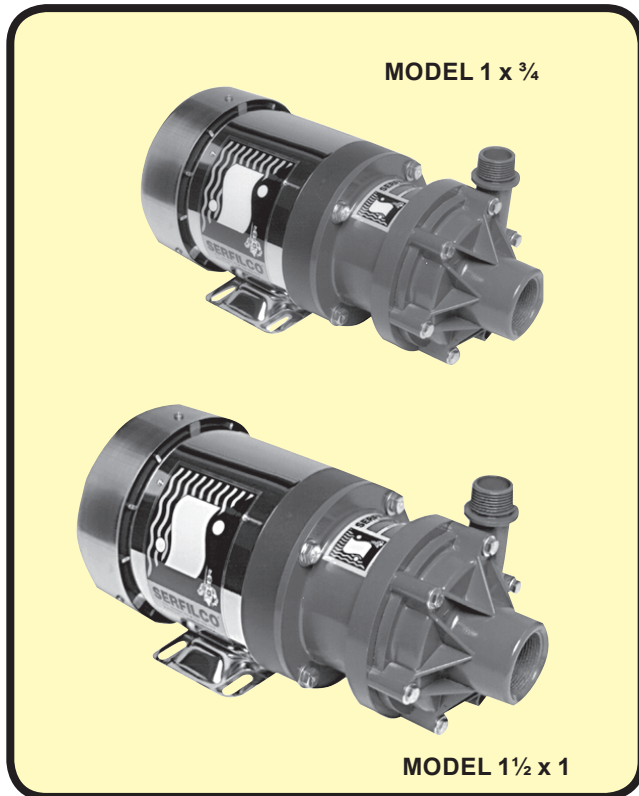


**SERFILCO®****SERIES 'M' | MAGNETIC PUMPS**2900 MacArthur Blvd. Northbrook, IL. USA 60062 www.serfilco.com (800) 323 - 5431BULLETIN
P-509_G
DEC 2010

EFFICIENT & DEPENDABLE, TROUBLE-FREE PERFORMANCE FOR:



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: 1/4" NPT drain
- **Accepts standard motors**
NEMA or IEC metric

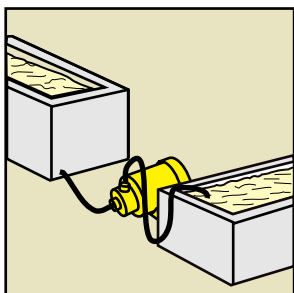
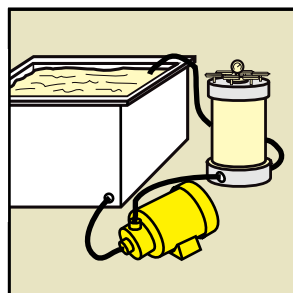
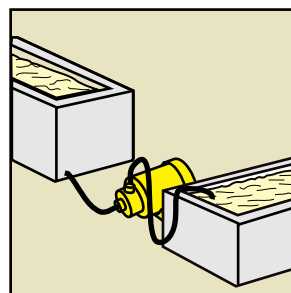
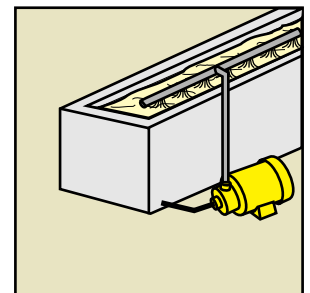
Series 'M' Magnetic-Coupled Pumps are seal-less and "leak-proof", providing total solution and vapor containment. They are available in two different materials of construction for a wide range of chemical and temperature compatibility.

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**



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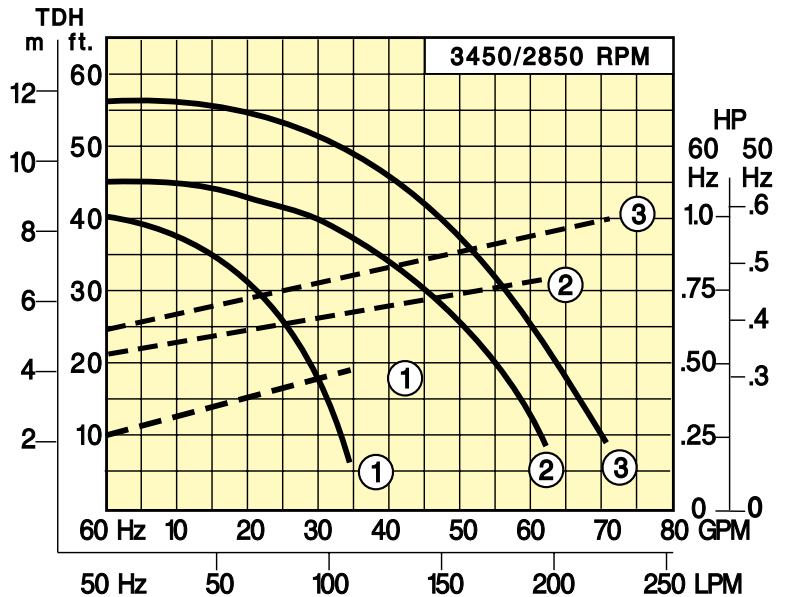
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Standard models are constructed of chemically coupled, glass-reinforced polypropylene or carbon-reinforced PVDF for suction casing, impeller-magnet assembly and liner. The casing "O"-ring is Viton. The spindle bushing is carbon with a flush groove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

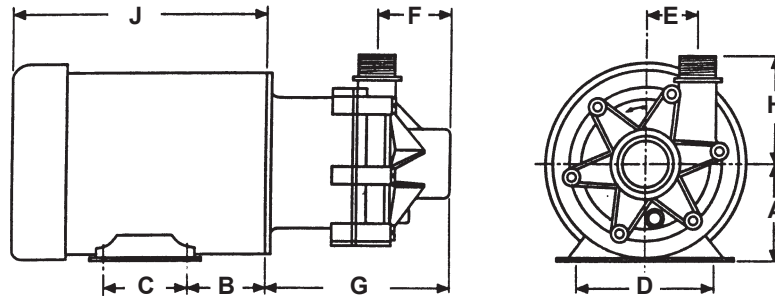
External fasteners are 304SS. The inlet and outlet are designed to accommodate an "O"-ring to provide a leak tight seal at these connections. The pump casing includes a blind boss for the 1/4" NPT drain (optional). The inlet O.D. on the 1 1/2 x 1 model will accommodate a 150mm I.D. socket flange. Maximum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



DIMENSIONS¹



MODEL	SUCTION & DISCHARGE	MOTOR	DIMENSIONS								
			A	B	C	D	E	F	G	H	J ²
1 x ¾	1" FNPT ¾" MNPT	NEMA 56C	3.5 (89)	2.75 (70)	3.0 (76)	4.87 (124)	1.81 (46)	2.06 ¹ (52)	6.0 ¹ (152)	3.5 (89)	8.0 (203)
	or 1" FBSP ¾" MBSP	METRIC 71 B3/B14	2.8 (71)	1.8 (45)	3.5 (89)	4.4 (112)					
1½ x 1	1½" 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)	9.0 (228)
	or 1½" FBSP 1" MBSP	METRIC 80 B3/B14	3.15 (80)	2.0 (50)	3.9 (100)	4.9 (125)					

¹ BSP dimension for F: 2.47 (63), for G: 6.41 (163)

² Varies with motor size and manufacturer.
Dimensions are for reference only.



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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 ¹	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

¹ 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. Multi-

ply 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 ²			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 ⁴								SHIP WT lbs.
FRAME SIZE		TEFC				IP54		
		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.	
T E F C	56C	-C.5	1-A	-D.5	1-D	-	-	35
		-C.75	1-B	-D.75	1-E			40
		-C1.0	1-C	-D1.0	1-F			50
		-C1.5	1-N	-D1.5	1-P			55
E ³ X P	56C	-E.5	1-G	-F.5	1-K	-	-	34
		-E.75	1-H	-F.75	1-L			45
		-E1.0	1-J	-F1.0	1-M			45
M E T R I C	71B3/B14	-	-	-	-	-DM.37	2-G	19
						-DM.55	2-H	19
	80B3/B14	-	-	-	-	-DM.75	3-J	28

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

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

⁴ 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.



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OPTIONAL, use Price Code Number

DESCRIPTION		ALTER MODEL NO.	ADD TO PRICE CODE NO.
Teflon® bushing		Change C to T	-T
EPDM elastomers		Change V to L	-1
BSP ports (1 x ¾)	PP	—	51-4000
	PVDF	—	51-5000
BSP ports (1½ x 1)	PP	—	51-6000
	PVDF	—	51-7000
¼" NPT drain and plug	PP	—	51-4001
	PVDF	—	51-5001



PUMP PRIMING CHAMBER

with removable polypropylene basket.
Use Price Code No. to order

MATERIAL	LIFT *	SUCTION CONNECTION	DIMENSIONS	PRICE CODE NO.
CPVC, Ryton®, Viton	8 ft.	1½" FNPT / 2" MNPT	9" L x 9" W x 12" H	99-1159-R
PVC, Noryl®, Viton	(2.4 m)	(5" dia. removable cover)		99-1159-V

* Based on water (1.0 S.G.) at 68°F (20°C). Suction lift is approximate and determined by air volume in suction piping.

Registered trademarks: Viton - Dupont Dow Elastomers; Teflon - DuPont
Noryl - General Electric; Ryton - Phillips Chemical