Mycom's MP series oil pump has a unique “double helical screw” design exhibiting superior reliability over other types.

The MP pump is designed to be more efficient at high temperatures and pressures and virtually eliminates user problems of operating in severe environments. Problems such as high suction pressure, high total pressure and high liquid temperature no longer exist.

- The reliability and durability of the MP series pump has been proven by its use in over 5,000 locations worldwide.
- It has no problems working at a differential pressure of 20 kg/cm² at the seal. The pump is ideal for high pressure processes.
- It includes a special Mycom developed relief valve which is attached to the body of the pump that allows for its use elimination. There is no need to install an extra valve to adjust the pressure.

The double helical screw type oil pump provides the following benefits:

THREE SUPERIOR BENEFITS WHICH SATISFY WITH THE CUSTOMER’S NEEDS.

1. Very solid and reliable design even at 20kg/cm² (285psi) pressure differential and 30kg/cm² (426 psi) seal chamber internal pressure. 86% overall efficiency is also promised.

- The pump is just one of the components provided to make the main equipment work properly. Nevertheless, it is the pump that gives absolute security to the device’s capacity. That is why the pump must be more reliable than other parts.

- The pump with traditional gearing has a hidden flaw of leakage at mechanical seal. Mycom reviewed and developed the seal design which it used on the original mechanical seal of Mycom screw compressor, that does not allow leakage.

- Our mechanical seal has a floating structure of balanced and static type. It has resistance to high speed and high pressure without suffering any distortion.

- When selecting the materials, we have been careful that the hermeticism is not affected by high resistance against friction, heat and corrosion.

- For the contact surface of seal end, we use carbon silicon, that has half of the friction coefficient of a cemented alloy and for the static side we use genuine carbon that has high density and a very fine grain.

- As a result of our ongoing study of the design and material of the seal, we accomplished the sealing quality that endures the axial high pressure at 30kg/cm² (426 psi).

- In an era when saving energy is at premium, the overall efficiency of Mycom oil pump not only saves energy but lowers the total operating cost.

- The efficiency of the traditional gear pump can only reach 75% and under increased pressure differentials, the overall efficiency will drop down to even less than 50%.

- Mycom analyzed the efficiency losses of the tooth shaped gears and by using our helical screw design, we have improved efficiencies that reach 86% with differential pressures of 1.5 kg/cm² (21 psi).

- The rotor design of Mycom oil pump has minimized the contact points that accomplished the shaft maneuvering without irregularities between Male and Female rotors assuring the improved performance.

- The double helical thrust offset design as well as the closer clearance between the rotors accomplished the better efficiency of 20 to 30% over the traditional pumps.
2. Integral pressure relief valve eliminates the separate installation resulting in less manufacturing as well as installation cost.

- Up until now, the equipment manufacturers and the OEMs have had to install an additional relief valve to compensate for the fluctuating pressure which requires extra time and additional expenses.

- Mycom's unique internal relief valve design eliminates the additional parts, installation and maintenance cost.

- Customers have had maintenance problems with sludge developing inside the slots and external pressure relief valve. Mycom's internal relief valve eliminates the area to deposit sludge and removes the additional maintenance requirements.

- This exclusive piston type relief control easily responds to the change of the liquid pressure and allows the pump to operate smoothly.

- This unique piston design also allows the pressure from both sides of the piston that promise the valve performance to operate without any noise and chattering thus result in the longer life expectancy of the pump.

3. Wider range of the performance coverage of single Mycom oil pump than other manufacturer's single model assures the drastic reduction of your inventory down to one third (1/3) compared with other manufacturers.

- The comparison of the displacement between Mycom oil pump and others shown below explains how wider performance range the Mycom pumps cover.

- Three different Mycom models covers the range of almost ten different models of other manufacturers. Eventually the service parts required for stock or for maintenance can be minimized when using Mycom oil pump.
Structual Advantages

**A:** Integral pressure relief valve
- Smooth response to the change in pressure.
- High durability.
- Sludge free structure.
- Less noise.

**B:** Special rotors
- Smooth rotation due to thrust, offset rotor design.
- Asymmetric rotor design assures the smooth contact.
- High durability.

**C:** Optimum suction and discharge ports
- Optimum port design to assure smooth fluid transfer.

**D:** Special rotor shaft
- Special material as well as treatment promise longer life expectancy.

**E:** Special thrust bearing
- Higher reliability and quality.

**F:** High resistance mechanical seal
- Balanced type structure eliminates the leakage.
- Special material assures the longer resistance against the leakage.
- No suction pressure to be on the seal suction.

**G:** Casing and cover
- Durable design and material against high pressure.

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ADVANTAGES
- Maintenance free operation.
  - Less BHP and bigger displacement that leads to better overall efficiency.
  - Quiet operation due to continuous suction and discharge operation.
- Chattering free operation.
- Consistent high quality and performance.
- Easy maintenance.
- Consistent high performance even under higher suction pressure.

CUSTOMER'S BENEFITS
- To save maintenance cost drastically.
  - Minimize the power cost.
  - Secure from noise.
- Less maintenance cost.
- Easy replacement of the thrust bearing.
- Eliminate mechanical seal leakage and pump troubles.

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**Design Parameters**
- Maximum discharge pressure: 20kg/cm² (284psi).
- Suction and discharge pressure differential: 20kg/cm² (284psi).
- Pressure regulating valve adjustable range: 1-4kg/cm² (14.2 - 56.8 psi).
- Maximum oil temperature 130°C (266°F).
- Viscosity: 3-500CST.
### Dimensions

<table>
<thead>
<tr>
<th>MODEL</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
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<tbody>
<tr>
<td>M50P</td>
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<td>251</td>
<td>230</td>
<td>80</td>
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<td>118</td>
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<td>190</td>
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### Differential Pressure

<table>
<thead>
<tr>
<th>MODEL</th>
<th>FREQUENCY (Hz)</th>
<th>REVOLUTIONS (rpm)</th>
<th>DISPLACEMENT (l/min 100CST 50CST)</th>
<th>BRAKE KILOWATT (BKW) 100CST 50CST</th>
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<td>1.25 / 1.20</td>
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<td>191 / 192</td>
<td>1.50 / 1.50</td>
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<td></td>
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<td>219 / 221</td>
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<td>5.80 / 5.20</td>
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<td>1450</td>
<td>872 / 847</td>
<td>8.50 / 7.50</td>
</tr>
</tbody>
</table>

### Model Code

- **Pump Model**
  - M50P: Rotor of diameter of 50mm.
  - M60P: Rotor of diameter of 60mm.
  - M80P: Rotor of diameter of 80mm.
  - M100P: Rotor of diameter of 100mm.

- **Poles**
  - 4P: Four poles.
  - 6P: Six poles.
  - 8P: Eight poles.

- **Direction of Fluid**
  - R: Right
  - L: Left

- **Suction Size**
  - 32A
  - 40A
  - 50A
  - 65A
  - 80A
  - 90A
  - 100A
  - 125A

- **Discharge Size**
  - 32A
  - 40A
  - 50A
  - 65A
  - 80A
  - 90A
  - 100A

- **Oil Temperature**
  - S: (Standard) Normal (maximum 80°C)
  - H: (High) Temperature high (maximum 130°C)

- **Option**
  - 01: With regulating valve
  - 02: Without regulating valve