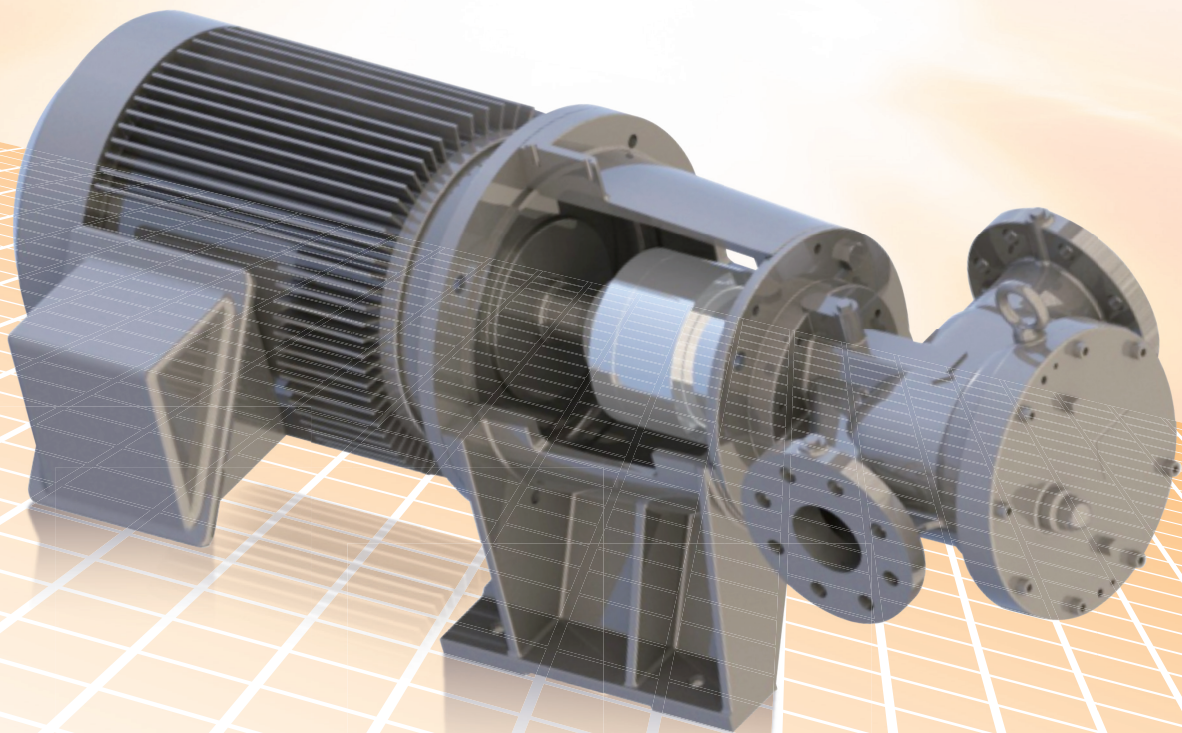




## 3 SCREW PUMP

# MSDK-MG



**Application** Lubrication oil and fuel oil for M/E, A/E and G/E

Specification	
Capacity	4~35m <sup>3</sup> /h (below 4m <sup>3</sup> /h by 1800min <sup>-1</sup> )
Fluid	1.5~600 mm <sup>2</sup> /s
	Lubrication oil    Turbine oil, Engine oil, Hydraulic oil, etc.
	Fuel oil            Kerosene, Diesel oil, Heavy oil Marine fuel · MFO (Marine Fuel Oil) : CFO, MFO380 (ISO 8217) · MGO (Marine Gas Oil) : DO, DMA & DMX (ISO 8217) · MDO (Marine Diesel Oil) : AFO, DMB (ISO 8217)
Working Pressure	Max. total press. 1.0MPa (suc. press. -0.05 ~ +0.5MPa / dis. Press. ~1.5MPa)
Standard Rotating Speed	3600min <sup>-1</sup> (60Hz×2P)
Temperature	Max. 150°C (Oil temperature)
Flange	Both suction and discharge are JIS 10K FF (JIS B 2239) Discharge flange can be JIS 16K FF

## Structure

### Main Parts Material

Casing : FC200

Power rotor : S45C

Idler rotor : FCD500

※Surface treatment is standardized due to expected severe operating conditions.

### Non-Seal Structure by Magnetic Coupling

- Power Transmission: Contact-free torque transmission from the motor to the pump rotors.
- Hermetic sealing : Static sealing between the shroud and the pump casing.

### Bearing

Self-lubrication : The rotors run in handling oil lubricated bearings.

### Simple Structure

- Easy assembling and elimination of shaft seal related parts.
- Easy overhauling and simple alignment procedure from spigot joint.

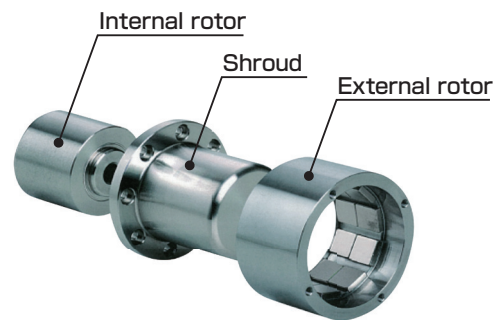
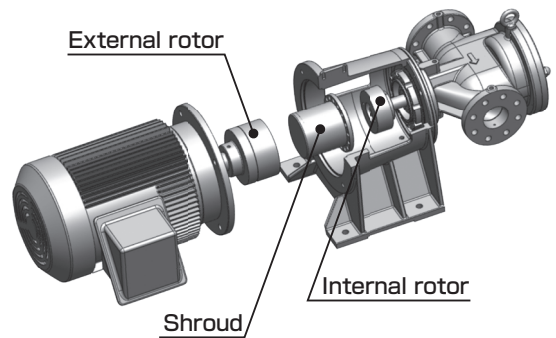
## Comparison with The Conventional

- Fewer parts and simpler structure.
- Non-leak structure by hermetic sealing: no shaft penetration.
- Simple alignment by the spigot jointed motor frame and the direct rigid coupling.

## Warning And Caution

- Strong magnetic force.
  - Don't come close to the coupling who wearing healthcare products or instruments.
    - ※Especially the person wearing heart pacemaker.
  - Don't locate equipment close to the coupling which are easily influenced.
  - Always use maker supply overhauling jig. Without them, working on the coupling is dangerous.
  - Avoid any substance stuck on the magnet. (Remove foreign substances such as iron particles and sludge in the oil and/or the pump surrounding as much as possible.)
    - ※Periodical overhauling and cleaning is recommended.
- Larger coupling loss (Eddy current & Hydraulic loss)
  - ※ Compare with conventional seal pumps, the motor power requirement is higher even if the same specification. Please contact us.

## Magnetic Coupling



Component & Standard Material	
External rotor	Steel / permanent magnet
Internal rotor	Steel / permanent magnet
Shroud	Stainless

Max.Shroud Pressure
1.6MPa

Max. Magnet Temperature
150℃

Max. Rotation Speed
3600min <sup>-1</sup>

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