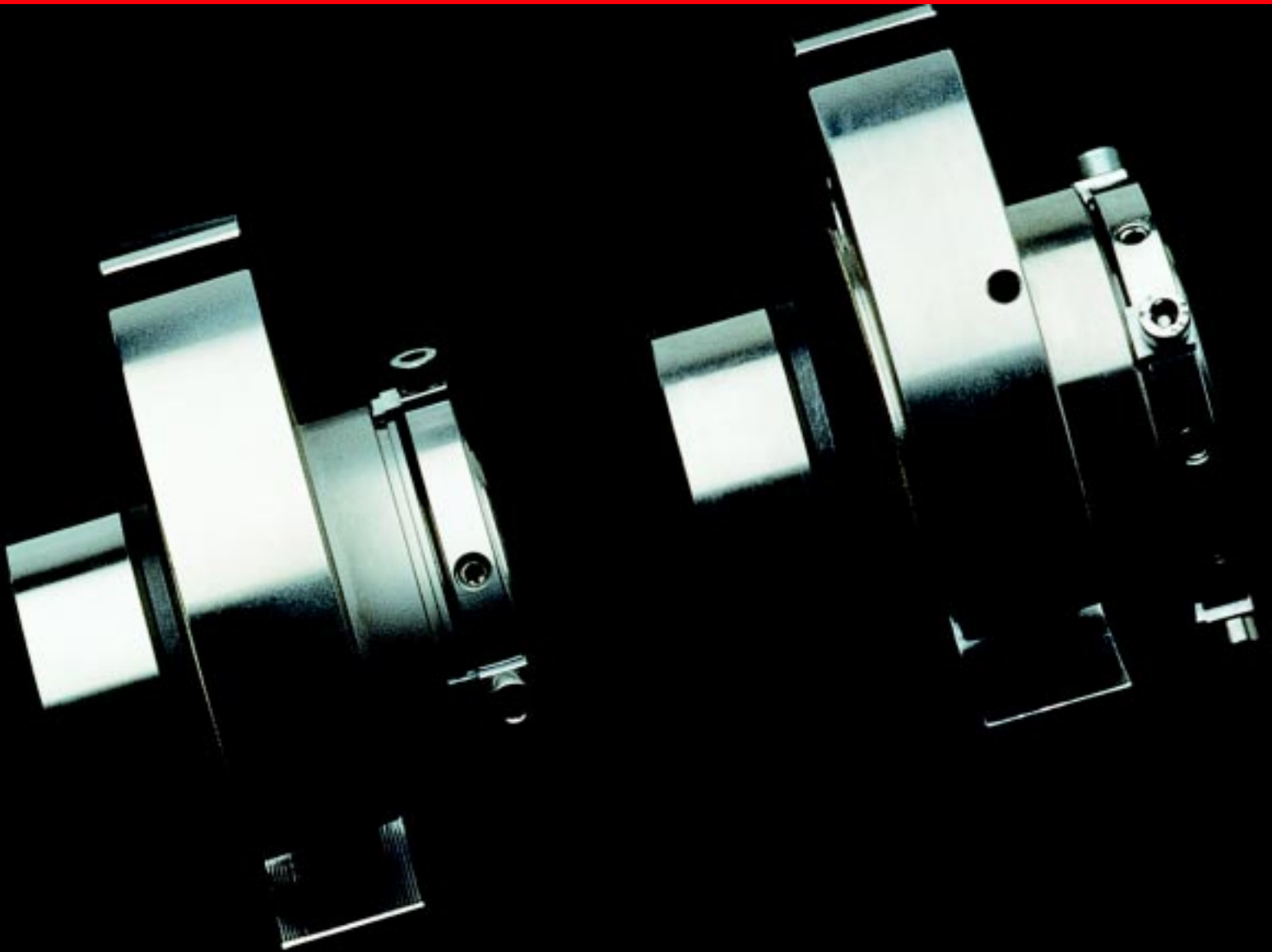




# BURGMANN®

## Cartex™ Seals

Engineered to provide the extra margin of performance



# With BURGMANN engineering, Cartex seals will provide trouble free performance for years



## Standardize on Cartex mechanical seals for a wide variety of applications

On average, only 10% of mechanical seals reach the end of their destined lifetime. The other 90% fail mainly due to incorrect operation, installation or selection. That's why BURGMANN engineered its entire line of Cartex seals to higher standards. Cartex seals are designed with high pressure ratings, tighter tolerances, more axial movement capability, seal parts with larger cross sections, and greater attention to functional details. So Cartex seals are more tolerant of system upsets and installation flaws to provide an extended margin of performance. In short, Cartex seals give you more performance at a competitive price.

Cartex mechanical seals are fully preassembled units for standard and large bore seal chambers on centrifugal pumps. They are also ideal for stuffing box conversions from packings, and for use on original equipment without seal chamber modifications. Cartex seal glands are equipped with all auxiliary piping connections.

Whether you require a quench, flush, or dry-running seal, Cartex offers both wet and dry seals to meet your needs. Double seals (ASD/ABD), quench and throttle-bushing seals (AST/ABT) are recommended as a safeguard for handling dangerous products. Flush-style seals (ASP/ABP) run cool and protect seal faces for longer life. Cartex gas barrier seals (ASGSD/ABGSD) are recommended when "zero leakage" is the goal.

All Cartex seals feature interchangeable parts so you can assemble exactly the right seal for your application from a reduced inventory, for fast, economical service in the field. In addition, Cartex seals are easier to install and safer to use because they feature improved assembly fixtures and enlarged auxiliary connection bores. These seals also feature stationary springs safely positioned outside the product to avoid corrosion, monolithic hard seal faces to increase stability, plus a wide variety of arrangements for various services.

## Cartex-ASGSD and ABGSD double gas seals provide economical, "zero leakage" performance

For applications requiring a double wet seal, the Cartex gas barrier seals offer an even more reliable alternative. These seals are available in both small bore (ASGSD) and big bore (ABGSD) configurations. The seal faces are gas lubricated and contactless with a self-regulating stable gas film. There is no wear, and there is negligible heat generation, so you achieve significantly improved MTBR. In addition, this advanced gas-barrier seal design provides a corresponding 99% reduction of the power consumption when compared to a comparable wet seal.

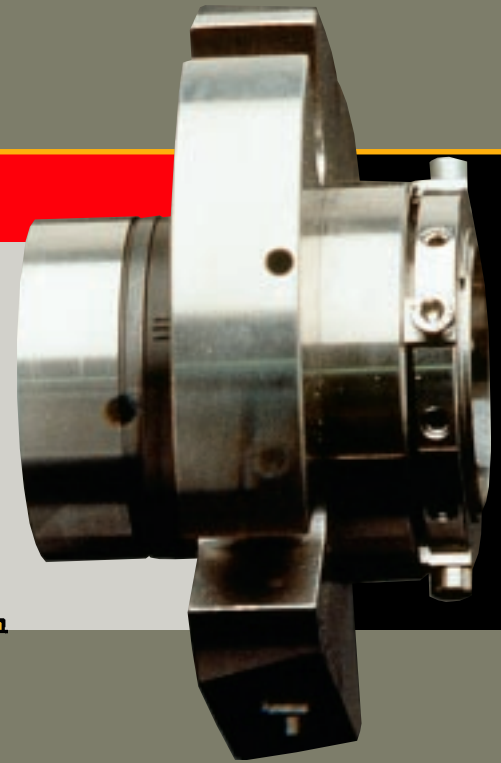
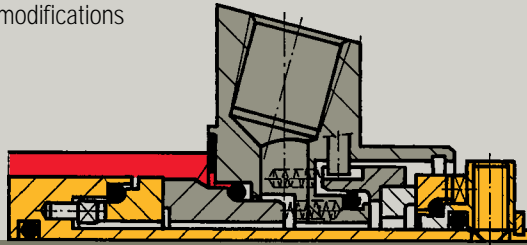
Cartex Product Features and Advantages	Benefits
Extended pressure rating	Forgiving on operational overloads
Robust cartridge design provides stabilizing seal gap	Reliable performance, long life
Axial/radial assembly fixtures	Facilitates correct installation
Springs and pins isolated from product for reduced corrosion	Increased reliability
Stationary springs	Forgiving on misalignment
Multi-spring design for even face load, stable gap	Low leakage, long life
O-ring moves to "clean" side, eliminates hang-up	Increased solids handling capability and improved reliability
Seal faces engineered for reduced distortion	Minimizes leakage, reliable operation
Rotating seat design	Compensates for misaligned shafts

# dry

## Cartex-ASGSD and ABGSD Double Gas Seals

With a design combination of stationary springs and seal faces pressurized from the inside, **this seal can handle solids up to 3%**. Standard bi-directional groove forgives incorrect electrical motor installation and backflow of product. This seal fits most ANSI seal chambers (standard and enlarged) without modifications or replacement.

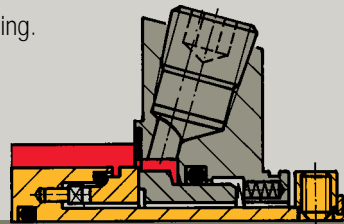
- Rotating
- Stationary
- Product



# wet

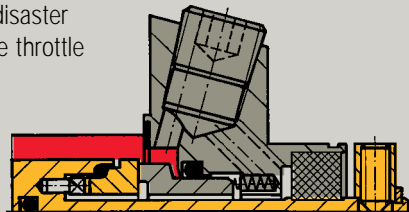
## Cartex-ASP and -ABP Single Wet Seals

Balanced, bi-directional seals; cover with auxiliary connection for flushing. Available in small bore (ASP) and big bore (ABP) configurations.



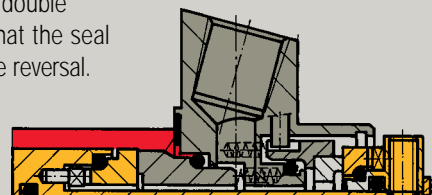
## Cartex-AST and -ABT Single Wet Seals

For operation with pressureless fluid quench, these seals can be run with an emergency throttle. Gland includes a fixed carbon throttle bushing ("disaster bushing") in place of a lip seal. In the event of primary seal failure, the throttle holds pressure and the drain port leads leakage to a defined location to provide an additional safety option. Available in small bore (AST) and big bore (ABT) configurations.



## Cartex-ASD and -ABD Double Wet Seals

Available in small bore (ASD) and big bore (ABD) configurations. Patented integrated circulating device for effective cooling. Can be used as double and tandem seal. The double pressure balanced design ensures that the seal remains closed even in the event of buffer pressure failure or pressure reversal.



## Cartex Seal Applications

Conditions	ASGSD ABGSD	AST ABT	ASP ABP	ASD ABD
Volatile media with poor lubricating properties	■	■		■
Media which react with oxygen	■	■		■
Low-viscosity media without solids	■	■	■	■
Media with solids which are inclined to sedimentation	■	■	■	■
Aggressive media	■			■
Media that are harmful to the environment	■			■
Media without environmental pollutants	■		■	■

## Cartex seal high-performance materials

Seal Component	Cartex-ASP, -ABP, -AST, -ABT, -ASD, -ABD Product Side	Cartex-ASGSD, -ABGSD Product Side
Stationary seal face	Silicon carbide or resin impregnated carbon	Silicon carbide diamond-like carbon coated
Rotating seat	Silicon carbide	Silicon carbide
O-rings	Standard: FPM, e.g. Viton®	Standard: FPM, e.g. Viton®
	Non-standard: EPDM, Perfluorocarbon rubber, NBR, Perfluorocarbon/PTFE	Non-standard: EPDM, Perfluorocarbon rubber, NBR, Perfluorocarbon/PTFE
Springs	Hastelloy® C-4	Hastelloy® C-4
Gland, sleeve and metal parts	316 SS, Optional Halar® coating for double seal Optional Hastelloy® C, Alloy 20	316 SS
Seal Component	Cartex-ASD, -ABD Atmospheric Side	Cartex -ASGSD, -ABGSD Atmospheric Side
Stationary seal face	Carbon	Silicon carbide
Rotating seat	Silicon carbide	Tungsten carbide

Viton® is a DuPont registered trademark.  
Hastelloy® is a registered trademark of Haynes International, Inc.  
Halar® is a registered trademark of Ausimont USA, Inc.



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## Operating Limits

### Gas Seals

#### Cartex-ASGSD and -ABGSD

Sizes, 1.125" to 4"	28 mm to 100 mm
Temp., -5°F to +428°F	-20°C to +220°C
Pressure, 190 psi	13 bar
Speed, 53 ft/s	16 m/s
Allowed axial movement: ± 0.04" / ± 1.0 mm	

### Single Wet Seals

#### Cartex-ASP, -ABP, -AST and -ABT

Sizes, 1" to 4"	25 mm to 100 mm
Temp., -40°F to +428°F	-40°C to +220°C
Pressure, 360 psi	25 bar (silicon carbide/resin impregnated carbon material combination)
Pressure, 230 psi	12 bar (silicon carbide/silicon carbide material combination)
Speed, Carbon/SiC SiC/SiC	52.8 ft/s 33 ft/s
	16 m/s 10 m/s
Allowed axial movement: ± 0.04" / ± 1.0 mm	
Please observe operating limits of the O-rings	

### Double Wet Seals

#### Cartex-ASD and -ABD

Sizes, 1" to 4"	25 mm to 100 mm
Temp., -40°F to +428°F	-40°C to +220°C
Recommended differential pressure is 20-30 psi.	
Speed, Carbon/SiC SiC/SiC	52.8 ft/s 33 ft/s
	16 m/s 10 m/s
Product Pressure, 290 psi	20 bar (silicon carbide/silicon carbide material combination)
360 psi	25 bar (silicon carbide/resin impregnated carbon material combination)
Allowed axial movement: ± 0.04" / ± 1.0 mm	
Please observe operating limits of the O-rings	