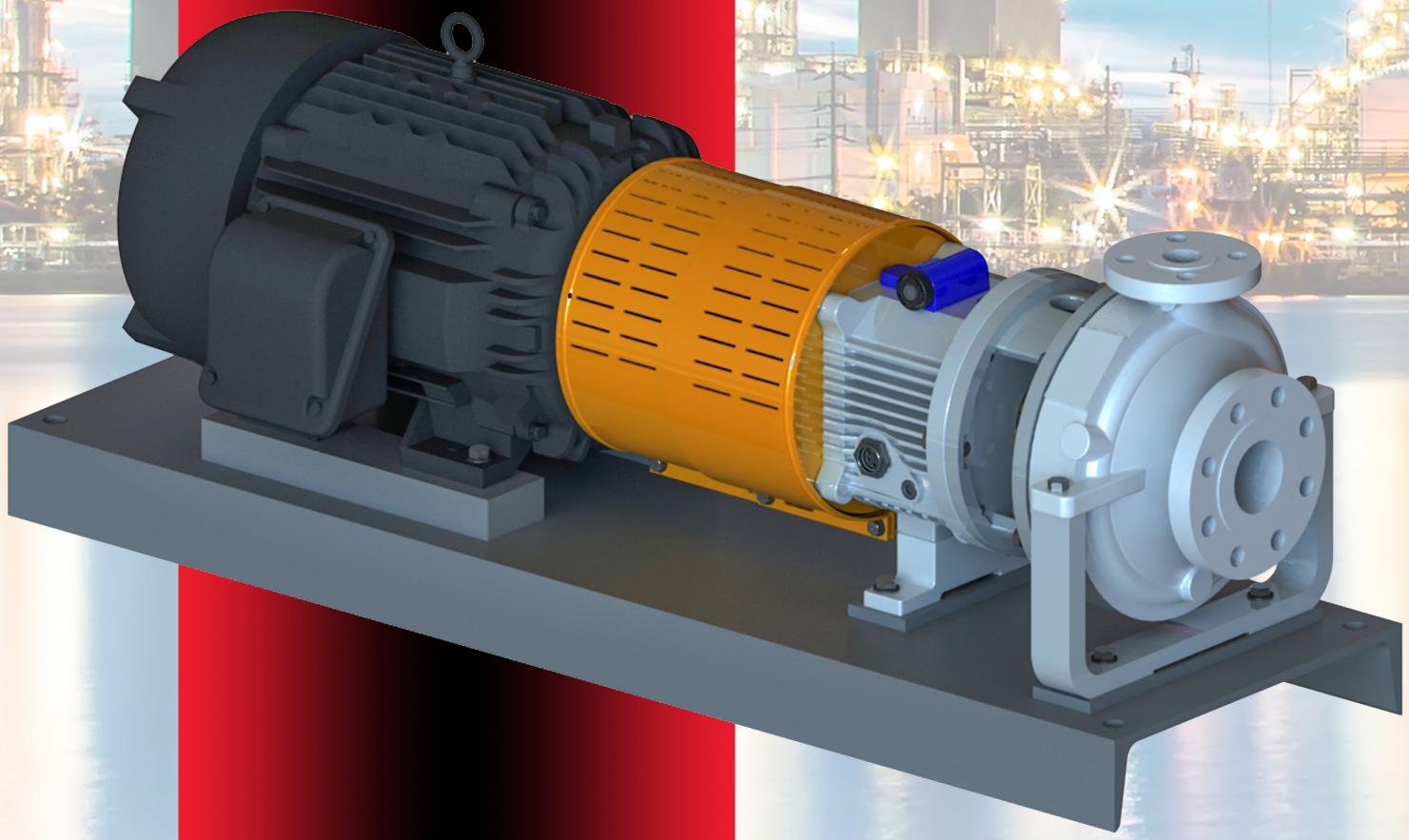
MANUFACTURED & TESTED IN THE USA
THE BEST QUALITY • THE FASTEST DELIVERY

PWA-HT

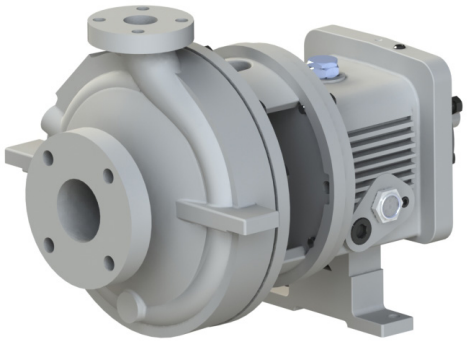
HIGH TEMPERATURE CENTRIFUGAL PROCESS PUMP



PumpWorks™

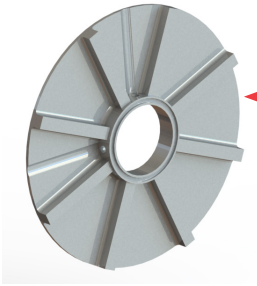
PWA-HT HIGH TEMPERATURE PROCESS PUMP

Designed for Reliable, High Temperature Operation

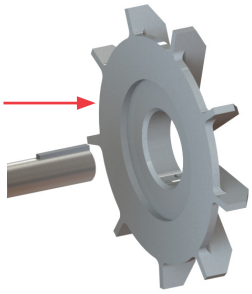


- Centerline case-mounted, providing uniform bi-axial thermal material expansion, thus maintaining critical shaft alignment for stable seal and bearing performance.
- Standard PumpWorks Upgraded Power Frame with proven Flinger Disc Lubrication. Provides for 305 increased L-10 bearing life and a minimum of 20ºF lower bearing operation temperature compared to flood oil design.
- High strength Carbon Steel casing is standard, yielding safer protection against casing fracture in rapid thermal changes, such as during fire suppression.

Superior High Temperature Protection



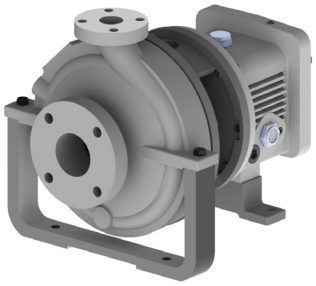
Shaft non-drive end Heat Sink and drive end Fan standard for temperatures above 450ºF



17" Pedestal mount

Notable Standard Features at No Additional Cost

- All parts are completely interchangeable with PumpWorks PWA pump, except for the centerline mounted casing.
- Upgraded 316L SS shaft versus carbon steel shaft at no additional cost.
- Jacketed Standard, Taper, and Big Bore stuffing box arrangements available to accommodate multiple high temperature Mechanical Sealing options.
- Yoke mounted pumps utilize the same baseplate as the PumpWorks PWA ANSI pump family.



Yoke mount

Seal Chamber / Sealing Solutions

- Multiple seal chambers for maximum sealing flexibility for all process applications.
- Accommodates all mechanical seal manufacturer's component and ANSI cartridge seal configurations.
- Supports the full array of CPI seal support system options.
- Ensures superior leak protection with maximum heat dissipation, maximizing seal life and pump reliability.

Standard bore

Tapered bore

Big bore

Component seal

Single cartridge seal

Dual cartridge seal

Capabilities

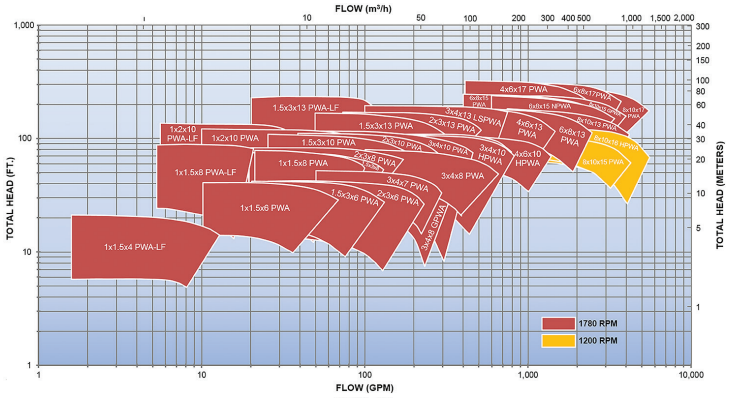
- Flows to 7,000 GPM | 1364 m³/hr
- Heads to 730 ft | 223m
- Temperatures to 700º F } 371º C
- Pressures to 500 psi | 35 bar

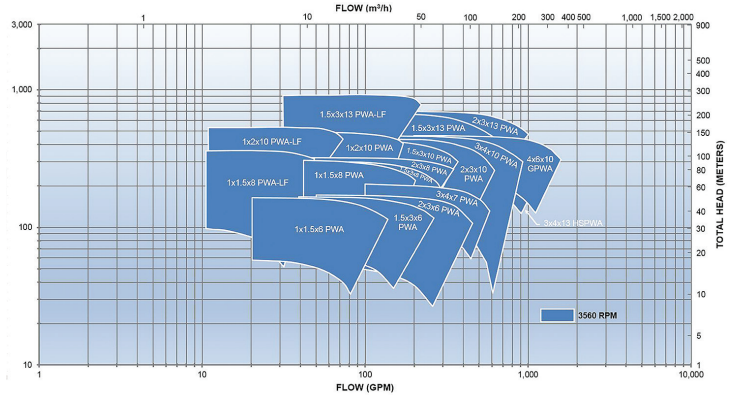
5 Year Unconditional Power Frame Warranty is Standard at No Additional Cost.

HYDRAULIC PERFORMANCE COVERAGE

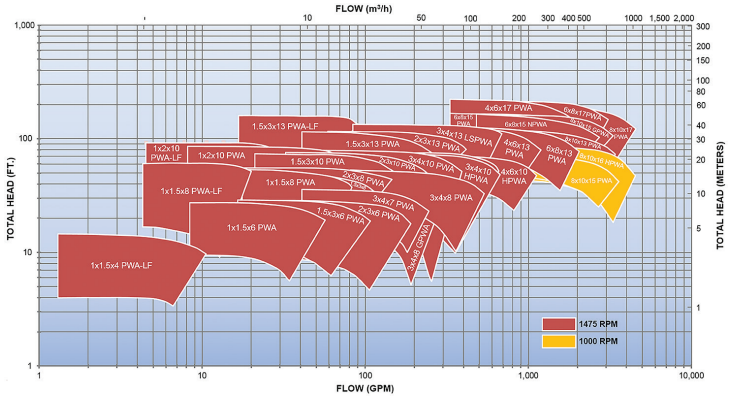
Performances shown are nominal and are to be used for preliminary selection only. Hydraulic Performance exactly

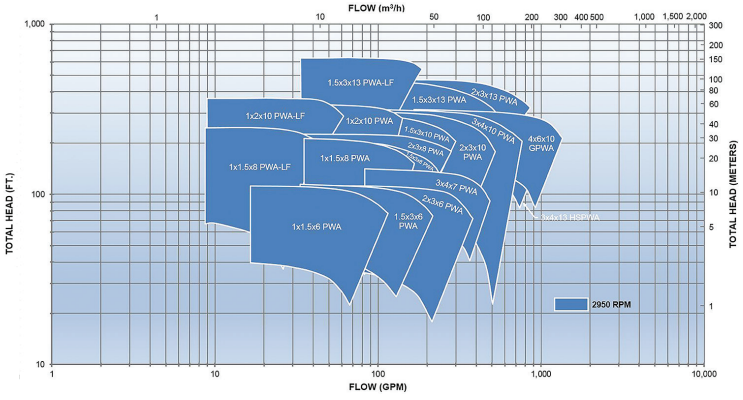
60 HZ Performance Coverage





50 Hz Performance Coverage





TECHNICAL DATA

All dimensions in inches and (mm)

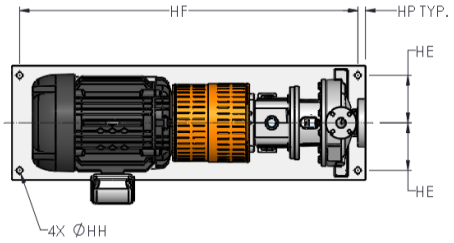
		GP1	GP2	GP3	GP4
Shaft	Shaft Diameter at Impeller	0.75 (19)	1 (25)	1.25 (32)	1.5 (38)
	Diameter in Stuffing Box/Seal Chamber				
	(Less sleeve)	1.375 (35)	1.75 (45)	2.125 (54)	2.5 (64)
	(With sleeve)	1.125 (29)	1.5 (38)	1.875 (48)	2 (51) note 1
	Diameter Between Bearings	1.5 (38)	2.125 (54)	2.5 (64)	3.125 (79)
	Diameter at Coupling	0.875 (22)	1.125 (29)	1.875 (48)	2.375 (60)
	Overhang	6.125 (156)	8.375 (213)	8.375 (213)	9.969 (253)
	Maximum Shaft Deflection	0.002 (0.05)			
	Shaft Deflection Index (L^3/ D^4)				
	(Less sleeve)	64	63	29	25
	(With sleeve)	143	116	48	62
Sleeve	Outside Diameter thru Stuffing Box/Seal Chamber	1.375 (35)	1.75 (45)	2.125 (54)	2.5 (64) note 1
Bearings	Radial	6207	6309	6311	6313
	Thrust	3306	3309	7310	3313
	Bearing Span	4.125 (105)	6.75 (171)	6.875 (164)	9.25 (235)
Large Bore Seal Chamber	Bore	2.875 (73)	3.5 (89)	3.875 (98)	4.75 (120) note 1
Stuffing Box	Bore	2 (51)	2.5 (64)	2.875 (73)	3.375 (86) note 1
Maximum Power Limits	HP (kW) per 100 RPM	1.1 (0.82)	3.4 (2.6)	5.6 (4.2)	14 (10.5) note 2
Maximum Allowable Working Pressure note 3	MAWP PSI (kPa)*	up to 285 PSI (1965 kPa) at 100°F with 150 # flanges			
		up to 375 PSI (2586 kPa) at 100°F with 300 # flanges – note 4			
		*Consult Pressure Temperature chart for various temperatures			
Maximum Temperature note 5	Oil or Grease Lubricated Bearing Frame without Optional Cooling	350° F (177°C)			
	Oil Lubricated Power Frame with Option Cooling	700° F (370°C)			
Casing	Corrosion Allowance	0.125 minimum			

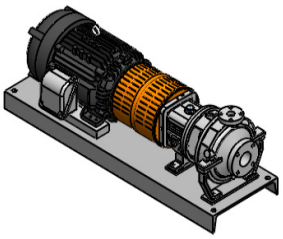
NOTES:
1. 17 inch pump sizes - Shaft diameter at Stuffing Box / Seal Chamber is 2.25 inches (57) with sleeve. Shaft Sleeve Outside Diameter is 2.75 inches (70) for packing and 2.5 inches (64) for mechanical seals.
   Seal chamber bore is 4.75 inches (121). Stuffing box bore is 3.625 inches (92).
2. 17 inch pump sizes power limitation per 100 RPM is 20HP (15kW).
3. Hydro-static test pressure equal to 1.5 times Maximum Allowable Working Pressure.
4. Pressure ratings to 740 PSI (5137 kPa) – consult factory.
5. Tube Finned Cooler, Jacketed Seal Chamber, Graphite Impeller O-ring and Casing Gasket for temperatures between 450º F (232º C) to 700º F (370º C).

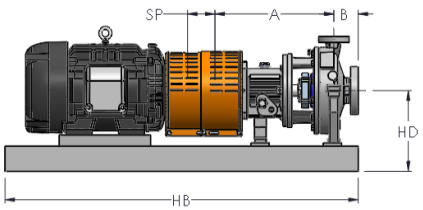
DIMENSIONS AND WEIGHTS

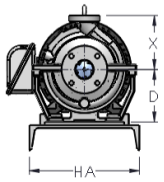
Dimensions in inches (mm), weights in lbs. (kg)

Not to be used for construction unless otherwise certified by manufacturer.









PUMP DIMENSIONS AND WEIGHTS

Dimensions in inches (mm), weights in lbs. (kg)

Pump approximate weights are Group 2 Power Frame. For Group 3 Power Frame, add 25 lbs. (11.5 kg). Weights and dimensions are approximate and not to be used for construction.

FRAME	SIZE	ANSI DESIGNATION	DISCHARGE SIZE	SUCTION SIZE	X	A	B	D	SP	WEIGHT BARE PUMP lb (kg)
GROUP 1	1x1.5x6	AA	1	1.5	6.5 (165)	13.5 (343)	4.0 (102)	5.25 (133)	3.75 (95)	110 (50)
	1.5x3x6	AB	1.5	3						120 (55)
	2x3x6	AC	2	3						125 (57)
	1x1.5x8	AA	1	1.5						130 (59)
	1.5x3x8	AB	1.5	3						135 (61)
GROUP 2 / GROUP 3	3x4x7	A70	3	4	11 (280)	19.5 (496)	4 (102)	8.25 (210)	3.75 (95)	270 (122)
	2x3x8	A60	2	3	9.5 (242)					265 (120)
	3x4x8	A70	3	4	11 (280)					270 (122)
	3x4x8G	A70	3	4						
	1x2x10	A05	1	2	8.5 (216)					280 (127)
	1.5x3x10	A50	1.5	3						285 (129)
	2x3x10	A60	2	3	9.5 (242)					275 (125)
	3x4x10	A70	3	4	11 (280)					290 (132)
	3x4x10H	A40	3	4	12.5 (318)			10 (254)		305 (138)
	4x6x10G	A80	4	6	13.5 (343)					385 (175)
	4x6x10H	A80	4	6						
	1.5x3x13	A20	1.5	3	10.5 (267)					350 (159)
	2x3x13	A30	2	3	11.5 (292)					355 (161)
	3x4x13	A40	3	4	12.5 (318)					370 (168)
	4x6x13	A80	4	6	13.5 (343)					440 (200)
GROUP 4	6x8x13	A90	6	8	16 (406)	27.875 (708)	6 (152)	14.5 (368)	5.25 (133)	620 (281)
	8x10x13	A100	8	10	18 (457)					740 (336)
	6x8x15	A110	6	8						700 (318)
	8x10x15	A120	8	10	19 (483)					800 (363)
	8x10x15G	A120	8	10						775 (352)
	8x10x16H	A120	8	10						1030 (467)
	3x4x17	–	3	4	16 (406)					620 (279)
	4x6x17	A105	4	6						720 (327)
	6x8x17	A110	6	8	18 (457)					815 (370)
	8x10x17 & 17H	A120	8	10	19 (483)					885 (401)

NEMA MOTOR FRAME	WEIGHT lb (kg)
182T	98 (45)
184T	128 (58)
213T	197 (89)
215T	226 (103)
254T	375 (170)
256T	412 (187)
284T	495 (225)
286T	519 (235)
324T	700 (318)
326T	756 (343)
364T	948 (430)
365T	1009 (458)
405T	1330 (603)
444T	1820 (826)
445T	1893 (859)
447T	2343 (1073)
449T	3020 (1370)

BASEPLATE DIMENSIONS AND WEIGHTS

Dimensions in inches (mm), weights in lbs. (kg)

MAX NEMA FRAME	ANSI BASEPLATE NUMBER	HA	HB	HD Max				HE	HF	HH	HP TYP	WEIGHT lb (kg)
				D=5.25 (133)	D=8.25 (210)	D=10 (254)	D=14.5 (368)					
184T	139	12 (381)	39 (991)	9 (229)				4.5 (114)	36.5 (927)	0.75 (19)	1.25 (32)	124 (56)
256T	148	15 (457)	48 (1219)	10.5 (267)				6 (152)	45.5 (1156)	0.75 (19)	1.25 (32)	195 (89)
326TS	153	18 (533)	53 (1346)	12.88 (327)				7.5 (191)	50.5 (1283)	0.75 (19)	1.25 (32)	258 (117)
184T	245	12 (381)	45 (1143)		12 (305)	13.75 (349)		4.5 (114)	42.5 (1080)	0.75 (19)	1.25 (32)	133 (61)
215T	252	15 (457)	52 (1321)		12.38 (314)	14.13 (359)		6 (152)	49.5 (1257)	0.75 (19)	1.25 (32)	189 (86)
286T	258	18 (533)	58 (1473)		13 (330)	14.75 (375)		7.5 (191)	55.5 (1410)	1 (25)	1.25 (32)	278 (127)
365T	264	21 (533)	64 (1626)		13.88 (353)	14.75 (375)		7.5 (191)	61.5 (1562)	1 (25)	1.25 (32)	395 (180)
405TS	268	24 (660)	68 (1727)		14.88 (378)	14.88 (378)		9.5 (241)	65.5 (1664)	1 (25)	1.25 (32)	430 (196)
449TS	280	26 (660)	80 (2032)		15.88 (403)	15.88 (403)		9.5 (241)	77.5 (1969)	1 (25)	1.25 (32)	437 (198)
286T	368	24 (660)	68 (1727)				19.25 (489)	9.5 (241)	65.5 (1664)	1 (25)	1.25 (32)	456 (208)
405T	380	26 (660)	80 (2032)				19.25 (489)	9.5 (241)	77.5 (1969)	1 (25)	1.25 (32)	580 (263)
449T	398	26 (660)	98 (2489)				19.25 (489)	9.5 (241)	95.5 (2426)	1 (25)	1.25 (32)	839 (382)

Weights and dimensions are approximate and not to be used for construction.

PumpWorks™ Made *Right* in the USA

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ISO 9001:2008 BUREAU VERITAS Certification

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