

RELY ON EXCELLENCE

## Cartex ANSI Single seals

Mechanical seals | Mechanical seals for pumps | Standard cartridge seals



### Features

- Single seal
- Available for standard (Cartex-ASP) and big bore (Cartex-ABPN) seal chambers
- Cartridge
- Balanced
- Independent of direction of rotation
- Single seals with flush (-ASP, -ABPN) and with quench combined with lip seal (-ASQ, -ABQ) or throttle ring (-ASTN, -ABTN)

### Advantages

- Ideal for use in ANSI process pumps
- Universal applicable for packings conversions, retrofits or original equipment
- Seal for standardizations
- No dimensional modification of the seal chamber necessary, small radial installation height
- No damage of the shaft by dynamically loaded O-Ring
- Extended service life
- Installation faults are avoided, cost-effective
- No damage caused by dirt entered during assembly
- Straightforward and easy installation due to pre-assembled unit (reduced down-times)

### Operating range

Cartex-ASP, - ABPN, -ASTN, -ABTN, -ASQ, -ABQ

Shaft diameter: d1 = 1.000" ... 3.750"

Other sizes on request

### Materials

Seal face: Silicon carbide (Q1), Carbon graphite resin impregnated (B), Tungsten carbide (U2)  
 Seat: Silicon carbide (Q1)  
 Secondary seals: FKM (V), EPDM (E), FFKM (K), Perfluorocarbon rubber/PTFE (U1)  
 Springs: Hastelloy® C-4 (M)  
 Metal parts: CrNiMo steel (G)

### Standards and approvals

- ANSI

### Recommended applications

- Process industry
- Petrochemical industry
- Chemical industry
- Pharmaceutical industry
- Power plant technology
- Pulp and paper industry
- Water and waste water technology
- Mining industry
- Food and beverage industry
- Universally applicable
- ANSI process pumps

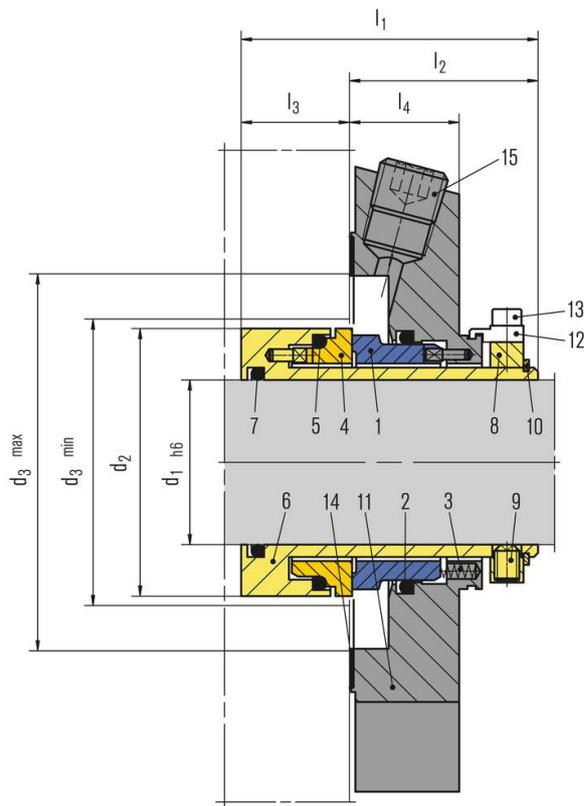
## RELY ON EXCELLENCE

Temperature:  
 $t = -40\text{ °C} \dots 220\text{ °C} (-40\text{ °F} \dots 428\text{ °F})$   
 (Check O-Ring resistance)

Sliding face material combination BQ1  
 Pressure:  $p_1 = 25\text{ bar} (363\text{ PSI})$   
 Sliding velocity:  $v_g = 16\text{ m/s} (52\text{ ft/s})$

Sliding face material combination Q1Q1  
 or U2Q1  
 Pressure:  $p_1 = 12\text{ bar} (174\text{ PSI})$   
 Sliding velocity:  $v_g = 10\text{ m/s} (33\text{ ft/s})$

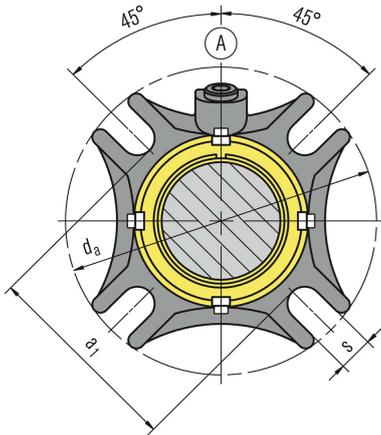
Axial movement:  
 $\pm 1.0\text{ mm}, d_1 \geq 75\text{ mm} \pm 1.5\text{ mm}$



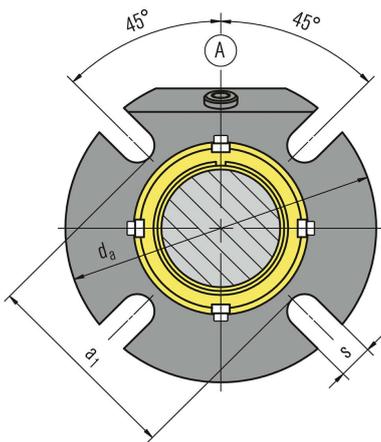
Item	Description
1	Seal face
2, 5, 7	O-Ring
3	Spring
4	Seat
6	Shaft sleeve
8	Drive collar
9	Set screw
10	Snap ring
11	Cover
12	Assembly fixture (remove after installation)
13	Screw
14	Gasket
15	Screw plug
16	Lip seal (-QN), throttle ring (-TN)

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## Installation, details, options



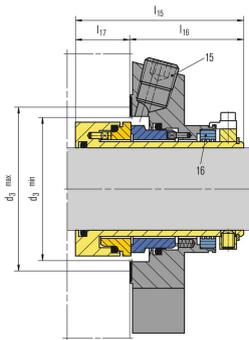
**Seal cover**  
Cast version



**Seal cover**  
Machined version

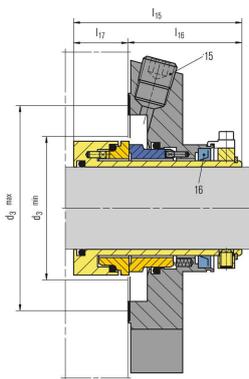
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## Product variants



### Cartex-ASTN and -ABTN

Single seal for standard (S) and big bore (B) seal chambers. Same as Cartex-ASP and -ABPN but with throttle ring (item 16). The cover has auxiliary connections for flushing and quench. Throttle ring: PTFE carbon-graphite reinforced (T12).



### Cartex-ASQN and -ABQN

Single seal for operation with unpressurized quench for standard (S) and big bore (B) seal chambers. Same as Cartex-ASP and -ABPN version but with lip seal (item 16) at the atmospheric side. The cover has auxiliary connections for flushing and quench. Lip seal: NBR (P), PTFE carbon reinforced (T3).

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### Dimensions

d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub> min	d <sub>3</sub> max	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	l <sub>15</sub>	l <sub>16</sub>	l <sub>17</sub>	a <sub>1</sub>	d <sub>a</sub>	s	Connection
1.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1125	1713	1752	2795	2638	1669	0.969	1000	2937	1909	1028	3311	4500	0.437	1/4 NPT
1250	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1375	1960	2000	3189	2638	1669	0.969	1000	2947	1919	1028	3543	5118	0.437	1/4 NPT
1.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.625	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.750	2.461	2.500	4.055	2.638	1.669	0.969	1.000	3.012	1.984	1.028	4.567	6.496	0.559	3/8 NPT
1.875	2.583	2.661	3.937	2.638	1.669	0.969	1.000	3.071	2.059	1.012	4.409	5.984	0.551	3/8 NPT
2.000	2.677	2.756	4.567	2.638	1.929	0.709	1.260	3.130	2.102	1.028	4.882	6.260	0.551	3/8 NPT
2.125	2.834	2.913	4.528	2.638	1.669	0.969	1.000	3.012	1.984	1.028	5.276	6.890	0.709	3/8 NPT
2.250	2.960	3.093	4.409	2.638	1.945	0.693	1.276	3.130	2.120	1.028	4.685	6.417	0.709	3/8 NPT
2.500	3.212	3.299	5.276	2.638	1.919	0.719	1.250	3.130	2.120	1.028	5.512	7.795	0.709	3/8 NPT
2.625	3.338	3.417	5.118	2.638	1.919	0.719	1.250	3.130	2.120	1.028	5.354	6.890	0.709	3/8 NPT
2.750	3.660	3.740	5.236	2.638	1.945	0.693	1.276	3.130	2.120	1.028	5.512	7.480	0.630	3/8 NPT
3.000	3.937	4.016	5.512	3.307	2.276	1.031	1.276	3.858	2.516	1.343	5.906	8.228	0.650	3/8 NPT
3.250	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**BIG BORE** - Dimensions in inch

### Dimensions

d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub> min	d <sub>3</sub> max	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	l <sub>15</sub>	l <sub>16</sub>	l <sub>17</sub>	a <sub>1</sub>	d <sub>a</sub>	s	Connection
1.000	1.693	1.732	2.205	2.638	1.669	0.969	1.000	2.937	1.909	1.028	2.756	3.937	0.433	1/4 NPT
1.125	1.713	1.752	2.205	2.638	1.669	0.969	1.000	2.937	1.909	1.028	2.440	4.134	0.437	1/4 NPT
1.250	1.969	2.008	2.402	2.638	1.669	0.969	1.000	3.130	2.102	1.028	2.638	4.252	0.433	1/4 NPT
1.375	1.961	2.000	2.402	2.638	1.669	0.969	1.000	2.947	1.919	1.028	2.760	4.213	0.437	1/4 NPT
1.500	2.200	2.244	2.717	2.638	1.669	0.969	1.000	3.130	2.102	1.028	2.950	4.488	0.551	3/8 NPT
1.625	2.340	2.421	2.795	2.638	1.669	0.969	1.000	3.130	2.102	1.028	3.030	4.921	0.551	3/8 NPT
1.750	2.461	2.500	2.953	2.638	1.669	0.969	1.000	3.012	1.984	1.028	3.228	5.118	0.559	3/8 NPT
1.875	2.583	2.661	3.070	2.638	1.669	0.969	1.000	3.071	2.043	1.028	3.190	5.118	0.551	3/8 NPT
2.000	2.677	2.756	3.189	2.638	1.669	0.969	1.000	3.130	2.102	1.028	3.430	5.472	0.630	3/8 NPT
2.125	2.834	2.913	3.583	2.638	1.669	0.969	1.000	3.012	1.984	1.028	3.820	5.512	0.650	3/8 NPT
2.250	2.960	3.039	3.583	2.638	1.669	0.969	1.000	3.130	2.102	1.028	3.858	5.866	0.650	3/8 NPT
2.375	3.070	3.125	3.590	2.638	1.669	0.969	1.000	-	-	-	4.020	6.181	0.709	3/8 NPT
2.500	3.212	3.291	3.937	2.638	1.669	0.969	1.122	3.130	2.102	1.028	4.528	6.693	0.709	3/8 NPT
2.625	3.338	3.417	4.016	2.638	1.669	0.969	1.250	3.130	2.102	1.028	4.528	6.378	0.630	3/8 NPT
2.750	3.660	3.740	4.370	2.638	1.929	0.709	1.260	3.130	2.102	1.028	4.646	7.441	0.709	3/8 NPT
3.000	3.937	4.016	4.724	3.307	2.260	1.047	1.260	3.858	2.516	1.343	5.000	7.835	0.709	3/8 NPT
3.250	4.189	4.268	4.921	3.307	2.260	1.047	1.260	3.858	2.516	1.343	5.315	7.830	0.709	3/8 NPT
3.750	4.689	4.750	5.433	3.307	2.260	1.047	1.000	-	-	-	5.827	8.189	0.866	3/8 NPT

**STANDARD BORE** - Dimensions in inch

All technical specifications are based on extensive tests and our many years of experience. The diversity of possible applications, however, means that they can serve only as guide values.

We must be notified of the exact conditions of application before we can provide any guarantee for a specific case. This is subject to change.

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[eagleburgmann.com](http://eagleburgmann.com)  
[info@eagleburgmann.com](mailto:info@eagleburgmann.com)

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