MATERIAL	PRICE CODE NO.	FLOW CURVE	ADD TO ...		MAX. HP		ADD TO ...	
				MODEL NO.	PRICE CODE NO.	60 Hz	50 Hz	MODEL	PRICE CODE NO.
1 x ¾ MPVCR	POLYPROPYLENE	51-4	1	1	1	.8	.6	A	1
1 x ¾ MKVCR	PVDF	51-5				1.2	.9	B	2
1½ x 1 MPVCR	POLYPROPYLENE	51-6	2	2	2	1.6	1.2	C	3
1½ x 1 MKVCR	PVDF	51-7	3	3	3				

MOTOR <sup>4</sup>								
FRAME SIZE	TEFC				IP54		SHIP WT lbs.	
	SINGLE PHASE ADD TO ...		THREE PHASE ADD TO ...		THREE PHASE ADD TO ...			
	MODEL NO.	PRICE CODE NO.	MODEL NO.	PRICE CODE NO.	MODEL NO.	PRICE CODE NO.		
TEFC	56C	C.5	1A	D.5	1D	-	-	35
		C.75	1B	D.75	1E			40
		C1.0	1C	D1.0	1F			50
		C1.5	1N	D1.5	1P			55
EXP <sup>3</sup>	56C	E.5	1G	F.5	1K	-	-	34
		E.75	1H	F.75	1L			45
		E1.0	1J	F1.0	1M			45
METRIC	71B3/B14	-	-	-	-	DM.37	2G	19
	80B3/B14	-	-	-	-	DM.55	2H	19
						DM.75	3J	28

<sup>2</sup> For pump only, eliminate letter suffix from Price Code No. and motor suffix from Model.

<sup>3</sup> EXP motors are 60 Hz only; Class 1 Group D and Class 2 Groups F & G.

<sup>4</sup> Single phase - 115/208-230V/1/60 or 190/200-220V/1/50  
Three phase - 208-230/460V/3/60 or 190/380-415V/3/50

For 50 Hz, add **-50** to Model No. and add **5** to Price Code No.