



## SERIES 'FES3' | SELF-PRIMING PUMPS



### VERSATILE-ECONOMICAL

**WASTES / ACIDS**  
**CHEMICALS / PLATING**  
**PHOTOGRAPHIC ETCHING**

- **Flows to 250 GPM or 175 ft. TDH @ 60 Hz**  
(800 LPM or 38 m @ 50 Hz)
- **Non-metallic solution contact**  
Glass reinforced polypropylene or  
carbon reinforced PVDF  
(See a chemical resistance chart)
- **Deep-lift capability**  
up to 25 feet / 7.6 meters
- **Fast priming**  
18 feet / 5.5 meters in 90 sec.
- **Capable of running dry without damage**
- **Powerful rare earth magnets**  
Provide sure coupling to 1.8 S.G.
- **Accepts standard motors NEMA or IEC metric**

Series 'FES3' self-priming magnetic coupled pumps are seal-less and "leak-proof" providing total solution containment. They are available in a choice of two different corrosion resistant materials for a wide range of chemical and temperature compatibility and are ideal for handling even the most difficult applications.

The outstanding self-priming feature of the Series 'FES3' combines deep-lift capabilities (up to 25 feet / 7.6 meters) and lightning-fast priming (18 feet / 4.0 meters in 90 seconds). The priming chamber's gooseneck design eliminates the need for internal check valves while ensuring that enough liquid is retained for efficient re-priming.

These pumps utilize powerful rare earth, neodymium, magnets which allow them to operate at full flow with a full size impeller while handling liquids over 1.8 specific gravity.

Additionally the Series 'FES3' is capable of running dry without damage when equipped with the standard carbon bushing and under optimum operating conditions. This helps protect the pump from operator errors and system upsets.

Their innovative and highly efficient design, and low energy consumption make these pumps one of the most versatile and economical centrifugal pumps on the market.

### APPLICATIONS

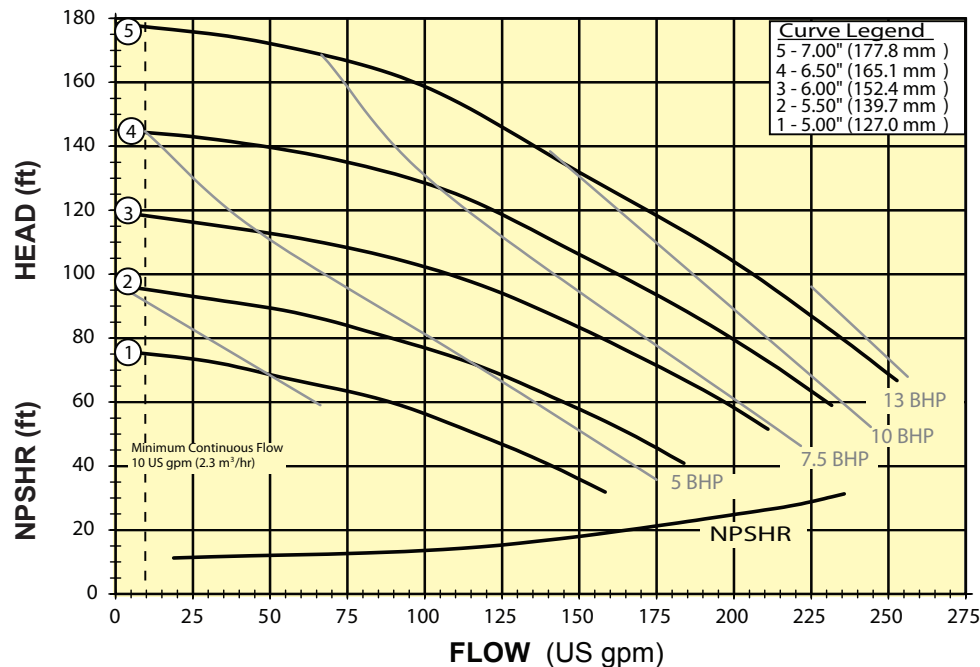
- Over-the-side pumping for filtration and agitation
- Pump from sumps or pits for waste treatment
- Transfer from rail cars, tanker trucks, or bulk storage
- Systems with entrained air or where dry run protection is required



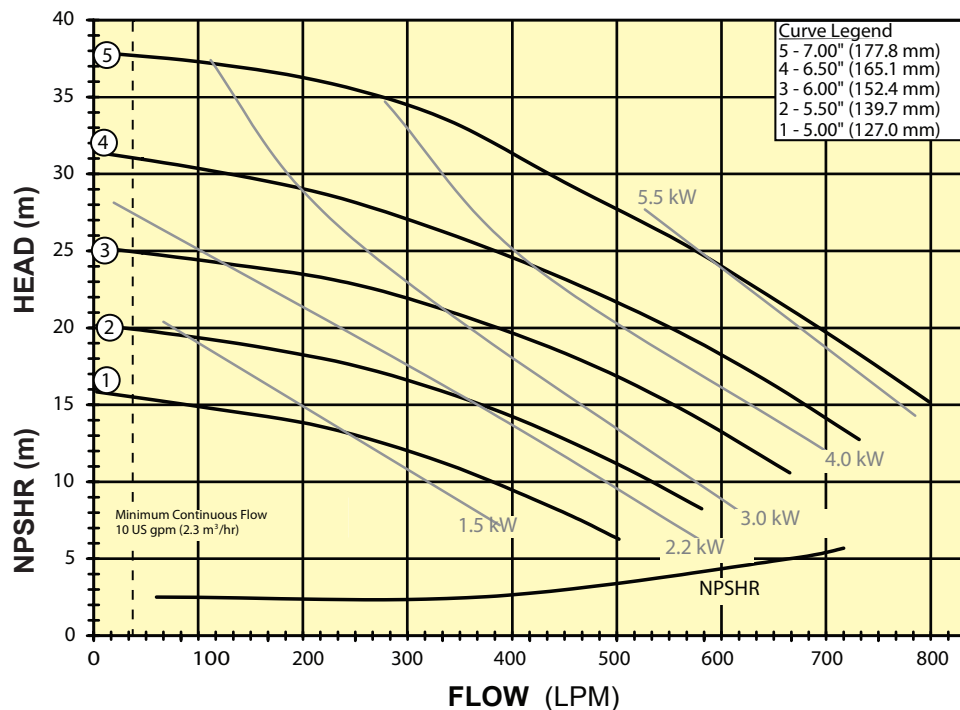
Standard models are constructed of glass-fiber reinforced polypropylene or carbon-fiber reinforced PVDF for suction casing, separator plate, inner volute, magnet liner and impeller. Impeller magnets are encapsulated in unfilled polypropylene or unfilled PVDF. The front and rear thrust

rings and shaft are high purity, fluoride resistant alumina ceramic. The impeller thrust ring is molybdenum disulfide filled PTFE. Standard bushing is carbon and the casing 'O' ring is Viton. Maximum pump pressure; 90 PSI (6.2 bar). Motors are continuous-duty and have a 1.15 service factor.

## FES3-60Hz (3450 RPM) - FLOODED SUCTION



## FES3-50Hz (2950 RPM) - FLOODED SUCTION





## TO ORDER, use Price Code Number

**For standard 60 HZ 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 FES3

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	
1	FES3MPVGC 1A-D5.0	51-1711-A	FES3MKVGC 1A-D5.0	51-1811-A	1.19
2	FES3MPVGC 2B-D7.5	51-1722-B	FES3MKVGC 2B-D7.5	51-1822-B	1.30
3	FES3MPVGC 3B-D10.0	51-1732-C	FES3MKVGC 3B-D10.0	51-1832-C	1.35
4	FES3MPVGC 4B-D15.0	51-1742-D	FES3MKVGC 4B-D15.0	51-1842-D	1.37
5	FES3MPVGC 5B-D15.0	51-1752-D	FES3MKVGC 5B-D15.0	51-1852-D	1.04

\* For higher specific gravity or reduced flow, refer to HP required. Then refer to Table II and construct Model and Price Code Number accordingly

**TABLE II**

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.

**EXAMPLE: PUMP + IMPELLER + FRAME + MOTOR = PRICE CODE NO.**  
 FES3MPVGC + 3 + B + -D7.5 = 51-1732-B

### PUMP<sup>1</sup>

MODEL NUMBER	PCN
FES3 MPVGC Polypropylene	51-17
FES3 MKVGC PVDF	51-18

### IMPELLER

	FLOW CURVE	ADD TO	
		MODEL	PCN
60 HZ	1	1	1
	2	2	2
	3	3	3
	4	4	4
	5	5	5
50 HZ	1	1	1
	2	2	2
	3	3	3
	4	4	4
	5	5	5

<sup>1</sup> For pump only, eliminate motor suffix from price code number.

<sup>2</sup> Three phase —  
 208-230-460V/3/60 or  
 220-380V/3/50

### FRAME SIZE

### MOTOR<sup>2</sup>

	HP/KW	FRAME SIZE	ADD TO		THREE PHASE	
			MODEL	PCN	MODEL	PCN
60 Hz	5.0	182/4 TC	A	1	-D5.0	-A
	7.5	213/15 TC	B	2	-D7.5	-B
	10.0	213/15 TC	B	2	-D10.0	-C
	15.0	213/15 TC	B	2	-D15.0	-D
50 Hz	3.0/2.2	90 - B14	C	3	-DM2.2	-E
	4.0/3.0	100 - B14	D	4	-DM3.2	-K
	5.5/4.0	112 - B14	E	5	-DM4.2	-G
	7.5/5.5	132 - B5	F	6	-DM5.5	-H
	10.0/7.5	132 - B5	F	6	-DM7.5	-J



# SERIES 'FES3' | SELF-PRIMING MAGNETIC COUPLED PUMPS

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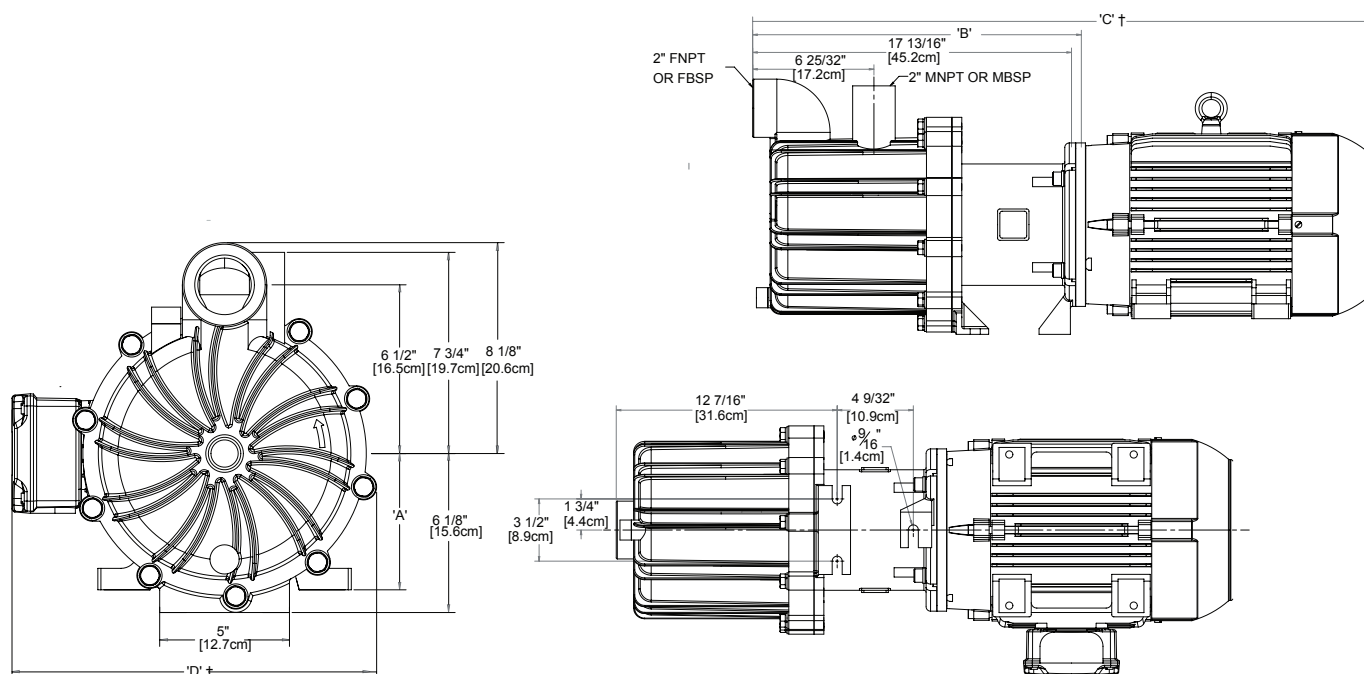
2900 MacArthur Blvd. Northbrook, IL. USA 60062 [www.serfilco.com](http://www.serfilco.com) (800) 323 - 5431

## OPTIONAL, use Price Code Number

DESCRIPTION	ADD OR CHANGE MODEL	ADD TO PCN
O-RING: (Change V in Model) EPDM	-L	-1
Bushing: (Change C in Model) Teflon	-T	-T
CONNECTIONS:		
BSP Threads	-P	-P
Union	-U	-U
Flange	-F	-F

DESCRIPTION	ADD OR CHANGE MODEL	ADD TO PCN
SPECIALS:		
SiC (bushing, thrust ring, shaft)	-S	-S
Non-Sparking ring	-N	-N
EXP MOTOR		
Also requires Non-Sparking ring	-X-N	-XN
575V MOTOR	-575	-575

## DIMENSIONS — IN (MM)



Motor Frame	A	B	C <sup>†</sup>	D <sup>†</sup>	Weight - lbs. [kg]	
					PP	PVDF
NEMA 184 T C	4-1/2" [11.4 cm]	17-13/16" [45.2 cm]	31-1/16" [78.9 cm]	12-15/32" [31.7 cm]	46 [20.9]	52 [23.6]
NEMA 213/215	5-1/4" [13.3 cm]	18-11/32" [46.6 cm]	34-11/16" [88.1 cm]	14-1/32" [35.7 cm]	51 [23.1]	57 [ 25.9]
IEC 90 w/ B 14 or B 5	3-17/32" [9.0 cm]	18-11/16" [47.5 cm]	29-11/16" [75.4 cm]	11-11/16" [29.7 cm]	54 [29.7]	60 [27.2]
IEC 100 w/ B 14 or B 5	3-15/16" [10.0 cm]	18-11/16" [47.5 cm]	31-1/8" [79.1 cm]	12-1/8" [30.8 cm]	54 [24.5]	60 [27.2]
IEC 112 w/ B 14 or B 5	4-13/32" [ 11.2 cm]	18-11/16" [47.5 cm]	31-7/8" [81.0 cm]	12-1/8" [30.8 cm]	54 [24.5]	60 [ 27.2]
IEC 132 w/ B 14 or B 5	5-3/16" [ 13.0 cm]	18-3/4" [ 47.6 cm]	34-27/32" [88.5 cm]	14-3/16" [36.0 cm]	57 [25.9]	63 [28.6]

Note: Dimensions and weights are for reference only. Weights listed are for pump only. Motor weight not included.

<sup>†</sup>Varies with motor manufacturer.