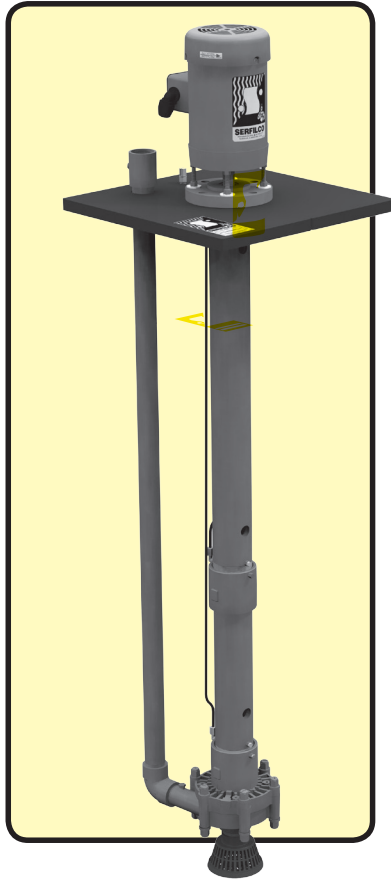


SERIES 'HB' VERTICAL PUMPS

2900 MacArthur Blvd. Northbrook, IL. USA 60062 www.serfilco.com (800) 323 - 5431

BULLETIN
P-302_U
NOV 2010



HIGH EFFICIENCY AND LOW ENERGY USAGE FOR:

WASTES / ACIDS / PLATING / CHEMICALS

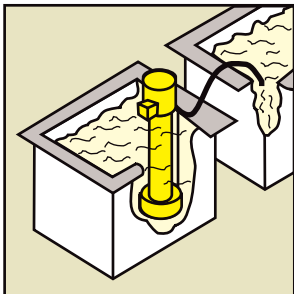
- **Flows to 140 U.S. GPM or 130 ft. TDH @ 60 Hz**
(450 LPM or 28m @ 50 Hz)
- **Corrosion resistant, CPVC construction**
(See a chemical resistance chart)
- **Pump lengths: 2 ft. to 10 ft. (.6m to 3.0m)**
- **Chemical duty motor**
Sealed oversized bearings, cast iron end bells, liquid/vapor seal and slinger, corrosion resistant two-part epoxy finish, stainless steel nameplate, 1.15 service factor at 50 and 60 Hz.
- **Centrifugal — quiet, vibration-free**
- **Shaft vapor seal protects motor bearings and atmosphere**

The Series 'HB' Sump Pump features corrosion resistant construction for deep sumps and chemical transfer. A stainless steel shaft sleeved in CPVC offers unmatched strength and chemical resistance. A vapor seal between the rotating shaft and the pump column protects the motor and motor bearings.

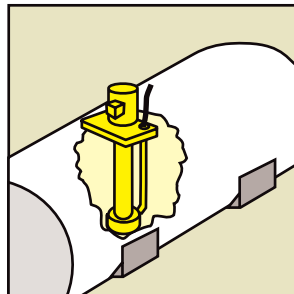
The shaft bearing and liner are positively lubricated with the product being pumped or clean water from a

separate source by means of the bleed line. A spiral flush groove in the rotating bearing ensures a uniform flow of liquid across the bearing surface. The bearing liner is made of a special fluoride-resistant ceramic.

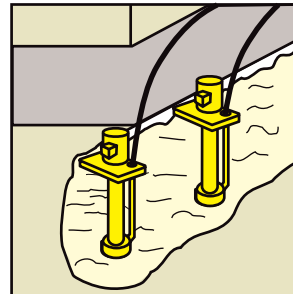
A suction extension can be utilized to pump to depths below impeller level. Thus, a shorter pump can be used, reducing shaft length and the number of bearings required.



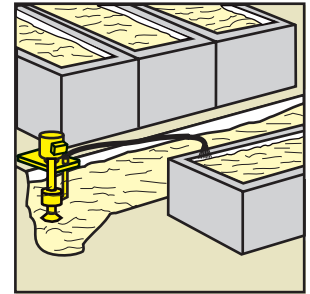
CHEMICAL TRANSFERRING



STORAGE TANK



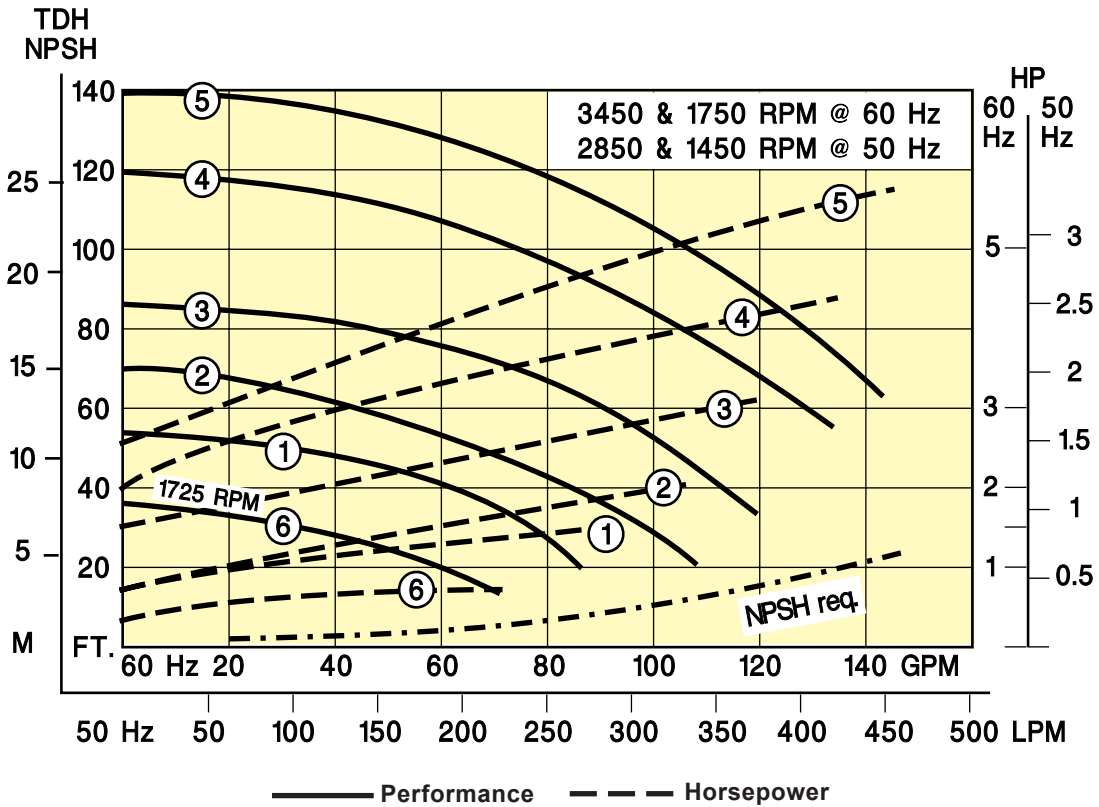
DEEP STANDBY PUMPING
when priming not possible



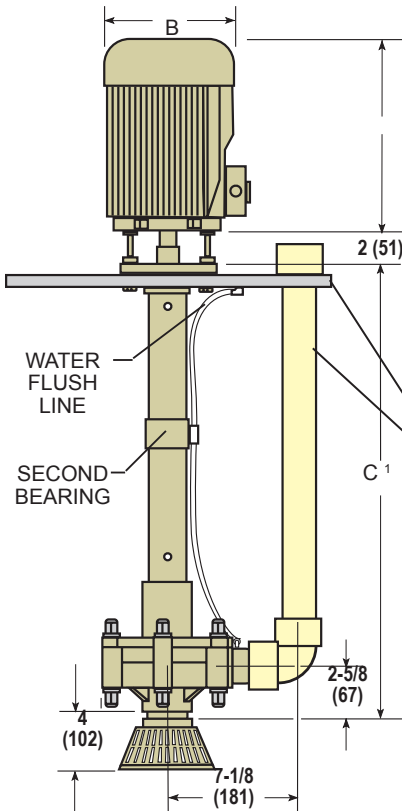
SUMP DRAINING and WASTE TREATMENT

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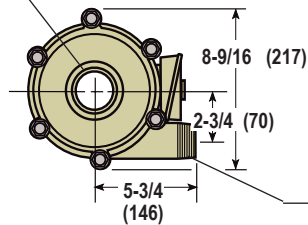
DIMENSIONS - Inches (mm)



HORSE-POWER	RPM @ 60 Hz	NEMA FRAME	A		B		SHIP. WT ²	
			inches	mm	Inches	mm	lbs.	kg.
1.0	1725	143TCZ	9-7/8	251	9-5/8	244	103	47
1.5	1725						102	46
1.5	3450	143TCZ	9-7/8	251	9-5/8	244	102	46
2.0	3450	145TCZ	9-7/8	251	9-5/8	244	106	48
3.0	3450	182TCZ	11-7/8	302	10-3/4	273	116	53
5.0	3450	184TCZ	13-1/4	337	11-1/4	286	138	63
7.5							151	68

- ¹ Pump length (C) and mounting plate dimensions are as ordered
- ² Approx. weight of 2 ft. (.6m) pump with square mounting plate. Add 4½ lbs. (2.0 kg.) per foot (.3m) of additional pump length above 2 feet (.6m).

2" FEMALE NPT SUCTION



1½" MALE NPT DISCHARGE

BOTTOM VIEW

Standard models are constructed of CPVC with high purity chemical resistant graphite or Rulon® (glass filled PTFE) bearing and silica-free ceramic liner for fluoride resistance. Includes polyethylene suction strainer. Elastomer "O"-rings are EPDM (ethylene propylene) with Viton® optional. Impeller is fully enclosed for maximum efficiency. Pump shaft is 303 stainless steel sleeved in CPVC, so complete pump assembly offers non-metallic solution contact except for titanium fasteners at each bearing. Hastelloy® C276 fasteners are optional. Standard pumps are suitable for 140°F (60°C) maximum. High temperature

models to 160°F (71°C) are available as single graphite bearing pumps only. Pump lengths are available as listed in one foot (.3m) increments only. The bleed line provides pressurized water or pumped solution to the bearings. (Each bearing requires 10 PSI.) Standard is external water flush. Product flush may be specified. All models are wet tested before shipment. Series 'HB' pumps can provide up to 9 ft.(2.7m) suction lift under certain conditions. Pump includes 20" x 20" square mounting plate and discharge pipe assembly.

TO ORDER, use Price Code Number

*For standard 24" - 60" pump / motor combinations, select model from TABLE I.
For other combinations, select components from TABLE II.*

TABLE I

FLOW CURVE NO.	24" PUMP		36" PUMP	
	MODEL	PRICE CODE NO.	MODEL	PRICE CODE NO.
1	HB1½CE1-24"C-CG- * °F-D1.5-SD	41-1024 AS	HB1½CE1-36"C-CG- * °F-D1.5-SD	41-1034 AS
2	HB1½CE2-24"C-CG- * °F-D2.0-SD	41-2024 BS	HB1½CE2-36"C-CG- * °F-D2.0-SD	41-2034 BS
3	HB1½CE3-24"C-CG- * °F-D3.0-SD	41-3024 CS	HB1½CE3-36"C-CG- * °F-D3.0-SD	41-3034 CS
4	HB1½CE4-24"C-CG- * °F-D5.0-SD	41-4024 DS	HB1½CE4-36"C-CG- * °F-D5.0-SD	41-4034 DS
5	HB1½CE5-24"C-CG- * °F-D7.5-SD	41-5024 ES	HB1½CE5-36"C-CG- * °F-D7.5-SD	41-5034 ES
6	HB1½CE5-24"C-CG- * °F-H1.0-SD	41-5024 GS	HB1½CE5-36"C-CG- * °F-H1.0-SD	41-5034 GS

FLOW CURVE NO.	48" PUMP		60" PUMP	
	MODEL	PRICE CODE NO.	MODEL	PRICE CODE NO.
1	HB1½CE1-48"C-CGx2- * °F-D1.5-SD	41-1045 AS	HB1½CE1-60"C-CGx2- * °F-D1.5-SD	41-1055 AS
2	HB1½CE2-48"C-CGx2- * °F-D2.0-SD	41-2045 BS	HB1½CE2-60"C-CGx2- * °F-D2.0-SD	41-2055 BS
3	HB1½CE3-48"C-CGx2- * °F-D3.0-SD	41-3045 CS	HB1½CE3-60"C-CGx2- * °F-D3.0-SD	41-3055 CS
4	HB1½CE4-48"C-CGx2- * °F-D5.0-SD	41-4045 DS	HB1½CE4-60"C-CGx2- * °F-D5.0-SD	41-4055 DS
5	HB1½CE5-48"C-CGx2- * °F-D7.5-SD	41-5045 ES	HB1½CE5-60"C-CGx2- * °F-D7.5-SD	41-5055 ES
6	HB1½CE5-48"C-CG- * °F-H1.0-SD	41-5044 GS	HB1½CE5-60"C-CGx2- * °F-H1.0-SD	41-5055 GS

*Include operating temperature in model number.

Registered Trademarks: Rulon - Dixon; Viton - DuPont Dow Elastomers; Hastelloy - Hayness International.

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TABLE II

Determine pump-motor model for a specified GPM, TDH, length, bearing and specific gravity. Select performance point on curve and size HP from corresponding number dotted line vertically above or below performance point. Read required HP at right ordinate and multiply by specific gravity. Select pump model components and Price Code Numbers from Table II.

EXAMPLE:

PUMP + IMPELLER + LENGTH + BRG & LINER + MOTOR/MTG PLATE = PRICE CODE NO.
 HB 1½CE + 2 + 48"C + CRX2-90°F + D2.0 - SD = 41-2042BS

PUMP		IMPELLER			LENGTH						BRG & LINER				MOTOR/MTG PLATE		
MODEL	PRICE CODE NO.	FLOW CURVE NO.	ADD TO ...		FT.	m	RPM	BRGS	ADD TO ...		MATERIAL	NO. OF ADD	TO ...		TEFC - 230-460V/3/50-60 ²		
			MODEL PRICE	CODE NO.					MODEL	PRICE CODE NO.			MODEL	PRICE CODE NO.	RPM	MODEL (HP)	PCN
HB1½CE	41-	1	1	1	2	.6	1725/1450 3450/2850	1	24°C	02	CERAMIC & RULON ¹	1 2 3	CR-*°F CRx2-*°F CRx3-*°F	1 2 3	3450/2850	D1.5_SD D2.0_SD D3.0_SD D5.0_SD D7.5_SD	AS BS CS DS ES
		2	2	2	3	.9	1725/1450 3450/2850	1	36°C	03							
		3	3	3	4	1.2	1725/1450 3450/2850	1 2	48°C	04	CERAMIC & GRAPHITE	1 2 3	CG-*°F CGx2-*°F CGx3-*°F	4 5 6	1725/1450	H1.0_SD H1.5_SD	CS HS
		4	4	4	5	1.5	1725/1450 3450/2850	2	60°C	05							
		5 & 6	5	5	6	1.8	1725/1450 3450/2850	2	72°C	06							
					7	2.1	1725/1450 2850	2	84°C	07							
					8	2.4	1725/1450 2850	3	96°C	08							
					9	2.7	1725/1450	3	108°C	09							
					10	3.0	1725/1450	3	120°C	10							

For BSP fittings or adapters, explosion-proof motors, motor starters, level controls, and Dri-Stop Pressure Switch for external bearing flush, contact Sales Department for appropriate bulletin.

* Include operating temperature in model number.

¹ Rulon for 140°F maximum temperature

² 230-380/415V/3/50

OPTIONAL

DESCRIPTION	ADD SUFFIX TO MODEL	ADD TO PRICE CODE NO.
Viton "O"-rings (installed)	V	V
Hastelloy C276 fasteners	HC	X
High temperature for single bearing pumps to 160°F (71°C). Use graphite bearing.	HT	T
Optional around mounting plate, 20" diameter x 1" thick	change -SD to -CD in model	replace S with C in PCN

DESCRIPTION	ADD SUFFIX TO MODEL	USE SEPARATE PRICE CODE NO.
Suction extension - 2" NPT CPVC pipe, threaded both ends	-K12" -K24" -K36	41-0633 41-0634 41-0635