

TH 8X TH 9X

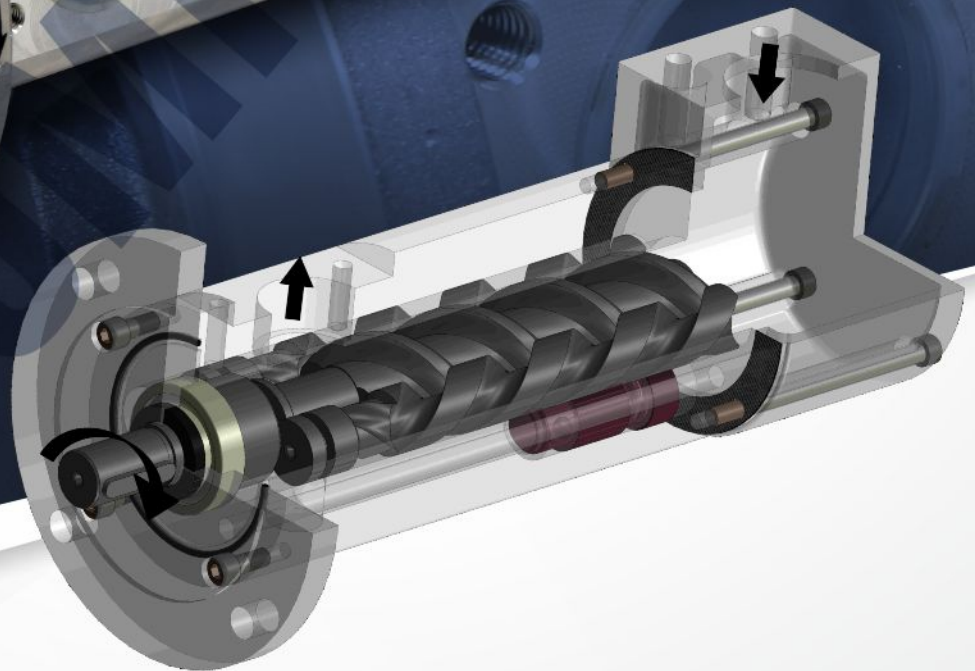
Triple Screw Pumps Three Screw Pumps

- TH 8X for Pressure upto 40 Bar
- TH 9X for Pressure upto 80 Bar
- Capacity upto 3200 L/Min
- Viscosity from 2 cSt to 10,000 cSt
- Profile Ground Screw Sets

PUMP

TURAKHIA
ENTERPRISE

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Delivery**

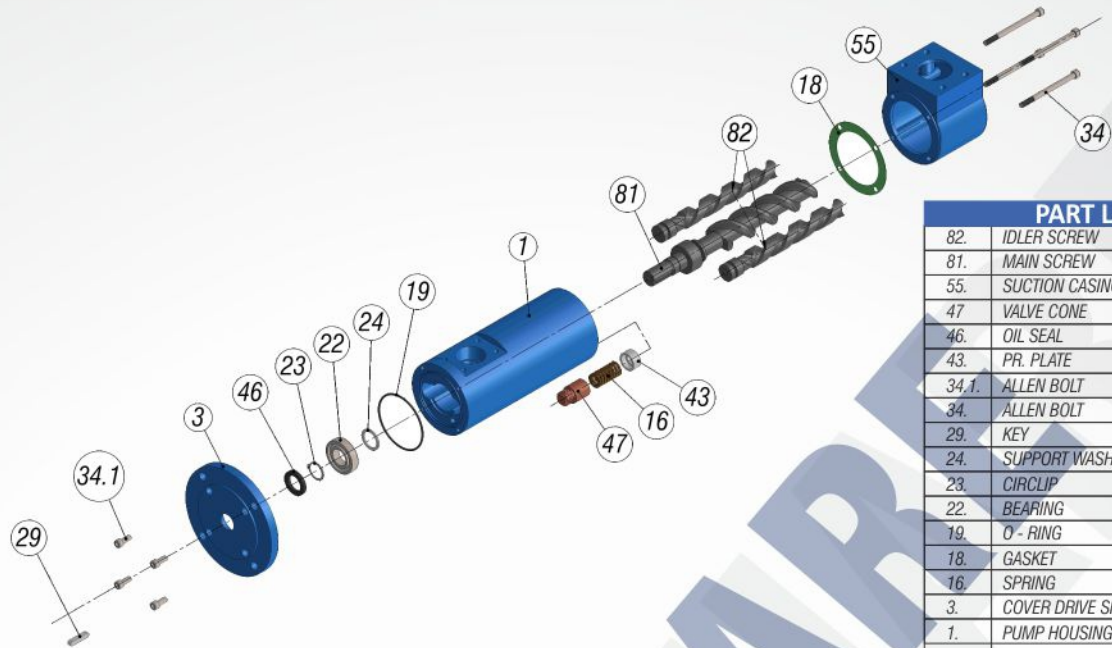


PUMPSQUARE SYSTEMS LLP

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EXPLODED VIEW



PART LIST		
82.	IDLER SCREW	2
81.	MAIN SCREW	1
55.	SUCTION CASING	1
47.	VALVE CONE	1
46.	OIL SEAL	1
43.	PR. PLATE	1
34.1.	ALLEN BOLT	4
34.	ALLEN BOLT	4
29.	KEY	1
24.	SUPPORT WASHER	1
23.	CIRCLIP	1
22.	BEARING	1
19.	O - RING	1
18.	GASKET	1
16.	SPRING	1
3.	COVER DRIVE SIDE	1
1.	PUMP HOUSING	1
SR. NO.	DESCRIPTION	QTY.

PUMP PERFORMANCE TABLE FOR TH 8X

68 cST / 30 Bar								
TH 8X	2900 RPM				1440 RPM			
	Min Flow	Power	Max Flow	Power	Min Flow	Power	Max Flow	Power
	LPM	kW	LPM	kW	LPM	kW	LPM	kW
TH 80	9.3	0.6	22.0	1.8	4.3	0.4	10.5	0.9
TH 81	29.0	2.3	37.0	2.8	13.0	1.1	17.0	1.3
TH 82	43.0	3.0	77.0	5.6	20.0	1.5	35.0	2.7
TH 83	105.0	7.5	150.0	10.5	49.0	3.5	70.0	5.0
TH 84	182.0	12.5	215.0	15.0	85.0	0.8	100.0	6.2
TH 85	270.0	18.5	390.0	26.0	125.0	9.0	180.0	12.3
TH 86	460.0	31.0	510.0	35.0	213.0	15.0	236.0	16.5
TH 87	625.0	42.0	810.0	55.0	288.0	20.0	375.0	26.0
TH 88	1050.0	68.0	1280.0	83.0	495.0	32.0	600.0	39.0
TH 89	1450.0	93.0	2215.0	140.0	670.0	43.5	1020.0	67.5
TH 90	2150.0	140.0	3150.0	200.0	1000.0	65.0	1470.0	96.0

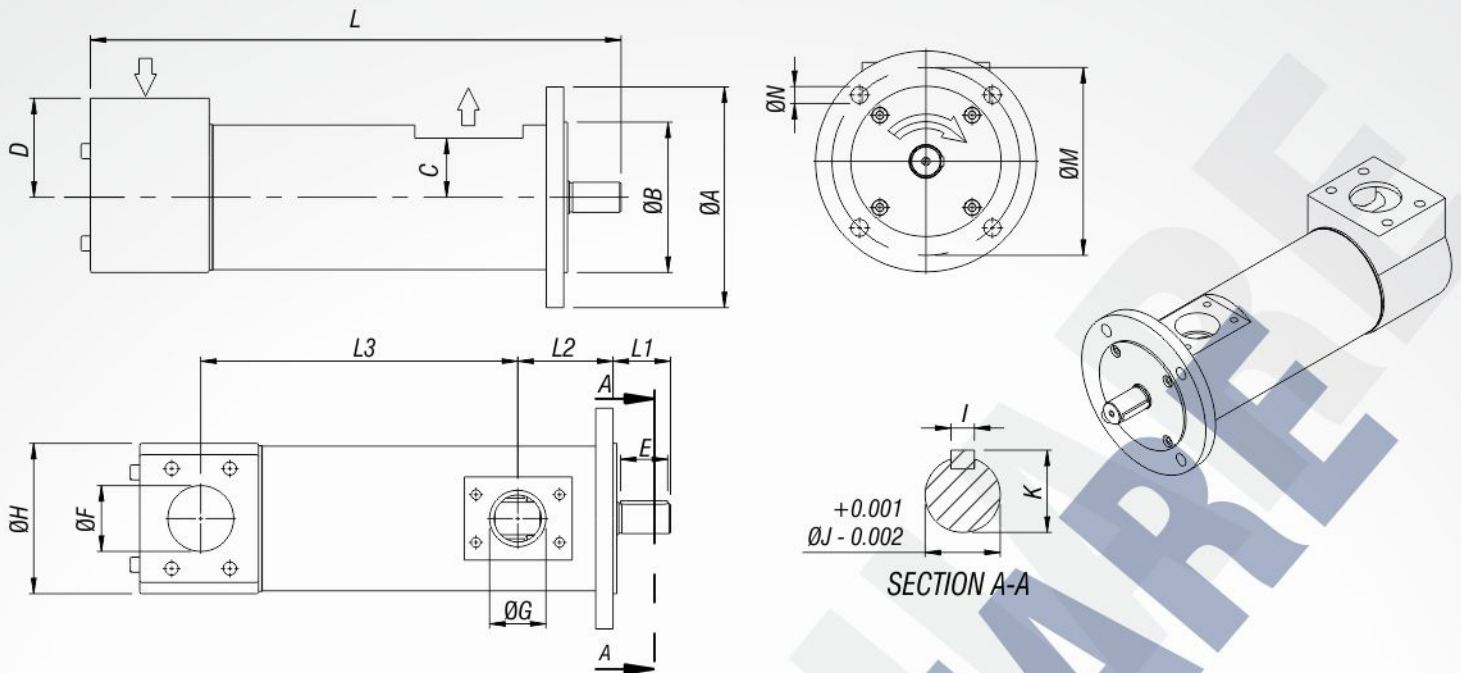
PUMP PERFORMANCE TABLE FOR TH 9X

68 cST / 60 Bar								
TH 9X	2900 RPM				1440 RPM			
	Min Flow	Power	Max Flow	Power	Min Flow	Power	Max Flow	Power
	LPM	kW	LPM	kW	LPM	kW	LPM	kW
TH 91	8.2	1.3	23.0	3.7	3.7	0.6	10.4	1.7
TH 92	25.7	4.0	32.1	5.0	11.6	1.9	14.5	2.4
TH 93	37.2	5.8	67.5	10.5	17.1	2.7	30.3	4.9
TH 94	91.8	13.7	131.4	20.0	41.5	6.7	59.4	9.6
TH 95	158.4	24.2	187.2	28.4	71.1	11.4	84.6	13.7
TH 96	236.7	35.7	335.7	50.4	106.2	16.8	151.2	24.2
TH 97	399.6	59.9	443.7	67.2	180.0	28.4	199.8	31.5
TH 98	543.6	81.9	705.6	106.1	244.8	38.9	317.7	50.4
TH 99	920.0	132.3	1118.0	160.7	415.0	64.0	505.0	77.7

* Data given in catalog is for Reference and Preliminary Selection only. Minimum Flow indicates minimum pitch on screw and maximum flow indicates maximum pitch possible on the screw set. Intermediate pitch screw set is available to adjust your flow requirement.

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GENERAL LAYOUT / DIMENSIONAL DRAWING



PUMP MODEL DIMENSIONS	TH-80	TH-81	TH-82	TH-83	TH-84	TH-85	TH-86	TH-87	TH-88	TH-89	TH-90
ØA	125	125	150	188	188	235	235	300	300	350	350
ØB	80	80	100	125	125	160	160	200	200	250	250
C	25	27.5	39	43.5	51.5	55	63	73	83	100	100
D	26	27	55	65	85	95	105	110	125	140	140
E	30	36	35	35	55	55	55	55	60	110	110
ØF	1/2" BSP	3/4" BSP	1 1/4" SAE	1 1/2" SAE	2" SAE	2 1/2" SAE	3" SAE	3 1/2" SAE	4" SAE	5" SAE	5" SAE
ØG	1/2" BSP	1/2" BSP	1" SAE	1 1/4" SAE	1 1/2" SAE	2" SAE	2 1/2" SAE	3" SAE	3" SAE	4" SAE	4" SAE
ØH	59	59	95.5	112	125	148.5	160	180	210	250	250
I	5	6	6	6	10	10	10	10	10	16	16
ØJ	14	19	19	19	32	32	32	32	38	55	55
K	16	21.5	21.5	21.5	35	35	35	35	41	59	59
L	190	210	260	305	375	402.5	440	507	594	1000	1000
L1	37	45	41	47	64.5	64.5	65.5	65.5	75	118	118
L2	53	70	62	69	75.4	83.5	83.5	94.5	150	256	287
L3	78.5	87	123	150	190	202.5	228.5	279	294.5	525	490
ØM	103	103	125	160	160	200	200	250	250	300	300
ØN	11	11	11	14	14	18	18	22	22	26	26

PUMP MODEL DIMENSIONS	TH-91	TH-92	TH-93	TH-94	TH-95	TH-96	TH-97	TH-98	TH-99
ØA	125	125	150	188	188	235	235	300	300
ØB	80	80	100	125	125	160	160	200	200
C	26	27.5	39	43.5	51.5	55	63	73	83
D	26	27	55.5	65	85	95	105	110	125
E	30	36	37	35	55	55	55	55	60
ØF	1/2" BSP	3/4" BSP	1 1/4" SAE	1 1/2" SAE	2" SAE	2 1/2" SAE	3" SAE	3 1/2" SAE	4" SAE
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ØH	59	65	95.5	112	125	148	160	180	212
I	5	6	6	6	10	10	10	10	10
ØJ	14	19	19	19	32	32	32	32	38
K	16	21.5	21.5	21.5	35	35	35	35	41
L	231	304	338	391	446.5	511	571	650	768
L1	37	42	41	42	64.5	61.5	65.5	65.5	76
L2	53	72.5	73	89	89	100.5	101	94.5	159
L3	212	171	190	241	248	297	342	422	460
ØM	103	103	125	160	160	200	200	250	250
ØN	11	11	11	14	14	18	18	22	22

Data indicated is for standard pump model and is subject to change.

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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

Triple Screw Pumps, type TH are used for the transfer of fluids with lubricating properties, as well as for generating pressure in hydraulic units or overcoming pressure in the hydraulic circuits. Main Industrial uses are in:

- Power Hydraulics
- Industries
- Oil & Gas
- Marine
- Power Generation
- Machine Tools
- Compressor Lubrication
- Filtrations
- Lube
- Windmill
- Presses

Typical Liquids

Bunker Oil, Engine Oil, Furnace Oil, Heating Oil, Hydraulic Oils, High Viscosity Lubrication Oil, Mineral Oil, Synthetic Oil, Oil Water Emulsions and Fuel Oils.

Material of Construction

Pump Housing : Carbon Steel, Cast Iron, Aluminum Alloy & Stainless Steel

Rotors

Main Screw : Alloy Steel, Hardened Steel and Surface Treated Steel

Idler Screw : Steel, Hardened Steel, Surface Treated Steel and Cast Iron

Shaft Sealing : Mechanical Seal / Lip Seal with Elastomers in Viton, EPDM & Nitrile.

Mounting Frames : Fabricated Steel

Relief Valve Parts : In Steel & Cast Iron

Mounting & Execution

Pump Mounting flanges are as per IS 3019 / 2 – IEC Standard. This has an added advantage for direct connection or mounting on to the standard electric motor. All the ports connections flanges comply to SAE 3000.

Installation

Screw-Pumps work perfectly in any position, provided suction and pressure lines are arranged in a way that prevents emptying of the pump when at a standstill. *Running Dry or with Non Lubricating Liquid will damage the pump.*

Direction of Rotation

Clockwise from the Shaft End of the Pump (Standard)

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

Speed of Rotation

Shaft Speed Ranging from 500 – 3600 RPM

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

Temperature Range

When fitted with standard radial shaft seals, up to 90 Deg C. Depending on operating conditions, temperatures as high as 180 deg C are permissible. Please ask us!

Suction and Pressure Lines

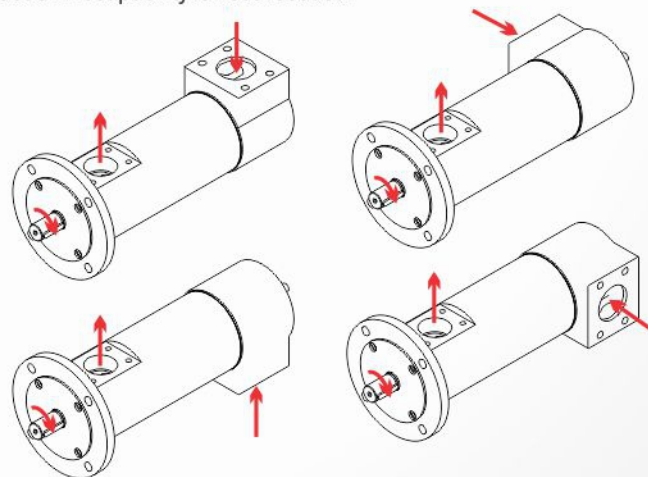
The cross section of the suction line should be such that fluid velocity nowhere exceeds 1 m/sec. In the pressure line velocity should not exceed 5 m/sec.

Pressure Relief Valve

All the pumps may be obtained with or without pressure relief valve, which we supply at your option as by-pass valve, connected to the suction chamber, or as a return valve connecting the fluid by a separate connection to the tank. When a large quantity should have to pass through the valve for more than 10 seconds, a return valve has to be fitted, to avoid an undue rise in temperature.

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 capability is not exceeded.



We also Manufacture :

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Internal Lobe Pumps
External Gear Pumps
External Lobe Pumps

Progressive Cavity Pumps
Twin Screw Pumps
Flexible Impeller Pumps
Shuttle Block Pumps

Piston Pumps
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ISO 9001:2008

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