

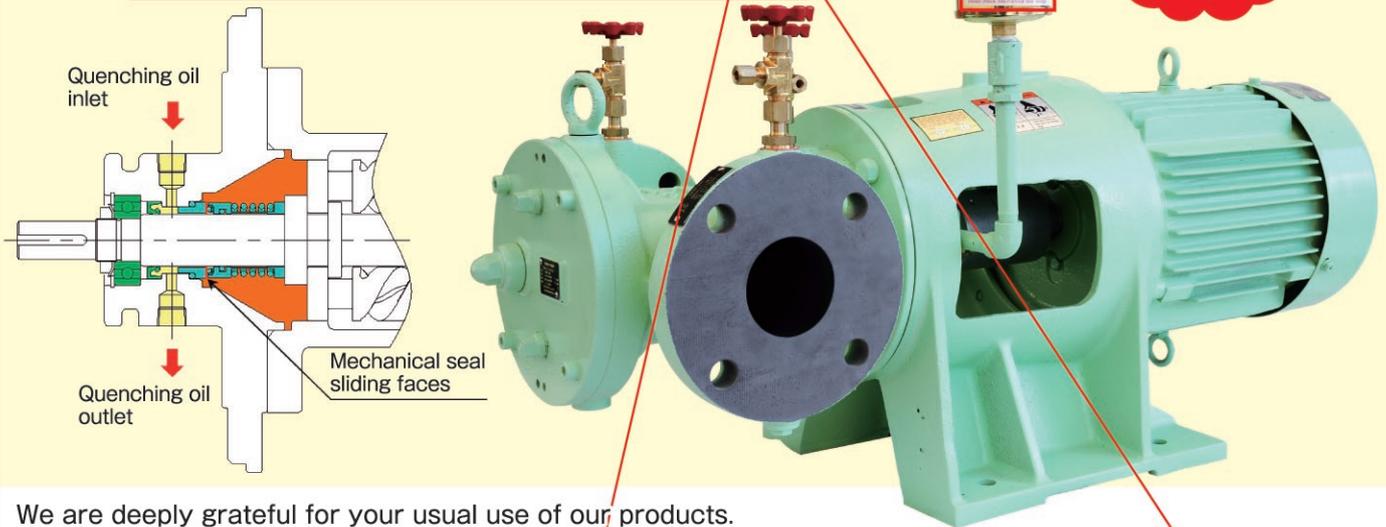
# Request for Filling Proper Quantity of Lubricating Oil into Oiler

## Oiler Caution Plate

**注意!**  
 オイルはポンプの使用に伴い変色いたします。  
 変色したオイルが“▶”マークに達したら、オイルを交換してください。  
 オイルはISO VG32~68相当を使用し、“□”マークまで注油してください。  
 尚、急激に変色したオイルが増加した場合は、メカニカルシール漏れの疑いがありますので点検してください。

**CAUTION!**  
 This oil is gradually discolored with use of pump.  
 If the discolored oil reach “▶” mark, please exchange oil.  
 The recommended oil is ISO VG32~68 or equivalent.  
 Please refill with oil to “□” mark.  
 If the discolored oil increase rapidly,  
 please check mechanical seal leakage.

\*Oiler Caution Plate Place on Oiler body.



We are deeply grateful for your usual use of our products.

It is our pleasure to inform you as follows of maintenance of the oilers attached to our positive-displacement pumps (such as gear and three-rotor screw pumps).

### 1. Role of Oil Quenching

Sliding faces of mechanical seal are shut off from atmospheric air by enclosing lubricating oil into an oil chamber provided on its atmospheric air side, and pressurized and overheated fuel oil is prevented from becoming hard when the fuel oil oozes out from it.

\*Hardening of oozed out fuel oil will cause residual to accumulate on mechanical seal sliding faces, and if allowable quantity of lubricating oil is exceeded, leakage will occur by opening of the sliding faces.

### 2. Procedures for Oiling Proper Quantity of Lubricating Oil

The oil recommended is ISO VG 32 to 68 or equivalent and, when it is first filled, it shall be filled up to “□” mark indicated on an oiler caution plate.

When the oil is discolored and reaches “▶” mark, please exchange the oil .

Recommended exchange cycle for the oil in continuous operation is 500 to 600 hours (3 to 4 weeks).

If discolored oil is suddenly increase in volume, please check the oil. Mechanical seal leakage is doubted.

\*Leakage from mechanical seals is not zero!

### 3. Cautions

Mechanical seals operate in a non-contact condition with a very thin oil film formed on the sealing part interfaces, causing them to produce a very small quantity of leakage, even during constant operation including initial operation.

\*The volume of lubricating oil between “□” mark and “▶” mark indicated on an oiler caution plate is 80 cc. The time required for its rise within the range is more than approximately 26 hours will be deemed to be permissible.

[The defect where the oiler reads over a specified level of lubricating oil]

Even during constant operation the oiler becomes full in a short period of time, which could cause it to overflow the oiler.

[The defect where the oiler reads under a specified level of lubricating oil]

Quenching oil conditions cannot be checked visually.

**Please supply a proper quantity of lubricating oil for the oiler.**

## Notice on oiler maintenance

### ● Oil level control

Fuel oil leakage from mechanical seal could discolor the quenching oil in the oiler. The leakage could increase the oil level as well.

※ There is a possibility that the leakage volume from mechanical seal increase in the following cases, due to the temperature change of handling liquid and etc.

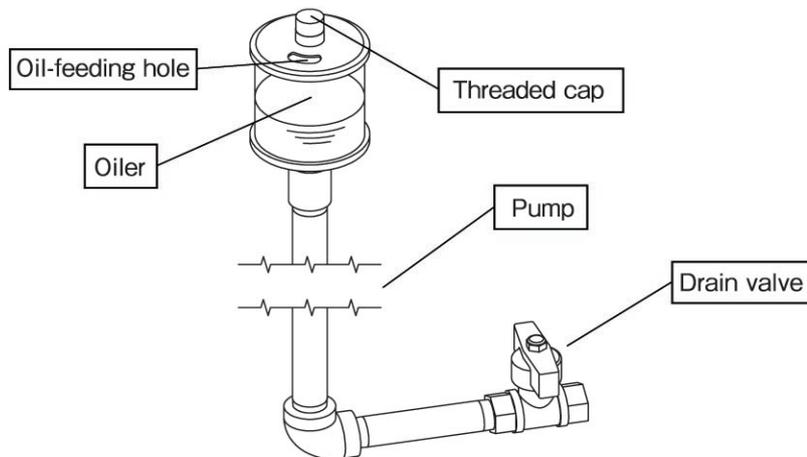
- Oil tank changeover
- Initial pump running

If the discoloration of the quenching oil is left without maintenance, leakage from mechanical seal, oil seal and other malfunctions are more likely to occur. Replace quenching oil by new one, in case the discoloration is observed.

The earlier replacement is recommended for the following pumps.

- High temperature and continuous running pump
- Initial running pump

※ Recommended replacement period for continuous running pump : 500h~ 600h (3~4weeks)



※ Supplement

Allowable leakage from mechanical seal : 3cc/h or less

Allowable quenching oil level increase in the oiler : 3cc/h or less

※ Volume from □ mark to ▲ mark in the oiler : 80 cc.

Oil level increase from □ mark to ▲ mark within 26 hours=Not within the allowable leakage  
⇒ Replace quenching oil.

Oil level increase to mark ▲ ⇒ Replace quenching oil

Oil level decrease ⇒ Refill quenching oil.

\*Notice on oiler maintenance Place on Oiler body.