

TECHNAFLO

Ingersoll Rand

W SERIES PUMPS

ENGINEERING DATA PACK



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W SERIES MODEL NUMBER SYSTEM

POSITIONS	SERIES	MAGNET TORQUE	MATERIALS OF CONSTRUCTION	DISPLACEMENT mL/REV			GEAR & BEARING MATERIAL			O-RING	PORT SIZE	MAGNET	BYPASS	MOTOR & DRIVE	OPEN	OPERATING TEMPERATURE	OPEN
	W	G	S	.	6	8	P	P	P	T	1	N	M	9	7	0	0
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

POS. 1 - PUMP SERIES

W = Waste Water Series

POS. 2 - MAGNET TORQUE

G = 65 oz/in

X = 240 oz/in

W = 460 oz/in (Required for 8.0 and 12. Sizes)

POS. 3 - METAL WETTED PARTS

S = 316 Stainless Steel

H = Hastelloy C276

T = Titanium

POS. 4, 5, & 6 - DISPLACEMENT mL/REV

.11 = Nominal 6 GPH at 3500 RPM

.19 = Nominal 10 GPH at 3500 RPM

.23 = Nominal 12 GPH at 3500 RPM

.38 = Nominal 20 GPH at 3500 RPM

.57 = Nominal 30 GPH at 3500 RPM

.68 = Nominal 36 GPH at 3500 RPM

.80 = Nominal 42 GPH at 3500 RPM

.99 = Nominal 52 GPH at 3500 RPM

1.2 = Nominal 63 GPH at 3500 RPM

1.3 = Nominal 68 GPH at 3500 RPM

1.6 = Nominal 84 GPH at 3500 RPM

2.0 = Nominal 105 GPH at 3500 RPM

2.3 = Nominal 121 GPH at 3500 RPM

2.6 = Nominal 137 GPH at 3500 RPM

5.3 = Nominal 279 GPH at 3500 RPM

7.9 = Nominal 416 GPH at 3500 RPM

8.0 = Nominal 421 GPH at 3500 RPM

12. = Nominal 650 GPH at 3500 RPM

POS. 7, 8, & 9 - GEAR & BEARING MATERIAL

PPP = PPS (Polyphenylene Sulfide)

EEE = PEEK (Polyetheretherketone)

TTT* = PTFE

* Available in .23, .38, .57, .68, .80, 1.2, and 1.6 only.

Requires PTFE O-rings and welded magnet.

Maximum Differential Pressure = 100PSI

POS. 10 - O-RING

V = Viton

T = PTFE

E = EPR

POS. 11 - PORT SIZE

2 = 1/4" NPT

3 = 3/8" NPT

(Required for 2.6, 5.3, and 7.9 sizes)

7 = 3/4" NPT Suction, 1/2" NPT on Discharge

(Required for 8.0 and 12. sizes)

POS. 12 - MAGNET

N = PPS or PEEK Encapsulated

(Material based on Pos. 7, 8, & 9)

W = Welded

(Required for PTFE gears, Hastelloy, Titanium pumps.

Not available for Stainless or in B size magnet.)

POS. 13 - BYPASS*

N = None

M = Medium 60 PSI (Standard)

L = Low Pressure 30 PSI

(Low Pressure not available in .99 to 2.3 sizes)

H = High Pressure 130 PSI

(High Pressure not available in .99 to 2.3 sizes)

* Bypass is not available in Hastelloy or Titanium, or from displacements above 2.3

POS. 14 & 15 - MOTOR DRIVE

00 = Pump Only

POS. 16 - OPEN

0 = Open

POS. 17 - OPERATING TEMPERATURES

PTFE = 140°F (60°C)

PPS = 250°F (121°C) Polyphenylene Sulfide

PEEK = 350°F (176°C) Polyetheretherketone

Note: Temperatures greater than 140°F (60°C) may reduce flow/pressure. Approximate gear & bearing maximum temperature limits

POS. 18 - OPEN

0 = Open

SERVICE PACK OPTION

Add "SP" in front of the model number, followed by positions 1-10, 16, 17, & 18 of pump model

Note: SPDB, SPDG, & SPDX default to SPDD

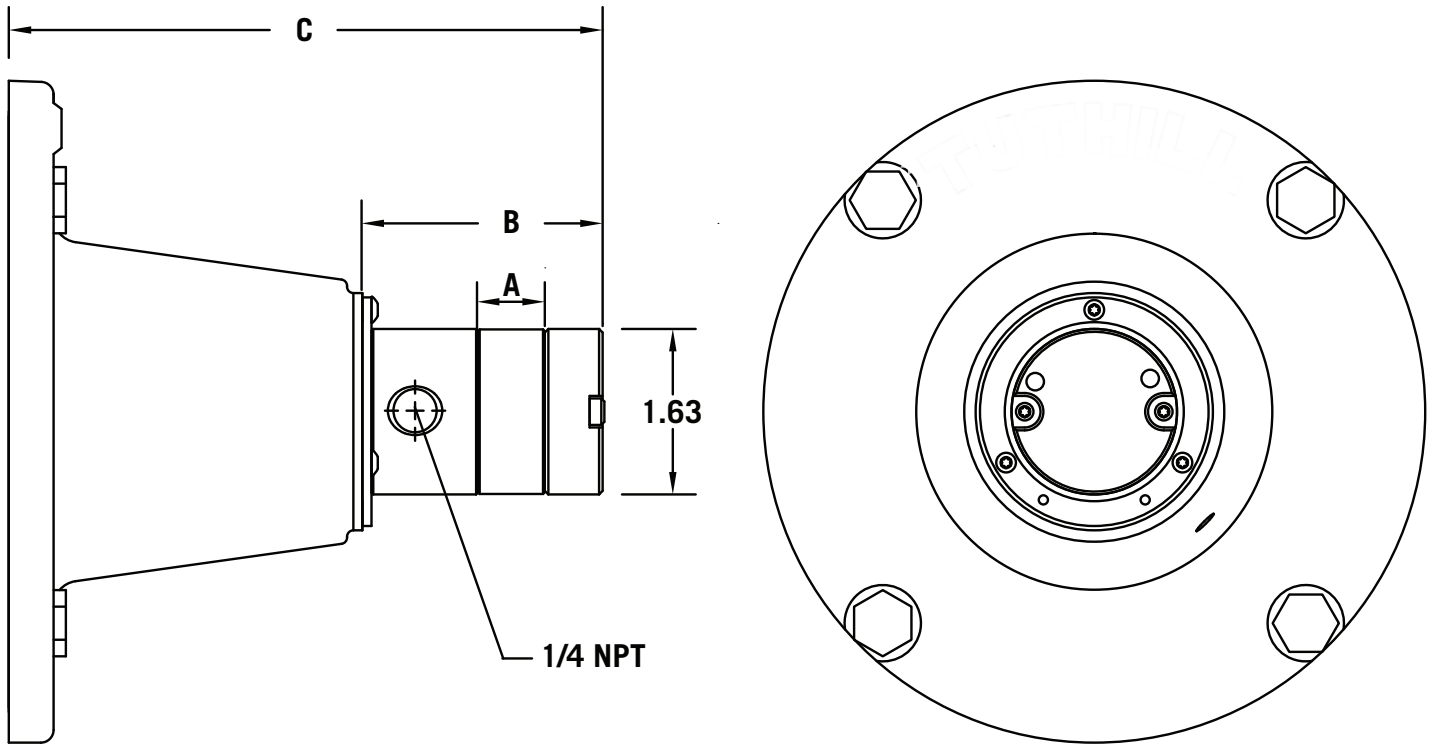
(Example - SPDDS1.2PPPT000)

Service Pack Contains:

- Gears
- Bearings
- O-Rings
- Lubricant
- Instruction Sheet

MOUNTING DIMENSIONS

All measurements are in inches [millimeters].



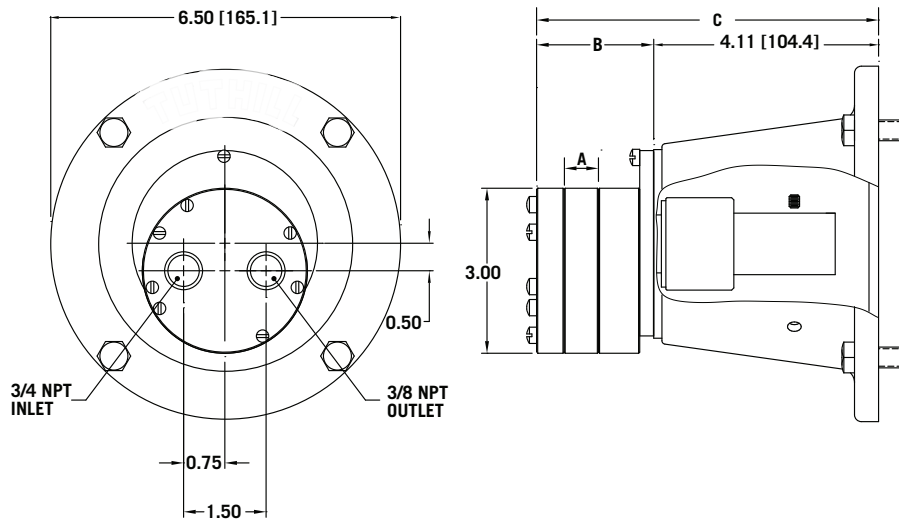
W SERIES DISPLACEMENTS .11 TO 2.3

DISPLACEMENT	DIMENSION A	DIMENSION B	DIMENSION C
.11 & .19	0.125" [3.2mm]	1.83" [46.4mm]	5.30" [134.6mm]
.23 & .38	0.250" [6.4mm]	1.95" [49.5mm]	5.42" [137.7mm]
.57	0.375" [9.5mm]	2.07" [52.7mm]	5.54" [140.7mm]
.68 & .80	0.450" [11.4mm]	2.15" [54.7mm]	5.62" [142.7mm]
.99 & 1.2	0.657" [16.7mm]	2.36" [59.9mm]	5.83" [148.1mm]
1.3	0.750" [19.0mm]	2.45" [62.3mm]	5.92" [150.4mm]
1.6 & 2.0	0.900" [22.9mm]	2.60" [66.0mm]	6.07" [154.2mm]
2.3	1.000" [25.4mm]	2.70" [68.6mm]	6.17" [156.7mm]

NOTE: In conjunction with our program of continuous testing and design upgrading, all specifications are subject to change without notice. All data is approximate. Request a quotation for your specific application.

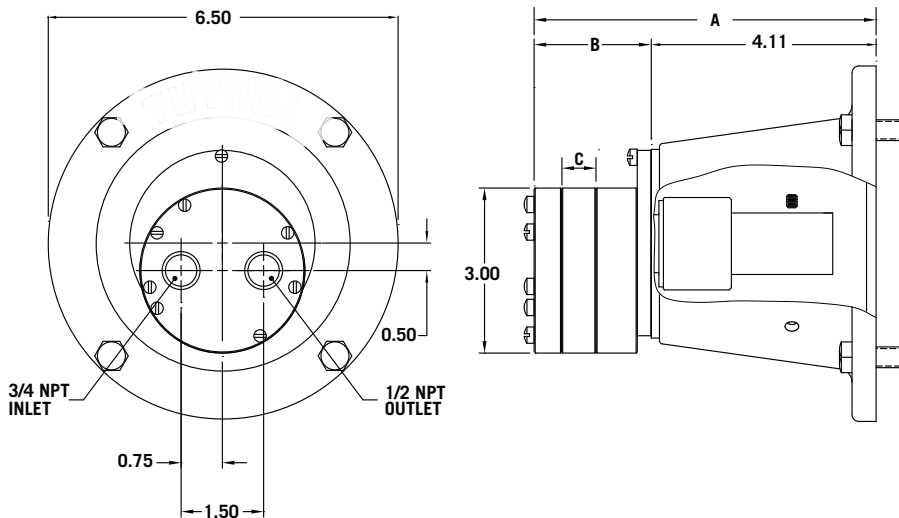
MOUNTING DIMENSIONS

All measurements are in inches [millimeters].



W SERIES DISPLACEMENTS 2.6 TO 7.9

DISPLACEMENT	DIMENSION A	DIMENSION B	DIMENSION C
2.6	0.313" [7.95mm]	1.82" [46.2mm]	5.93" [150.6mm]
5.3	0.625" [15.8mm]	2.12" [53.8mm]	6.24" [158.5mm]
7.9	0.938" [23.8mm]	2.43" [61.8mm]	6.55" [166.4mm]



W SERIES DISPLACEMENTS 8.0 TO 12.

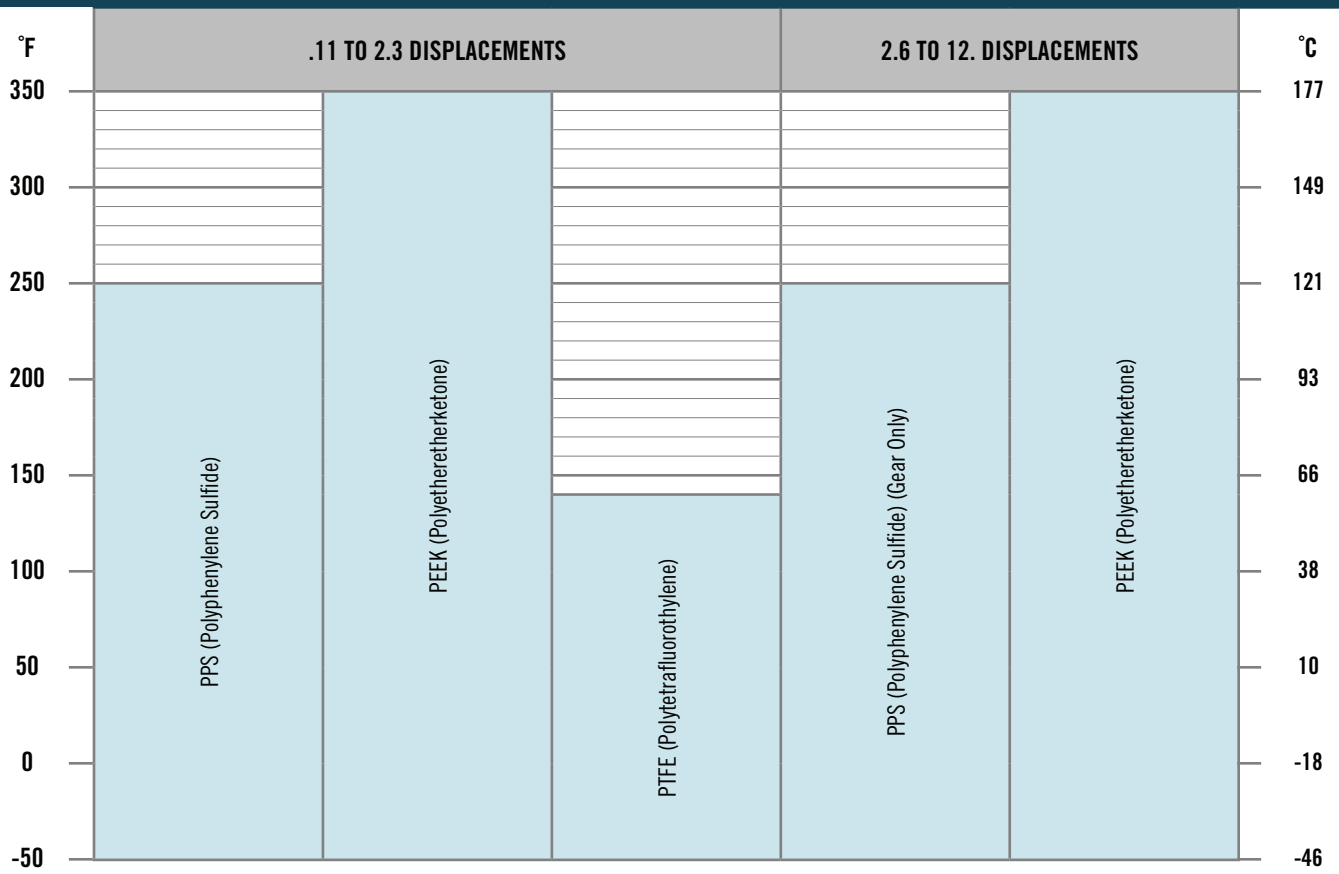
DISPLACEMENT	DIMENSION A	DIMENSION B	DIMENSION C
8.0	7.00" [177.8mm]	2.65" [59.7mm]	0.625" [15.9mm]
12.	7.32" [185.9mm]	2.96" [75.1mm]	0.938" [23.8mm]

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W SERIES PUMPS MATERIALS OF CONSTRUCTION

PART	MATERIAL
BODY	Stainless Steel - ASTM A276 - 316 SS
	Hastelloy - C276
	Titanium - ASTM B348
CAVITY PLATE	Stainless Steel - ASTM A276 - 316 SS
	Hastelloy - C276
	Titanium - ASTM B348
CAP	Stainless Steel - ASTM A276 - 316 SS
	Hastelloy - C276
	Titanium - ASTM B348
GEARS & BEARINGS	PPS - 30% Carbon/15% PTFE
	PEEK - 15% Carbon
	PTFE
O-RINGS	Viton
	Teflon (PTFE)
	Buna-N
	EPR
SHAFT	Stainless Steel - ASTM A276 - 316 SS
	Hastelloy - C276
	Titanium - ASTM B348
MAGNET	Ceramic Encapsulated in PPS
	Ceramic Encapsulated in PEEK
	Samarium Cobalt Encapsulated in PPS
	Samarium Cobalt Encapsulated in PEEK
	Samarium Cobalt Weld Encapsulated and Molded Over with PPS
	Samarium Cobalt Weld Encapsulated and Molded Over with PEEK
MAGNET CUP	Stainless Steel - ASTM A167
	Hastelloy - C276
	Titanium - ASTM B265
MAGNET SHROUD	Stainless Steel - AMS 5524
	Hastelloy - C276
	Titanium - ASTM B265

W SERIES TEMPERATURE LIMITS



W SERIES PERFORMANCE INFORMATION

PUMP DISPLACEMENT	THEORETICAL FLOW 3500 RPM, 0 PSI (BAR)		CONSTANT MAX SPEED	MAX DIFFERENTIAL PRESSURE @ 1 cPs VISCOSITY				MAX TEMPERATURE		MAX MAGNET SIZE
				Intermittent		Continuous				
				m/REV	GPH	LPH	RPM	PSI	BAR	
.11	6	22	5000	150	10.3	150	10.3	350	177	G
.19	10	38	5000	150	10.3	150	10.3	350	177	G
.23	12	46	5000	250	17.2	250	17.2	350	177	G
.38	20	76	5000	250	17.2	250	17.2	350	177	G
.57	30	114	5000	250	17.2	250	17.2	350	177	G
.68	36	136	5000	250	17.2	200	13.8	350	177	G
.80	42	160	5000	250	17.2	200	13.8	350	177	G
.99	52	198	5000	200	13.8	140	9.7	350	177	X
1.2	63	239	5000	200	13.8	140	9.7	350	177	X
1.3	69	259	5000	175	12.1	125	8.6	350	177	X
1.6	84	319	5000	150	10.3	100	6.9	350	177	X
2.0	105	399	5000	150	10.3	100	6.9	350	177	X
2.3	121	459	5000	150	10.3	100	6.9	350	177	X
2.6	137	519	5000	250	17.2	150	10.3	350	177	X
5.3	279	1057	5000	145	10	100	6.9	350	177	X
7.9	416	1576	4000	95	6.6	70	4.8	350	177	X
8.0	422	1596	4000	150	10.3	150	10.3	350	177	W
12.	632	2394	4000	120	8.2	100	6.9	350	177	W

REGULATORY COMPLIANCE INFORMATION



ATEX

The W Series pumps' technical file is lodged in accordance with Article 13(1)(b)(ii) of ATEX Directive 2014/34/EU of 26 February 2014

THE FOLLOWING STANDARDS WERE USED TO VERIFY CONFORMANCE:

2006/42/EC – The Machinery Directive

EN 1127-1:2011 – Explosive atmospheres - Explosion prevention and protection - Part 1: Basic concepts and methodology

EN ISO 80079-36:2016 – Explosive atmospheres - Part 36: Non-electrical equipment for explosive atmospheres - Basic method and requirements

EN ISO 80079-37:2016 – Explosive atmospheres - Part 37: Non-electrical equipment for explosive atmospheres - Nonelectrical type of protection constructional safety "c", control of ignition sources "b", liquid immersion "k"



The W Series pumps comply with the European Directive 2006/42/EC

THE FOLLOWING STANDARDS WERE USED TO VERIFY CONFORMANCE:

EN ISO 12100:2010 – Safety of machinery - General principles for design

EN 809:1998+A1:2009 – Pumps and pump units for liquids - Common safety requirements

2011/65/EU – The Restriction of Hazardous Substances Directive

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