

LOBE (TROCHOIDAL) PUMPS - MONOBLOCK - RTBP Series

WORKING PRINCIPLE:

An internal lobe pump unit consists of an inner and outer rotor. The inner rotor has one teeth lesser than the outer rotor. RTBP series uses a trochoidal inner rotor and an outer rotor formed by a circle with intersecting circular arcs. The inner rotor is located off-center and both rotors rotate. During part of the assembly's rotation cycle, the area between the inner and outer rotor increases thus creates a vacuum. This vacuum creates suction, and hence, this part of the cycle is where the intake is located. Then, the area between the rotors decreases, causing compression. During this compression period, fluids can be pumped, or compressed (if they are gaseous fluids). Smooth rolling action of the rotors results in minimum noise, vibration and pulsation - less flow.

MAIN APPLICATIONS:

- Transfer of lubricating oils
- Pressure lubrication and cooling of bearings
- Oil circulation through cooler, gear lubrications, etc.
- Transfer of fuel oils

LIQUIDS:

- Pump is well suitable for operation on clean liquid and for low pressure lubrication services



ROTARY TROCHOIDAL PUMP

PRODUCT SPECIFICATIONS AND FEATURES:

Rotors	Sintered Iron
Casing	Cast Iron
Shaft	20MnCr5
Seal	Oil Seal (Nitrile)
Capacity	10 - 40 lpm
Outlet Pressure	Up to 6 bar
Viscosity	6 - 750 cSt
Temperature	Up to 80°C
Speed	Up to 1450 rpm
Drive	Direct only
Rotation	Anti-clockwise facing pump drive shaft

VALUE PROPOSITIONS:

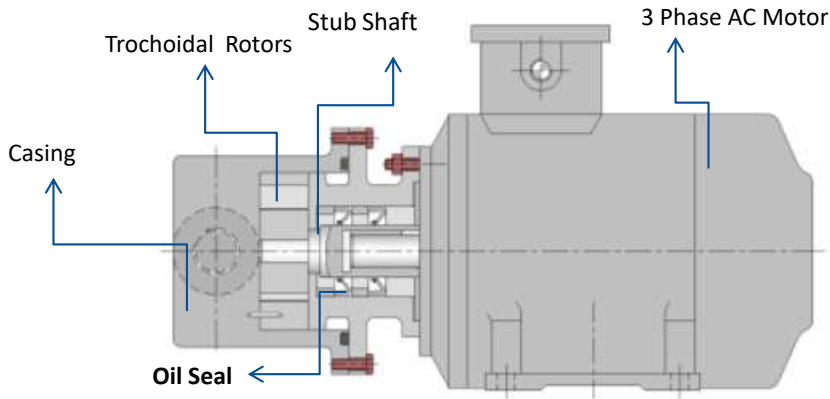
- Capable of running at direct motor speed
- Considerable saving in power
- Low noise and vibrations
- Smooth, pulsation free flow
- Very compact installation
- High suction lift
- Negligible maintenance
- Ease of dismantling and assembly
- Elimination of bearings
- Compact design

MARKET SEGMENTS:

- Power Generation
- Oil & Gas
- Machine Tool
- Cement
- Steel

CONSTRUCTION:

There are only two pumping elements in a Rotary Trochoidal pump. The flow of liquid is axial through elements. Also there is only one shaft, well supported at both ends of rotor for smooth, vibration-free running and eliminating bearing problems normally found in conventional gear pumps. The pumps has a very low noise level.



PERFORMANCE DATA:

Pump Model	Capacity / Power	Pressure (bar)				Suction & Discharge
		0	2	4	6	
RTBP-10	Capacity (lpm)	11.8	11.54	11.11	10.71	1/2" BSP
	Power (kW)	0.16	0.22	0.28	0.34	
RTBP-20	Capacity (lpm)	25	24	22	21	3/4" BSP
	Power (kW)	0.26	0.36	0.45	0.55	
RTBP-40	Capacity (lpm)	45	44	43	41	3/4" BSP
	Power (kW)	0.21	0.3	0.5	0.7	

Testing medium: Lube Oil Viscosity: 75 cSt Speed: 1450

* For special requirements, contact CIRCOR Sales Team

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