

Cooler Range

For use with AESSEAL[®] Seal Support Systems



Features

- Range of air or water cooled options
- Compact Design
- PED compliant and third party approved
- High efficiency cooling

Benefits

- Reducing installation and running costs
- Suitable for retrofitting in existing installations
- Suitable for a wide range of applications
- Optimize seal performance and life by reducing seal face temperature



Advanced Natural Convection Air Cooling

Python™

The AESSEAL® Python is an advanced air cooled heat exchanger for cooling mechanical seal barrier / buffer / flush fluids.

Air cooling is achieved through natural convection without the need for cooling water. The unit consists of a tube formed into a coil, terminated with inlet and outlet manifolds. The Python is available in both 8m single (Fig 1) and 16m dual coil (Fig 2) arrangements.

Features & Benefits:

Requires No Plant Utilities Services: Simple low cost Installation and minimal maintenance

Robust Design: Suitable for a wide range of arduous environments

Specification

Designed and manufactured in accordance with ASME VIII Div 1, complies with PED 2014/68/EU: Suitable for a wide range of arduous environments

316 SS Tube with Stainless Steel Fins: Robust design suitable for a range of challenging environments

Connections: DN15 (1/2" NB) ASME B16.5 600lb R.F

Welding: ASME IX, Pickled and passivated as standard

Maximum Rated Operating Pressure: 58.3 bar g (845.6 psi g)

Maximum Rated Operating Temperature: 200°C (392°F)



Fig 1
Single Coil



Fig 2
Dual Coil

Water Coolers

Helicoil Cooler

The Helicoil Cooler (Fig 6) is constructed from 316 stainless steel tube and cast iron casing as standard.

Cast iron & cast 316 steel casing options are available for a wider range of applications and material compatibility. This robust product is a very efficient seal cooler used on API Piping Plan 21, 22 and 23 arrangements. The product can also be used in conjunction with other products in the systems division range to provide additional cooling on high heat applications.

Features & Benefits:

High Reliability: Simple construction allows cleaning and maintenance of the shell side to prevent fouling for long term operation

Application Suitability: High pressure, high heat load, liquid-to-liquid applications

Options Available: Contact AESSEAL® Technical Department for models and options suited to specific applications

Specification

Design / Construction: ASME VIII Div 1, U-Stamped Case

Connections*: ½" NPT(F) Shell Connections ½" NPT(M) Coil Connections

Coil Side Maximum Rated Operating Pressure: 69 bar g (1000 psi g)

Shell Side Maximum Rated Operating Pressure: 6.1 bar g (89 psi g)

Maximum Design Temperature: 232°C (450°F)

(*Standard cooler connections – for different options contact AESSEAL Technical Department)

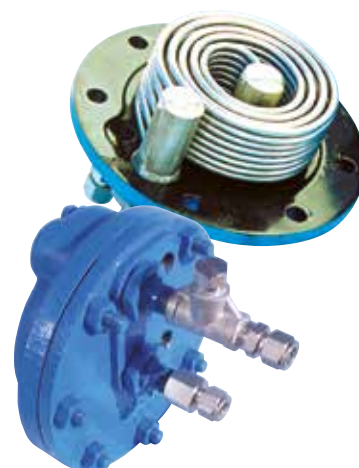


Fig 6
Helicoil Cooler

AES682C™

Robust design high efficiency cooler.

The AES682C™ (Fig 7) is a full stainless steel shell & tube heat exchanger, with an innovative dual concentric tube coil for cooling mechanical seal barrier / buffer / flush fluids. Typically uses plant cooling water on shell side and hot barrier / buffer / flush fluids on the tube side. This product can also be easily dismantled for ease of cleaning and maintenance (Fig 8). Suitable for a wide range of arduous environments.

Features & Benefits:

High Efficiency Cooler: Provides optimal heat removal in arduous environments

Easily Dismantled: Simple cleaning and maintenance

Industry Accepted Design: Meets the requirements of API 682, ASME VIII Div 1, CE marked and complies with PED 2014/68/EU

Meets Requirements of API 682

Specification

Connections: Compression fitting (Tube Side) / NPT (Shell Side)

Welding: In accordance with ASME IX

Tube Side Maximum Rated Operating Pressure: 100 bar g (1450 psi g)

Tube Side Maximum Rated Operating Temperature: 200°C (392°F)

Shell Side Maximum Rated Operating Pressure: 16 bar g (232 psi g)

Shell Side Maximum Rated Operating Temperature: 80°C (176°F)



Fig 7
AES682C™ Internal



Fig 8
AES682C™ Shell

Water Coolers

AES-CIC Cooler

The AES-CIC Cooler is an efficient yet simple product that provides cost effective seal cooling.

The AES-CIC is a new coiled double pipe water cooler offered as standard in 316L stainless steel, to be used where cooling water is readily available. The AES-CIC is designed to be utilised horizontally or vertically, allows for ease of installation. The cooler is suitable for API Piping Plan 21, 22 and 23 arrangements and in conjunction with products in the system division range to provide additional cooling on high heat application.

Features & Benefits:

Coiled double pipe heat exchanger - compact highly efficient cooler.

Low pressure loss - ideal where flow rate generated is marginal.

316L stainless steel - suitable for a range of duties and industries.

Meets Requirements of API 682

Specification

Design / Construction: ASME B31.3 PED 2014/68/EU Category SEP.

Connection: DN15 (1/2" NB) ASME B16.5 600lb R.F (tube side)
2 x 1/2" NPT Ports at Flange End 2 x 1/4" NPT F Vent/Drain Standard (shell side).

Duplex / Super duplex: available upon request.

Tube Side Maximum Rated Operation Pressure: 60 bar g (870 psi g).

Shell Side Maximum Rated Operation Pressure: 16 bar g (232 psi g).

Maximum Design Temperature: 250°C (482°F) (tube-side) 80°C (176°F) (shell-side).

Minimum Design Temperature: -50°C (-58°C) (tube-side) -50°C (-58°C) (shell-side).



FDSC — Forced Draft Seal Coolers

High performance cooling at a low cost,
ideal for high heat generating applications.

The FDSC™ uses a combination of high performance cooling elements and high capacity, AC electrically powered fans to give long trouble-free operation in arduous applications. The FDSC™ design provides the highest cooling performance in heat dissipation whilst minimizing the space required. It has a high cooling capacity making it suitable for application requiring a high level of heat dissipation. This product also offers a low cost, environmentally friendly cooling solution.

Air blast coolers are used for process cooling. Ambient air is forced over a finned tubing heat exchanger to remove unwanted heat from a closed circuit containing process fluids or intermediate coolant. Coolant return temperatures can be reduced to as low as 10°C above ambient air temperature.

Coolers are available with 300lb, 600lb or 1500lb flanged connections on a standard 10 or 20" bank unit, dependent on capacity of fluid required to be cooled, and what temperature reduction. (*Other combinations are available upon request) Small footprint enables simple attachment to other systems, or in areas with limited space. Fully API compliant, ATEX certification available.



Features & Benefits:

High Cooling Capacity - Suitable for application requiring a high level of heat dissipation

Versatile - Able to be used with different API systems

Water saving - No requirement for an on-site water supply, environmentally friendly

Specification

Robust Design: Made fully in Stainless Steel

Maximum Working Pressure: 80 barg (1160 psig) @ 120°C (248°F)

ATEX Compliant: Zone 1 Anti-static Exd motor and anti-static nylon impeller available in line with ATEX Zone 1 Exd IIBT4Gb - IP55

Protective grill: Safety feature covers motor blades and fins

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



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AESSEAL plc is certified to:

ISO 9001, ISO 14001, ISO/IEC 20000, ISO/IEC 27001,
ISO/TS 29001, ISO 37001, ISO 45001 & ISO 50001



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INVESTOR
IN PEOPLE

Use double mechanical seals with hazardous products.

Always take safety precautions:

- Guard your equipment
- Wear protective clothing



WARNING

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