PRODUCT BROCHURE

VERTICAL HOLLOW SHAFT MOTORS

US DOE Compliant



- US DOE Compliant VHS offering
- Designed for deep well vertical turbine pumps

ENGINEERED TO OUTRUN

ABB's Vertical Hollow Shaft (VHS) motors are purpose-built for vertical turbine pump applications where performance, reliability and longevity are non-negotiable. Engineered with a compact, robust design and optimized for deep well pumping, these motors deliver smooth, efficient power transmission and minimal maintenance in the harshest environments.

With decades of innovation behind every unit, ABB VHS motors combine trusted durability with advanced engineering—driving water, energy and industry forward with confidence.

ABB VHS MOTORS

Efficient, reliable, easy-to-maintain performance

ABB is a trusted global supplier of NEMA Premium® efficiency vertical hollow shaft pump motors, serving OEMs, electric motor distributors, well drillers and municipalities. These inverter-duty motors are built for long-lasting performance, offering low vibration and dependable operation in demanding environments.

Fit for purpose
- Designed for deep well vertical turbine applications, the coupling is at the top of the motor, which allows for easy access to shaft and impeller maintenance
- Machined for 175% extra high thrust capacity on 360 frames and above

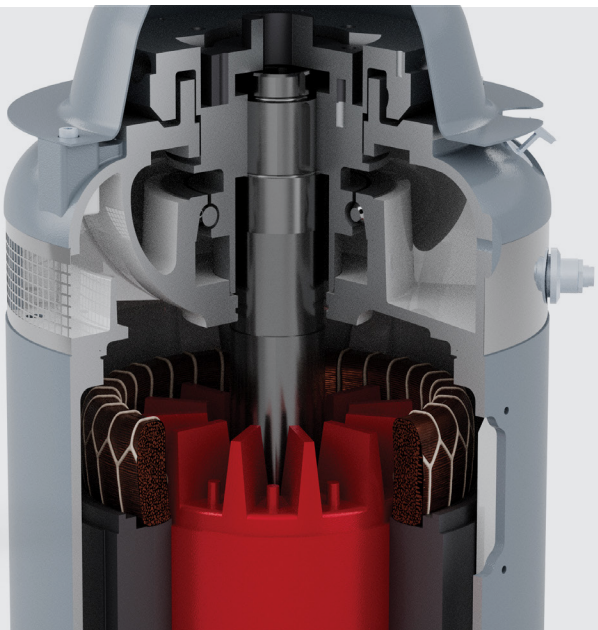
Drop-in design
- Drops into standard NEMA frame vertical hollow shaft motors

Reliability
- UL listed
- Non-reverse ratchet (NRR) design that prohibits a motor and pump from spinning in opposite directions
- Double-stacked bearing for extra high thrust capacity on 440 frames and above

Durability
- Heavy duty cast iron construction
- Class F insulation, Class B rise at full load
- Space heater for harsh environments

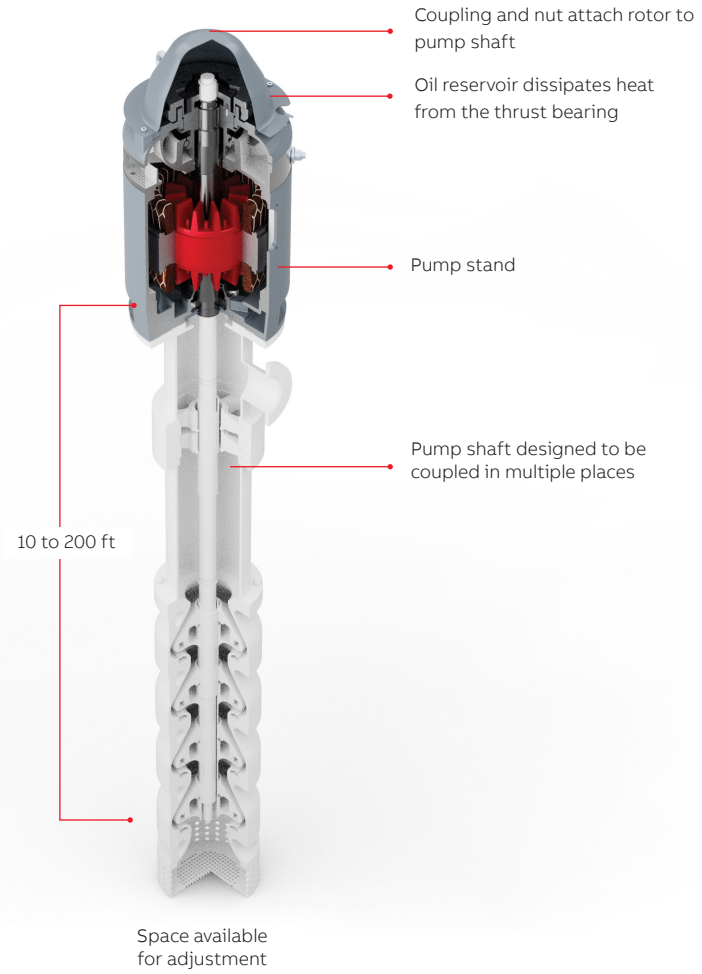
User-friendly
- Motors suitable for part winding start or Wye-Delta start
- Lightweight top cover for easy maintenance
- Oversized conduit box
- Inverter duty per NEMA MG1





A NEW ABB SOLUTION

Elevating your operations



ABB's Vertical Hollow Shaft (VHS) pump motors are engineered for high-performance, reliability and energy efficiency in demanding deep well pumping applications. Designed to meet the rigorous requirements of the water and wastewater, agricultural irrigation and industrial sectors, ABB VHS motors feature a robust construction with precision-balanced rotors and optimized ventilation for extended service life and reduced maintenance. The hollow shaft design allows for easy coupling with vertical turbine pumps, ensuring seamless power transmission and smooth operation.

ABB also has a line of WP1 and TEFC vertical hollow shaft fire pumps that deliver reliable water flow with minimal maintenance—ideal for critical fire protection and emergency service applications.

With our commitment to sustainability and advanced motor technology, VHS motors deliver consistent torque, superior performance and energy savings in even the most challenging operating environments.

UL Listed Vertical Pump Motors
Our commitment to continual innovation and growth is reflected in our products.

DESIGNED WITH YOUR BUSINESS IN MIND

Used in various vertical pumping applications

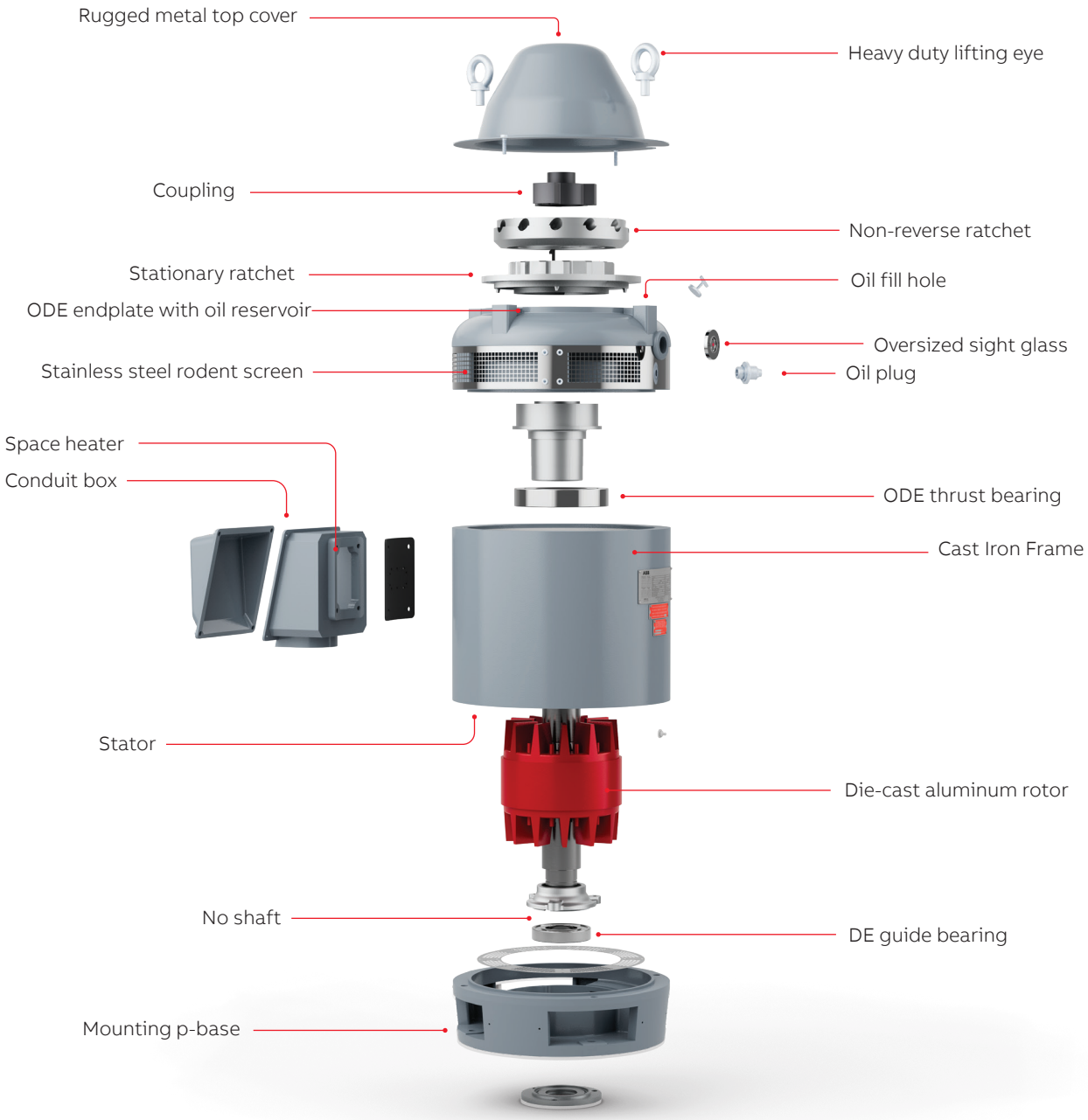





BUILT FOR POWER

Engineered to perform

Put your trust in a better-built motor. Demand quality construction, lower total cost of ownership and optimum efficiency from the motors that drive your business.



VHS NOMENCLATURE

	Pole	Enclosure	Type	Hp	Efficiency	Frame	Model	P-Base	Volt/Hertz
	4	**WP**	**HS**	**050**	**PE**	**32**	**A**	**B**	**42**
Position	1	2	3	4	5	6	7	8	9
	4: 4-pole 2: 2-pole	WP: WP1 TE: TEFC	HS: VHS	7.5: 7.5 010: 10 015: 15 020: 20 100: 100 250: 250 Etc.	PE: Premium HE: High	21: 213/5 25: 254/6 28: 284/6 32: 324/6 36: 364/5 40: 404/5/7 50: 5006/8	A: Standard F: Fire pump	A: 10” B: 12” C: 16.5” D: 20” E: 24.5	42: 208-230 and 230/460 46: 460V @60Hz 56: 575V @60Hz 13: 380V @60Hz 14: 400V @60Hz 15: 415V @60Hz 23: 380V @50Hz 24: 400V @ 50Hz 25: 415V @50Hz

Position 1	Pole
4	4-pole
2	2-pole

Position 2	Enclosure
WP	WP1 weather protected
TE	TEFC totally enclosed fan cooled

Position 3	Type
HS	Hollow-shaft

Position 4	Power rating (HP)
7.5	7.5
010	10
015	15
020	20
025	25
030	30
040	40
050	50
060	60
075	75
100	100
125	125
150	150
200	200
250	250
300	300

Position 5	Efficiency
HE	Premium
PE	High

Position 6	NEMA frame size
21	213/215
25	254/6
28	284/6
32	324/6
36	364/5
40	404/5
44	444/5/7
50	5006/8

Position 7	VHS model
A	Standard
F	Fire pump

Position 8	P-base size (in.)
A	10”
B	12”
C	16.5”
D	20”
E	24.5

Position 9	Volt/Hertz
42	208-230/460 and 230/460 @60Hz
46	460V @60Hz
56	575V @60Hz
13	380V @60Hz
14	400V @60Hz
15	415V @60Hz
23	380V @50Hz
24	400V @50Hz
25	415V @50Hz

VHS WP1

15 - 500 Hp



Standard features
- NEMA Premium efficient design
- Class F insulation, Class B rise at full load
- 1.15 service factor (sine wave power)
- Maximum 40°C ambient, 3300ft altitude
- Motors suitable for part winding start or Wye-Delta start
- NEMA Design B parameters with special balance
- Non-reverse ratchet (NRR)
- Polyurea grease drive end (DE) bearing
- PTC thermistors
- 120V space heaters

Weather Protected Type 1 (WP1)
- 4-Pole
- 15-500 Hp
- 250 - 5000 NEMA frame
- 60 Hz

Options:
- Modified P-Base
- Modified coupling
- Steady bushing
- 50 Hz

Hp	RPM	Frame	Catalog Number	List Price (USD)	Aprx. Wt. (lb)	Full Load Eff.	Full Load Amps	Down-thrust (lbf)	P-base BD (in.)	CD Dim. (in.)	Cplg BX
230/460 volts, 60 Hz											
15	1800	254TP	4WPHS015PE25AA42	4,385	485	93.0	18.5	3300	10.00	23.38	1.00
		254TP	4WPHS015PE25AB42	4,385	485	93.0	18.5	3300	12.00	23.38	1.00
		254TP	4WPHS015PE25AC42	4,385	485	93.0	18.5	3300	16.50	23.38	1.00
20	1800	256TP	4WPHS020PE25AA42	4,821	507	93.3	24.5	3300	10.00	23.38	1.00
		256TP	4WPHS020PE25AB42	4,821	507	93.3	24.5	3300	12.00	23.38	1.00
		256TP	4WPHS020PE25AC42	4,821	507	93.3	24.5	3300	16.50	23.38	1.00
25	1800	284TP	4WPHS025PE28AA42	5,477	546	93.7	29.8	3300	10.00	24.75	1.00
		284TP	4WPHS025PE28AB42	5,477	546	93.7	29.8	3300	12.00	24.75	1.00
		284TP	4WPHS025PE28AC42	5,477	546	93.7	29.8	3300	16.50	24.75	1.00
30	1800	286TP	4WPHS030PE28AA42	6,007	573	94.2	35.4	3300	10.00	24.75	1.00
		286TP	4WPHS030PE28AB42	6,007	573	94.2	35.4	3300	12.00	24.75	1.00
		286TP	4WPHS030PE28AC42	6,007	573	94.2	35.4	3300	16.50	24.75	1.00
40	1800	324TP	4WPHS040PE32AB42	6,665	725	94.2	48.4	5700	12.00	28.22	1.25
		324TP	4WPHS040PE32AC42	6,665	725	94.2	48.4	5700	16.50	28.22	1.25
50	1800	326TP	4WPHS050PE32AB42	7,795	793	94.7	57.3	5700	12.00	28.22	1.25
		326TP	4WPHS050PE32AC42	7,795	793	94.7	57.3	5700	16.50	28.22	1.25
60	1800	364TP	4WPHS060PE36AC42	9,094	926	95.1	67.8	5700	16.50	31.16	1.25
75	1800	365TP	4WPHS075PE36AC42	10,883	1010	95.3	85.1	5700	16.50	31.16	1.25
100	1800	404TP	4WPHS100PE40AC42	13,988	1422	95.5	113.8	6700	16.50	36.94	1.50

Cast iron frame

Red catalog number indicates **NEW** product

Hp	RPM	Frame	Catalog Number	List Price (USD)	Aprx. Wt. (lb)	Full Load Eff.	Full Load Amps	Down-thrust (lbf)	P-base BD (in.)	CD Dim. (in.)	Cplg BX
230/460 volts, 60 Hz											
125	1800	405TP	**4WPHS125PE40AC42**	17,290	1488	95.5	138.1	6700	16.50	36.94	1.50
150	1800	444TP	**4WPHS150PE44AC42**	22,565	1978	96.0	168.4	15680	16.50	42.66	1.69
		444TP	**4WPHS150PE44AD42**	22,565	1978	96.0	168.4	15680	20.00	42.66	1.69
200	1800	445TP	**4WPHS200PE44AC42**	27,706	2038	96.2	220.6	15680	16.50	42.66	1.69
		445TP	**4WPHS200PE44AD42**	27,706	2038	96.2	220.6	15680	20.00	42.66	1.69
250	1800	445TP	**4WPHS250PE44AC42**	33,948	2038	96.3	274.0	15680	16.50	42.66	1.69
		445TP	**4WPHS250PE44AD42**	33,948	2038	96.3	274.0	15680	20.00	42.66	1.69
300	1800	447TP	**4WPHS300PE44AC42**	39,049	2468	96.5	341.6	15680	16.50	49.75	1.94
		447TP	**4WPHS300PE44AD42**	39,049	2468	96.5	341.6	15680	20.00	49.75	1.94
460 volts, 60 Hz											
40	1800	324TP	**4WPHS040PE32AB46**	6,665	725	94.2	48.4	5700	12.00	28.22	1.25
		324TP	**4WPHS040PE32AC46**	6,665	725	94.2	48.4	5700	16.50	28.22	1.25
50	1800	326TP	**4WPHS050PE32AB46**	7,795	793	94.7	57.3	5700	12.00	28.22	1.25
		326TP	**4WPHS050PE32AC46**	7,795	793	94.7	57.3	5700	16.50	28.22	1.25
60	1800	364TP	**4WPHS060PE36AC46**	9,094	926	95.1	67.8	5700	16.50	31.16	1.25
75	1800	365TP	**4WPHS075PE36AC46**	10,883	1010	95.3	85.1	5700	16.50	31.16	1.25
100	1800	404TP	**4WPHS100PE40AC46**	13,988	1422	95.5	113.8	6700	16.50	36.94	1.50
125	1800	405TP	**4WPHS125PE40AC46**	17,290	1488	95.5	138.1	6700	16.50	36.94	1.50
150	1800	444TP	**4WPHS150PE44AC46**	22,565	1978	96.0	168.4	15680	16.50	42.66	1.69
		444TP	**4WPHS150PE44AD46**	22,565	1978	96.0	168.4	15680	20.00	42.66	1.69
200	1800	445TP	**4WPHS200PE44AC46**	27,706	2038	96.2	220.6	15680	16.50	42.66	1.69
		445TP	**4WPHS200PE44AD46**	27,706	2038	96.2	220.6	15680	20.00	42.66	1.69
250	1800	445TP	**4WPHS250PE44AC46**	33,948	2038	96.3	274.0	15680	16.50	42.66	1.69
		445TP	**4WPHS250PE44AD46**	33,948	2038	96.3	274.0	15680	20.00	42.66	1.69
300	1800	447TP	**4WPHS300PE44AC46**	39,049	2468	96.5	341.6	15680	16.50	49.75	1.94
		447TP	**4WPHS300PE44AD46**	39,049	2468	96.5	341.6	15680	20.00	49.75	1.94
		5006P	**4WPHS300PE50AD46**	41,398	3638	95.9	328.3	16480	20.00	49.75	1.94
		5006P	**4WPHS300PE50AE46**	41,398	3638	95.9	328.3	16480	24.50	49.75	1.94
350	1800	5006P	**4WPHS350PE50AD46**	43,747	3638	96.1	379.1	16480	20.00	49.75	1.94
		5006P	**4WPHS350PE50AE46**	43,747	3638	96.1	379.1	16480	24.50	49.75	1.94
400	1800	5008P	**4WPHS400PE50AE46**	53,731	4648	96.2	436.2	16480	24.50	53.88	2.19
450	1800	5008P	**4WPHS450PE50AE46**	58,174	4648	96.4	487.5	16480	24.50	53.88	2.19
500	1800	5008P	**4WPHS500PE50AE46**	66,464	4648	96.4	537.7	16480	24.50	53.88	2.19

Cast iron frame

Red catalog number indicates **NEW** product

VHS FIRE PUMP WP1

15 - 500 Hp



Standard features
- High efficient designs
- Maximum 50C ambient, 3300ft altitude
- Motors suitable for DOL or Wye-Delta start
- NEMA Design B parameters with special balance
- Non-reverse ratchet (NRR)
- Polyurea grease drive end (DE) bearing
- PTC thermistors
- Space heaters (60Hz = 120V)

Applications
- Fire protection systems

VHS, WP1, High efficient, three phase, Fire pump, DOE Compliant

Hp	RPM	Frame	Catalog Number	List Price (USD)	Aprx. Wt. (lb)	Full Load Eff.	Full Load Amps	Down-thrust (lbf)	P-base BD (in.)	CD Dim. (in.)	Cplg BX
230/460 volts, 60 Hz											
15	1800	254TP	4WPHS015HE25FA42	4,375	533	93.0	18.5	3300	10.00	23.38	1.00
		254TP	4WPHS015HE25FB42	4,375	533	93.0	18.5	3300	12.00	23.38	1.00
		254TP	4WPHS015HE25FC42	4,375	533	93.0	18.5	3300	16.50	23.38	1.00
20	1800	256TP	4WPHS020HE25FA42	4,809	557	93.3	24.5	3300	10.00	23.38	1.00
		256TP	4WPHS020HE25FB42	4,809	557	93.3	24.5	3300	12.00	23.38	1.00
		256TP	4WPHS020HE25FC42	4,809	557	93.3	24.5	3300	16.50	23.38	1.00
25	1800	284TP	4WPHS025HE28FA42	5,464	600	93.7	29.9	3300	10.00	24.75	1.00
		284TP	4WPHS025HE28FB42	5,464	600	93.7	29.9	3300	12.00	24.75	1.00
		284TP	4WPHS025HE28FC42	5,464	600	93.7	29.9	3300	16.50	24.75	1.00
30	1800	286TP	4WPHS030HE28FA42	5,992	630	94.2	35.4	3300	10.00	24.75	1.00
		286TP	4WPHS030HE28FB42	5,992	630	94.2	35.4	3300	12.00	24.75	1.00
		286TP	4WPHS030HE28FC42	5,992	630	94.2	35.4	3300	16.50	24.75	1.00
40	1800	324TP	4WPHS040HE32FB42	6,649	797	94.2	48.3	5700	12.00	28.22	1.25
		324TP	4WPHS040HE32FC42	6,649	797	94.2	48.3	5700	16.50	28.22	1.25
50	1800	326TP	4WPHS050HE32FB42	7,776	872	94.7	57.3	5700	12.00	28.22	1.25
		326TP	4WPHS050HE32FC42	7,776	872	94.7	57.3	5700	16.50	28.22	1.25
60	1800	364TP	4WPHS060HE36FC42	9,072	1018	95.1	67.8	5700	16.50	31.16	1.25
75	1800	365TP	4WPHS075HE36FC42	10,856	1111	95.2	85.2	5700	16.50	31.16	1.25
100	1800	404TP	4WPHS100HE40FC42	13,954	1564	95.5	113.8	6700	16.50	36.94	1.50
125	1800	405TP	4WPHS125HE40FC42	17,247	1636	95.5	138.1	6700	16.50	36.94	1.50
150	1800	444TP	4WPHS150HE44FC42	22,509	2175	96.0	168.4	15680	16.50	42.66	1.69
		444TP	4WPHS150HE44FD42	22,509	2175	96.0	168.4	15680	20.00	42.66	1.69
200	1800	445TP	4WPHS200HE44FC42	27,637	2241	96.1	220.6	15680	16.50	42.66	1.69
		445TP	4WPHS200HE44FD42	27,637	2241	96.1	220.6	15680	20.00	42.66	1.69

Cast iron frame **Red** catalog number indicates **NEW** product

Hp	RPM	Frame	Catalog Number	List Price (USD)	Aprx. Wt. (lb)	Full Load Eff.	Full Load Amps	Down-thrust (lbf)	P-base BD (in.)	CD Dim. (in.)	Cplg BX
250	1800	445TP	4WPHS250HE44FC42	33,864	2241	96.3	274.6	15680	16.50	42.66	1.69
		445TP	4WPHS250HE44FD42	33,864	2241	96.3	274.6	15680	20.00	42.66	1.69
300	1800	447TP	4WPHS300HE44FC42	38,952	2714	96.5	341.1	15680	16.50	49.75	1.94
		447TP	4WPHS300HE44FD42	38,952	2714	96.5	341.1	15680	20.00	49.75	1.94
		5006P	4WPHS300HE50FD42	41,295	4001	95.9	328.3	16480	20.00	49.75	1.94
		5006P	4WPHS300HE50FE42	41,295	4001	95.9	328.3	16480	24.50	49.75	1.94
350	1800	449TP	4WPHS350HE44FC42	41,457	2813	96.2	386.6	15680	16.50	49.75	1.94
		449TP	4WPHS350HE44FD42	41,457	2813	96.2	386.6	15680	20.00	49.75	1.94
		5006P	4WPHS350HE50FD42	43,638	4112	96.0	379.1	16480	20.00	49.75	1.94
		5006P	4WPHS350HE50FE42	43,638	4112	96.0	379.1	16480	24.50	49.75	1.94
400	1800	5008P	4WPHS400HE50FD42	53,597	5112	96.1	437.1	16480	20.00	53.88	2.19
		5008P	4WPHS400HE50FE42	53,597	5112	96.1	437.1	16480	24.50	53.88	2.19
450	1800	5008P	4WPHS450HE50FD42	58,029	5264	96.3	488.1	16480	20.00	53.88	2.19
		5008P	4WPHS450HE50FE42	58,029	5264	96.3	488.1	16480	24.50	53.88	2.19
500	1800	5008P	4WPHS500HE50FD42	66,298	5385	96.4	538.5	16480	20.00	53.88	2.19
		5008P	4WPHS500HE50FE42	66,298	5385	96.4	538.5	16480	24.50	53.88	2.19
460 volts, 60 Hz											
40	1800	324TP	4WPHS040HE32FB46	6,649	797	94.2	48.3	5700	12.00	28.22	1.25
		324TP	4WPHS040HE32FC46	6,649	797	94.2	48.3	5700	16.50	28.22	1.25
50	1800	326TP	4WPHS050HE32FB46	7,776	872	94.7	57.3	5700	12.00	28.22	1.25
		326TP	4WPHS050HE32FC46	7,776	872	94.7	57.3	5700	16.50	28.22	1.25
60	1800	364TP	4WPHS060HE36FC46	9,072	1018	95.1	67.8	5700	16.50	31.16	1.25
75	1800	365TP	4WPHS075HE36FC46	10,856	1111	95.2	85.2	5700	16.50	31.16	1.25
100	1800	404TP	4WPHS100HE40FC46	13,954	1564	95.5	113.8	6700	16.50	36.94	1.50
125	1800	405TP	4WPHS125HE40FC46	17,247	1636	95.5	138.1	6700	16.50	36.94	1.50
150	1800	444TP	4WPHS150HE44FC46	22,509	2175	96.0	168.4	15680	16.50	42.66	1.69
		444TP	4WPHS150HE44FD46	22,509	2175	96.0	168.4	15680	20.00	42.66	1.69
200	1800	445TP	4WPHS200HE44FC46	27,637	2241	96.1	220.6	15680	16.50	42.66	1.69
		445TP	4WPHS200HE44FD46	27,637	2241	96.1	220.6	15680	20.00	42.66	1.69
250	1800	445TP	4WPHS250HE44FC46	33,864	2241	96.3	274.6	15680	16.50	42.66	1.69
		445TP	4WPHS250HE44FD46	33,864	2241	96.3	274.6	15680	20.00	42.66	1.69
300	1800	447TP	4WPHS300HE44FC46	38,952	2714	96.5	341.1	15680	16.50	49.75	1.94
		447TP	4WPHS300HE44FD46	38,952	2714	96.5	341.1	15680	20.00	49.75	1.94
		5006P	4WPHS300HE50FD46	41,295	4001	95.9	328.3	16480	20.00	49.75	1.94
		5006P	4WPHS300HE50FE46	41,295	4001	95.9	328.3	16480	24.50	49.75	1.94
350	1800	449TP	4WPHS350HE44FC46	41,457	2813	96.2	386.6	15680	16.50	49.75	1.94
		449TP	4WPHS350HE44FD46	41,457	2813	96.2	386.6	15680	20.00	49.75	1.94
		5006P	4WPHS350HE50FD46	43,638	4112	96.0	379.1	16480	20.00	49.75	1.94
		5006P	4WPHS350HE50FE46	43,638	4112	96.0	379.1	16480	24.50	49.75	1.94
400	1800	5008P	4WPHS400HE50FD46	53,597	5112	96.1	437.1	16480	20.00	53.88	2.19
		5008P	4WPHS400HE50FE46	53,597	5112	96.1	437.1	16480	24.50	53.88	2.19
450	1800	5008P	4WPHS450HE50FD46	58,029	5264	96.3	488.1	16480	20.00	53.88	2.19
		5008P	4WPHS450HE50FE46	58,029	5264	96.3	488.1	16480	24.50	53.88	2.19
500	1800	5008P	4WPHS500HE50FD46	66,298	5385	96.4	538.5	16480	20.00	53.88	2.19
		5008P	4WPHS500HE50FE46	66,298	5385	96.4	538.5	16480	24.50	53.88	2.19

Cast iron frame **Red** catalog number indicates **NEW** product

VHS FIRE PUMP TEFC

7 1/2 - 350 Hp



Standard features
- High efficient designs
- Maximum 50C ambient, 3300ft altitude
- Motors suitable for DOL or Wye-Delta start
- NEMA Design B parameters with special balance
- Non-reverse ratchet (NRR)
- Polyurea grease drive end (DE) bearing
- PTC thermistors
- Space heaters (60Hz = 120V , 50Hz = 230V)

Applications
- Fire protection systems

VHS, TEFC, High efficient, three phase, Fire pump, DOE Compliant											
Hp	**RPM**	**Frame**	**Catalog Number**	**List Price (USD)**	**Aprx. Wt. (lb)**	**Full Load Eff.**	**Full Load Amps**	**Down-thrust (lbf)**	**P-base BD (in.)**	**CD Dim. (in.)**	**Cplg BX**
230/460 volts, 60 Hz											
7.5	1800	213TP	**4TEHS7.5HE21FA42**	4,231	445	89.8	9.6	2500	10.00	22.94	0.75
10	1800	215TP	**4TEHS010HE21FA42**	4,713	495	89.9	12.7	2500	10.00	22.94	0.75
		254TP	**4TEHS015HE25FA42**	5,993	682	91.3	18.8	3300	10.00	26.56	1.00
15	1800	254TP	**4TEHS015HE25FB42**	5,993	682	91.3	18.8	3300	12.00	26.56	1.00
		254TP	**4TEHS015HE25FC42**	5,993	682	91.3	18.8	3300	16.50	26.56	1.00
		256TP	**4TEHS020HE25FA42**	6,589	731	91.3	24.8	3300	10.00	26.56	1.00
20	1800	256TP	**4TEHS020HE25FB42**	6,589	731	91.3	24.8	3300	12.00	26.56	1.00
		256TP	**4TEHS020HE25FC42**	6,589	731	91.3	24.8	3300	16.50	26.56	1.00
		284TP	**4TEHS025HE28FA42**	7,486	781	92.7	30.3	3300	10.00	26.56	1.00
25	1800	284TP	**4TEHS025HE28FB42**	7,486	781	92.7	30.3	3300	12.00	26.56	1.00
		284TP	**4TEHS025HE28FC42**	7,486	781	92.7	30.3	3300	16.50	26.56	1.00
		286TP	**4TEHS030HE28FA42**	8,210	825	92.7	35.9	3300	10.00	26.56	1.00
30	1800	286TP	**4TEHS030HE28FB42**	8,210	825	92.7	35.9	3300	12.00	26.56	1.00
		286TP	**4TEHS030HE28FC42**	8,210	825	92.7	35.9	3300	16.50	26.56	1.00
40	1800	324TP	**4TEHS040HE32FC42**	9,109	1034	93.2	47.6	5700	16.50	28.66	1.25
50	1800	326TP	**4TEHS050HE32FC42**	10,654	1287	93.4	58.1	5700	16.50	28.66	1.25
60	1800	364TP	**4TEHS060HE36FC42**	12,428	1221	93.9	68.6	5700	16.50	30.08	1.25
75	1800	365TP	**4TEHS075HE36FC42**	14,873	1243	94.4	85.7	5700	16.50	30.08	1.25
100	1800	404TP	**4TEHS100HE40FC42**	19,117	2002	94.8	114.5	6700	16.50	39.93	1.50
125	1800	405TP	**4TEHS125HE40FC42**	23,629	2046	94.8	139.3	6700	16.50	39.93	1.50
150	1800	444TP	**4TEHS150HE44FC42**	30,837	2332	95.2	169.9	15680	16.50	46.56	1.69
		444TP	**4TEHS150HE44FD42**	30,837	2332	95.2	169.9	15680	20.00	46.56	1.69
200	1800	445TP	**4TEHS200HE44FC42**	37,864	2546	95.2	222.4	15680	16.50	46.56	1.69
		445TP	**4TEHS200HE44FD42**	37,864	2546	95.2	222.4	15680	20.00	46.56	1.69

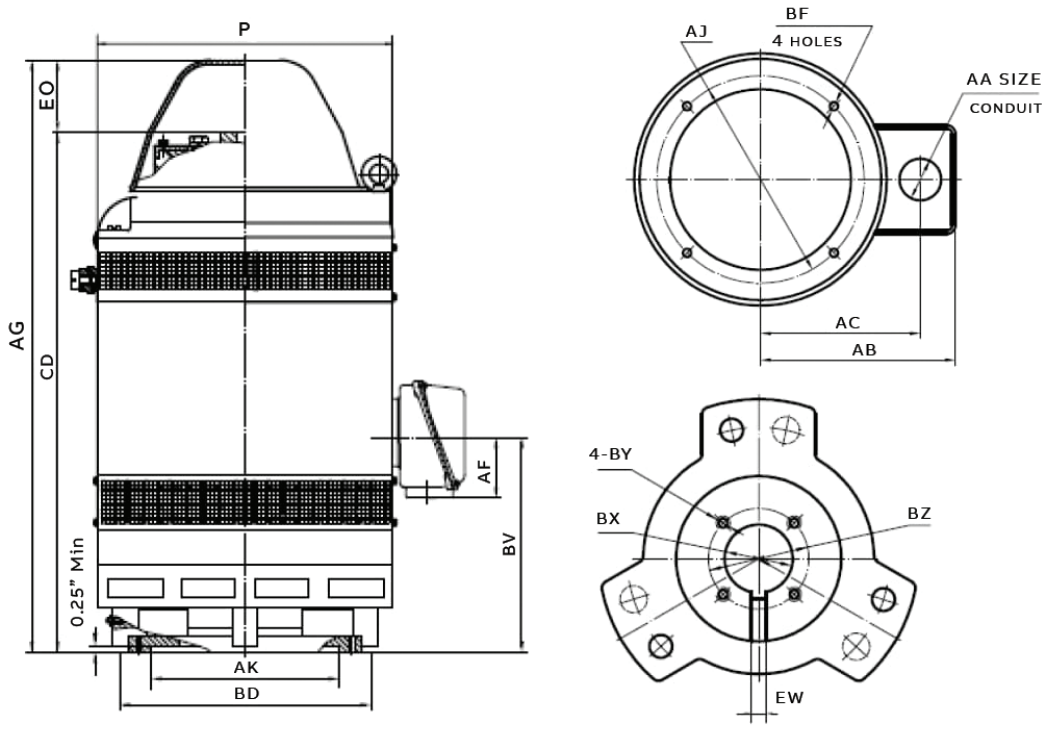
Cast iron frame **Red** catalog number indicates **NEW** product

Hp	RPM	Frame	Catalog Number	List Price (USD)	Aprx. Wt. (lb)	Full Load Eff.	Full Load Amps	Down-thrust (lbf)	P-base BD (in.)	CD Dim. (in.)	Cplg BX
250	1800	445TP	**4TEHS250HE44FC42**	46,393	2546	95.2	277.6	15680	16.50	46.56	1.69
		445TP	**4TEHS250HE44FD42**	46,393	2546	95.2	277.6	15680	20.00	46.56	1.69
300	1800	447TP	**4TEHS300HE44FC42**	53,365	3278	95.6	333.7	15680	16.50	52.81	1.94
		447TP	**4TEHS300HE44FD42**	53,365	3278	95.6	333.7	15680	20.00	52.81	1.94
350	1800	449TP	**4TEHS350HE44FC42**	56,796	3762	95.6	388.7	15680	16.50	56.86	1.94
		449TP	**4TEHS350HE44FD42**	56,796	3762	95.6	388.7	15680	20.00	56.86	1.94
460 volts, 60 Hz											
40	1800	324TP	**4TEHS040HE32FC46**	9,109	1034	93.2	47.6	5700	16.50	28.66	1.25
50	1800	326TP	**4TEHS050HE32FC46**	10,654	1287	93.4	58.1	5700	16.50	28.66	1.25
60	1800	364TP	**4TEHS060HE36FC46**	12,428	1221	93.9	68.6	5700	16.50	30.08	1.25
75	1800	365TP	**4TEHS075HE36FC46**	14,873	1243	94.4	85.7	5700	16.50	30.08	1.25
100	1800	404TP	**4TEHS100HE40FC46**	19,117	2002	94.8	114.5	6700	16.50	39.93	1.50
125	1800	405TP	**4TEHS125HE40FC46**	23,629	2046	94.8	139.3	6700	16.50	39.93	1.50
150	1800	444TP	**4TEHS150HE44FC46**	30,837	2332	95.2	169.9	15680	16.50	46.56	1.69
		444TP	**4TEHS150HE44FD46**	30,837	2332	95.2	169.9	15680	20.00	46.56	1.69
200	1800	445TP	**4TEHS200HE44FC46**	37,864	2546	95.2	222.4	15680	16.50	46.56	1.69
		445TP	**4TEHS200HE44FD46**	37,864	2546	95.2	222.4	15680	20.00	46.56	1.69
250	1800	445TP	**4TEHS250HE44FC46**	46,393	2546	95.2	277.6	15680	16.50	46.56	1.69
		445TP	**4TEHS250HE44FD46**	46,393	2546	95.2	277.6	15680	20.00	46.56	1.69
300	1800	447TP	**4TEHS300HE44FC46**	53,365	3278	95.6	333.7	15680	16.50	52.81	1.94
		447TP	**4TEHS300HE44FD46**	53,365	3278	95.6	333.7	15680	20.00	52.81	1.94
350	1800	449TP	**4TEHS350HE44FC46**	56,796	3762	95.6	388.7	15680	16.50	56.86	1.94
		449TP	**4TEHS350HE44FD46**	56,796	3762	95.6	388.7	15680	20.00	56.86	1.94

Cast iron frame **Red** catalog number indicates **NEW** product

DIMENSIONS

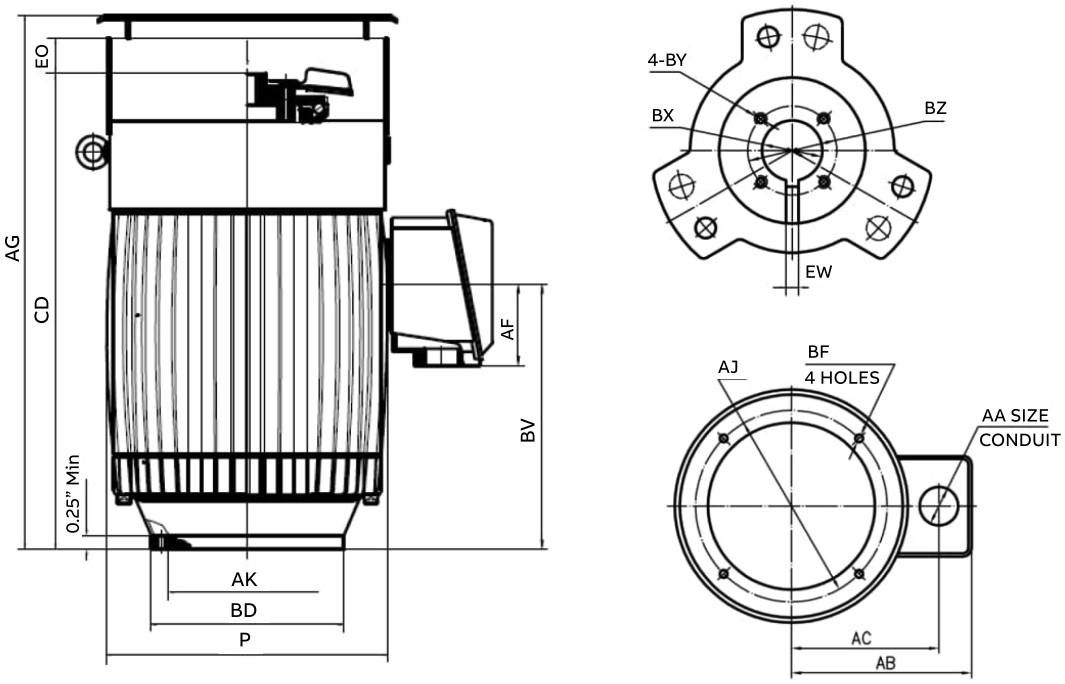
WP1, three phase



Hp	Frame	Mounting dimensions (in)													Overall dimensions (in)			
		BD	AJ	AK	BF	BV	AF	BX	BZ	EW	BY	CD	EO	AA	P	AB	AC	AG
15	254TP	10	9.125	8.25	0.44	12.7	5.2	1	1.375	0.25	#10 - 32	23.38	3.22	1.5	16.1	14.1	11.2	28.1
20	256TP	10	9.125	8.25	0.44	12.7	5.2	1	1.375	0.25	#10 - 32	23.38	3.22	1.5	16.1	14.1	11.2	28.1
25	284TP	10	9.125	8.25	0.44	14.1	5.2	1	1.375	0.25	#10 - 32	24.75	3.22	1.5	16.1	14.1	11.2	29.5
30	286TP	10	9.125	8.25	0.44	14.1	5.2	1	1.375	0.25	#10 - 32	24.75	3.22	1.5	16.1	14.1	11.2	29.5
40	324TP	16.5	14.75	13.5	0.69	13.5	5.2	1.25	1.75	0.25	1/4 - 20	28.22	4.22	3	17.3	14.8	11.8	32.7
50	326TP	16.5	14.75	13.5	0.69	13.5	5.2	1.25	1.75	0.25	1/4 - 20	28.22	4.22	3	17.3	14.8	11.8	32.7
60	364TP	16.5	14.75	13.5	0.69	15.3	5.2	1.25	1.75	0.25	1/4 - 20	31.16	4.56	3	19.1	15.6	12.6	36.0
75	365TP	16.5	14.75	13.5	0.69	15.3	5.2	1.25	1.75	0.25	1/4 - 20	31.16	4.56	3	19.1	15.6	12.6	36.0
100	404TP	16.5	14.75	13.5	0.69	19.5	5.2	1.5	2.125	0.375	1/4 - 20	36.94	4.56	3	21.0	16.9	13.6	42.2
125	405TP	16.5	14.75	13.5	0.69	19.5	5.2	1.5	2.125	0.375	1/4 - 20	36.94	4.56	3	21.0	16.9	13.6	42.2
150	444TP	16.5	14.75	13.5	0.69	22.6	7.2	1.69	2.50	0.375	1/4 - 20	42.66	5	3	23.2	20.6	15.6	47.7
200	445TP	16.5	14.75	13.5	0.69	22.6	7.2	1.69	2.50	0.375	1/4 - 20	42.66	5	3	23.2	20.6	15.6	47.7
250	445TP	16.5	14.75	13.5	0.69	22.6	7.2	1.69	2.50	0.375	1/4 - 20	42.66	5	3	23.2	20.6	15.6	47.7
300	447TP	16.5	14.75	13.5	0.69	29.7	7.2	1.94	2.50	0.50	1/4 - 20	49.75	5	3.5	23.2	20.6	15.6	54.8
300	5006P	24.5	14.75	13.5	0.69	26.3	10.6	1.94	2.50	0.50	1/4 - 20	49.75	6	3.5	26.8	22.2	18.5	56.1
350	5006P	24.5	14.75	13.5	0.69	26.3	10.6	1.94	2.50	0.50	1/4 - 20	49.75	6	3.5	26.8	22.2	18.5	56.1
400	5008P	24.5	14.75	13.5	0.69	30.4	10.6	2.188	3.25	0.50	3/8 - 16	53.88	6	3.5	26.8	22.2	18.5	60.2
450	5008P	24.5	14.75	13.5	0.69	30.4	10.6	2.188	3.25	0.50	3/8 - 16	53.88	6	3.5	26.8	22.2	18.5	60.2
500	5008P	24.5	14.75	13.5	0.69	30.4	10.6	2.188	3.25	0.50	3/8 - 16	53.88	6	3.5	26.8	22.2	18.5	60.2

DIMENSIONS

TEFC, three phase

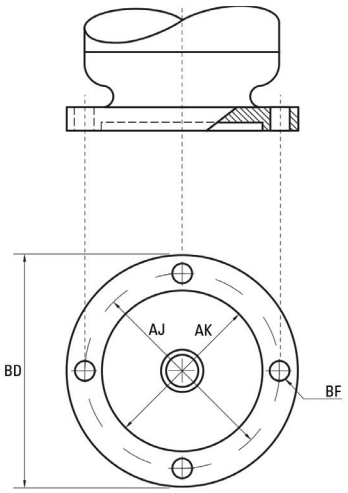


Hp	Frame	Mounting dimensions (in)											Overall dimensions (in)			
		BD	AJ	AK	BF	BV	AF	BX	EW	CD	EO	AA	P	AB	AC	AG
7.5	213TP	10	9.125	8.25	0.44	9.5	5	0.75	0.188	22.94	3.15	1.5	15.2	14.3	11.2	29.2
10	215TP	10	9.125	8.25	0.44	9.5	5	0.75	0.188	22.94	3.15	1.5	15.2	14.3	11.2	29.2
15	254TP	10	9.125	8.25	0.44	11.0	5	1	0.25	26.56	6.25	1.5	17.1	15.2	12.1	32.8
20	256TP	10	9.125	8.25	0.44	11.0	5	1	0.25	26.56	6.25	1.5	17.1	15.2	12.1	32.8
25	284TP	10	9.125	8.25	0.44	11.0	5	1	0.25	26.56	6.25	1.5	17.1	15.2	12.1	32.8
30	286TP	10	9.125	8.25	0.44	11.0	5	1	0.25	26.56	6.25	1.5	17.1	15.2	12.1	32.8
40	324TP	16.5	14.75	13.5	0.69	14.5	5	1.25	0.25	28.66	6.25	3	19.6	16.1	12.8	34.9
50	326TP	16.5	14.75	13.5	0.69	14.5	5	1.25	0.25	28.66	6.25	3	19.6	16.1	12.8	34.9
60	364TP	16.5	14.75	13.5	0.69	16.0	5	1.25	0.25	30.08	6.25	3	19.6	16.1	12.8	36.8
75	365TP	16.5	14.75	13.5	0.69	16.0	5	1.25	0.25	30.08	6.25	3	19.6	16.1	12.8	36.8
100	404TP	16.5	14.75	13.5	0.69	18.0	5	1.5	0.375	39.93	9.86	3	24.3	21.1	16.2	51.52
125	405TP	16.5	14.75	13.5	0.69	18.0	5	1.5	0.375	39.93	9.86	3	24.3	21.1	16.2	51.52
150	444TP	16.5	14.75	13.5	0.69	24.0	5	1.69	0.375	46.56	9.86	3	24.3	21.1	16.2	56.4
200	445TP	16.5	14.75	13.5	0.69	24.0	5	1.69	0.375	46.56	9.86	3	24.3	21.1	16.2	56.4
250	445TP	16.5	14.75	13.5	0.69	24.0	5	1.69	0.375	46.56	9.86	3	24.3	21.1	16.2	56.4
300	447TP	16.5	14.75	13.5	0.69	30.0	5	1.94	0.375	52.81	9.86	3.5	24.3	21.1	16.2	62.7
350	449TP	16.5	14.75	13.5	0.69	34.0	5	1.94	0.375	56.86	9.86	3.5	24.3	21.1	16.2	66.8

P-BASE OPTIONS

WP1 flange

The following table shows the bases that fit each of the Hp/frame sizes. Proper alignment of pump flange and motor flange is critical. Small errors in alignment are magnified by the distance from the flange to the top of the motor, resulting in vibration, electrical noise, premature bearing wear and oil leakage.



P-base options for WP1 Std				P-Base Dimensions (in)			
Hp	**Frame**	**Base Size**	**Catalog number**	**BD**	**AJ**	**AK**	**BF**
15 - 30	250/280	10	**PBWP250/280-10**	10	9.125	8.25	0.44
		12	**PBWP250/280-12**	12	9.125	8.25	0.44
		16.5	**PBWP250/280-16.5**	16.5	14.75	13.5	0.69
40 - 50	320	12	**PBWP320-12**	12	9.125	8.25	0.44
		16.5	**PBWP320-16.5**	16.5	14.75	13.5	0.69
60 - 75	360	16.5	**PBWP360-16.5**	16.5	14.75	13.5	0.69
100 - 125	400	16.5	**PBWP400-16.5**	16.5	14.75	13.5	0.69
150 - 350	440	16.5	**PBWP440-16.5**	16.5	14.75	13.5	0.69
		20	**PBWP440-20**	20	14.75	13.5	0.69
300 - 500	5000	20	**PBWP5000-20**	24.5	14.75	13.5	0.69
		24.5	**PBWP5000-24.5**	24.5	14.75	13.5	0.69

Indicates standard flange size **Red** catalog number indicates **NEW** product

TEFC flange

The following table shows the bases that fit each of the Hp/frame sizes. Proper alignment of pump flange and motor flange is critical. Small errors in alignment are magnified by the distance from the flange to the top of the motor, resulting in vibration, electrical noise, premature bearing wear and oil leakage.

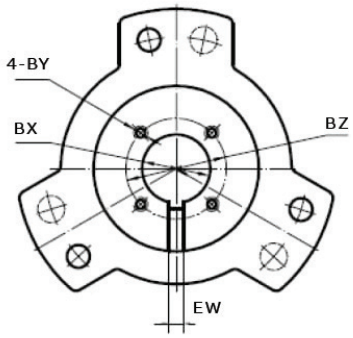
P-base options for TEFC				P-Base Dimensions (in)			
Hp	**Frame**	**Base Size**	**Catalog number**	**BD**	**AJ**	**AK**	**BF**
7.5 - 10	210	10.0	**PBTE210-10**	10.0	9.125	8.25	0.44
		10.0	**PBTE250/280-10**	10.0	9.125	8.25	0.44
15 - 30	250/280	12.0	**PBTE250/280-12**	12.0	9.125	8.25	0.44
		16.5	**PBTE250/280-16.5**	16.5	14.75	13.5	0.69
40 - 50	320	16.5	**PBTE320-16.5**	16.5	14.75	13.5	0.69
60 - 75	360	16.5	**PBTE360-16.5**	16.5	14.75	13.5	0.69
100 - 125	400	16.5	**PBTE400-16.5**	16.5	14.75	13.5	0.69
150 - 350	440	16.5	**PBTE440-16.5**	16.5	14.75	13.5	0.69
		20.0	**PBTE440-20**	20.0	14.75	13.5	0.69

Indicates standard flange size **Red** catalog number indicates **NEW** product

COUPLING

WP1 option





Coupling options for WP1				Coupling dimensions (in)			
Hp	**Frame**	**Bore size (BX nom)**	**Catalog number**	**BX (Actual)**	**BY (Bolt size)**	**BZ**	**Sq. Key**
15 - 30	250/280	1	**C250/280-1**	1.001	#10 - 32	1 - 3/8	1/4
		1-3/16	**C250/280-1316**	1.188	1/4 - 20	1 - 3/4	1/4
		1-1/4	**C250/280-114**	1.251	1/4 - 20	1 - 3/4	1/4
40 - 75	320/360	1	**C320/360-1**	1.001	#10 - 32	1 - 3/8	1/4
		1-3/16	**C320/360-1316**	1.188	1/4 - 20	1 - 3/4	1/4
		1-1/4	**C320/360-114**	1.251	1/4 - 20	1 - 3/4	1/4
		1-1/2	**C320/360-112**	1.501	1/4 - 20	2 - 1/8	3/8
100 - 125	400	1-3/16	**C400-1316**	1.188	1/4 - 20	1 - 3/4	1/4
		1-1/4	**C400-114**	1.251	1/4 - 20	1 - 3/4	1/4
		1-1/2	**C400-112**	1.501	1/4 - 20	2 - 1/8	3/8
		1-11/16	**C400-11116**	1.688	1/4 - 20	2 - 1/2	3/8
		1-15/16	**C400-11516**	1.938	1/4 - 20	2 - 1/2	1/2
150 - 250	440	1-3/16	**C440-1316**	1.188	1/4 - 20	1 - 3/4	1/4
		1-1/4	**C440-114**	1.251	1/4 - 20	1 - 3/4	1/4
		1-1/2	**C440-112**	1.501	1/4 - 20	2 - 1/8	3/8
		1-11/16	**C440-11116**	1.688	1/4 - 20	2 - 1/2	3/8
		1-15/16	**C440-11516**	1.938	1/4 - 20	2 - 1/2	1/2
300 - 350	440	1-3/16	**C440-1316**	1.188	1/4 - 20	1 - 3/4	1-4
		1-1/4	**C440-114**	1.251	1/4 - 20	1 - 3/4	1/4
		1-1/2	**C440-112**	1.501	1/4 - 20	1 - 3/4	3/8
		1-11/16	**C440-11116**	1.688	1/4 - 20	2 - 1/2	3/8
		1-15/16	**C440-11516**	1.938	1/4 - 20	2 - 1/2	1/2
300 - 350	5000	1-11/16	**C5000-11116**	1.688	1/4 - 20	2 - 1/2	3/8
		1-15/16	**C5000-11516**	1.938	1/4 - 20	2 - 1/2	1/2
		2-3/16	**C5000-2316**	2.188	3/8 - 16	3 - 1/4	1/2
400 - 500	5000	1-11/16	**C5000-11116**	1.688	1/4 - 20	2 - 1/2	3/8
		1-15/16	**C5000-11516**	1.938	1/4 - 20	2 - 1/2	1/2
		2-3/16	**C5000-2316**	2.188	3/8 - 16	3 - 1/4	1/2

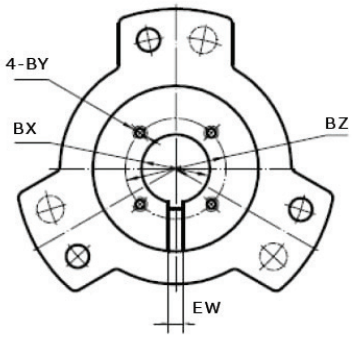
Hp	Frame	Downthrust (lbs.)
15	254TP	3,300
20	256TP	3,300
25	284TP	3,300
30	286TP	3,300
40	324TP	5,700
50	326TP	5,700
60	364TP	5,700
75	365TP	5,700
100	404TP	6,700
125	405TP	6,700
150	444TP	15,680
200	445TP	15,680
250	445TP	15,680
300	447TP	15,680
350	449TP	15,680
300	5006P	16,480
350	5006P	16,480
400	5008P	16,480
450	5008P	16,480
500	5008P	16,480

Indicates standard flange size **Red** catalog number indicates **NEW** product

COUPLING

TEFC option





Coupling options for TEFC				Coupling Dimensions (in)			
Hp	**Frame**	**Bore size (BX nom)**	**Catalog number**	**Bx (Actual)**	**Y (Bolt size) B**	**BZ**	**SQ. Key**
7.5 - 10	210	3/4	**C210-34-TE**	0.751	#10 - 32	1 - 3/8	3/16
		1	**C250/280-1TE**	1.001	#10 - 32	1 - 3/8	1/4
15-30	250/280	1 - 3/16	**C250/280-1316TE**	1.188	1/4 - 20	1 - 3/4	1/4
		1 - 1/4	**C250/280-114TE**	1.251	1/4 - 20	1 - 3/4	1/4
40 - 75	320/360	1	**C320/360-1TE**	1.001	#10 - 32	1 - 3/8	1/4
		1 - 3/16	**C320/360-1316TE**	1.188	1/4 - 20	1 - 3/4	1/4
		1 - 1/4	**C320/360-114TE**	1.251	1/4 - 20	1 - 3/4	1/4
		1 - 1/2	**C320/360-112TE**	1.501	1/4 - 20	2 - 1/8	3/8
100 - 125	400	1 - 3/16	**C400-1316TE**	1.188	1/4 - 20	1 - 3/4	1/4
		1 - 1/4	**C400-114TE**	1.251	1/4 - 20	1 - 3/4	1/4
		1 - 1/2	**C400-112TE**	1.501	1/4 - 20	2 - 1/8	3/8
		1 - 11/16	**C400-11116TE**	1.688	1/4 - 20	2 - 1/2	3/8
150 - 350	440	1 - 3/16	**C440-1316TE**	1.188	1/4 - 20	1 - 3/4	1/4
		1 - 1/4	**C440-114TE**	1.251	1/4 - 20	1 - 3/4	1/4
		1 - 1/2	**C440-112TE**	1.501	1/4 - 20	2 - 1/8	3/8
		1 - 11/16	**C440-11116TE**	1.688	1/4 - 20	2 - 1/2	3/8
		1 - 15/16	**C440-11516TE**	1.938	1/4 - 20	2 - 1/2	1/2

Indicates standard flange size **Red** catalog number indicates **NEW** product

HP	Frame	Downthrust (lbs.)
7.5	213TP	405
10	215TP	450
15	254TP	620
20	256TP	665
25	284TP	710
30	286TP	750
40	324TP	940
50	326TP	1170
60	364TP	1110
75	365TP	1130
100	404TP	1820
125	405TP	1860
150	444TP	2120
200	445TP	2315
250	445TP	2540
300	447TP	2980
350	449TP	3420

WP1 REPLACEMENT PARTS

Bearings

HP	Frame	Description	Catalog Number
15 - 20	250TP	Thrust (Top)	**7312BM**
		Guided (Bottom)	**6212**
25 - 30	280TP	Thrust (Top)	**7312BM**
		Guided (Bottom)	**6212**
40 - 50	320TP	Guided (Bottom)	**6213**
		Thrust (Top)	**7221BM**
60 - 75	360TP	Guided (Bottom)	**6314**
		Thrust (Top)	**7224BM**
100 - 125	400TP	Guided (Bottom)	**6317**
		Thrust (Top)	**7230BM**
150 - 350	440TP	Guided (Bottom)	**6318**
		Double thrust (Top)	**7232BM / DT**
300 - 500	5000P	Guided (Bottom)	**6322**
		Double thrust (Top)	**7236BM / DT**

Red catalog number indicates **NEW** product

Steady bushings

HP	Frame	Bore size (in)	Catalog number
15 - 30	250/280	1	**SB250/280-1**
		1.1875	**SB250/280-1316**
		1.25	**SB250/280-114**
40 - 50	320	1	**SB320-1**
		1.1875	**SB320-1316**
		1.25	**SB320-114**
		1.5	**SB320-112**
60-75	360	1	**SB360-1**
		1.875	**SB360-1316**
		1.25	**SB400-114**
		1.5	**SB400-112**
100-125	400	1.875	**SB400-1316**
		1.25	**SB400-114**
		1.5	**SB400-112**
		1.6875	**SB400-11116**
		1.9375	**SB400-11516**
150-350	440	1.875	**SB440-1316**
		1.25	**SB440-114**
		1.5	**SB440-112**
		1.6875	**SB440-11116**
		1.9375	**SB440-11516**
300-500	5000	1.6875	**SB5000-11116**
		1.9375	**SB5000-11516**
		2.1875	**SB5000-2316**



TEFC REPLACEMENT PARTS

Bearings

HP	Frame	Description	Catalog Number
7.5 - 10	210TP	Thrust (Top)	**7311B**
		Guided (Bottom)	**6211**
15 - 20	250TP	Thrust (Top)	**7312B**
		Guided (Bottom)	**6212**
25 - 30	250TP	Thrust (Top)	**7312B**
		Guided (Bottom)	**6212**
40 - 50	280TP	Thrust (Top)	**7224B**
		Guided (Bottom)	**6314**
60 - 75	350TP	Thrust (Top)	**7224B**
		Guided (Bottom)	**6314**
100 - 125	400TP	Thrust (Top)	**7230B**
		Guided (Bottom)	**6317**
150 - 350	440TP	Thrust (Top)	**7230B**
		Guided (Bottom)	**6317**

Steady bushings

HP	Frame	Bore size (in)	Catalog number
7.5 - 10	210	0.75	**SB210-34TE**
		0.88	**SB210-78TE**
		1	**SB210-1TE**
15 - 30	250/280	1	**SB250/280-1TE**
		1.1875	**SB250/280-1316TE**
		1.25	**SB250/280-114TE**
40 - 50	320	1	**SB320-1TE**
		1.875	**SB320-1316TE**
		1.25	**SB320-114TE**
		1.5	**SB320-112TE**
60 - 75	360	1	**SB360-1TE**
		1.875	**SB360-1316TE**
		1.25	**SB360-114TE**
		1.5	**SB360-112TE**
100 - 125	400	1.875	**SB400-1316TE**
		1.25	**SB400-114TE**
		1.5	**SB400-112TE**
		1.6875	**SB400-11116TE**
150 - 350	440	1.875	**SB440-1316TE**
		1.25	**SB440-114TE**
		1.5	**SB440-112TE**
		1.6875	**SB440-11116TE**
		1.9375	**SB440-11516TE**

Red catalog number indicates **NEW** product

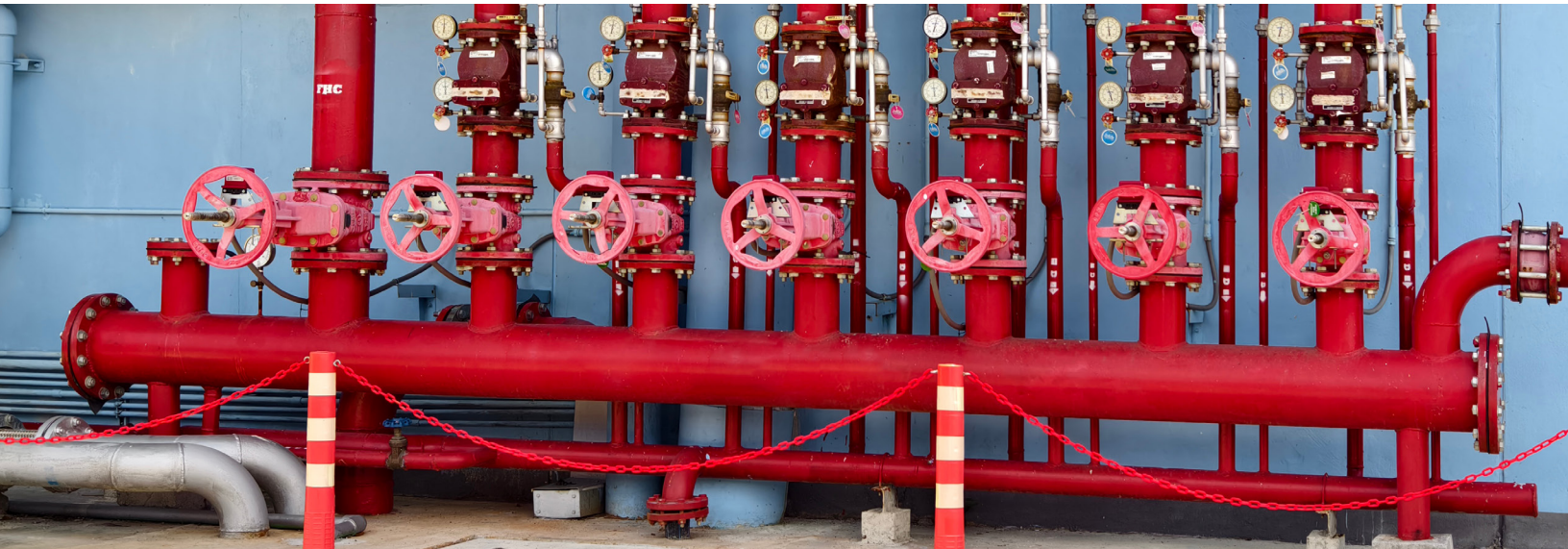


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