

**SERFILCO®****SERIES 'HF' | HORIZONTAL PUMPS**2900 MacArthur Blvd. Northbrook, IL. USA 60062 [www.serfilco.com](http://www.serfilco.com) (800) 323 - 5431BULLETIN  
P-208\_D  
SEPT 2011

*Available with optional flange connections and long-coupled.*

### HIGH FLOW, HIGH TDH ANSI DIMENSIONAL HIGH EFFICIENCY /LOW ENERGY USAGE

- **Flows to 400 U.S. GPM or 160 ft. TDH @ 60 Hz**  
(1250 L/min or 37 m @ 50 Hz)
- **Non-metallic solution contact**  
**High-temperature polypropylene, CPVC, or PVDF**  
(Refer to a chemical resistance chart)
- **Centrifugal – quiet, vibration free**
- **Choice of single or double mechanical seal**  
with EPDM or Viton® elastomers
- **Choice of long or close-coupled**
- **Chemical Duty motor – standard**  
Sealed oversized bearings, cast iron end bells, corrosion resistant two-part epoxy coating, stainless steel nameplate
- **ANSI dimensional — with optional flanges**

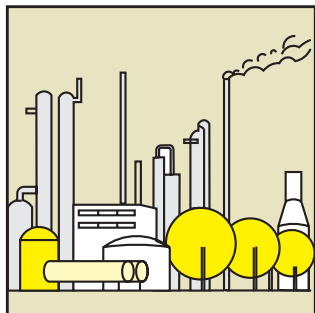
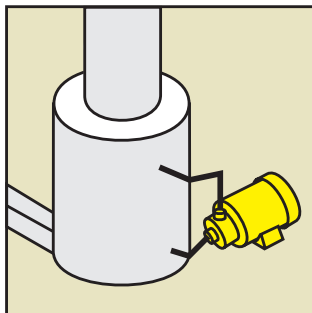
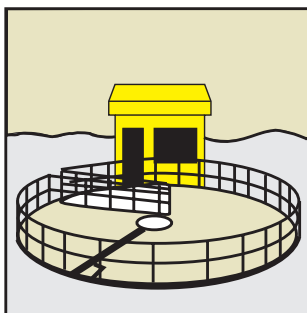
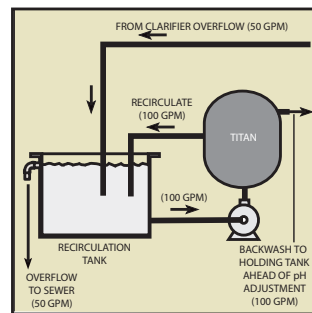
The **Series 'HF' Horizontal Pump** represents the next generation of molded pumps from SERFILCO. The 'HF' retains a robust design and non-metallic solution contact to meet the most demanding applications while providing the choice of materials of construction and economy found in all of our molded pumps.

The 'HF' is offered in a choice of SERFILCO exclusive high-temperature polypropylene, CPVC, or PVDF construction and is ANSI dimensional with the optional flanged connections.

The totally enclosed impeller is molded to close tolerances which allows peak horsepower efficiency across a broad range of operational flow and head requirements.

The external mechanical seal and impeller sleeve design isolates metal components to provide non-metallic solution contact with the pumped liquid. The standard (M8) seal assembly has silicon carbide seal faces and is the most durable and longest lasting mechanical seal available. Double mechanical seal models require water lubrication of the seal faces and allow the pump to be used for solutions containing abrasives, high salt concentrations and for electroless plating solutions.

### TYPICAL APPLICATIONS

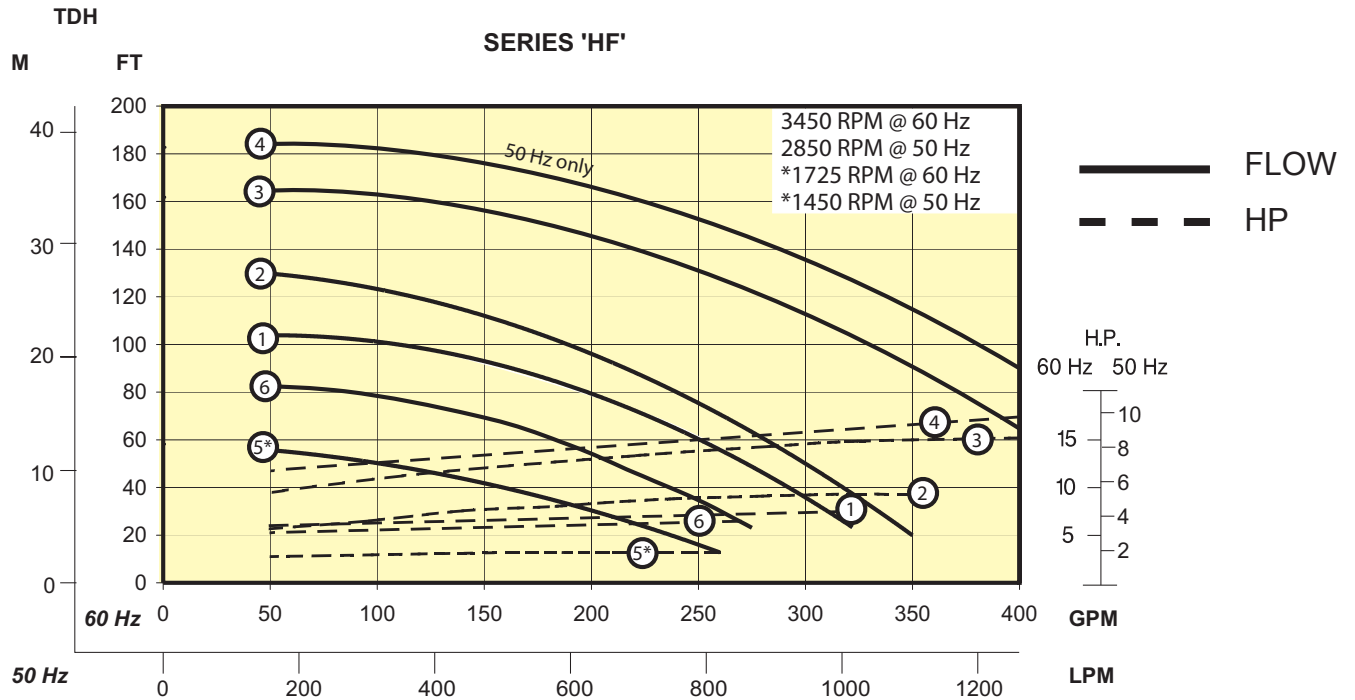
**PETROCHEMICAL****– FUME SCRUBBING  
– COOLING TOWER****– WASTE TREATMENT  
– PROCESS WATER****FILTER SYSTEM**



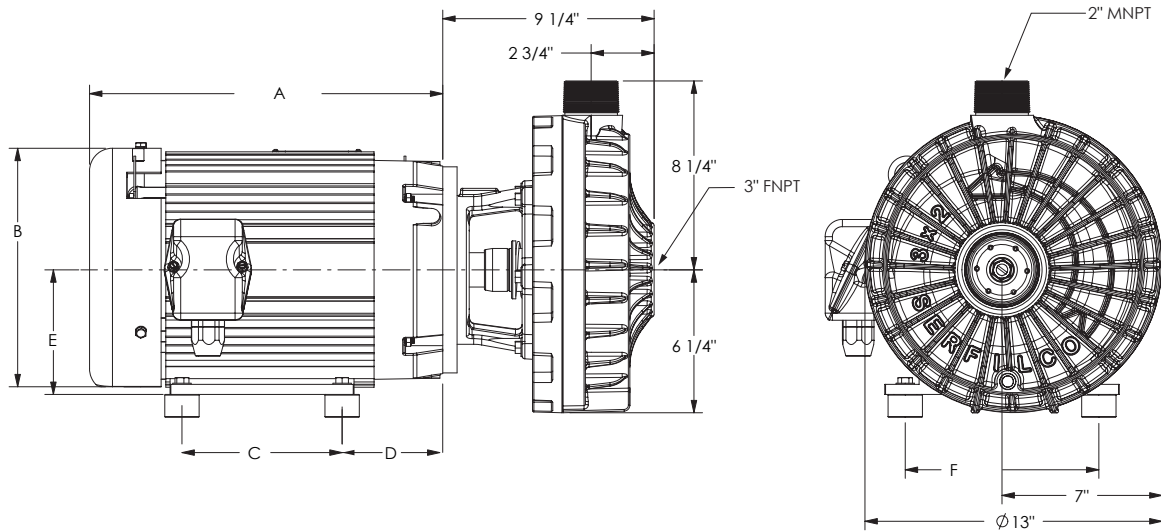
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## DIMENSIONS



MOTOR FRAME	HP	DIMENSIONS in. (mm)					
		A*	B*	C	D	E*	F
184TC	5.0	14.0(356)	8.7(221)	5.5(140)	2.8(71)	4.5(114)	7.5(191)
213TC	7.5	15.5 (394)	10.4(263)	5.5(140)	3.5(89)	5.3(135)	8.5(216)
215TC	10.0	15.4(390)	10.4(263)	7.0(178)	4.4(111)	5.5(140)	8.5(216)
215TC	15.0	15.4(390)	10.4(263)	7.0(178)	4.4(111)	5.5(140)	8.5(216)

\* Motor dimensions will vary with motor manufacturer



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Pumps are molded of SERFILCO exclusive high-temperature polypropylene, CPVC, or PVDF and have sleeved stainless steel shafts for non-metallic solution contact. All models have an enclosed impeller and externally mounted Type 21 mechanical seal with silicon carbide seal faces. ANSI 150 lb. flange connections are optional. O-rings are either EPDM or Viton.

External hardware not in liquid contact is stainless steel. Motor is coated with two-part epoxy.

A double mechanical seal is recommended for solutions containing abrasives, high temperature and other critical service.

### TO ORDER use Price Code Number

**FOR STANDARD PUMP-MOTOR COMBINATION, SELECT MODEL FROM TABLE I.  
FOR CUSTOM PUMP-MOTOR COMBINATION, SELECT FROM TABLE II ON PAGE 4**

**TABLE I**      **STANDARD MODELS**

From performance curves graph, select flow curve number providing the desired performance. Then match to Model Number listed below. Standard models include silicon carbide single mechanical seal. EPDM elastomers are standard with CPVC or polypropylene. Viton is standard with PVDF. Motor HP is non-overloading at full capacity.

#### 60 Hz MODELS

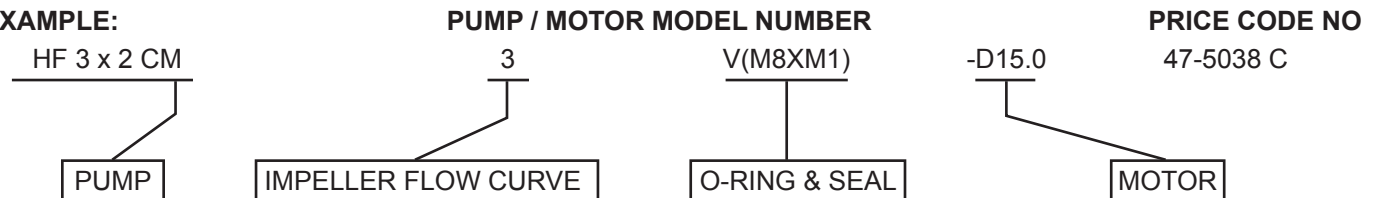
FLOW CURVE	MODEL NUMBER	PRICE CODE NO.	MODEL NUMBER	PRICE CODE NO.	MODEL NUMBER	PRICE CODE NO.
	CPVC		POLYPROPYLENE		PVDF	
1	HF3x2CM1L(M8)-D7.5	47-5011A	HF3x2PM1L(M8)-D7.5	47-5111A	HF3x2KM1V(M8)-D7.5	47-5217A
2	HF3x2CM2L(M8)-D10.0	47-5021B	HF3x2PM2L(M8)-D10.0	47-5121B	HF3x2KM2V(M8)-D10.0	47-5227B
3	HF3x2CM3L(M8)-D15.0	47-5031C	HF3x2PM3L(M8)-D15.0	47-5131C	HF3x2KM3V(M8)-D15.0	47-5237C
5	HF3x2CM5L(M8)-H5.0	47-5051D	HF3x2PM5L(M8)-D5.0	47-5151D	HF3x2KM5V(M8)-H5.0	47-5257D
6	HF3x2CM6L(M8)-D7.5	47-5061A	HF3x2PM6L(M8)-D7.5	47-5161A	HF3x2KM6V(M8)-D7.5	47-5267A

#### 50 Hz MODELS

FLOW CURVE	MODEL NUMBER	PRICE CODE NO.	MODEL NUMBER	PRICE CODE NO.	MODEL NUMBER	PRICE CODE NO.
	CPVC		POLYPROPYLENE		PVDF	
1	HF3x2CM1L(M8)-D7.5-50	47-5011E	HF3x2PM1L(M8)-D7.5-50	47-5111E	HF3x2KM1V(M8)-D7.5-50	47-5217E
2	HF3x2CM2L(M8)-D7.5-50	47-5021E	HF3x2PM2L(M8)-D7.5-50	47-5121E	HF3x2KM2V(M8)-D7.5-50	47-5227E
3	HF3x2CM3L(M8)-D10.0-50	47-5031F	HF3x2CM4L(M8)-D10.0-50	47-5131F	HF3x2KM3V(M8)-D10.0-50	47-5237F
4	HF3x2CM4L(M8)-D10.0-50	47-5041F	HF3x2CM4L(M8)-D10.0-50	47-5141F	HF3x2KM4V(M8)-D10.0-50	47-5247F
5	HF3x2CM5L(M8)-H5.0-50	47-5051G	HF3x2PM5L(M8)-D5.0-50	47-5151G	HF3x2KM5V(M8)-H5.0-50	47-5257G
6	HF3x2CM6L(M8)-D7.5-50	47-5061E	HF3x2PM6L(M8)-D7.5-50	47-5161E	HF3x2KM6V(M8)-D7.5-50	47-5267E

**TABLE II****CUSTOM MODELS**

To determine pump model for a specified gpm, TDH, material and specific gravity (SG), select performance point on curve. Determine required HP by moving vertically to corresponding number dotted line. Read the required HP at right ordinate and multiply by SG Select pump, O-ring, mechanical seal, and motor to construct Model and Price Code No.

**EXAMPLE:**

PUMP	PRICE CODE NO.
CPVC HF 3x2CM	47-50
POLYPROPYLENE HF 3x2PM	47-51
PVDF HF 3x2 KM	47-52

FLOW CURVE NO.	ADD TO . . .	
	MODEL NO.	PRICE CODE NO.
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

'O'-RING & MECHANICAL SEAL MATERIAL (SOLUTION CONTACT)	ADD TO . . .	
	MODEL NUMBER	PRICE CODE NO.
<b>SINGLE MECHANICAL SEAL</b>		
EPDM SILICON CARBIDE	L(M8)	1
VITON SILICON CARBIDE	V(M8)	7
<b>DOUBLE MECHANICAL SEAL<sup>1</sup></b>		
EPDM SILICON CARBIDE	L(M8xM1)	4
VITON SILICON CARBIDE	V(M8xM1)	8

<sup>1</sup> DRI-STOP 2R is recommended when a double mechanical seal is used. DRI-STOP switch prevents damage to pump due to dry operation. Consult Bulletin A-105

<sup>2</sup> 60 Hz= 208-230/460/3/60  
50 Hz=190-208/380-415/3/50

Hz RPM	NEMA MOTORS <sup>2</sup>	
	HP MODEL NUMBER	PRICE CODE NUMBER
60 Hz 3450	-D7.5 -D10.0 -D15.0	A B C
60 Hz 1725	-H5.0	D
50 Hz 2850	-D7.5-50 -D10.0-50 -D15.0-50	E F H
50 Hz 1450	-H5.0-50	G

**OPTIONS**

DESCRIPTION	ADD TO MODEL	PRICE CODE NO.
Trimmed impeller to meet specified flow	—	47-0084
Flange connections ANSI dimensional	-F	X

LONG COUPLING KIT		
FOR MODEL	FOR MOTOR FRAME	PRICE CODE NO.
HF 3 X 2	182/184T	42-0506
	213/215T	42-0507
Motor mounting		42-0504

LONG COUPLING KIT INCLUDES CAST IRON BEARING PEDESTAL FRAME, BASEPLATE, FLEXIBLE COUPLING, GUARD