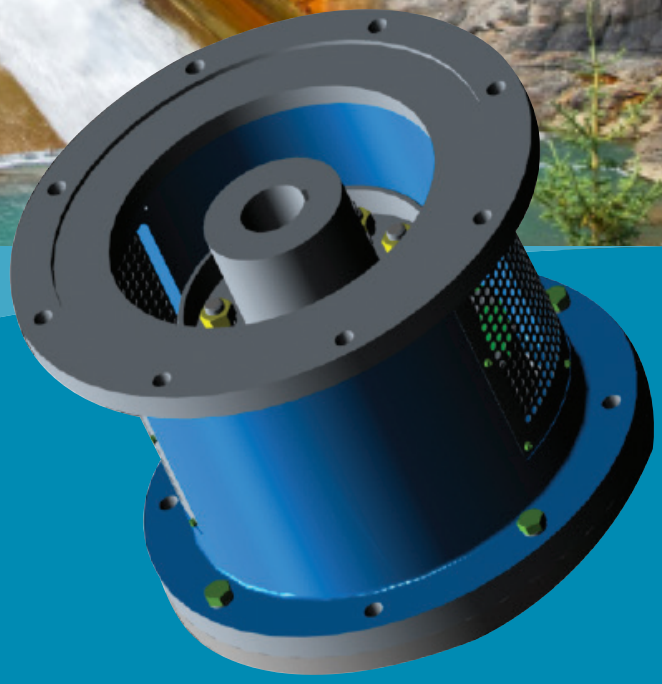


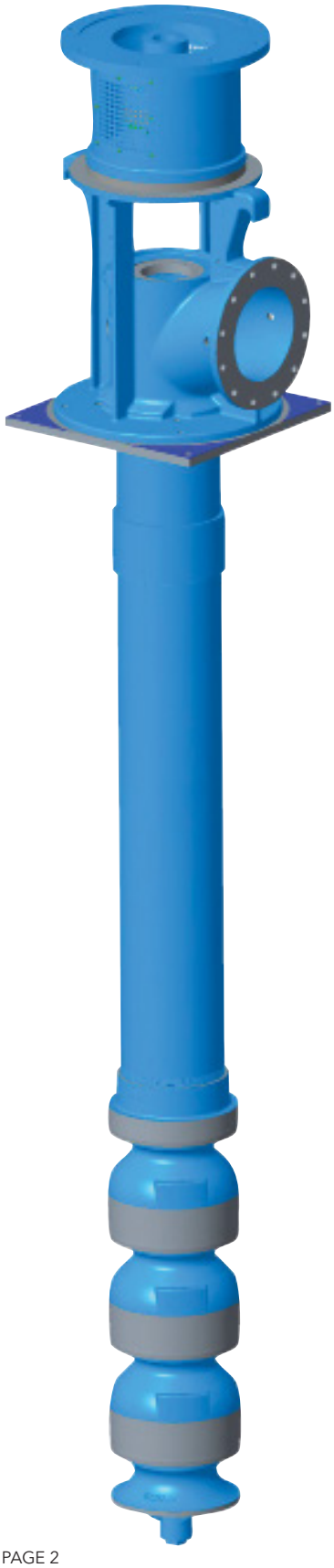
Thrust Pots

FOR LINESHAFT VERTICAL TURBINE PUMPS

GOULDS WATER TECHNOLOGY
a xylem brand

BRTHRPTTURB R2

Thrust Pots



Thrust pots are required on vertical turbine lineshaft pumps using IEC motors which will not carry axial thrust loads. The thrust pot is installed between the discharge head and the motor.

Technical Data

- For IEC motor only
- Maximum Power: 315kw
- Bearing Life: 20000h minimum

Design Features

- Modular Design
- Simple to Install
- Grease Lubrication

Model Description

TP-800 - 7313 - 160 - 10 / 42

- 42 — Motor Shaft Diameter (mm)
- 10 — Discharge Head Size
- 160 — Motor Frame
- 7313 — Bearing Size
- TP-800 — Thrust Pot

Material

Part	Standard material
Motor Support	Cast Iron
Hollow Shaft	Ductile Iron
Motor	Ductile Iron
Bearing	Ductile Iron
Bearing	FAG or equivalent

Parts List and Cross-Sectional Drawing

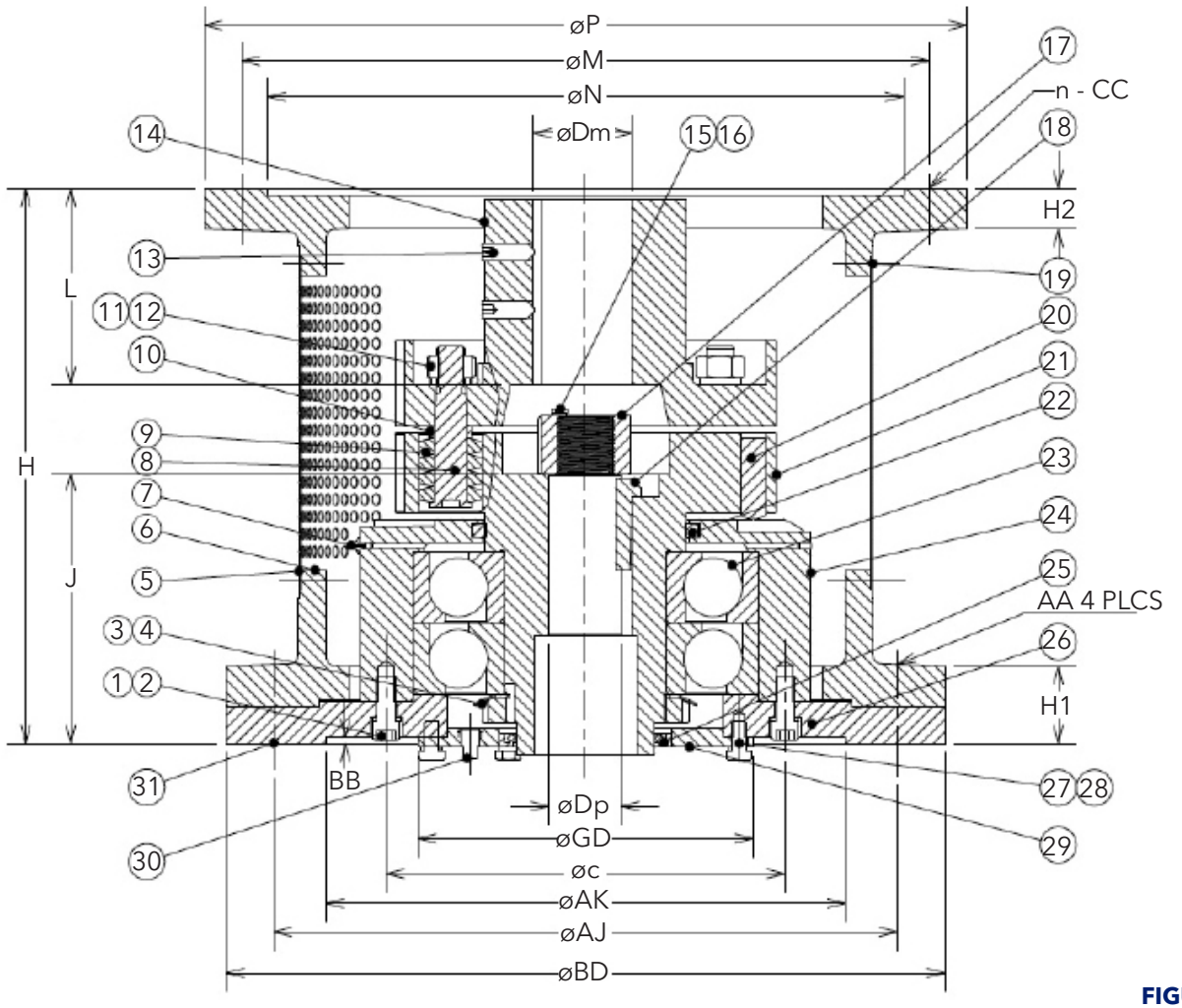


FIGURE 1

No.	Part Name
1	Screw
2	Washer
3	Lock Washer
4	Lock Nut
5	Guard
6	Motor Support
7	Grease Fitting
8	Pole Pin
9	Flexible Ring
10	Block Ring
11	Nut
12	Washer
13	Set Screw
14	Motor Shaft Coupling
15	Washer

No.	Part Name
16	Screw
17	Adjusting Nut
18	Gib Key
19	Screw
20	Non-Reverse Pin
21	Hollow Shaft
22	Felt Ring
23	Bearing
24	Bearing Housing
25	Oil Seal
26	Base Plate
27	Bolt
28	Washer
29	Grease Cover
30	Plug

NOTE: Drive shaft, washer (15), locking screws (16), adjusting nut (17) and gib key (18) are not furnished with thrust pot.

Table 1 General Information & Dimensions (mm)

Type	Name	Frame	Power	N	M	P	AK	AJ	BD	Bearing	Thrust 2P 2900 RPM	Thrust 4P 1450 RPM
1	TP-800-7313-160-10/42	160	11-18.5kW	250	300	350	209.5	231.65	254	7313B/DT	1650kg	2150kg
2	TP-800-7313-180-10/48	180	18.5-22kW	250	300	350	209.5	231.65	254	7313B/DT	1650kg	2150kg
3	TP-800-7313-200-16.5/55	200	30-37kW	300	350	400	342.85	374.65	419	7313B/DT	1650kg	2150kg
4	TP-800-7313-225-16.5/55	225	45kW	350	400	450	342.85	374.65	419	7313B/DT	1650kg	N/A
5	TP-800-7319-225-16.5/60	225	37-45kW	350	400	450	342.85	374.65	419	7319B/DT	N/A	3750kg
6	TP-800-7319-250-16.5/65	250	55kW	450	500	550	342.85	374.65	419	7319B/DT	N/A	3750kg
7	TP-800-7319-280-16.5/75	280	75-90kW	450	500	550	342.85	374.65	419	7319B/DT	N/A	3750kg
8	TP-800-7324-250-16.5/65	250	55kW	450	500	550	342.85	374.65	419	7324B/DT	N/A	4800kg
9	TP-800-7324-280-16.5/75	280	75-90kW	450	500	550	342.85	374.65	419	7324B/DT	N/A	4800kg
10	TP-800-7324-315-20/80	315	110-200kW	550	600	660	342.85	374.65	508	7324B/DT	N/A	4800kg
11	TP-800-7324-315-26/80	315	110-200kW	550	600	660	342.85	558.8	622	7324B/DT	N/A	4800kg
12	TP-800-7328-315-26/80	315	110-200kW	550	600	660	342.85	558.8	622	7328B/DT	N/A	5580kg
13	TP-800-7328-355-26/95	355	220-315kW	680	740	800	342.85	558.8	622	7328B/DT	N/A	5580kg
14	TP-800-7314-250-16.5/60	250	55kW	450	500	550	342.85	374.65	419	7314B/DT	1900	N/A
15	TP-800-7314-280-16.5/65	280	75-90kW	450	500	550	342.85	374.65	419	7314B/DT	1900	N/A
16	TP-800-7315-315-20/65	315	110-160kW	550	600	660	342.85	374.65	508	7315B/DT	2050	N/A

Table 2 The Dimension for Thrust Pot (unit: mm)

Type	Name	Dm	n-AA	H	H1	H2	L	J	BB	C	Dp	GD
1	TP-800-7313-160-10/42	42	4* 11.25	322	45	25	110	161	5	170	31.750	170
2	TP-800-7313-180-10/48	48	4* 11.25	322	45	25	110	161	5	170	31.750	170
3	TP-800-7313-200-16.5/55	55	4* 19.0	322	50	25	110	161	5	170	31.750	170
4	TP-800-7313-225-16.5/55	55	4* 19.0	322	50	25	110	161	5	170	31.750	170
5	TP-800-7319-225-16.5/60	60	4* 19.0	428	55	25	140	219	5	200	42.875	200
6	TP-800-7319-250-16.5/65	65	4* M16-1.5 x 50 Deep	428	55	30	140	219	5	200	42.875	200
7	TP-800-7319-280-16.5/75	75	4* M16-1.5 x 50 Deep	428	55	30	140	219	5	200	42.875	200
8	TP-800-7324-250-16.5/65	65	4* M16-1.5 x 50 Deep	428	55	30	140	215	5	290	49.225	290
9	TP-800-7324-280-16.5/75	75	4* M16-1.5 x 50 Deep	428	55	30	140	215	5	290	49.225	290
10	TP-800-7324-315-20/80	80	4-M16-1.5 x Through	462	60	35	170	215	5	290	49.225	290
11	TP-800-7324-315-26/80	80	4* 24.0	464	67	35	170	217	5	290	49.225	290
12	TP-800-7328-315-26/80	80	4* 24.0	480	67	35	170	233	5	290	63.525	290
13	TP-800-7328-355-26/95	95	4* 24.0	480	67	35	170	233	5	290	63.525	290
14	TP-800-7314-250-16.5/60	60	4* M16-1.5 x 45 Deep	364	50	30	140	161	5	180	36.525	180
15	TP-800-7314-280-16.5/65	65	4* M16-1.5 x 45 Deep	364	50	30	140	161	5	180	36.525	180
16	TP-800-7315-315-20/65	65	4-M16-1.5 x Through	364	55	35	140	161	5	190	39.700	190

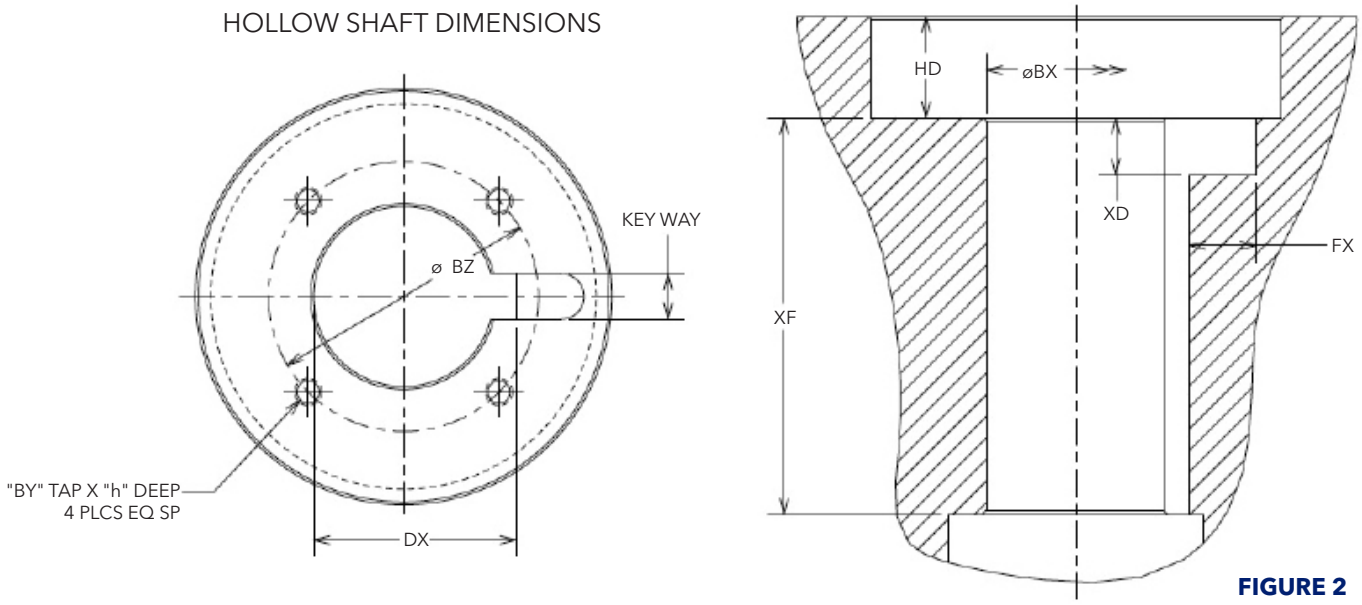


FIGURE 2

Table 3 Hollow Shaft Dimensions (unit: mm)

Type	Name	HD	BX	XD	FX	XF	Keyway	BZ	DX	n-BY	h
1	TP-800-7313-160-10/42	20	31.800/31.775 (1)	10.5	12	84	6.35 x 3.175	44.45	35.00	4* 1/4-20UNC	15
2	TP-800-7313-180-10/48	20	31.800/31.775 (1)	10.5	12	84	6.35 x 3.175	44.45	35.00	4* 1/4-20UNC	15
3	TP-800-7313-200-16.5/55	20	31.800/31.775 (1)	10.5	12	84	6.35 x 3.175	44.45	35.00	4* 1/4-20UNC	15
4	TP-800-7313-225-16.5/55	20	31.800/31.775 (1)	10.5	12	84	6.35 x 3.175	44.45	35.00	4* 1/4-20UNC	15
5	TP-800-7319-225-16.5/60	32	42.900/42.875	14	16	115	9.525 x 4.763	63.50	47.64	4* 1/4-20UNC	15
6	TP-800-7319-250-16.5/65	32	42.900/42.875	14	16	115	9.525 x 4.763	63.50	47.64	4* 1/4-20UNC	15
7	TP-800-7319-280-16.5/75	32	42.900/42.875	14	16	115	9.525 x 4.763	63.50	47.64	4* 1/4-20UNC	15
8	TP-800-7324-250-16.5/65	36	49.280/49.230	14	16	120	12.7 x 6.35	63.50	55.60	4* 1/4-20UNC	15
9	TP-800-7324-280-16.5/75	36	49.280/49.230	14	16	120	12.7 x 6.35	63.50	55.60	4* 1/4-20UNC	15
10	TP-800-7324-315-20/80	36	49.280/49.230	14	16	120	12.7 x 6.35	63.50	55.60	4* 1/4-20UNC	15
11	TP-800-7324-315-26/80	36	49.280/49.230	14	16	120	12.7 x 6.35	63.50	55.60	4* 1/4-20UNC	15
12	TP-800-7328-315-26/80	36	63.580/63.530 (2)	20	24	140	15.9 x 7.94	95.25	71.50	4* 3/8-16UNC	20
13	TP-800-7328-355-26/95	36	63.580/63.530 (2)	20	24	140	15.9 x 7.94	95.25	71.50	4* 3/8-16UNC	20
14	TP-800-7314-250-16.5/60	26	36.575/36.550 (3)	14	16	88	9.525 x 4.763	54.00	41.30	4* 1/4-20UNC	15
15	TP-800-7314-280-16.5/65	26	36.575/36.550 (3)	14	16	88	9.525 x 4.763	54.00	41.30	4* 1/4-20UNC	15
16	TP-800-7315-315-20/65	24	39.725/39.700 (3)	14	16	88	9.525 x 4.763	54.00	44.50	4* 1/4-20UNC	15

Alternate BX available:
(1) 30.226/30.221
(2) 62.001/61.951
(3) 38.150/38.125

The Installation of Thrust Pot

There are five key parts (motor adaptor, motor shaft coupling, hollow shaft, bearing housing and bearings) and other additional parts in a thrust pot. Please find the cross-sectional drawing at Figure1.

The bearing, bearing housing, hollow shaft, motor support and base plate are installed together when shipping. After reaching the site, slide the driveshaft down through the hollow shaft to meet the shaft coupling below, apply a thin film of oil to the shaft thread (if non-galling material) and screw into coupling. Make sure the shaft is not damaged in any way.

Apply a thin film of oil to gib key and install. Key shall be a slide fit allowing adjustment of the drive shaft by means of the adjusting nut, install adjusting nut, but do not adjust impeller at this time.

Turn adjusting nut clockwise and the shaft counterclockwise, when you feel the turning from hard to easy, then stop, this position means the starting point of the impeller adjusting.

After finding the starting point, turn the adjusting nut 2~4 turns (4~8mm), and then tighten the locking screw.

Then install the shaft coupling, tightening the nut, make sure there is 4-6mm between motor shaft coupling and the hollow shaft.

The last step is to install the motor guiding the shaft into the shaft coupling and locking it with the set screws on top of the key.

The Operation of Thrust Pot

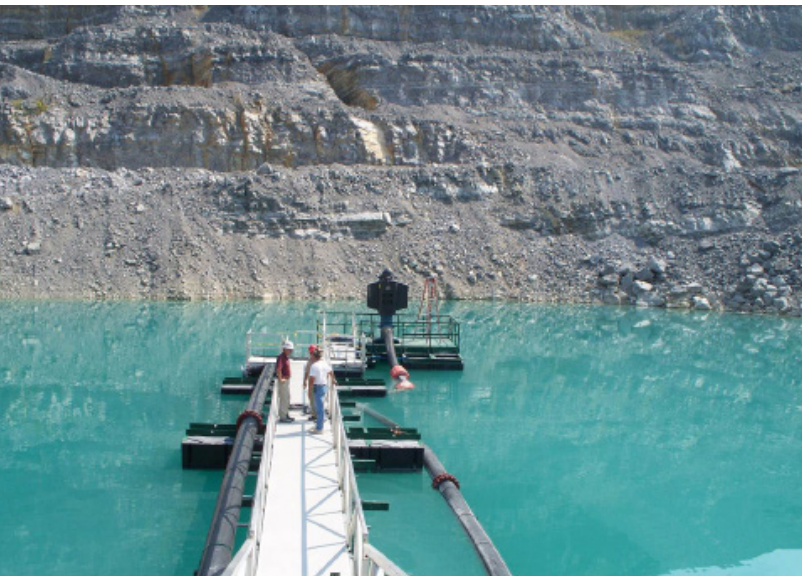
When operating the pump, the thrust pot should run smooth. The temperature of the bearing should be less than 50°C higher than the ambient temperature, with a maximum temperature of 90°C. If the temperature of the bearing exceed either of the above temperatures, stop running the pump and check the installation and lubrication of the bearings, if the issue continues, contact the service of Goulds Water Technology or factory. The vibration of the pump should comply with the JB/T 8097-1999, if it exceeds, stop running the pump and check the whole installation of the thrust pot and pump, if the issue continues contact the service of Goulds Water Technology or factory.

The Maintenance of Thrust Pot

- Add a small amount of grease to the bearings every 3 months.
- If the pump is left non-operational for more than one year, the grease in the bearings should be replaced. Remove the grease cover to complete this.
- Use NLGI GRADE 2 grease or equivalent

Safety and Protection

- Please make sure the guards are securely fastened to the frame when in operation. Injury could be incurred if guard is not replaced.
- Replace the Flexible Rings regularly to avoid contact between the pole pin and the hollow shaft.
- Exam the non-reverse pin regularly and replace it when worn as damage to the unit might occur.



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Xylem Inc.
P.O. Box 5487
Lubbock, TX 79408
Phone: (806) 763-7867
Fax: (800) 453-4749
www.xylem.com/goulds