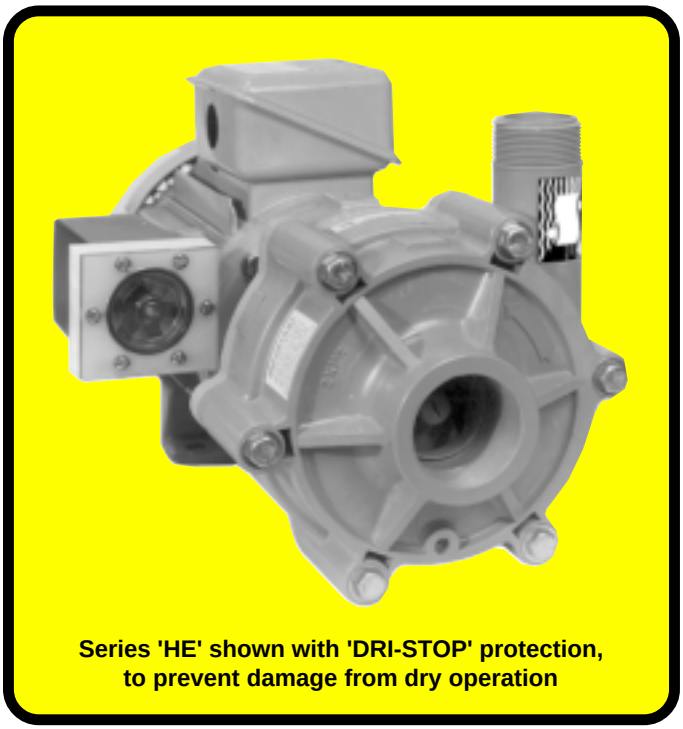
SERFILCO

SERIES 'HE' HORIZONTAL PUMPS

Heavy duty centrifugal pumps for severe applications



Series 'HE' shown with 'DRI-STOP' protection, to prevent damage from dry operation

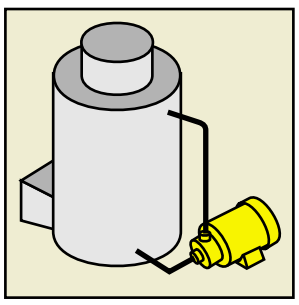
Acid / Aqueous / Caustic Chemical / Etching / Photographic Plating / Scrubbing / Wastes

- **Flows to 175 U.S. GPM or 130 ft. TDH @ 60 Hz** (552 LPM or 28 M @ 50 Hz)
- **Non-metallic solution contact** PPP high temperature polypropylene, CPVC or PVDF *(Refer to a chemical resistance chart)*
- **Single or double mechanical seal,** carbon/ceramic, or silicon carbide 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.

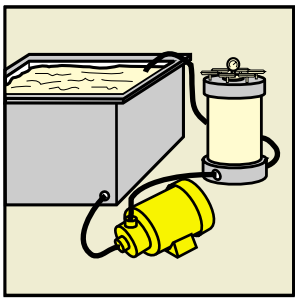
Here is a pump capable of "total" chemical resistance, both internally and externally with its non-metallic construction of all wetted components, choice of seal assembly and elastomer materials. Engineering grade plastics provide application compatibility with a variety of chemicals that would be corrosive to other materials of construction.

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.

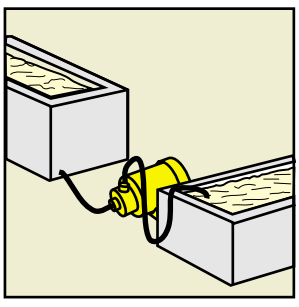
The external mechanical seal and impeller sleeve assembly eliminate any metal in contact with the solution pumped. The unique design of the mechanical seal isolates metal components from solution contact. The double mechanical seal model requires water lubrication of the seal faces and allows the pump to be used for solutions containing abrasives, a high salt concentration and for electroless plating solutions. The standard (M8) seal assembly is silicon carbide and designed for slurries, abrasive solutions and for solutions which contain fluorides. The M8 seal is the most durable and longest lasting mechanical seal available. Viton or EPDM elastomers are available on the 'HE' pump.



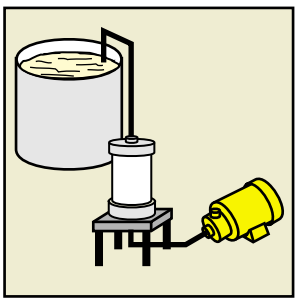
PRESSURE SPRAYING



FILTER SYSTEM



WASTE TREATMENT

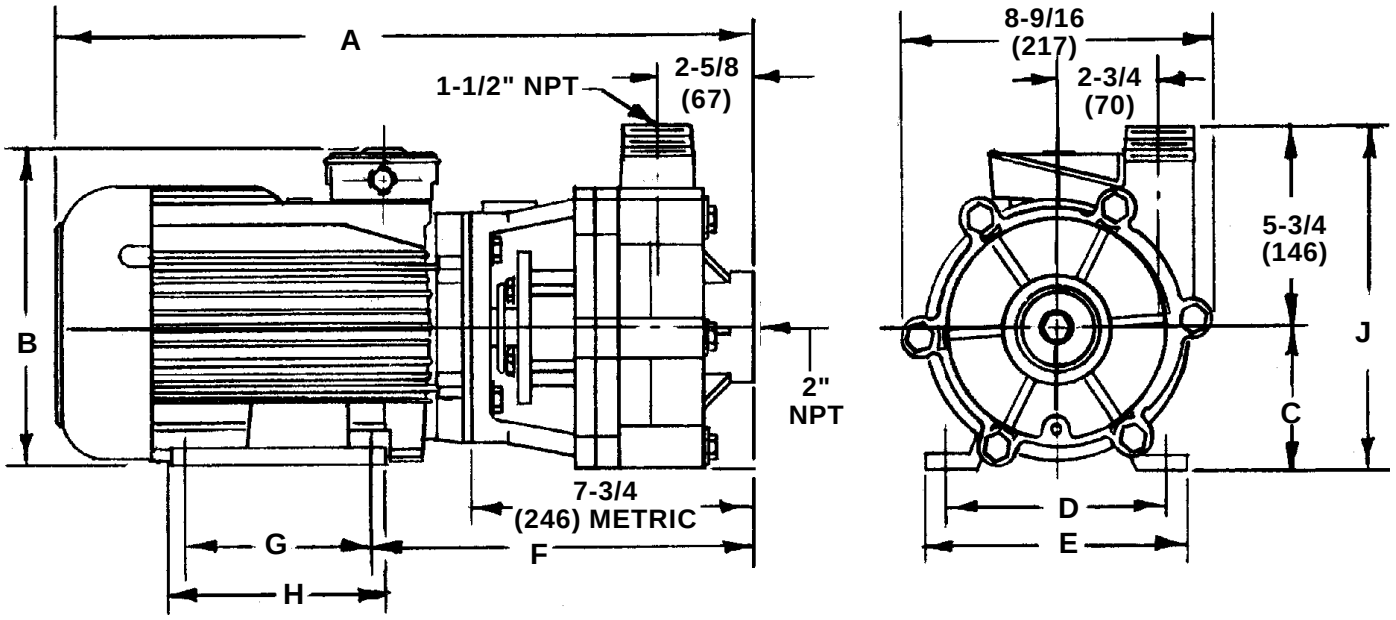


SOLUTION TRANSFER w/PRIMING CHAMBER

SERIES 'HE' PUMPS Dimensions

Standard models are constructed of CPVC, polypropylene or PVDF 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 Sales Department for BSP fittings or adapters.

DIMENSIONS in inches (mm)



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

	MOTOR HP	A	B	C	D	E	F	G	H	J	MOTOR WT.* Lbs.
NEMA	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

	MOTOR KW	A	B	C	D	E	F	G	H	J	Kg.
METRIC	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.

SERIES 'HE' PUMPS Flow Curves and Ordering Information

Select performance point on curve, determine required HP by moving vertically from GPM to corresponding number dotted line. Read the required HP at right ordinate and multiply by S.G. This is the HP required.

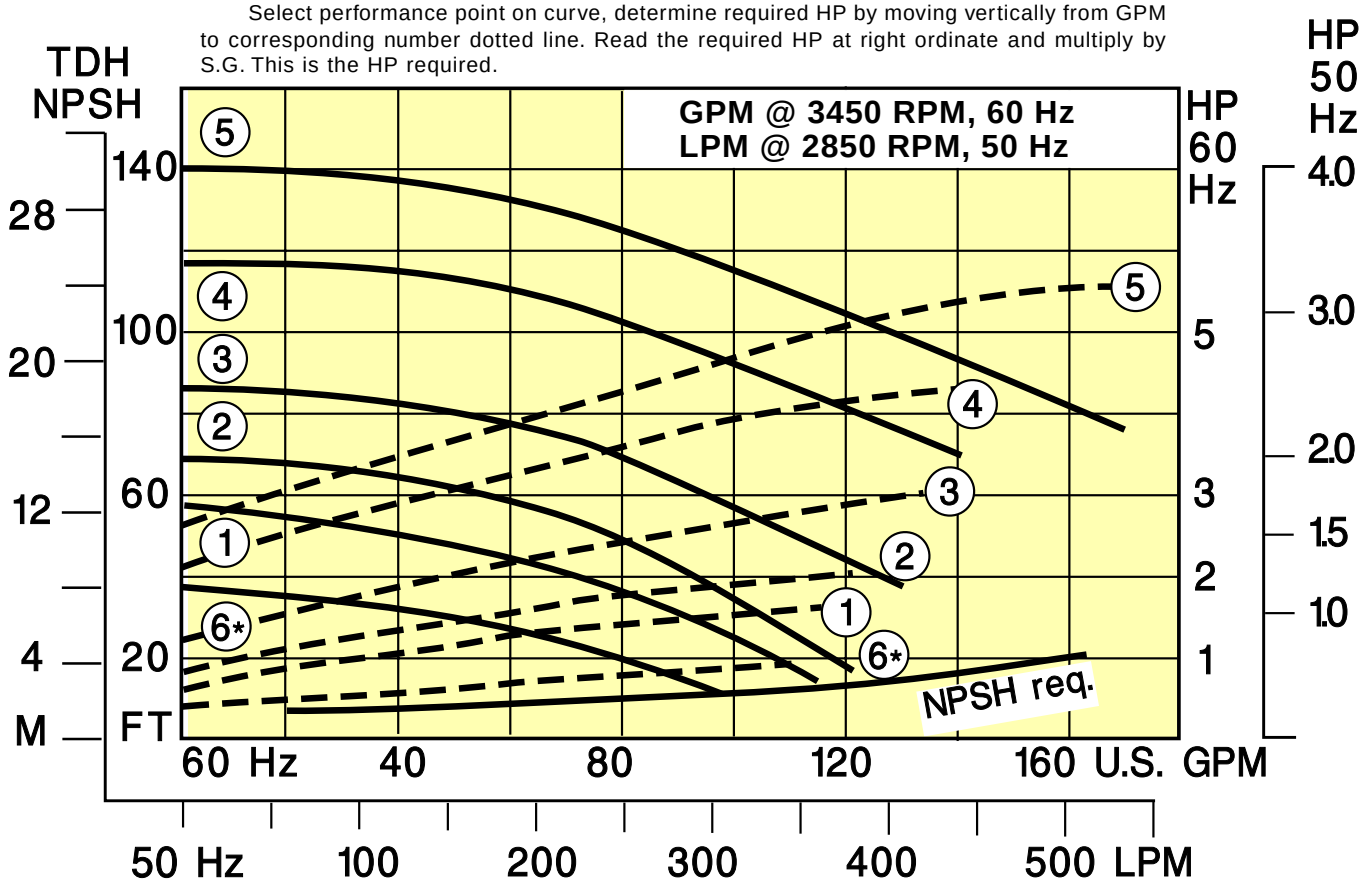


***TABLE I* - Standard models with SINGLE silicon carbide mechanical seal and Viton elastomers**

FLOW CURVE NO.	CPVC MODEL NO.	PRICE CODE NUMBER	PVDF MODEL NO.	PRICE CODE NUMBER	POLYPROPYLENE ** MODEL NO.	PRICE CODE NUMBER
1	H2 x 1½ CE1V(M8) -D1.5	42-0118A	H2 x 1½ KE1V(M8) -D1.5	42-0318A	H2 x 1½ PE1V(M8) -D1.5	42-0418A
2	H2 x 1½ CE2V(M8) -D2.0	42-0128B	H2 x 1½ KE2V(M8) -D2.0	42-0328B	H2 x 1½ PE2V(M8) -D2.0	42-0428B
3	H2 x 1½ CE3V(M8) -D3.0	42-0138C	H2 x 1½ KE3V(M8) -D3.0	42-0338C	H2 x 1½ PE3V(M8) -D3.0	42-0438C
4	H2 x 1½ CE4V(M8) -D5.0	42-0148D	H2 x 1½ KE4V(M8) -D5.0	42-0348D	H2 x 1½ PE4V(M8) -D5.0	42-0448D
5	H2 x 1½ CE5V(M8) -D7.5	42-0158E	H2 x 1½ KE5V(M8) -D7.5	42-0358E	H2 x 1½ PE5V(M8) -D7.5	42-0458E
6	H2 x 1½ CE6V(M8) -H1.0	42-0168F	H2 x 1½ KE6V(M8) -H1.0	42-0368F	H2 x 1½ PE6V(M8) -H1.0	42-0468F

***TABLE IA* - Standard models with DOUBLE silicon carbide mechanical seal and Viton elastomers**

FLOW CURVE NO.	CPVC MODEL NO.	PRICE CODE NUMBER	PVDF MODEL NO.	PRICE CODE NUMBER	POLYPROPYLENE ** MODEL NO.	PRICE CODE NUMBER
1	H2 x 1½ CE1V(M8 x M1) -D1.5	42-0119A	H2 x 1½ KE1V(M8 x M1) -D1.5	42-0319A	H2 x 1½ PE1V(M8 x M1) -D1.5	42-0419A
2	H2 x 1½ CE2V(M8 x M1) -D2.0	42-0129B	H2 x 1½ KE2V(M8 x M1) -D2.0	42-0329B	H2 x 1½ PE2V(M8 x M1) -D2.0	42-0429B
3	H2 x 1½ CE3V(M8 x M1) -D3.0	42-0139C	H2 x 1½ KE3V(M8 x M1) -D3.0	42-0339C	H2 x 1½ PE3V(M8 x M1) -D3.0	42-0439C
4	H2 x 1½ CE4V(M8 x M1) -D5.0	42-0149D	H2 x 1½ KE4V(M8 x M1) -D5.0	42-0349D	H2 x 1½ PE4V(M8 x M1) -D5.0	42-0449D
5	H2 x 1½ CE5V(M8 x M1) -D7.5	42-0159E	H2 x 1½ KE5V(M8 x M1) -D7.5	42-0359E	H2 x 1½ PE5V(M8 x M1) -D7.5	42-0459E
6	H2 x 1½ CE6V(M8 x M1) -H1.0	42-0169F	H2 x 1½ KE6V(M8 x M1) -H1.0	42-0369F	H2 x 1½ PE6V(M8 x M1) -H1.0	42-0469F

Notes: Motor HP shown is non-overloading for full flow with 1.1 specific gravity fluids.

See ***Table II*** for additional selections.

* 1725 rpm @ 60 Hz, 1450 rpm @ 50 Hz

** Polypropylene models are glass reinforced

NOTE: S.G. = Specific gravity of liquid pumped.

SERIES 'HE' PUMPS Ordering Information and Optional Equipment

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/MOTOR MODEL NUMBER** **PRICE CODE NO.**

H2x1-1/2KE 1 V(M8xM1) -D1.5 = 42-0319A

PUMP | IMPELLER | SEAL | MOTOR

PUMP	PRICE CODE NO.
CPVC H2 x 1-1/2 CE	42-01
PVDF H2 x 1-1/2KE	42-03
POLYPROP. H2x 1-1/2PE	42-04

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

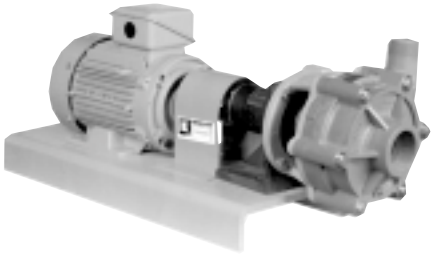
TEFC 208-230/460/3/60 or 190/380-415/3/50 NEMA MOTORS		
RPM	ADD TO . . . HP MODEL NUMBER	ADD TO . . . PRICE CODE NUMBER
3450 or 2850	D1.5	A
	D2.0	B
	D3.0	C
	D5.0	D
	D7.5	E
1725 or 1450	H1.0	F
	H1.5	G

OPTIONAL

DESCRIPTION		PRICE CODE NUMBER
FLANGE CONNECTIONS ANSI 150 Lbs. (ASA 150) 2"x1-1/2" (not installed)	CPVC	42-0200
	PVDF	42-0211
	Polypropylene	42-0218
STAINLESS STEEL SHAFT		42-0358
METRIC PIPE ADAPTER SETS Consult Sales Dept.		

*Ceramic is silica free

** A DRI-STOP pressure switch is available to prevent damage to pump due to dry operation; See Pump Tips & Controls.



For long-coupled pump, contact Sales Dept.

Specifications subject to change without notice.