HMD KONTRO **Sealless Pumps**

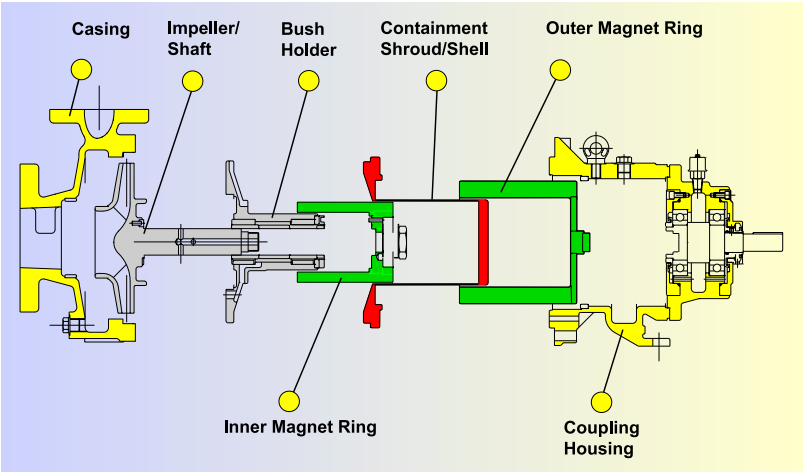
World-Leading Technology **World-Leading Company**

Magnet Drive Pumps

A Few Facts

What is meant by magnet drive sealless pumps
The sealless pump is a conventional centrifugal pump without packed glands or mechanical seals. The dynamic seal normally used to seal the impeller shaft has been replaced by a static containment shroud/shell to form **a completely sealed liquid end/pressure boundary**.

Prime mover energy is transmitted to the sealed liquid end by a bank of external magnets passing force through the containment shroud/shell to the impeller shaft.



The Facts
Mechanical seals on pumps are designed to maintain their seal as much as possible by leaking small amounts of fluid to keep the seal faces lubricated. This is then boiled off (fugitive emission).

Seals, like bearings must wear. As they wear, the faces lose their sealing effect and any liquid pumped will seep through the seal.

A fugitive emission can be costly in terms of time, money and safety in the work place.

Environmental controls, occupational safety and product liability are now of paramount importance to process plant operators.

Most companies will probably have a seal maintenance or support programme, to lessen their continuous leakage problems. This involves time, extra money and a spares inventory as well as plant down-time when replacement seals are required.

Advantages of sealless pumps

- **Ease of application**
- **Low Capital Cost**
- **Safe, leak free operation**
- **Low running costs**
- **Minimal spares holding**
- **Fast maintenance**
- **Minimal downtime**
- **Maximises on-line time**

Key HMD pump benefits

- **Almost no unplanned maintenance**
- **Uses standard electric motors**
- **No leakage possible – Environmentally safe**
- **High pressures and hot oil capabilities without 'backup' systems**
- **All specifications available ISO 2858, DIN, EN22858: 1993, ANSI B73.1M, B73.3M and API 610 / 685**
- **HMD service back up worldwide (Separate bulletin available)**
- **Over 65,000 pumps installed worldwide is your guarantee of quality**
- **Non - metallic versions are available**
- **Can be serviced on site**
- **No spares required on hand**
- **No cooling required up to 450°C, 850°F**

Salts Acids alkalis Nitrogen & sulphur compounds Hydrocarbons Oleochemicals HALOGENIDES Alcohols & glycols Heat transfer fluids Nuclear contaminates

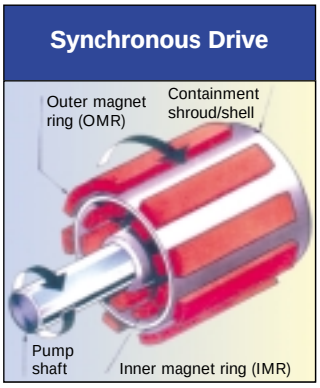
Worldwide 24 hour support

We recognise your need for total support and provide 24 hour hotline suppport as standard, for all our customers worldwide.

International support hotline **+44 1426 988448**
UK support hotline **01426 988448**

A few facts

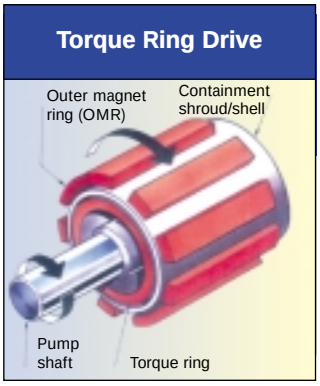
HMD/Kontro magnet drive operation



For service up to 260°C, 500°F

The synchronous drive comprises an outer magnet ring assembly (OMR) built to magnetically couple with an inner magnet ring assembly (IMR). These two magnet rings are locked together by the flux of attracting magnet poles flowing through the containment shroud/shell. The magnet / magnet coupling is therefore a fixed speed drive and has a constant torque performance.

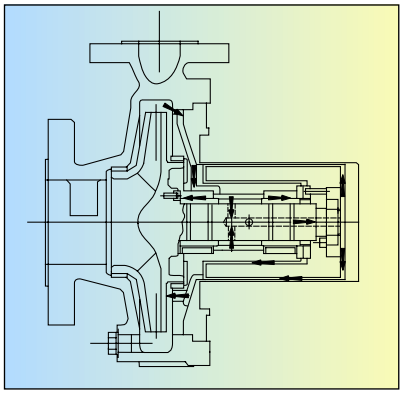
Any prime mover can be used, electric motor, turbine or air motors are typical and can be supplied either in close coupled or separate mounted configurations.



For service up to 450°C, 850°F

The torque ring drive is similar in method to the synchronous drive except the inner magnet ring is replaced in this drive system by a special torque ring.

Magnetic eddy currents are created which rotate the torque ring. This allows HMD/KONTRO pumps to operate at temperatures up to 450°C, 850°F without cooling.



Lubrication

The impeller and shaft assembly is supported within the bush holder by product wetted bearings. During rotation, pumpage is taken from the discharge side of the impeller and fed back through the inner magnet ring, the containment shroud/shell and the product wetted bearings to both cool and lubricate.

HMD KONTRO Sealless Pumps — Sundyne CORPORATION

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