Lube Oil Skids

Lube oil skids maintain oil flow to bearings, seals, and servo-controls on critical turbomachinery assets such as air and gas compressors, steam turbines, power recovery turbines, and power generating equipment.

During operation, turbomachines generate a significant amount of heat due to mechanical friction, requiring all moving parts to be properly lubricated. These skids are essential in keeping the lube oil cool and clean ensuring optimum efficiency and maximum service life of the equipment. Loss of pressure or oil flow to these turbomachinery assets will shut down the equipment or even the entire plant.

Because continuity of service is critical, lube oil systems are equipped with a main pump and an auxiliary pump which will take over in case of main pump failure. In the event of a failure, the system will experience a pressure spike as the auxiliary pump is brought into operation while the main pump is in operation. Pressure reducing and backpressure regulators installed in these systems must be able to respond quickly to the pressure spikes while maintaining a constant delivery of pressure and oil flow to the bearings.

Fisher® Types MR105 and MR108 Regulators

Fisher® Types MR105 and MR108 regulators are ideal for lube oil skid applications where high flow capacity is required and speed of response is critical for accurate pressure control. These direct-operated regulators offer a large actuator and do not require valve stem packing, minimizing friction, and improving speed of response. The Type MR105 pressure reducing regulator and Type MR108 backpressure regulator have been thoroughly tested to 100,000 cycles at the product’s pressure and temperature limits to ensure long and reliable service life.

Types MR105 and MR108 regulators offer simple, reliable, and economical pressure control and are available with:

- Steel and Stainless Steel constructions meeting API 614 requirements
- Pressures up to 400 psig / 27.6 bar
- Temperatures up to 250°F / 121°C
- Various sizes and end connection configurations
Superior Capacity Performance

Type MR105 Passes Large Flow Rates with Minimal Offset from Setpoint.

Features

- **Stability** - The cage-guided metal plug design provides superior control stability of delivery pressure.
- **Easy Drain** - Easy drain feature allows you to drain the system of oil without expensive spool pieces saving you time and space.
- **Visual Travel Indicator For Type MR105** - Travel indicator option provides visual indication of the valve movement from the closed to open position.
- **Easy Maintenance** - Quick Change Travel Indicator kit is available for fast replacement. Easy access to trim parts during maintenance.

Designed Per API 614 Requirements for Lube Oil Skids

- Accurate Pressure Control
- Faster Speed of Response
- Easy Maintenance Design
- Easy Setpoint Change
- Special Drain Feature

LIQUID FLOW REGULATION TEST
\[ P_1 = 250 \text{ PSIG (17.2 bar)}, \ P_2 = 100 \text{ PSIG (6.9 bar)} \]

<table>
<thead>
<tr>
<th>OUTLET PRESSURE, PSIG (bar)</th>
<th>FLOW, GPM (lpm) (WATER)</th>
</tr>
</thead>
<tbody>
<tr>
<td>180</td>
<td>0</td>
</tr>
<tr>
<td>160</td>
<td>50 (189)</td>
</tr>
<tr>
<td>140</td>
<td>100 (378)</td>
</tr>
<tr>
<td>120</td>
<td>150 (568)</td>
</tr>
<tr>
<td>100</td>
<td>200 (757)</td>
</tr>
<tr>
<td>80</td>
<td>250 (946)</td>
</tr>
<tr>
<td>60</td>
<td>300 (1135)</td>
</tr>
</tbody>
</table>

83% more flow at 20% Droop
57% more flow at 10% Droop

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