FDU™

Fluid Distribution Unit

Features

- Independent pressurised fluid supply system
- Capable of supporting multiple seals
- Optional pressure switch and accumulator
- Reduced energy consumption

Benefits

- Removes the expense of piping a pressurised clean water / oil supply to a new area of the plant
- Removes the expense of purchasing one system per seal
- Enables greater control of water / oil ring main pressure
- The system can be operated intermittently to reduce energy costs via dead-ended piping

The FDU™ system can be operated in two distinctive formats. It can be utilised as a traditional plan 54 system or as an auto top up ring main for AESSEAL® water management systems.

The FDU™ system is capable of acting as a fluid ring main system, providing cool barrier fluid to multiple independent seal support systems. This means that the AESSEAL® water management system principle can be applied without the need for a water ring main. The FDU™ ring main system allows the water management systems to be set at the desired operating parameters for the applications, regardless of differences in equipment operating pressures. The FDU™ is available with a number of modular options to suit a wide range of industrial applications where the quality or availability of a closed loop water / oil supply ring main is in question. This system can also be set up as a dead-ended system and run intermittently to save energy costs. (see Figure 1)

The AESSEAL FDU™ is also designed to deliver a reliable and consistent high volume of cooling fluid for mechanical seal support applications. As the FDU™ operates in a closed loop environment with the mechanical seal it provides significant water savings over conventional gland packing or single mechanical seal applications using a Quench, Flush and Drain arrangement. This is especially advantageous when used on large diameter, high shaft speed, double mechanical seal applications as found in the Mining Industry. (see Figure 2)
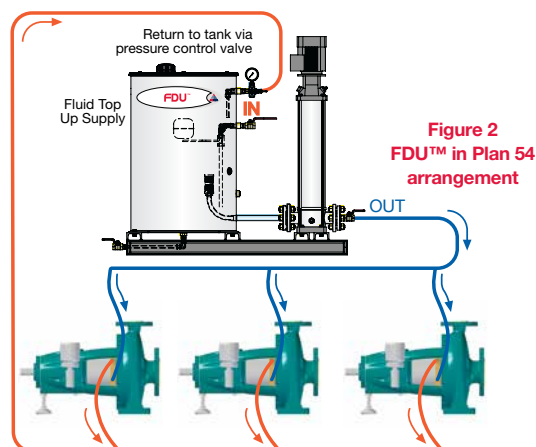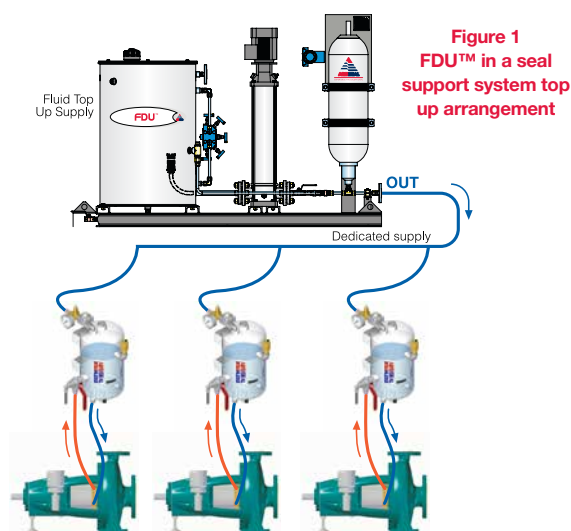
Specifications

Fluid Storage Tank Capacity: 180 litres (48 US gals), unpressurised
Fluid Storage Tank Material: Stainless Steel
Circulation Pump: Centrifugal Pump, 16 bar (232 psi) rated
Barrier Fluid Media: Water or Oil*
Optional Extras: Can be supplied with an accumulator and / or standby circulation pump, depending on the critically of the application.

Figure 1
FDU™ in a seal support system top up arrangement

Fluid Top Up Supply

OUT

Dedicated supply

Figure 2
FDU™ in Plan 54 arrangement

Return to tank via pressure control valve

Fluid Top Up Supply

IN

OUT

The diagram to the left illustrates how the FDU™ can supply multiple seal support systems. The diagram above illustrates how the FDU™ can supply multiple seals in a closed loop operation.

*Oil can only be used with the appropriate seal supply system. Please contact systems technical for further advice.

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For further information and safe operating limits contact our technical specialists at the locations below.

AESSEAL plc is certified to:
ISO 9001, ISO 14001, ISO/IEC 20000, ISO/IEC 27001, ISO/TS 29001, ISO 37001, ISO 45001 & ISO 50001

Use double mechanical seals with hazardous products.

Always take safety precautions:

WARNING

- **Guard your equipment**
- **Wear protective clothing**

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