

TH 2X

Triple Screw Pumps / Three Screw Pumps

- Inlet Pressure upto 6 Bar
- Discharge Pressure upto 40 Bar
- Capacity upto 100 LPM
- Viscosity from 2cSt to 750 cSt
- Temperature upto 150 deg C

PUMP

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Working Principle

Triple Screw Pumps are positive displacement pumps of very simple design. They consist of three rotating parts only "the rotors" which turn in their precisely machined housing bores. The rotors are of double start screws, continuously meshing to form delivery chambers, which move constantly from the suction to the pressure / discharge side. Constant volume of the chambers and the uniformity of the movement allow an even flow. The pumps remain therefore near silent in operation and almost free of pulsation, even at high speed. The Principle of screw pump and its accurate profiles warrant high suction power. Axial loads on the rotor are compensated by adequate design of the bearing part. All the radial loads are self-compensated.

Application

TH 2X Pumps are specialized for the use with fuel oils, lube oils, hydraulic oils and other lubricating liquids which doesn't contain any solid particles or abrasive particles. As a result they find their application in wide variety of fields like:

- Furnace oil Firing
- Filling Pumps
- Transfer Pumps
- Hydraulic Pumps
- Booster Pumps / Burner Pumps

Typical Liquids

Bunker Oil, Fuel Oil, Engine Oil, Furnace Oil, Heating Oil, Hydraulic Oils, Mineral Oil, Synthetic Oil and Other Oils having lubricating properties.

Mounting & Execution

Suction Flanges : As per PN 16 DIN 2533

Discharge Flanges : As per PN 40 DIN 2535

- Horizontal Flange Mounted Pump coupled with Motor using a Bell Housing Bracket
- Vertical Flange Mounted Pump coupled with Motor using a Bell Housing Bracket and a Pedestal

Material Of Construction

Pump Housing : Cast iron

Rotors

Main Screw : Nitrided Alloy Steel

Idler Screw : Nitrided Alloy Steel

Liner : Aluminium / Cast Iron

Shaft Sealing : Single Unbalance Mechanical Seal

Mechanical Seal : TC / TC

Casing Covers : Cast iron

Bearing Bush : Aluminium

Elastomers : Viton

Gasket : Non Asbestos

Temperature range

Max Temperature upto 150° C is permissible.

Jacketing

Optional Jacketing Front Cover can be provided on request

Speed of Rotation

Shaft Speed ranging from 500 – 3600 RPM.

Do not exceed 1500 RPM when pumping residual fuels, crude oil, furnace oil due to the presence of abrasives and contaminants.

Direction of Rotation

Clockwise from the Shaft End of the Pump (Standard)

Anticlockwise from the Shaft End of the Pump (On Request / Non Standard)

Filtration

The pump must be protected against solid particles in the fluid by suitable suction filters.

The mesh width should be 0.1 mm and care has to be taken that even with a contaminated

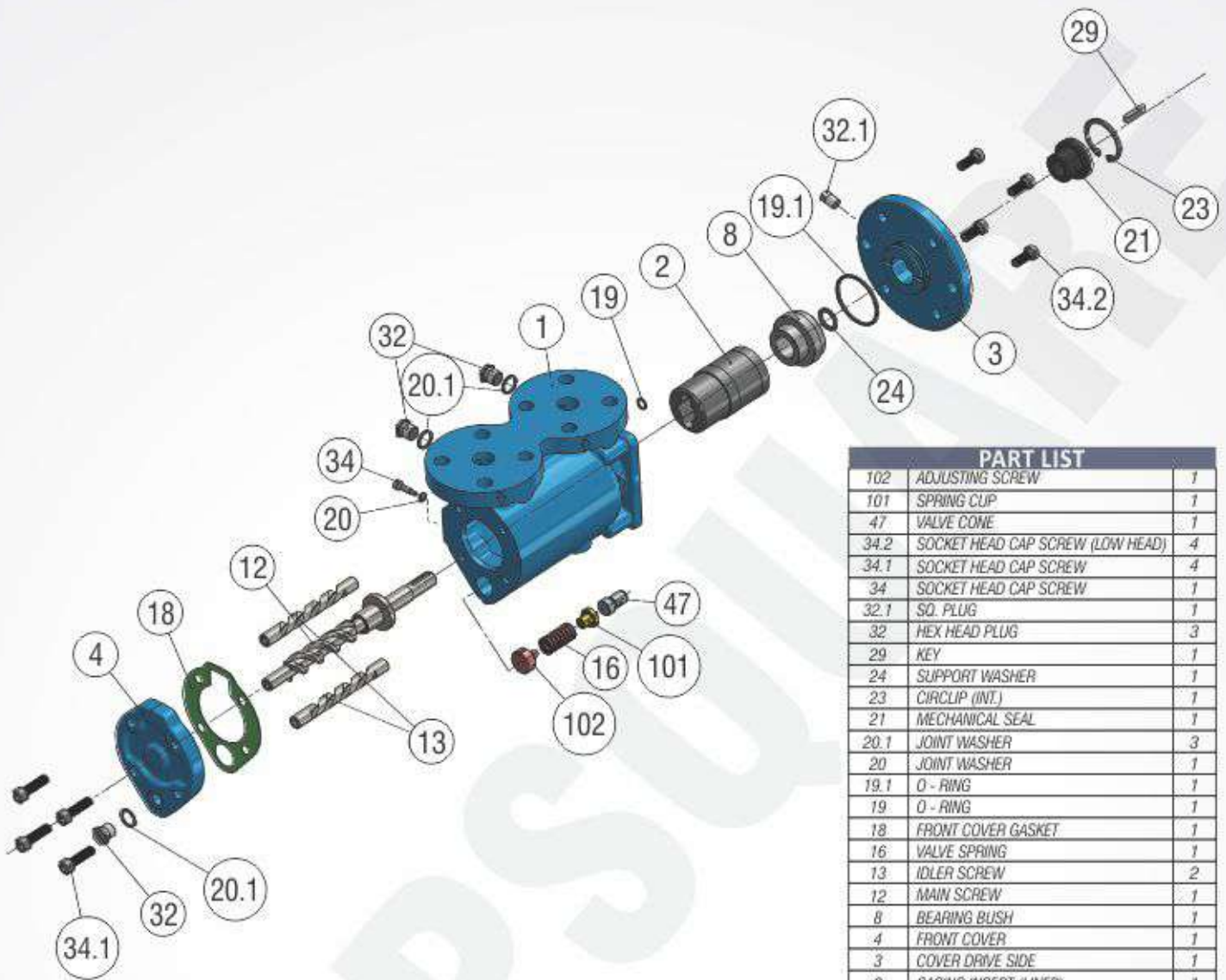
Filter the admissible suction lift capabilities is not exceeded.

Installation

All pumps are by default to be bracket mounted with the motor. They work perfectly in any position (horizontal & vertical), provided suction and discharge lines are arranged in a way that prevents emptying of pump when at stand still

Running Dry or with Non Lubricating Liquid, will damage the pumps.

EXPLODED VIEW



PART LIST		
102	ADJUSTING SCREW	1
101	SPRING CUP	1
47	VALVE CONE	1
34.2	SOCKET HEAD CAP SCREW (LOW HEAD)	4
34.1	SOCKET HEAD CAP SCREW	4
34	SOCKET HEAD CAP SCREW	1
32.1	SO. PLUG	1
32	HEX HEAD PLUG	3
29	KEY	1
24	SUPPORT WASHER	1
23	CIRCLIP (INT.)	1
21	MECHANICAL SEAL	1
20.1	JOINT WASHER	3
20	JOINT WASHER	1
19.1	O - RING	1
19	O - RING	1
18	FRONT COVER GASKET	1
16	VALVE SPRING	1
13	IDLER SCREW	2
12	MAIN SCREW	1
8	BEARING BUSH	1
4	FRONT COVER	1
3	COVER DRIVE SIDE	1
2	CASING INSERT (LINER)	1
1	PUMP HOUSING	1
SR. NO.	DESCRIPTION	QTY.

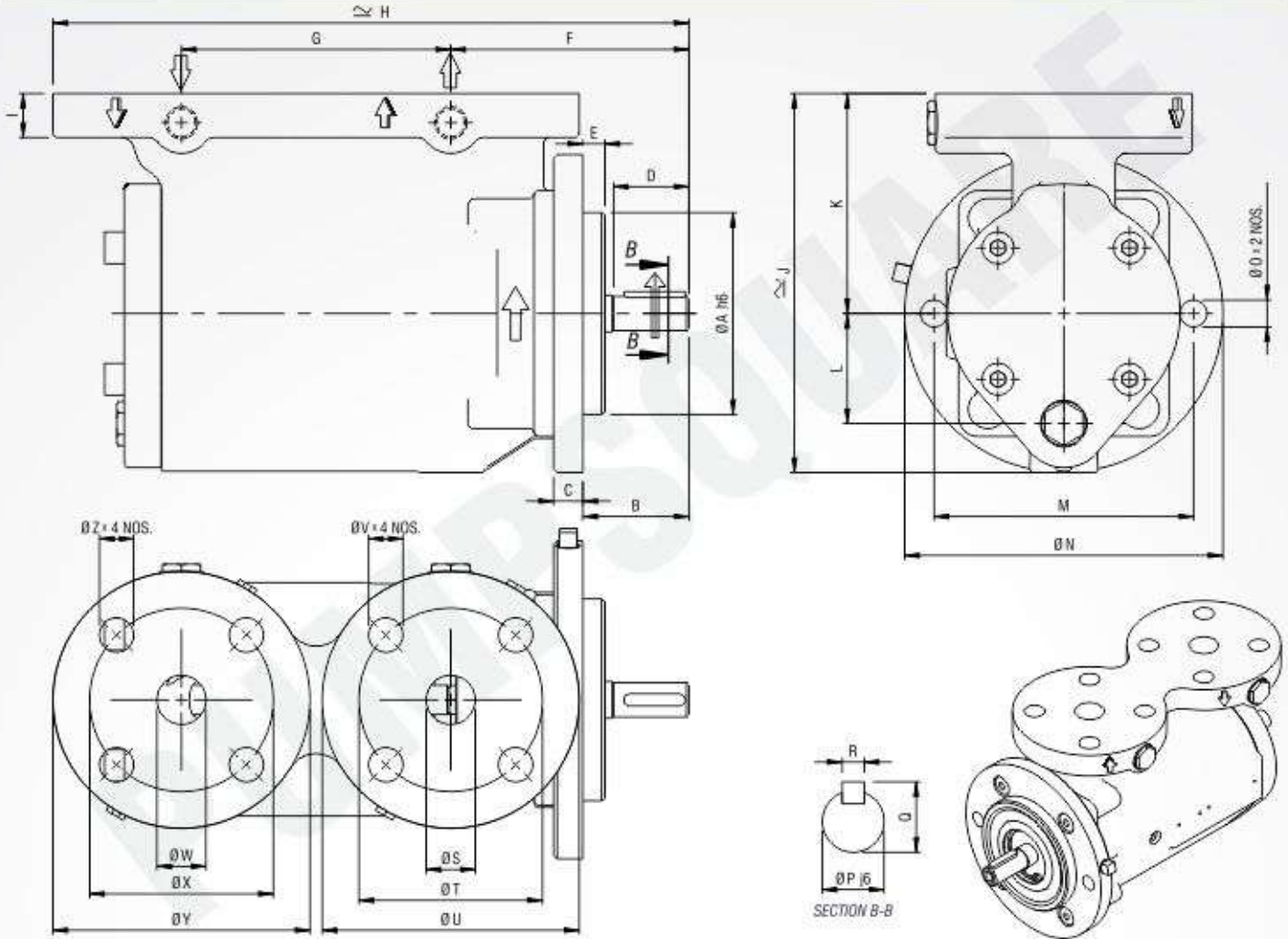
PUMP PERFORMANCE TABLE FOR TH 2X

TH 2X	75 cSt												
	Discharge Pressure	960 RPM				1440 RPM				2900 RPM			
		Low Pitch		High Pitch		Low Pitch		High Pitch		Low Pitch		High Pitch	
	Flow LPM	Power kW	Flow LPM	Power kW	Flow LPM	Power kW	Flow LPM	Power kW	Flow LPM	Power kW	Flow LPM	Power kW	
TH 21	20	2.42	0.16	7.16	0.37	4.00	0.26	11.81	0.58	8.84	0.62	25.20	1.23
	40	1.77	0.27	5.95	0.69	3.44	0.44	10.60	1.07	8.28	0.95	23.99	2.22
TH 22	20	7.81	0.41	14.88	0.69	12.74	0.64	23.90	1.08	26.97	1.38	50.13	2.26
	40	6.70	0.75	37.29	1.33	11.63	1.17	22.13	2.05	25.85	2.43	48.36	4.20
TH 23	20	17.02	0.79	30.97	1.35	27.06	1.24	49.10	2.09	56.36	2.60	54.68	4.77
	40	15.25	1.50	28.27	2.63	25.39	2.32	45.94	4.03	101.56	4.31	98.86	8.19

*Data Indicated is for standard pump model and is subject to changed

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GENERAL LAYOUT / DIMENSIONAL DRAWING



PUMP MODEL DIMENSIONS	Ø A	B	C	D	E	F	G	H	I	J	K	L	M
TH - 21	82.55	42	12	30	9	96	110	260	18	155	90	45	106
TH - 22	101.6	53	15	40	10	130	125	315	18	183	95	56	146
TH - 23	120	42	16	33	4	125	135	330	18	200	110	60	150
PUMP MODEL DIMENSIONS	Ø N	Ø O	Ø P	Q	R	Ø S	Ø T	Ø U	Ø V	Ø W	Ø X	Ø Y	Ø Z
TH - 21	130	11	14	16	5	20	75	105	14	20	75	105	14
TH - 22	175	14	19	21.5	6	25	85	120	14	25	85	120	14
TH - 23	180	14	19	21.5	6	25	85	120	14	32	100	140	18

*Data indicated is for reference only and is subjected to change.

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ISO 9001:2008

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