Appendix to installation and operating instructions on CRK and MTR

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This supplement applies to these pump types at high-speed operation, 5400 rpm, only:

- MTRE1s XX/19 HS
- MTRE1 XX/19 HS
- MTRF3 XX/19 HS

4.2 Maximum permissible operating pressure and liquid temperature for the shaft seal

Note: The MTRE1 19-19 is designed for a maximum operating pressure of 38 bar. If the pump operates at this pressure, the life of the shaft seal will be reduced.

The diagram, fig. 1, shows three different operating ranges for the HUUV/HUUE shaft seal. At high-speed operation, 5400 rpm, the MTRE1 19-19 can operate in range 3.

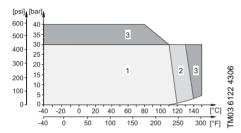


Fig. 1 Operating ranges for HUUV/HUUE cartridge shaft seals fitted to MTR/MTRE pumps.

Operating range 1: Optimum operating range with the longest life of the shaft seal.

Operating range 2: Risk of periodic noise in connection with start-up and variation in pressure and temperature.

Operating range 3: Outer operating range where the life of the shaft seal may be reduced.

Grundfos recommends a service check every 8.000-12.000 hours for operating range 3.

The standard seal in MTR pumps is an HUUV seal which is applicable in oil-containing liquids within the whole operating range. However, the maximum temperature for the MTR pump is 90 °C.

7. Technical data

Pump type	MTRE1 19/19 HS-W-A- HUUV
Minimum liquid temperature [°C]	-10
Maximum liquid temperature [°C]	+90
Maximum operating pressure [bar]	38
Enclosure class	IP 55

10. Sound pressure level

Motor	Maximum motor speed	L _{pA} [dB(A)]
[kW]		100 Hz
4.0	5400	87
5.5	5300	83
7.5	5100	85

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