EXPERIENCE THE EXCEPTIONAL

SWFF-TF™

Water Management System with Flow Fuse™ and Thermal Fuse™

Features

- Flow sensing shut off valve
- Water regulator
- Automatic reset facility
- Thermal relief valve

Benefits

- Protects the process from barrier fluid contamination upon catastrophic seal failure
- Maintains water level and pressure, which reduces due to normal seal operation
- Protects the mechanical seal from running dry during process up-sets
- Maintains systems pre-set pressure by accommodating any thermal expansion

FLOWFUSE™

The intelligent SWFF-TF™ system incorporates the Flow Fuse™ and Thermal Fuse™ products:

The Flow Fuse™ is designed to restrict barrier fluid contamination of the process upon momentary or permanent seal failure. The Flow Fuse™ does this by shutting off the plant water supply when it detects an abnormally high flow of water. The Flow Fuse™ product has two operating functions. These are manual-reset and auto-reset. In manual-reset the Flow Fuse™ will completely shut off the plant water supply upon the detection of seal failure and the only way to reset the Flow Fuse™ is manually. This mode is most suited to applications where barrier fluid contamination of the process cannot be tolerated. In auto-reset mode, upon seal failure the Flow Fuse™ will shut off the plant water supply but allow a small volume of water to continue to pass through. If the seal failure is momentary (e.g. temporary parting of the seal faces) the Flow Fuse™ will automatically reset itself to the original operating pressures once the seal failure has been resolved.

The Thermal Fuse™ is a pressure relief valve designed to relieve the system of pressure build up as a result of a temperature increase.

- Flow Fuse™ (Nickel plated brass construction) — Heart of the SWFF-TF™ System
- In-line filter (1 micron) — Cleans plant water before it fills the vessel
- Mounting brackets — Provides a secure and stable mounting for the SWFF-TF™ system
- Thermal Fuse™ (Brass) — Will relieve the system of excess pressure build up as a result of a temperature increase
- Seal feed and return lines — Carries barrier fluid to and from the mechanical seal
- Vessel - (304 SS construction, 10 litre / 2.64 gal (US) capacity, 25 litre / 6.60 gal (US) option, 16 bar / 232 psi pressure limit, 100°C / 212°F temperature limit) — Dissipates the heat from the barrier fluid to atmosphere
- Drain valve (Nickel plated brass) — Drains any sediment from the SWFF-TF™

WaterAid

Charity registration number 288701

WaterAid - water for life - The international NGO dedicated exclusively to the provision of safe domestic water, sanitation and hygiene education to the world's poorest people. Commitment to Global Water Conservation and a Clean Environment AESSEAL® is delighted to support WaterAid's vision of a world where everyone has access to safe water and sanitation.

www.wateraid.org

Specifications

System Specification:

Maximum Set Pressure: 6 barg / 87 psig*
Maximum Design Pressure: 10 barg / 145 psig
Minimum Working Pressure: 1 barg / 15 psig
Maximum Temperature: 80°C / 176°F (with suitably rated piping / hosing)
Minimum Temperature: 0°C / 32°F**

* 8 Barg can be achieved with optional expansion vessel
** Protection against freezing required for water below 0°C

Vessel:

- **Construction:** 304 Stainless Steel
- **Connections:** 1/2" NPT for seal feed and return hoses
- **Finish:** White powder coat
- **Designed to:** ASME VIII Div.1 and certified by TÜV to cover PED requirements

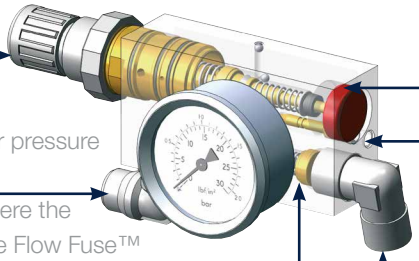
SWFF-TF™ Components:

- **Flow Fuse™:** Nickel plated brass construction, 10 bar / 150 psi maximum pressure
- **Thermal Fuse™:** Brass construction
- **In-line Filter:** 1 micron, UV stabilized material, 8 bar / 120 psi maximum pressure

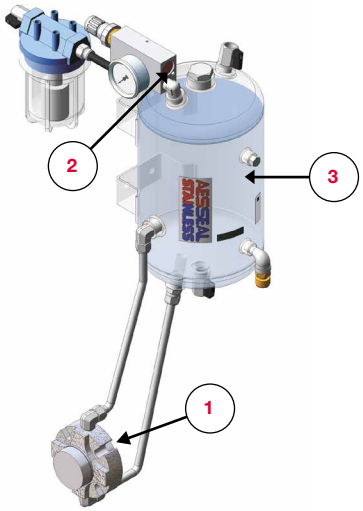
Optional Extras:

- Cooling Coil
- Finned Tubing
- **Pressure Switch:** Safe Area, Intrinsically Safe and Explosion Proof options
- **Level Switch:** Safe Area, Intrinsically Safe and Explosion Proof options
- SS Braided Flexible Hose
- SS Hard Pipe

Flow Fuse™ Operating Principle



- **Pressure regulator —** Regulates the plant water line pressure to 2 bar / 30 psi above seal chamber pressure
- **Plant water inlet** — Is the point where the plant water line is connected to the Flow Fuse™
- **Integral check valve** — Protects the plant water supply from potential contamination from the process
- **Flow Fuse™ vessel inlet** — Is the point where the Flow Fuse™ connects to the system vessel
- **Automatic reset adjusting screw** — When screw is fully screwed in the Flow Fuse™ will be in manual reset mode. When it is screwed out it will be in auto reset mode
- **Activation indicator and manual reset button** — When the red button moves outside the Flow Fuse™ casing it shows that it has been activated. The button needs to be pushed in to refill the vessel in manual reset mode



Flow Fuse™ Activation

1. The seal fails
2. Flow Fuse™ valve triggers, isolating plant water supply
3. Minimal barrier fluid loss, ensuring your process is protected

Barrier & Buffer Fluid Systems For Use With Double Mechanical Seals AESSEAL® supplies an extensive range of barrier and buffer fluid systems for use with double mechanical seals. Wherever possible AESSEAL® prefers to supply both the seal and the system. In addition the company will suggest suitable barrier or buffer fluids for most applications, based on extensive field experience. AESSEAL® accepts no responsibility for any problems associated with system design, installation, operation, or the use of an unsuitable barrier or buffer fluid, where the fluid, seal or any part of the system have not been specified and / or supplied by AESSEAL®.

AESSEAL®

EXPERIENCE THE EXCEPTIONAL

To experience the exceptional, please contact your local representative. Discover full details on our website:

www.aesseal.com

This document is designed to provide dimensional information and an indication of availability. For further information and safe operating limits contact our technical specialists at the locations below.

THE QUEEN'S AWARDS FOR ENTERPRISE 2011

Use double mechanical seals with hazardous products.

Always take safety precautions:

WARNING

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

UK Sales & Technical advice:
AESSEAL plc
Mill Close
Bradmarsh Business Park
Rotherham, S60 1BZ
United Kingdom

Tel: +44 (0) 1709 369966
Fax: +44 (0) 1709 720788
E-mail: seals@aesseal.com

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USA Sales & Technical advice:
AESSEAL Inc.
355 Dunavant Drive
Rockford,
TN. 37853
USA

Tel: +1 865 531 0192
Fax: +1 865 531 0571
E-mail: usa@aesseal.com

LN-UK/US-SWFF-TF-01c

11/2015