# Trochoidal Gear Pump Internal Lobe Pump





### **PUMPSQUARE SYSTEMS LLP**

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#### **GENERAL INFORMATION**

#### Working



There are two Pumping Elements with Gear in Gear Principle. The rotors are mounted on single shaft well supported on both the ends. As the shaft rotates, they mesh & un-mesh displacing the liquid axially through its pumping elements. Axial flow through elements ensures better suction capabilities, very low noise level and nearly pulsation free flow. These pumps have low power consumption compared to other brands due to unique mounting of rotors.

Rotors are produced using sintered metal technology and the other components are produced using the advanced manufacturing techniques with all the necessary quality checks for repeated accuracies in dimensions, guaranteed interchangeability and near to perfect pumping characteristics.

This series is highly reliable when put to work on field, has **longer service life**, **practically needs no maintenance** and has reduced cost of the end product than the conventional equivalents to the customer. A standard pump would consists of Rotors in Sintered Iron, with built - in Relief Valve, Shaft in EN-8 / SS - 304, Lip Seal in Nitrile and all other contact parts in Cast Iron.

#### Applications

- · Unloading and Transfer of Lubricating Oil from Tanks and Barrels
- · Oil Circulation, Gearbox, Bearing and Pressure Lubrication
- Transfer of Fuel Oils from Daily Service Tanks, Pre Heaters and Filters
- Transfer and Circulation of Oil in Transformers & Oil Cleaning Machines
- Fuel Injection Pumps and as Booster Pumps in Oil Burner Services
- Unidirectional Flow Designs for Reversing Shaft Duties as in Machine Tools, Gear Boxes and Crane Duties
- · In Hydraulic Power Packs
- Low Pressure Continuous and Intermittent duty application

#### Typical Liquid List

Lubrication Oils, Fuel Oils like HSD, LDO, Furnace Oil, Transformer Oils, Palm Oil, Hydraulic Oils, Additives, Shampoos, Coconut Oil and media having good lubricating properties

#### Optional MOC

Under Special Execution we can offer pumps in Stainless Steel, Ball Bearing Construction and Seals in Viton or EPDM.

#### Mountings

- · Monoblock type Pump and Motor eliminating need of Coupling and Frame.
- Foot Mounted Pump Coupled with Motor on a Base Plate with Coupling guard
- Flange Mounted Pump Coupled with Motor using a Bell Housing Bracket

#### **Features**

- · Compact, Light Weight, Easy to Maintain and Neat Design
- Can be Serviced in place without Disconnecting the Pipelines & Motors (Applicable even for Mono Block Construction)
- Bi-Directional
- Integrated Shaft in Mono Block construction eliminating the shaft runout for the improved life of the lip seal. Also, Shaft is supported on 2X Bush Bearings as well as 2X Ball Bearings reducing the load on shaft as well as the pumps
- Pump Shaft Dynamically Balanced and Heat Dissipation is improved in Mono Block Design
- Engineered to run at High Speeds and adaptability of Mechanical Seals for Critical Applications even for lower flow rates
- · Advanced Metallurgical Composition for Better & Longer Rotor Life
- Low Power Consumption & High Volumetric Efficiency
- · Pump with Steam Jacketing on Request
- With Built-In Relief Valve
- Improved Rotor Profiles for Smooth Meshing minimizing the Internal Losses and for excellent Suction Capabilities

#### Prime Mover

- · Three Phase AC Motor
- DC Motor
- Single Phase AC Motor
- · Directly Couple to PTO Shaft

| Pump Data with 40 cSt Lube Oil at 40° C (VDMA 24284 Test Standard as per GR. II CL. II) |                      |             |                    |       |       |  |
|---|----------------------|-------------|--------------------|-------|-------|--|
| Pump<br>Model   | Port Size            | Max<br>Flow | Max<br>Pressure    | Speed | Power | Sealing Option                         |
| New   | Inlet X Outlet (BSP) | LPM         | kg/cm <sup>2</sup> | RPM   | BkW   |  |
| IL01  | 1/4" x 1/4"          | 4.5         | 3                  | 1450  | 0.25  | Lip Seal                               |
| IL11  | 1/4" X 1/4"          | 4.5         | 3                  | 1450  | 0.25  | Lip Seal Mechanical Seal/Gland Packing |
| IL02  | ½" X ½"              | 10          | 6                  | 1450  | 0.37  | Lip Seal                               |
| IL12  | 1/2" X 1/2"          | 10          | 6                  | 1450  | 0.37  | Lip Seal/Mechanical Seal/Gland Packing |
| IL03  | 1/2" X 1/2"          | 15          | 6                  | 1450  | 0.5   | Lip Seal                               |
| IL13  | ½" X ½"              | 15          | 6                  | 1450  | 0.5   | Lip Seal/Mechanical Seal/Gland Packing |
| IL04  | ½" X ½"              | 20          | 6                  | 1450  | 0.65  | Lip Seal                               |
| IL14  | 1" x 1"              | 20          | 6                  | 1450  | 0.65  | Lip Seal/Mechanical Seal/Gland Packing |
| IL05  | 1" x 1"              | 40          | 6                  | 1450  | 0.75  | Lip Seal/Mechanical Seal/Gland Packing |
| IL15  | 1" x 1"              | 40          | 6                  | 1450  | 0.75  | Lip Seal/Mechanical Seal/Gland Packing |
| IL06  | 1½" x 1½"            | 77          | 6                  | 1450  | 1.2   | Lip Seal/Mechanical Seal/Gland Packing |
| IL16  | 1½" x 1½"            | 77          | 6                  | 1450  | 1.2   | Lip Seal/Mechanical Seal/Gland Packing |

- Pumps can be offer for pressure upto 12 Kg/cm<sup>2</sup> in IL 1X Series
- . For Flow Greater than 80 LPM, Please refer to our Internal Lobe Pumps without Crescent Catalog
- Grafoil Packing Rings in leiu of Grand Packing can be provided for High Temperature Application

## PUMP

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#### We also Manufacture :

Internal Gear Pumps Internal Lobe Pumps External Gear Pumps External Lobe Pumps Progressive Cavity Pumps Twin Screw Pumps Triple Screw Pumps Flexible Impeller Pumps Shuttle Block Pumps Piston Pumps Peristaltic Pumps Simplex / Duplex Filters