

**SERFILCO®****SERIES 'EF' | VERTICAL PUMPS**2900 MacArthur Blvd. Northbrook, IL. USA 60062 www.serfilco.com (800) 323 - 5431BULLETIN
P-316_F
JUNE 2013

*Shown with optional
discharge pipe assembly*

HIGH FLOW, HIGH TDH HIGH EFFICIENCY LOW ENERGY USAGE

- **Flows to 400 U.S. gpm or 170 ft. TDH @ 60 Hz (1250 l/m or 42m @ 50 Hz)**
- **Non-metallic solution contact**
High-temperature polypropylene, CPVC, or PVDF
(See a chemical resistance chart)
- **Pump has no bearings, and can run dry indefinitely**
- **Heavy duty PTFE vapor seal**
Protects motor bearing and end bell.
- **Centrifugal - quiet, vibration free**
- **In-tank or Out-of-tank**
- **Chemical duty motor (7.5 - 15.0 HP)**
Sealed oversized bearings. Cast iron end bells with vapor seal. Corrosion resistant two-part epoxy coating. Stainless steel nameplate.

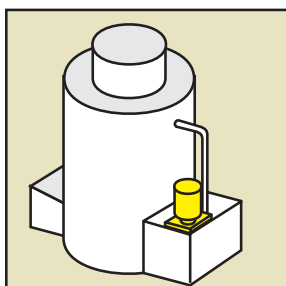
The Series 'EF' Vertical Pump represents the next generation of molded pumps from SERFILCO with flows to 400 U.S. GPM at 60 Hz. It is a robust design to meet the most demanding applications while providing the economy of operation found in all of SERFILCO's molded pumps.

The 'EF' features a cantilevered, sleeved, stainless steel shaft with vapor seal to provide protection for the motor. The cantilevered shaft eliminates bearings and conventional pump seals, resulting in a pump that can run dry indefinitely without damage. This pump is offered in a choice of SERFILCO exclusive high temperature polypropylene, CPVC, or PVDF construction and, as with

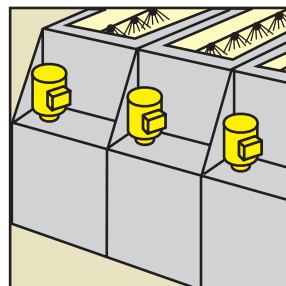
all of SERFILCO's vertical cantilever pumps, provides non-metallic solution contact. A compound impeller prevents liquid from rising in the column even at maximum TDH, while the fully enclosed bottom impeller provides high hydraulic efficiency at low horsepower.

A unique characteristic of these vertical cantilever pumps is their ability to lift liquid with an optional suction extension installed. The pump self primes as long as liquid is at or above the level of the impeller. Once primed the liquid level can be lowered to the end of the suction extension to a maximum depth of 9 ft. (2.7m).

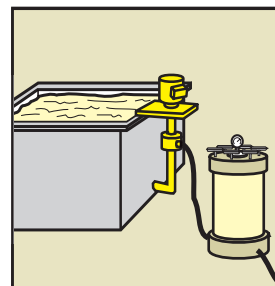
TYPICAL APPLICATIONS



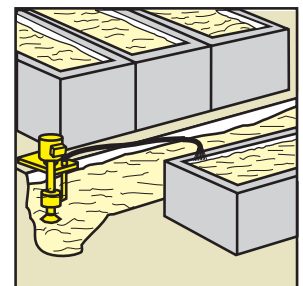
FUME SCRUBBING



**PCB WET
PROCESSING**



**IN-TANK OR OUT-OF-TANK
PUMPING AGITATION and
FILTRATION**



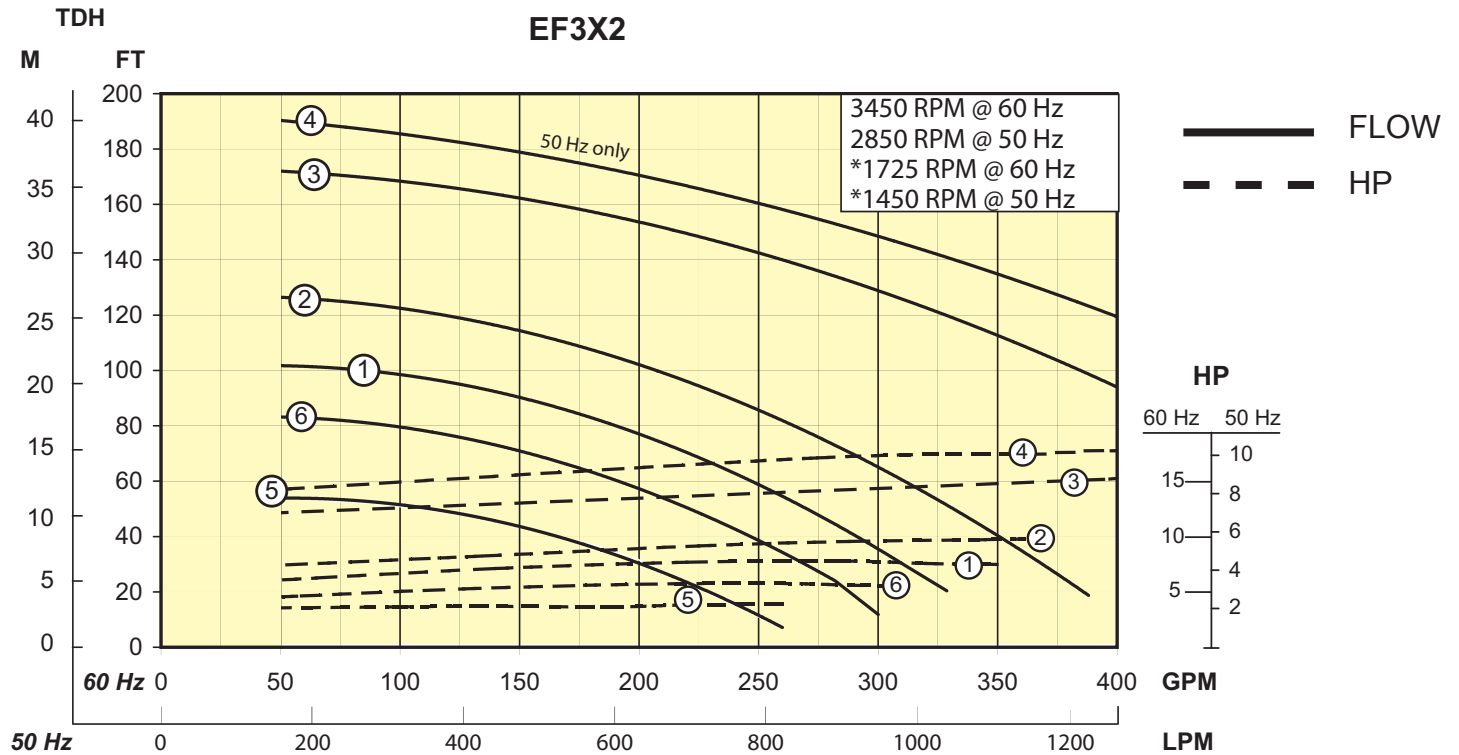
**- SUMP DRAINING
- WASTE TREATMENT**



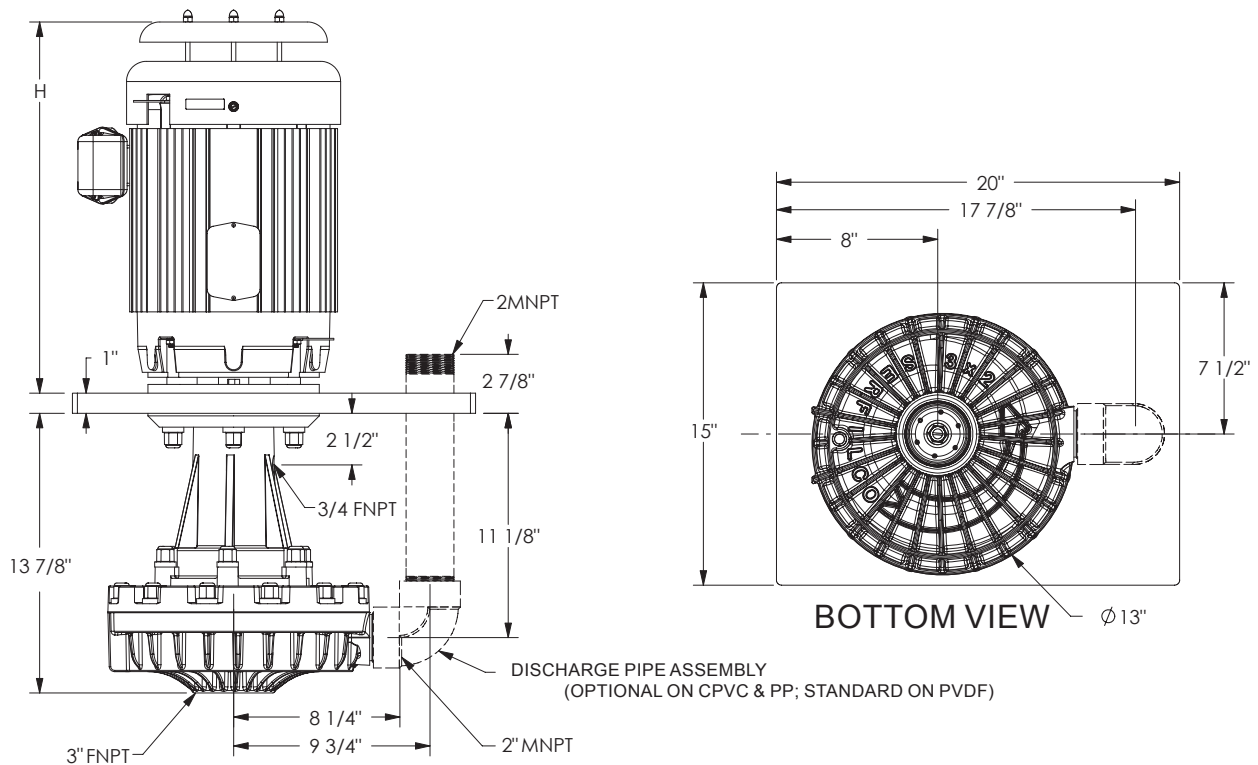
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DIMENSIONS - Inches (mm)





Pump models are molded of SERFILCO exclusive high temperature polypropylene, CPVC, or PVDF with a sleeved stainless steel shaft for non-metallic solution contact. The 1" thick mounting plate is polypropylene or PVC and includes a PTFE vapor seal. Standard "O"-rings are EPDM on CPVC and polypropylene pumps and Viton® on PVDF pumps. The compound impeller is fully enclosed for maximum efficiency. The suction strainer is standard on CPVC and

polypropylene pumps and optional on PVDF pumps. The discharge pipe assembly is standard on PVDF pumps and optional on polypropylene and CPVC pumps. The Chemical Duty, NEMA "C" face motors are 208-230-460V/3/60 @ 3450 or 1725 RPM and 190-208-380-415 V/3/50 @ 2850 or 1450 RPM. Motors are coated with two-part epoxy. These pumps can be used with up to a 9 ft (2.7 m) suction extension under certain conditions.

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. Motor HP is non-overloading at full capacity. Standard models include EPDM (ethylene propylene) elastomers.

60 Hz MODELS						
FLOW CURVE	MODEL NUMBER	PRICE CODE NO.	MODEL NUMBER	PRICE CODE NO.	MODEL NUMBER	PRICE CODE NO.
	CPVC		POLYPROPYLENE		PVDF	
1	EF 3X2 -1SC-D7.5	45-2011	EFP 3X2 -1SC-D7.5	45-2211	EFK 3X2 -1SC-D7.5	45-2411
2	EF 3X2 -2SC-D10.0	45-2022	EFP 3X2 -2SC-D10.0	45-2222	EFK 3X2 -2SC-D10.0	45-2422
3	EF 3X2 -3SC-D15.0	45-2033	EFP 3X2 -3SC-D15.0	45-2233	EFK 3X2 -3SC-D15.0	45-2433
5	EF 3X2 -5SC-H7.5	45-2054	EFP 3X2 -5SC-H7.5	45-2254	EFK 3X2 -5SC-H7.5	45-2454
6	EF 3X2 -6SC-D7.5	45-2061	EFP 3X2 -6SC-D7.5	45-2261	EFK 3X2 -6SC-D7.5	45-2461

50 Hz MODELS						
FLOW CURVE	MODEL NUMBER	PRICE CODE NO.	MODEL NUMBER	PRICE CODE NO.	MODEL NUMBER	PRICE CODE NO.
	CPVC		POLYPROPYLENE		PVDF	
1	EF 3X2 -1SC-D7.5-50	45-2015	EFP 3X2 -1SC-D7.5-50	45-2215	EFK 3X2 -1SC-D7.5-50	45-2415
2	EF 3X2 -2SC-D7.5-50	45-2025	EFP 3X2 -2SC-D7.5-50	45-2225	EFK 3X2 -2SC-D7.5-50	45-2425
3	EF 3X2 -3SC-D10.0-50	45-2036	EFP 3X2 -3SC-D10.0-50	45-2236	EFK 3X2 -3SC-D10.0-50	45-2436
4	EF 3X2 -4SC-D10.0-50	45-2046	EFP 3X2 -4SC-D10.0-50	45-2246	EFK 3X2 -4SC-D10.0-50	45-2446
5	EF 3X2 -5SC-H7.5-50	45-2057	EFP 3X2 -5SC-H7.5-50	45-2257	EFK 3X2 -5SC-H7.5-50	45-2457
6	EF 3X2 -6SC-D7.5-50	45-2065	EFP 3X2 -6SC-D7.5-50	45-2265	EFK 3X2 -6SC-D7.5-50	45-2465



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TABLE II CUSTOM MODELS

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

EXAMPLE: PUMP + IMPELLER + MOTOR = PRICE CODE NO.
EF 3x2 + -1SC + -D7.5 = 45-2011

PUMP		
MODEL	MATERIAL & COLUMN LENGTH	PRICE CODE NO.
EF 3x2	CPVC	45-20
EFP 3x2	PP	45-22
EFK3x2	PVDF	45-24

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

MOTOR ¹			
VOLTAGE	STD. HP (kW)	ADD TO . . .	
		MODEL NO.	PRICE CODE NO. ¹
208-230/460/3/60 3450 RPM	7.5	-D 7.5	1
	10	-D 10.0	2
	15	-D 15.0	3
208-230/460/3/60 1725 RPM	7.5	-H 7.5	4
220/380/440/3/50 190/380/3/50 2850 RPM	7.5 (5.5)	-D 7.5 -50	5
	10.0 (7.5)	-D 10.0 -50	6
	15.0 (11.0)	-D 15.0 -50	8
220/380/440/3/50 1450 RPM	7.5 (5.5)	-H 7.5 -50	7

MOTOR (NEMA)			
DIMENSIONS			
DIAMETER		HEIGHT (H)	
INCHES	mm	INCHES	mm
10-1/4	260	15-5/16	389
10-3/8	264	18-3/8	467
10-3/8	264	18-3/8	467
10-1/4	260	15-9/16	395
10-1/4	260	15-9/16	395
10-3/8	264	18-3/8	467
10-3/8	264	18-3/8	467
10-1/4	260	15-9/16	395

PUMP + MOTOR	
SHIPPING WEIGHTS ²	
LBS.	kg.
160	73
215	98
215	98
190	86
190	86
215	98
190	86

¹ To order pump without motor, use 0 for motor Price Code No.

² Pump end only: 60 lbs (27 kg.)

OPTIONAL

DESCRIPTION	ADD SUFFIX TO MODEL	ADD TO OR SEPARATE PRICE CODE NO.
Viton "O"-rings installed in CPVC or PP pumps	-V	V
EPDM "O"-rings in PVDF pumps	-L	L
PVDF impeller & shaft sleeve for CPVC pump (installed). For continuous operation above 180°F	-K	K
Through hole in mounting plate	-MPH	H
Alternate discharge location to match EHM2	-EHM	M

DESCRIPTION	CPVC		POLYPROPYLENE		PVDF	
	ADD SUFFIX TO MODEL	USE SEPARATE PRICE CODE NO.	ADD SUFFIX TO MODEL	USE SEPARATE PRICE CODE NO.	ADD SUFFIX TO MODEL	USE SEPARATE PRICE CODE NO.
Discharge pipe assembly	-DPA	45-1202	-DPAP	45-1202-PP	—	—
Suction strainer	—	—	—	—	-STK	45-1203-K
Suction extension w/ strainer						
12"	-K12	46-0081	-K12P	46-0081-PP	-K12K	46-0081-K
24"	-K24	46-0082	-K24P	46-0082-PP	-K23K	46-0082-K
36"	-K36	46-0083	-K36P	46-0083-PP	-K36K	46-0083-K