



SERFILCO®

Chemical resistant pumps & filters engineered for industry

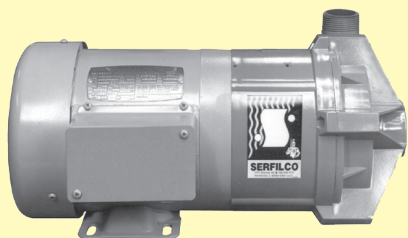
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10/09/20
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SERIES 'F' MAGNETIC PUMPS

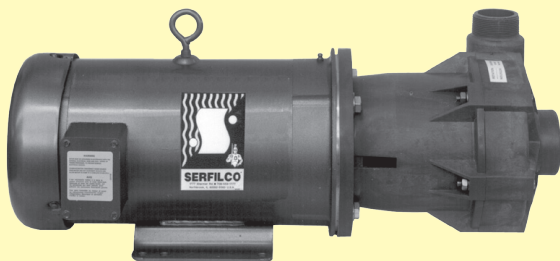
HIGH CAPACITY MAGNETIC-COUPLED PUMP IN A SMALL PACKAGE FOR:

**WASTE / ACIDS
CHEMICALS / PLATING
PHOTOGRAPHIC / ETCHING**

- **Flows to 255 GPM or 135 ft. TDH @ 60 Hz**
(804 LPM or 28.6m @ 50 Hz)
- **Non-metallic solution contact**
Glass reinforced polypropylene or
carbon reinforced PVDF
(See a *chemical resistance chart*)
- **Can run dry for 10 minutes, or 30 minutes if wetted, without causing pump damage**
- **Powerful rare-earth magnets**
Provide sure coupling to 1.6 S.G. @ 30 CPS
- **Accepts standard motors**
NEMA or IEC metric
(except 143/145 frame)



POLYPROPYLENE
MODEL 1-1/2 X 1-1/4



PVDF
MODEL 2 x 2

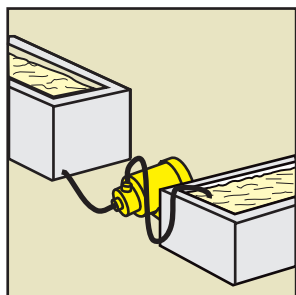
Series 'F' Magnetic-Coupled Pumps are seal-less and "leak-proof" providing total solution containment. Available in two different materials of construction for a wide range of chemical and temperature compatibility.

By using powerful 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 with the full size impeller at full flow while handling liquids up to 1.8 S.G. or 50 CPS.

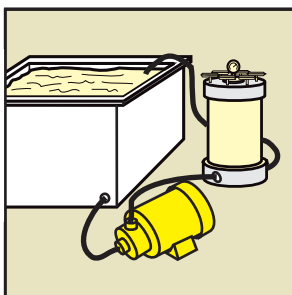
These powerful magnets create a balancing field which eliminates loading on bearing surfaces, thus

providing an extended life span of the bushing compared to that of many standard magnetic coupled pumps. This same "balancing" gives the pump its ability to run dry for 10 minutes, or 30 minutes if wetted, before damage occurs. A fluted bushing provides positive internal liquid circulation/flush along the shaft spindle. These pumps utilize a high-purity ceramic stub-shaft which eliminates breakage.

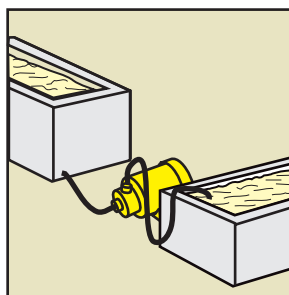
A unique feature of this pump is its ability to mount to NEMA and metric frame motors, thus giving motor options of TEFC, EXP, chemical duty and 575V. The pump is also available longcoupled.



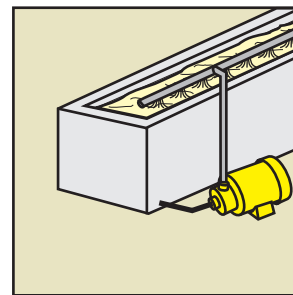
WASTE TREATMENT



FILTER SYSTEM



**MIXING and TRANSFER
PUMPING**



RECIRCULATION



SERIES 'F' | MAGNETIC COUPLED PUMPS

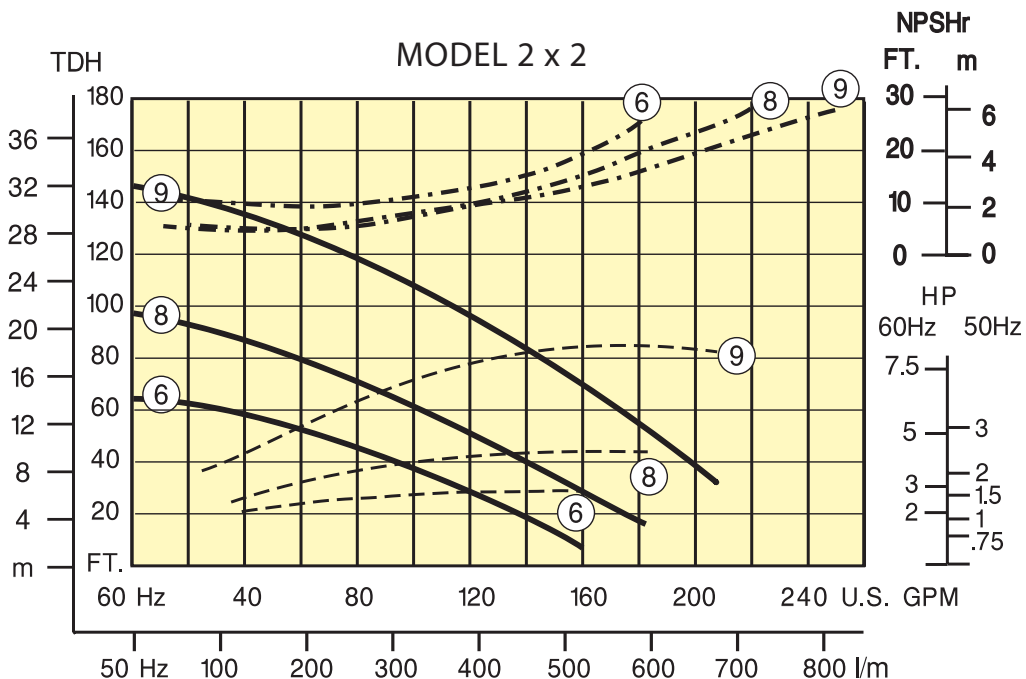
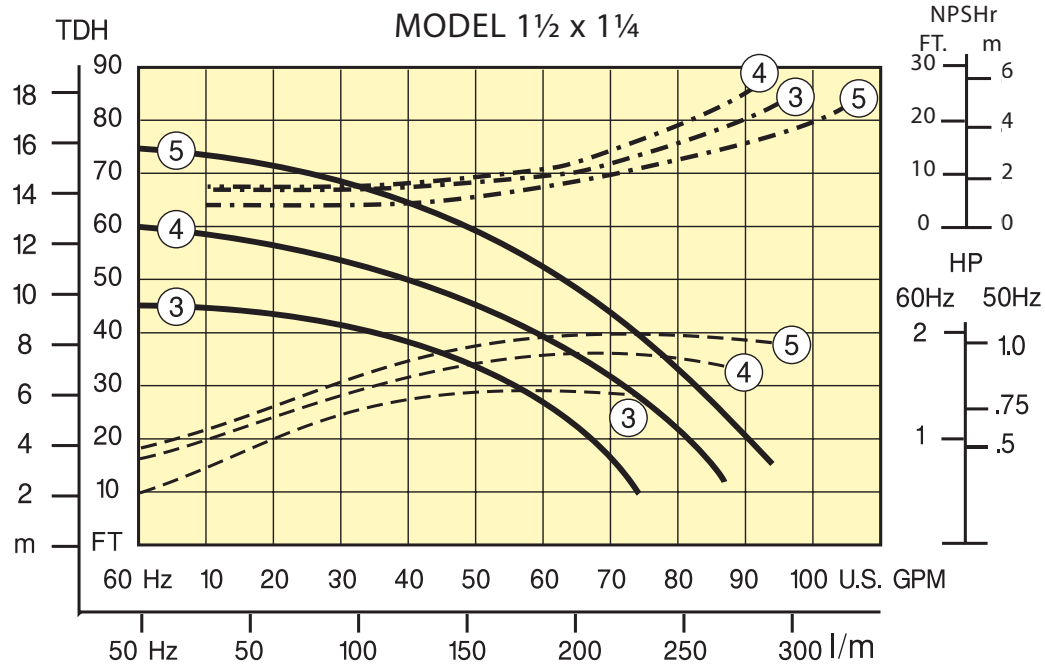
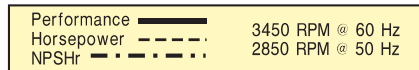
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Standard models are constructed of chemically coupled, glass-filled polypropylene or carbon-filled PVDF. "O"-ring is Viton on both. Bushing material is high density carbon on both with flush groove for positive cooling. The casing thrust ring and spindle are fluoride-resistant ceramic. Maximum pump pressure: 35 PSI (2.4 BAR) for 1½" x 1¼" model, 60 PSI (4.1 BAR) for 2" x 2" models. All of the flow curves illustrated are the

result of impeller diameter trimming, thus a variety of flow and pressure conditions can be attained with a single pump and spare impellers.

Motors are continuous-duty and have a 1.15 service factor. Single phase motors are supplied with 8 ft. (2.4 m) of 3-wire cord and plug. 3-phase motors are not supplied with cord.





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TO ORDER, use Price Code Number

For standard pump-motor combination, select model from TABLE I.
For custom pump-motor combination, select from components in TABLE II.

TABLE I

Select pump-motor model or flow curve number providing the desired performance.

MODEL 1½ x 1¼ with NEMA MOTOR					
FLOW CURVE	POLYPROPYLENE PUMP / MOTOR		PVDF PUMP / MOTOR		* Motor HP shown will handle full flow to a S.G. of:
	MODEL NUMBER	PRICE CODE NUMBER	MODEL NUMBER	PRICE CODE NUMBER	
3	1-1/2 x 1-1/4 MPVGC3-D1.5	51-1036 F	1-1/2 x 1-1/4 MKVGC3-D1.5	51-2036 F	1.0
4	1-1/2 x 1-1/4 MPVGC4-D2.0	51-1047 G	1-1/2 x 1-1/4 MKVGC4-D2.0	51-2047 G	1.1
5	1-1/2 x 1-1/4 MPVGC5-D3.0	51-1057 H	1-1/2 x 1-1/4 MKVGC5-D3.0	51-2057 H	1.5
MODEL 2 x 2 with NEMA MOTOR					
6	2 x 2 MPVGC6-D3.0	51-1262 H	2 x 2 MKVGC6-D3.0	51-2262 H	1.0
8	2 x 2 MPVGC8-D5.0	51-1282 J	2 x 2 MKVGC8-D5.0	51-2282 J	1.1
9	2 x 2 MPVGC9-D10.0	51-1292 Q	2 x 2 MKVGC9-D10.0	51-2292 Q	1.3

TABLE II

* For higher specific gravity or reduced flow, refer to HP required. Then refer to Table II and construct Model and Price Code No. accordingly.

To determine pump - motor for a specific flow, TDH, and/or specific gravity, select flow/pressure point on performance curve (solid line). Required HP is determined by moving vertically to corresponding HP curve (dotted line) and then horizontally to HP scale. Multiply indicated HP by specific gravity of fluid to be pumped.

Select pump materials and construct Model and Price Code Numbers. Calculate Net Positive Suction Head Available (NPSHa) for the installation and refer to NPSHr curves on preceding page. NPSHa should be no less than NPSHr to avoid cavitation or related suction problems.

EXAMPLE:

PUMP + IMPELLER + MOTOR = PRICE CODE NO.
1-1/2 x 1-1/4 MPVGC + 3 + - D1.5 = 51-1036F

PUMP ¹	
MODEL NO.	PRICE CODE NUMBER
1-1/2 x 1-1/4 MPVGC Polypropylene	51-10 __
1-1/2 x 1-1/4 MKVGC PVDF	51-20 __
2 x 2 MPVGC Polypropylene	51-12 __
2 x 2 MKVGC PVDF	51-22 __

IMPELLER		
FLOW CURVE	ADD TO...	
	MODEL NO.	PRICE CODE NO.
3	3	3
4	4	4
5	5	5
6	6	6
8	8	8
9	9	9

MOTOR ²					
PUMP MODEL SINGLE		PHASE		THREE PHASE	
		ADDTO...		ADDTO...	
		MODEL NO. (HP)	PRICE CODE NO.	MODEL NO. (HP)	PRICE CODE NO.
T E F C	1½ X 1¼	-C1.0	6C	-D1.0	6D
		-C1.5	6E	-D1.5	6F
		—	—	-D2.0	7G
		—	—	-D3.0	7H
	2 x 2	—	—	-D3.0	2H
		—	—	-D5.0	2J
		—	—	-D7.5	2K
		—	—	-D10.0	2Q
E X P	1½ X 1¼	-E1.0	6L	-F1.0	6M
		—	—	-F1.5	7N
		—	—	-F2.0	7P
		—	—	-F3.0	7Q
	2 x 2	—	—	-F3.0	2L
		—	—	-F5.0	2M
		—	—	-F7.5	2N
		—	—	-F10.0	2P

¹ For pump only, eliminate motor suffix from Model Number and suffix letter from Price Code Number.

² Single phase - 115-208-230V/1/60 or 110-220V/1/50

Three phase - 208-230-460V/3/60 or 220-380V/3/50.

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

All motors are 3450/2850 RPM. EXP motors are 60 Hz only;

Class I Group D and Class II Groups F & G.

Metric motors are IP54.

FRAME		kW		
M E T R I C	80-B3/B14	—	—	-DM.75 8R
	90-B3/B14	—	—	-DM1.1 8S
	100-B3/B14	—	—	-DM1.5 9T
M E T R I C	100-B3/B14	—	—	-DM2.2 4R
	100-B3/B14	—	—	-DM3.2 4S
	100-B3/B14	—	—	-DM4.2 4T



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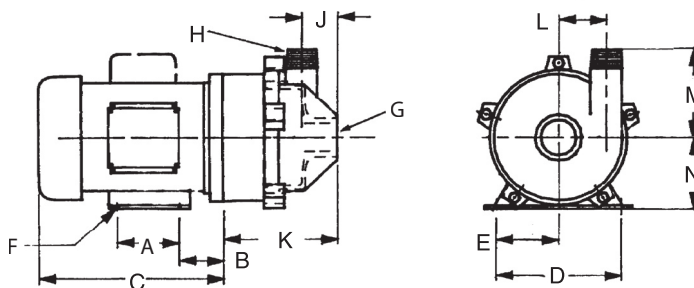
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OPTIONAL, use Price Code Number

DESCRIPTION		ALTER MODEL NO.	ADD TO PRICE CODE NO.
Teflon® bushing		Change C to T	T
EPDM elastomers		Change V to L	1
Flange connections (3" Inlet x 2" outlet) for 2 x 2 models only — (150# ANSI, welded in place.)	PP	—	51-1200
	PVDF	—	51-2220

DIMENSIONS - In (mm)



**Close-Coupled
to TEFC motor**

NEMA	MOTOR FRAME	A	B	C ¹		D	E	F	METRIC	MOTOR FRAME	A	B	C	D	D	F
				1 ø	3 ø											
	56 C	3 (76)	2-3/4 (70)	9-3/4 (248)	4-7/8 (124)	2-7/16 (62)	11/32 (9) SLOT	80-B3/ B14		(100)	(222)	(245)	(125)	(63)	(101)	
	143 TC 145 TC	4 (102) 5 (127)	2-3/4 (70)	10-1/4 (260)	5-1/2 (140)	2-3/4 (70)	11/32 (9) DIA.	90-B3/ B14		(100)	(125)	(293)	(140)	(70)	(10)	
	182 TC 184 TC	4-1/2 (115) 5-1/2 (140)	3-1/2 (89)	—	7-1/2 (190)	3¾ (95)	13/32 (10) DIA.	100-B14		(140)	(63)	(331)	(160)	(80)	(12)	
	213 TC 215 TC	5-1/2 (140) 7 (178)	3-1/2 (89)	—	8-1/2 (216)	4¼ (108)	13/32 (10) 13/32 (10) DIA.									

¹ Motor length may vary.

NOTE: 2 x 2 model pumps only mount to 182/4TC
or larger or 100 frame-B14 face motors.

MODEL		G	H	J	K	L	M	N
1-1/2 x 1-1/4	In (mm)	1 1/2 FNPT	1 1/4 MNPT	2.88 (60)	7.19 (183)	2.25 (57)	4.75 (121)	3.5 (89)
2 x 2	In (mm)	2 FNPT	2 MNPT	2.5 (63.5)	10.5 ³ (267)	256 (65)	5.75 (146)	4.5 (114)

² Dimension J is 3.5" (89 mm) with flange option.

³ Dimension K is 11.5" (292 mm) with flange option.

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