

**SERFILCO®****SERIES 'HE' | HORIZONTAL PUMPS**2900 MacArthur Blvd. Northbrook, IL. USA 60062 [www.serfilco.com](http://www.serfilco.com) (800) 323 - 5431BULLETIN  
P-201\_U  
FEB 2013

## ENERGY SAVING CENTRIFUGAL PUMPS FOR:

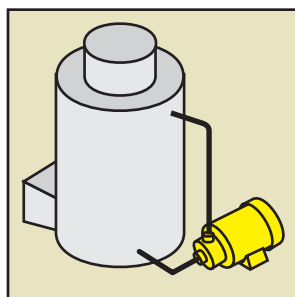
**ACID / AQUEOUS / CAUSTIC  
CHEMICAL / ETCHING / PHOTOGRAPHIC  
PLATING / SCRUBBING / WASTES**

- **Flows to 175 U.S. GPM or 130 ft. TDH @ 60 Hz**  
(552 LPM or 28 M @ 50 Hz)
- **Non-metallic solution contact**  
High temperature polypropylene, CPVC, PVDF or ECTFE (*Refer to a chemical resistance chart*)
- **Single or double mechanical seal,**  
carbon/ceramic, or silicon carbide with EPDM or Viton® elastomers
- **Centrifugal - quiet, vibration-free**
- **NPT or metric connections available**
- **Pump casing indexes to six directions of discharge**
- **Chemical duty motor (1.0 - 7.5 HP)**  
Sealed oversized bearings, liquid/vapor seal and slinger, cast iron end bells, corrosion resistant two-part epoxy finish, stainless steel nameplate, 1.15 service factor at 50 or 60 Hz.

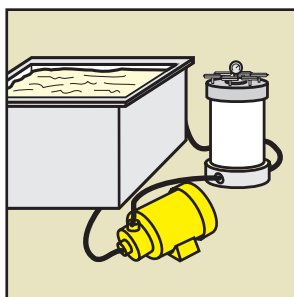
Here is a pump capable of "total" chemical resistance, both internally and externally with its non-metallic construction of all wetted components, choice of seal assembly and elastomer materials. The use of engineered plastics in a choice of materials provide excellent chemical compatibility for the most demanding applications.

The totally enclosed impeller is molded to close tolerances which allow this pump to operate at peak horsepower efficiency across a broad range of operational flow/head requirements

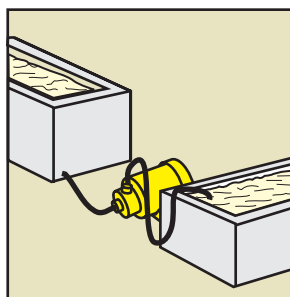
The external mechanical seal and impeller sleeve design isolates metal components to provide non-metallic solution contact with the pumped solution. The standard (M8) seal assembly has silicon carbide seal faces and is the most durable and longest lasting mechanical seal available. The double mechanical seal models require water lubrication of the seal faces and allows the pump to be used for solutions containing abrasives, high salt concentrations and for electroless plating solutions. Either Viton or EPDM elastomers are available on the 'HE' pump.



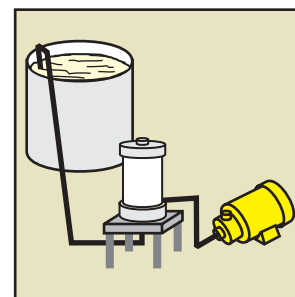
**PRESSURE  
SPRAYING**



**FILTER  
SYSTEM**



**WASTE  
TREATMENT**



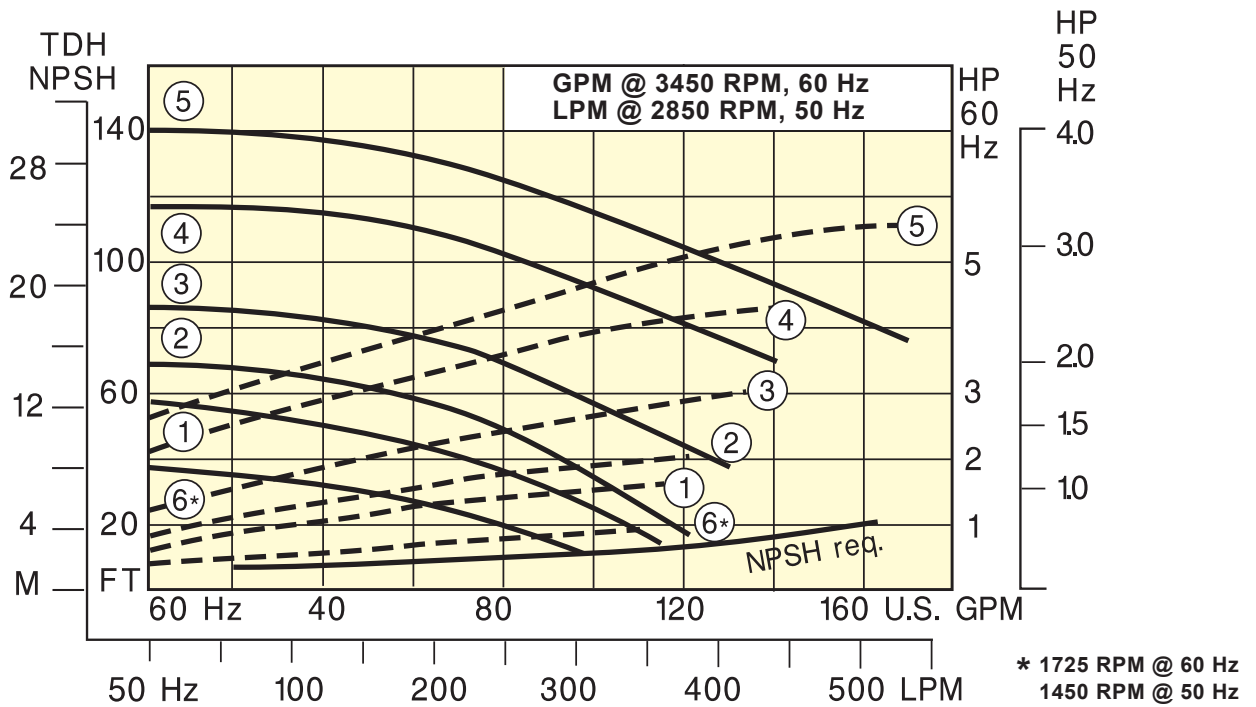
**SOLUTION TRANSFER  
w/PRIMING CHAMBER**



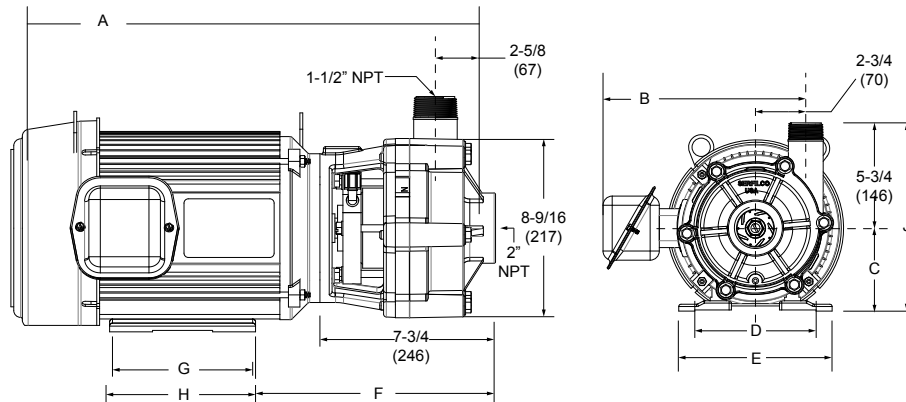
# SERIES 'HE' | Specifications and Performance Curves

P-201\_U  
Page 2

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## DIMENSIONS in inches (mm)



DIMENSIONS for NEMA motors are in inches and those for metric motors are in mm.

										MOTOR WT.*
NEMA										Lbs.
MOTOR HP	A	B	C	D	E	F	G	H	J	
1.5 (& 1 @ 1725 RPM)	16.94	8.63	3.5	5.5	6.75	10.5	4	4.75	9.25	43
2 (& 1.5 @ 1725 RPM)	18	8.63	3.5	5.5	6.75	10.5	5	5.75	9.25	44
3	19.63	9.63	4.5	7.5	9	11.25	4.5	5.5	10.25	50
5	21	9.63	4.5	7.5	9	11.25	5.5	6.5	10.25	65
7.5	21	9.63	4.5	7.5	9	11.25	5.5	6.5	10.25	110

METRIC										Kg.
MOTOR KW	A	B	C	D	E	F	G	H	J	
1.5 (90S frame)	496	212	90	140	170	307	100	125	236	23
2.2 (90L frame)	521	212	90	140	170	307	125	150	236	25
3.0 (100 frame)	549	236	100	160	197	314	140	172	246	30

\*For shipping weight, add 15 lbs (6.8 Kg.) to motor weight.



Standard models are constructed of CPVC, polypropylene, PVDF, or ECTFE with threaded connections. The motor shaft is protected by the impeller sleeve assembly. Elastomers are EPDM or Viton. Impellers are enclosed. The mechanical seal is type 21, externally mounted with stainless steel components not in solution contact. A double mechanical seal is recommended for solutions

containing abrasives and for high temperature or other critical service. Close coupled motors are NEMA 'JM' or metric (IEC) standard. The motors designated NEMA can operate on 50 or 60 Hz at full rated horsepower. Consult Application Engineering Department for BSP fittings or adapters.

## ORDERING INFORMATION

**For standard CPVC, PP, PVDF, and ECTFE pump-motor combination, select model from TABLE 1.**

**For other pump-motor combinations, select from TABLE II.**

**TABLE I STANDARD MODELS**

Select flow curve number providing the desired performance. Then match to Model Number listed below. Standard models include silicon carbide single mechanical seal with EPDM or Viton elastomers. Motor HP is non-overloading at full capacity with 1.1 specific gravity fluids.

FLOW CURVE NO.	CPVC/EPDM	PRICE CODE NUMBER	POLYPROPYLENE**/ EPDM	PRICE CODE NUMBER
	MODEL NO.		MODEL NO.	
1	H2 x 1½ CE1L(M8) -D1.5	42-0110-A	H2 x 1½ PE1L(M8) -D1.5	42-0410-A
2	H2 x 1½ CE2L(M8) -D2.0	42-0120-B	H2 x 1½ PE2L(M8) -D2.0	42-0420-B
3	H2 x 1½ CE3L(M8) -D3.0	42-0130-C	H2 x 1½ PE3L(M8) -D3.0	42-0430-C
4	H2 x 1½ CE4L(M8) -D5.0	42-0140-D	H2 x 1½ PE4L(M8) -D5.0	42-0440-D
5	H2 x 1½ CE5L(M8) -D7.5	42-0150-E	H2 x 1½ PE5L(M8) -D7.5	42-0450-E
6	H2 x 1½ CE6L(M8) -H1.0	42-0160-F	H2 x 1½ PE6L(M8) -H1.0	42-0460-F

FLOW CURVE NO.	PVDF/Viton	PRICE CODE NUMBER	ECTFE/EPDM	PRICE CODE NUMBER
	MODEL NO.		MODEL NO.	
1	H2 x 1½ KE1V(M8) -D1.5	42-0318-A	H2 x 1½ HE1L(M8) -D1.5	42-0610-A
2	H2 x 1½ KE2V(M8) -D2.0	42-0328-B	H2 x 1½ HE2L(M8) -D2.0	42-0620-B
3	H2 x 1½ KE3V(M8) -D3.0	42-0338-C	H2 x 1½ HE3L(M8) -D3.0	42-0630-C
4	H2 x 1½ KE4V(M8) -D5.0	42-0348-D	H2 x 1½ HE4L(M8) -D5.0	42-0640-D
5	H2 x 1½ KE5V(M8) -D7.5	42-0358-E	H2 x 1½ HE5L(M8) -D7.5	42-0650-E
6	H2 x 1½ KE6V(M8) -H1.0	42-0368-F	H2 x 1½ HE6L(M8) -H1.0	42-0660-F

\*\* Polypropylene models are glass reinforced

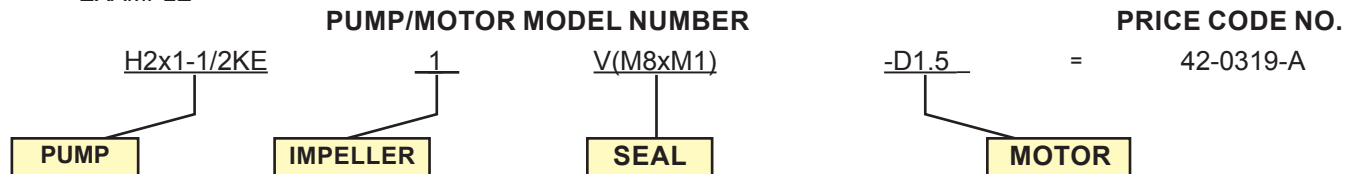


## TO ORDER FROM TABLE II

To determine pump-motor for a selected GPM, TDH and/or specific gravity, select flow/pressure point on curve. Required HP is determined by moving vertically to corresponding dotted line and then horizontally to HP scale. Multiply indicated HP by specific gravity. Select pump materials and mechanical seal(s) and construct Model and Price Code No.

**TABLE II**

EXAMPLE



PUMP	PRICE CODE NO.
CPVC H2 x 1-1/2CE	42-01
PVDF H2 x 1-1/2KE	42-03
POLYPROP. H2 x 1-1/2PE	42-04
ECTFE H2X1-1/2HE	42-06

FLOW CURVE NO.	ADD TO ...	
	MODEL NO.	PRICE
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 CARBON/CERAMIC*	L(M1)	1
EPDM SILICON CARBIDE	L(M8)	0
VITON CARBON/CERAMIC*	V(M2)	2
VITON SILICON CARBIDE	V(M8)	8
<b>DOUBLE MECHANICAL SEAL**</b>		
EPDM CARBON/CERAMIC*	L(M1xM1)	5
EPDM SILICON CARBIDE	L(M8xM1)	4
VITON CARBON/CERAMIC*	V(M2xM1)	6
VITON SILICON CARBIDE	V(M8xM1)	9

TEFC 208-230/460/3/60 or 190/380-415/3/50		
RPM	NEMA MOTORS	
	ADD TO ...	
	HP MODEL NUMBER	PRICE CODE NUMBER
3450 or 2850	D1.5	A
	D2.0	B
	D3.0	C
	D5.0	D
	D7.5	E
1725 or 1450	H1.0	F
	H1.5	G

\* Ceramic is silica free

\*\* ADRI-STOP pressure switch is available to prevent damage to pump due to dry operation; consult Bulletin A-105.

## OPTIONAL

DESCRIPTION	PRICE CODE NUMBER
FLANGE CONNECTIONS	CPVC 42-0200
ANSI 150 Lbs. (ASA 150) 2"x1-1/2"	PVDF 42-0211
(not installed)	Polypropylene 42-0218
STAINLESS STEEL SHAFT	42-0230
METRIC PIPE ADAPTER SETS	Consult Application Sales Dept.

LONG COUPLED KIT		
MODEL	FOR MOTOR FRAME	PRICE CODE NUMBER
LCK-1	182T & 184T	42-0201-A
LCK-2	143T & 145T	42-0202-A
LCK-3	56	42-0203-A
LCK-4	182 & 184	42-0205-A
MOTOR MOUNTING & ALIGNMENT		42-0204

Long-coupled kit includes cast iron bearing pedestal frame, fiberglass reinforced channel (23-1/2" x 10" x 2-3/4"), flexible coupling and guard, and stainless steel shaft and fasteners. (Order pump separately)

