LABYRINTH SEAL PUMPS

ACD’s Labyrinth seal design is reliable and provides trouble free centrifugal pump operation eliminating the need for a traditional mechanical seal.

- Incorporates a gas type seal that effectively seals around the shaft to protect against static and dynamic liquid leakage.
- The insulating closure plate along with the staggered stainless steel distance piece provides an interrupted cold-transference path to prevent “ice bridging.”
- Optimized tolerance and design result in high efficiency and very low sealing gas consumption.
- Designed as an exchangeable cartridge for added flexibility.
- The non-contacting seal design makes the sealing life virtually unlimited.
- Speeds up to 8000 RPM.
- Discharge pressures to 800 PSI (55 bar).

FEATURES & BENEFITS

- Process applications where continuous operation is required.
- Pumping applications where contamination must be kept to a minimum or when safety does not allow process gas to be vented to the atmosphere.
- High suction pressure applications that exceed mechanical seal capability
- ACD offers the reverse bias seal configuration for high purity (Argon) applications.

APPLICATIONS

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LIQUIDS PUMPED

- LIN
- LOX
- LAR
- Methane (LNG)
- Consult with ACD for other liquids

TYPICAL SCOPE OF SUPPLY

- Labyrinth seal cartridge with replaceable sleeves
- High performance seal gas regulators
- “Double” – staggered web stainless steel intermediate
- Insulating closure-plate
- Labyrinth seal interconnecting piping
- Babbitt labyrinth seal liner for Oxygen, Nitrogen, Argon and Methane service.

OPTIONS

- Seal gas panel

AVAILABLE Labyrinth SEAL CONFIGURATIONS:

- Single gas (w/ mixture out)
- Dual Gas
- Reverse Bias
LABYRINTH SEAL PUMPS

TYPICAL DUAL GAS LABYRINTH SEAL PUMP

The Labyrinth Seal Component system is completely plumbed, assembled and factory tested. Only three field connections are required for ease of installation. Performance and installation data should be used for reference only. Please contact ACD if certified information is required.

REVERSE BIAS GAS SEAL

SINGLE GAS SEAL WITH MIXTURE OUT

DUAL GAS SEAL FLOW

For Pumping applications where product contamination must be kept to a minimum, or safety does not allow the process gas to be freely vented to atmosphere, a dual gas seal is a must. This design buffers the first stage of the labyrinth with product gas and the second stage with an external GN2 gas supply.