



SERFILCO®

Chemical resistant pumps & filters engineered for industry

BULLETIN
P-520
10/19/2020
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SERIES 'FE3' | MAGNETIC PUMPS



EFFICIENCY, RELIABILITY AND PERFORMANCE

WASTES / ACIDS

CHEMICALS / PLATING

PHOTOGRAPHIC ETCHING

- **Flows to 200 GPM or 160 ft. TDH @ 60 Hz**
(700 LPM or 41 m @ 50 Hz)
- **Non-metallic solution contact**
Glass reinforced polypropylene or
carbon reinforced PVDF
(See a chemical resistance chart)
- **High operating efficiency – up to 63%**
- **Extended dry run capability**
- **Powerful rare earth magnets**
Provide sure coupling to 1.8 S.G.
- **Choice of connections – NPT or BSP threads, flanges or unions**
- **Accepts standard motors NEMA or IEC metric**

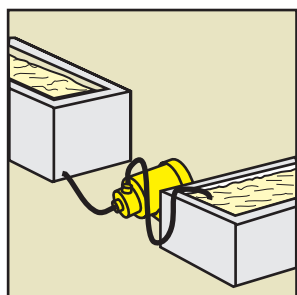
Series 'FE3' magnetic coupled pumps are seal-less and "leak-proof", providing total solution containment. They are available in a choice of two different corrosion resistant materials for a wide range of chemical and temperature compatibility and are ideal for handling even the most difficult applications.

The Series 'FE3' magnetic coupled pumps offer extremely high operating efficiencies for their size; up to 63%. This technological advancement results in smaller motor horsepower and means lower energy consumption and operating costs over the long life cycle of the pump.

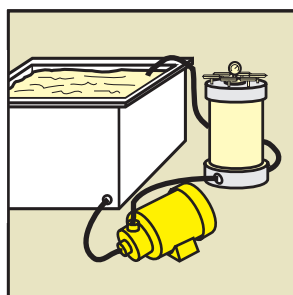
These pumps utilize powerful rare earth, neodymium, magnets which allow them to operate at full flow with a full size impeller while handling liquids over 1.8 specific gravity.

Additionally the Series 'FE3' 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.

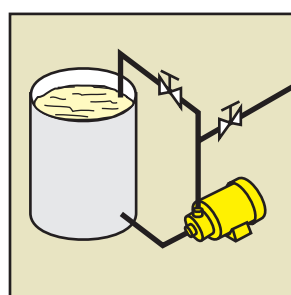
Their innovative and highly efficient design, and low energy consumption make these pumps one of the most versatile and economical centrifugal pumps on the market.



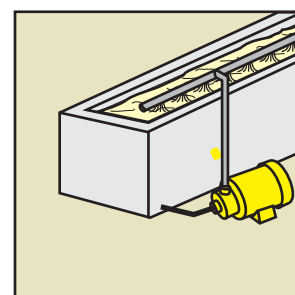
WASTE TREATMENT



FILTRATION



MIXING and
TRANSFER PUMPING



RECIRCULATION

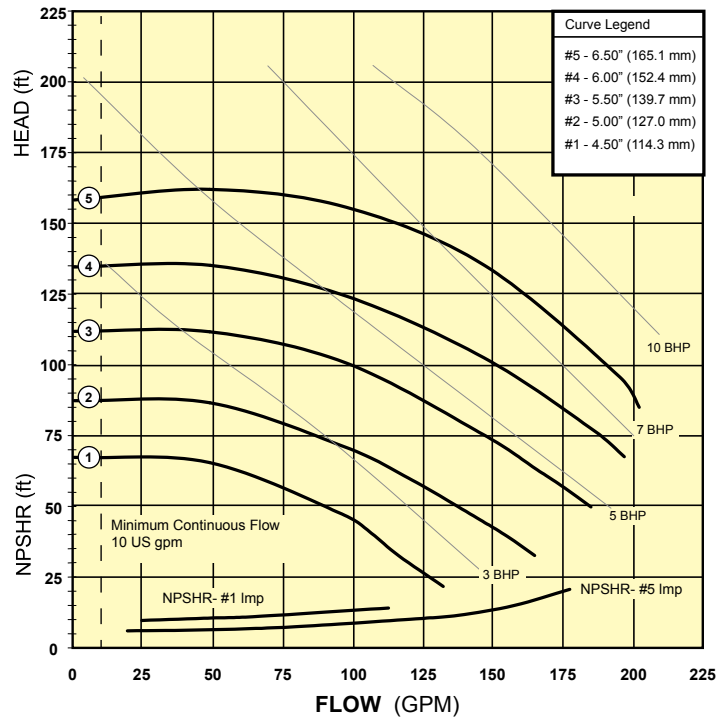


Standard models are constructed of glass-fiber reinforced polypropylene or carbon-fiber reinforced PVDF for suction casing, magnet liner and impeller. Impeller magnets are encapsulated in unfilled polypropylene or unfilled PVDF. The front and rear thrust rings and shaft are high purity,

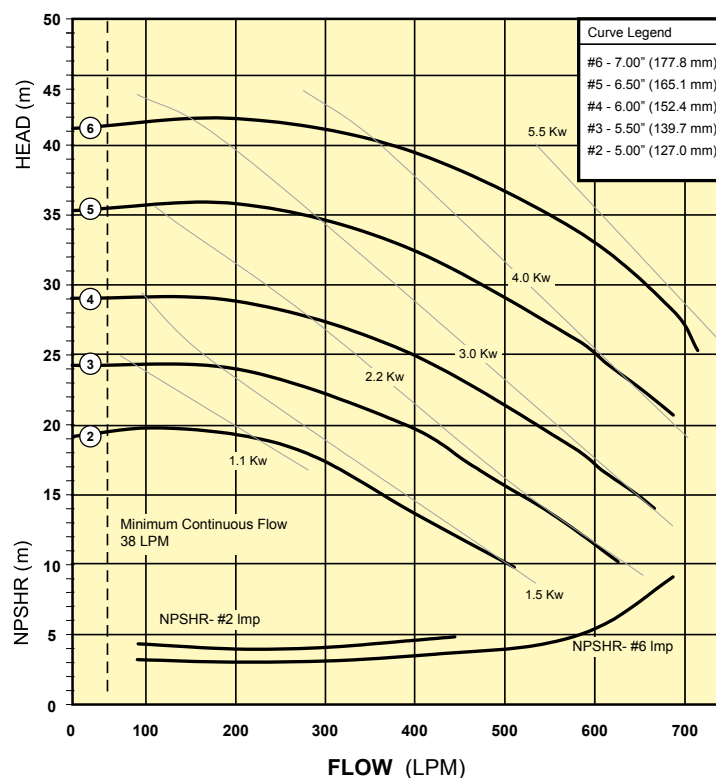
fluoride resistant alumina ceramic. The impeller thrust ring is molybdenum disulfide filled PTFE. Standard bushing is carbon and the casing 'O' ring is viton. Maximum pump pressure; 90 PSI (6.2 bar).

Motors are continuous-duty and have a 1.5 service factor.

FE3 - 60 Hz - 3450 RPM



FE3 - 50 Hz - 2950 RPM





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For standard 60HZ 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

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	FE3MPVGC 1A-D3.0	51-1511-A	FE3MKVGC 1A-D3.0	51-1611-A	1.16
2	FE3MPVGC 2A-D5.0	51-1521-B	FE3MKVGC 2A-D5.0	51-1621-B	1.32
3	FE3MPVGC 3B-D7.5	51-1532-C	FE3MKVGC 3B-D7.5	51-1632-C	1.53
4	FE3MPVGC 4B-D10.0	51-1542-D	FE3MKVGC 4B-D10.0	51-1642-D	1.45
5	FE3MPVGC 5B-D15.0	51-1552-E	FE3MKVGC 5B-D15.0	51-1652-E	1.53

* 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.
FE3MPVGC + 3 + B + -D5.0 = 51-1532-B

PUMP¹

MODEL NUMBER	PCN
FE3 MPVGC Polypropylene	51-15
FE3 MKVGC PVDF	51-16

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	2	2	2
	3	3	3
	4	4	4
	5	5	5
	6	6	6

¹ For pump only eliminate motor suffix from price code number.

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

FRAME SIZE

MOTOR²

	HP/KW	FRAME SIZE	ADD TO		THREE PHASE	
			MODEL	PCN	MODEL	PCN
60 HZ	3.0	182/4 TC	A	1	-D3.0	A
	5.0	182/4 TC	A	1	-D5.0	B
	7.5	213/15 TC	B	2	-D7.5	C
	10.0	213/15 TC	C	2	-D10.0	D
	15.0	213/15 TC	C	2	-D15.0	E
50 Hz	2.0/1.5	90-B14	C	3	-DM1.5	F
	3.0/2.2	90-B14	C	3	-DM2.2	G
	4.0/3.0	100-B14	D	4	-DM3.2	H
	5.5/4.0	112-B14	E	5	-DM4.2	J
	7.5/5.5	132-B5	F	6	-DM5.5	K
	10.0/7.5	132-B5	F	6	-DM7.5	L



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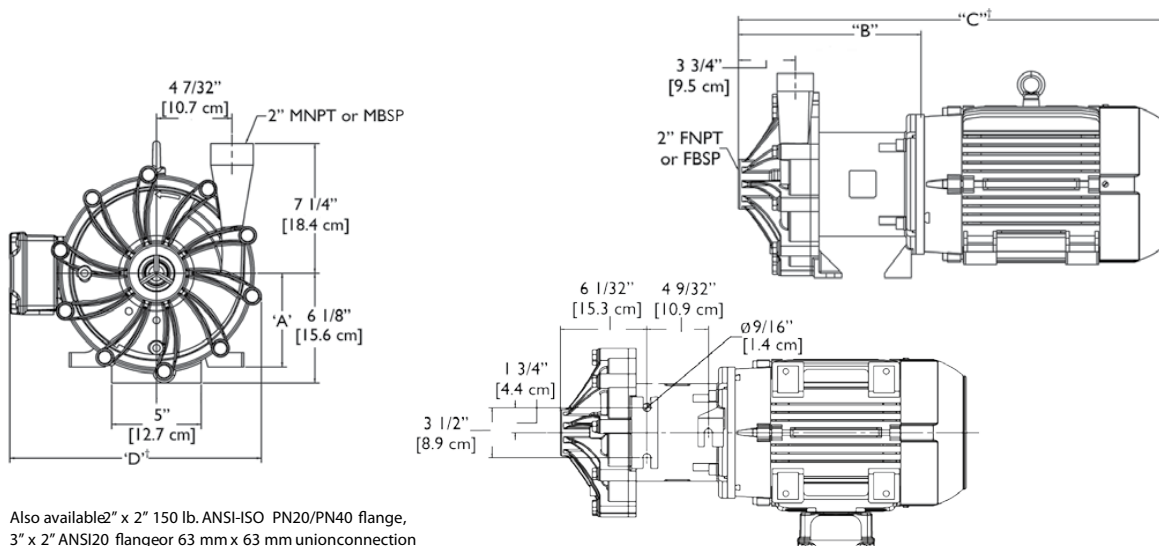
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OPTIONAL, use Price Code Number

DESCRIPTION	ADD OR CHANGE MODEL	ADD TO PCN
O-RING: (Change V in Model)		
EPDM	-L	-1
Simriz	-Z	-3
Kalrez	-K	-4
Bushing: (Change C in Model)		
Teflon	-T	-T

DESCRIPTION	ADD OR CHANGE MODEL	ADD TO PCN
CONNECTIONS:		
BSP threads	-B	-B
Union	-U	-U
Flange	-F	-F
SPECIALS:		
SiC (bushing, thrust ring, shaft)	-S	-S
Hastelloy shaft	-H	-H
Titanium hardware	-M	-M
Non-Sparking ring	-N	-N
EXP MOTOR		
Also requires Non-Sparking ring	-X-N	-XN

DIMENSIONS



Also available 2" x 2" 150 lb. ANSI-ISO PN20/PN40 flange,
3" x 2" ANSI20 flange or 63 mm x 63 mm union connection

Motor Frame	A	B	C [†]	D [†]	Weight - lbs. [kg]	
					PP	PVDF
NEMA 184 T C	4-1/2" [11.4 cm]	11-13/32" [29.0 cm]	26-7/16" [67.2 cm]	12-15/32" [31.7 cm]	40 [18.1]	44 [20.0]
NEMA 213/215 T C	5-1/4" [13.3 cm]	12" [30.5 cm]	28-5/16" [71.9 cm]	14-1/32" [35.7 cm]	45 [20.4]	49 [22.2]
IEC 90 w/B14 or B5	3-17/32" [9.0 cm]	12-5/16" [31.2 cm]	23-5/16" [59.2 cm]	11-11/16" [29.7 cm]	48 [21.8]	52 [23.6]
IEC 100 w/B14 or B5	3-15/16" [10.0 cm]	12-5/16" [31.2 cm]	24-23/32" [62.8 cm]	12-1/8" [30.8 cm]	48 [21.8]	52 [23.6]
IEC 112 w/B14 or B5	4-13/32" [11.2 cm]	12-5/16" [31.2 cm]	25-15/32" [64.7 cm]	12-1/8" [30.8 cm]	48 [21.8]	52 [23.6]
IEC 132 w/B14 or B5	5-3/16" [13.0 cm]	12-3/8" [31.4 cm]	28-15/32" [72.3 cm]	14-3/16" [36.0 cm]	51 [23.1]	55 [24.9]

Note: Contact factory for dimension on flanged or union models. Dimensions and weights are for reference only.

[†]Varies with motor manufacturer