

EagleBurgmann®

Rely on excellence

Cartex®-GSDN Gas-lubricated mechanical seal





Cartex®-GSDN

- Double seal
- Bi-directional (independent of direction of rotation)
- gas-lubricated, gas-buffered
- internally pressurized
- cartridge unit

Cartex®-GSDN – keeping your process cool

Is your product incompatible with the supply medium?
Do you have to keep your product ultra-pure or prevent
it from contacting the seal faces?

If any of these is the case, then the latest generation
of non-contacting mechanical seals is the right
solution for your centrifugal pump applications. Cartex-
GSDN seals are well-engineered, rugged and reliable,
and they require minimal maintenance.

Cool seal, cool process: Boost the efficiency of your process

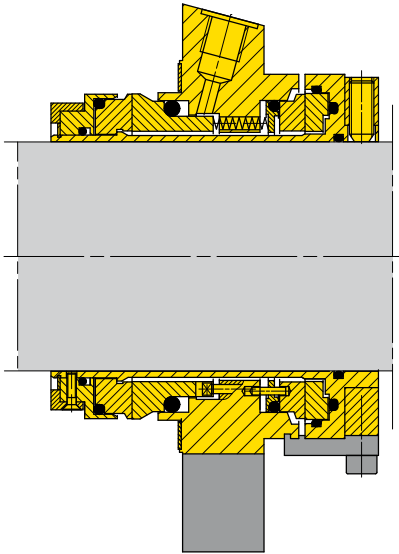
Non-contacting Cartex-GSDN mechanical seals
virtually eliminate mechanical resistance. You only
need a nitrogen supply (distribution network or
cylinder) and an upstream EagleBurgmann supply and
control unit.

For you and your process, this means:
no friction on the seal faces, no heat generated at the
seal or in the contact medium and no additional
complex components to dissipate frictional heat. You
get the benefits of maximum environmental protection
and maximum efficiency, and your process stays cool.

The Cartex-GSDN is easy to install. There are few
wearing parts, which keeps maintenance costs low.

Even if you currently have conventional mechanical
seals or stuffing box packings on your centrifugal
pumps, retrofit and standardization are not a problem.

Cartex®-GSDN



A highly sophisticated seal: Special features

The HR principle is the characteristic design feature of the Cartex series: The seat and shaft sleeve rotate along with the pump shaft, while the springs remain stationary.

Internal pressurization together with centrifugal forces creates a self-cleaning effect at the seal face during ongoing operation. This prevents harmful contamination and increases operational reliability, especially in applications where the media contains solids.

High axial tolerance and a design free of empty spaces are two of the outstanding features of the Cartex-GSDN. Wide seal faces ensure high gas film stability. U grooves are a standard feature on the bi-directional seals.

Silicon carbide face materials and a high-strength DLC coating ensure optimal performance in continuous operation.

The seals are also designed to withstand critical situations during start-up and shut-down or if buffer gas supply fails. Double-balanced Cartex-GSDN seals remain closed and balanced in these situations too.

Broad applications spectrum: Operating limits

Shaft diameter
 $d_1 = 30 \dots 100 \text{ mm}$

Pressure:
 $p_1 = 9 \text{ bar}, p_3 = 12 \text{ bar}$ with
U grooves (bi-directional)

$p_1 = 13 \text{ bar}, p_3 = 16 \text{ bar}$ with V grooves
(uni-directional)

Differential pressure ($p_3 - p_1$) = min. 3 bar

Operating temperature limits for:
EPDM $-20 \dots +140 \text{ }^\circ\text{C}$
FFKM $-20 \dots +120 \text{ }^\circ\text{C}$
FKM $-20 \dots +170 \text{ }^\circ\text{C}$

Sliding velocity: $v_g = 4 \dots 15 \text{ m/s}$

Max. axial movement: $\pm 1 \text{ mm}$

Max. viscosity: 600 mPa

Materials

	Product side	Atmospheric side
Seal face	Q1	Q19
Counter ring	Q19	Q1
O-rings	V, E, K, (U1)	
Springs	M	
Components	G, M	

Is your process cool?

We would be pleased to provide further technical details and mounting dimensions for gas-lubricated Cartex-GSDN seals.

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EagleBurgmann is one of the leading international companies for industrial sealing technology. Our products are used everywhere that safety and reliability are important: In the oil and gas industries, petroleum refining, chemicals, energy, food, paper, water, marine applications, aerospace and mining. Every day, more than 5000 employees contribute their ideas, solutions and commitment to ensuring that customers all over the world can rely on our seals. Our modular seal service, TotalSealCare™, underlines our commitment to customer orientation and our provision of tailor-made services for every application.

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