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**AESSEAL®**

**API 682  
SYSTEM**

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When selecting and installing suitable Barrier Fluid System for your Double Seal application consideration should be given to the following selection parameters. These parameters must also be considered in conjunction with your specific site standards and requirements.

### 1. Materials of Construction

Consideration must always be given when selecting and installing a barrier system to the suitability of its materials of construction with reference to the environment and process within which it will be operating.

A full list of system materials of construction is available on request.

### 2. Barrier Fluid

- a. When selecting and installing a Barrier Fluid the site must determine its compatibility with the process to which it is to be applied. Consideration must also be given to personnel and environmental exposure when selecting and installing the barrier medium and appropriate precautions taken and protective equipment and clothing worn.
- b. The flammability and auto ignition characteristics of the barrier fluid must be considered in conjunction with the system surface temperature and its location to other equipment.
- c. Vaporisation must also be considered. Barrier fluids such as solvents should not be used due to their low vaporisation temperatures.

### 3. Temperature

- a. Site specific surface temperature limits must always be considered. Where the surface temperature of the system is likely to exceed these site limits a guard should be placed around the system.

### 4. Pressure

- a. All pressure vessels are tested to 1.5 times the recommended working pressure. When considering a specific site pressure requirement the pressure rating of the system components must also be considered. Such items as the tubing where the temperature and pressure relationship should be understood. Details are available on request.

### 5. Electrical Requirements

- a. Electrical requirements will be site specific set against the applicable local or National Standards. A Systems Application Form should be completed by the customer when ordering a system and this will indicate the electrical classification required.

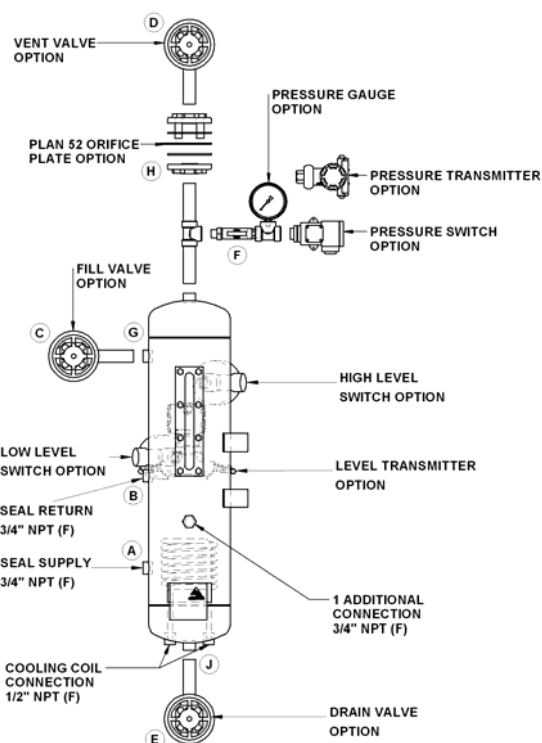
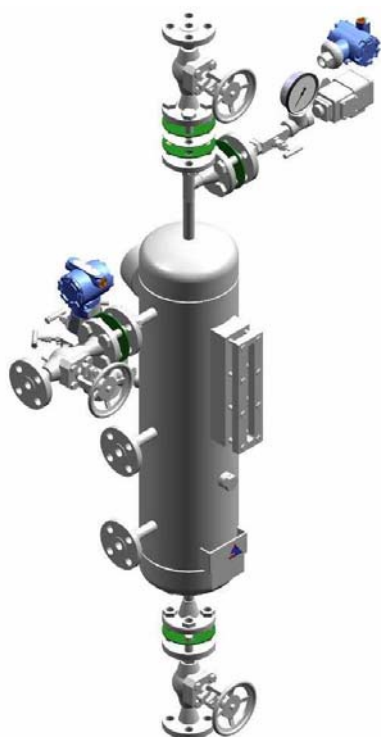
### **DECLARATION OF INCORPORATION**

This Mechanical Seal Support System must not be put into service until the relevant machinery into which it is incorporated has been declared to be in conformity with the provisions of the Machinery Directive.

Stephen Shaw  
Director,  
AESSEAL (MCK) Ltd.



# INSTALLING & COMMISSIONING AN API 682 SYSTEM



- Ensure all connections are made:-
  - (i) **To seal chamber (point A)**
  - (ii) **From seal chamber (point B)**
  - (iii) **Barrier Fluid/Pressure connection (point C / point G)**
  - (iv) **Vent to safe area (point D / point H)**
  - (v) **Drain connection (point E / point J)**
- Ensure electrical supply to any supplied switches / transmitters.
- Ensure that the system is mounted to a bracket/stand which is not subject to vibration.
- Check that any isolation valves (if applicable) are open between the seal supply and seal return.
- If any instrumentation is supplied, open the instrument valve (item F if supplied) which isolates the pressure switch/transmitter and gauge.
- Close the drain valve (if supplied).
- Start to fill the vessel with clean fresh barrier. Fill to 1" below the top of the sight level glass via point C / point G.
- Remove the barrier fluid supply if applicable.
- Close the vent valve on the top of the vessel (if supplied).
- Connect pressure supply at point C / point G.
- Keep applying pressure SLOWLY until the correct barrier fluid pressure is achieved.
- Check for any leaks and tighten if needed.
- The system is now charged, and ready for the process pump to start.
- Start the process pump and then stop after a few seconds. At this point check the fluid level in the vessel and refill if necessary using the above procedure. This will ensure that the barrier fluid has circulated to all areas of the stuffing box and pipework loop.
- Start process pump again and leave to run.
- The barrier system will need to be monitored closely for the first 2 to 3 hours until equilibrium temperature is achieved.
- *Barrier fluid level should be monitored regularly and a log kept. This will build up operating*

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