

RELY ON EXCELLENCE

eCartex ANSI Single seals

Mechanical seals | Mechanical seals for pumps | Standard cartridge seals



Features

- Single seal
- Available for standard (eCartex-ASPN) and big bore (eCartex-ABPN) seal chambers
- Cartridge
- Balanced
- Independent of direction of rotation
- Single seals with flush (-ASPN, -ABPN) and with quench combined with lip seal (-ASQN, -ABQN) or throttle ring (-ASTN, -ABTN)

Advantages

- **The series has sliding surfaces that are equipped with EagleBurgmann DiamondFace technology as standard**
- Up to 80 % less energy consumption and minimized heat generation of seal due to friction-reducing DiamondFace layer
- Up to 100 % extended operating period, prolongation of MTBF and MTBR intervals
- Significantly improved dry-run capability for inadequately lubricated sealing surfaces, thus vastly improved process safety
- Universally applicable, even with high solids content in the medium

Operating range

Shaft diameter: $d_1 = 1.000'' \dots 3.750''$

Other sizes on request

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:

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

Materials

Seal face: Silicon carbide DiamondFace (Q15)

Seat: Silicon carbide DiamondFace (Q15)

Secondary seals: FKM (V), EPDM (E), FFKM (K), Perfluorcarbon rubber/PTFE (U1)

Springs: Hastelloy® C-4 (M)

Metal parts: CrNiMo steel (G), CrNiMo cast steel (G)

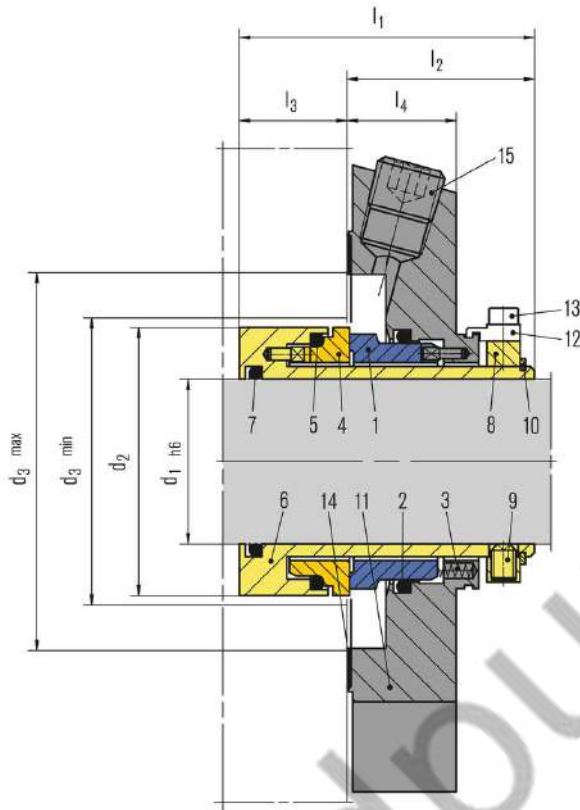
Standards and approvals

- 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

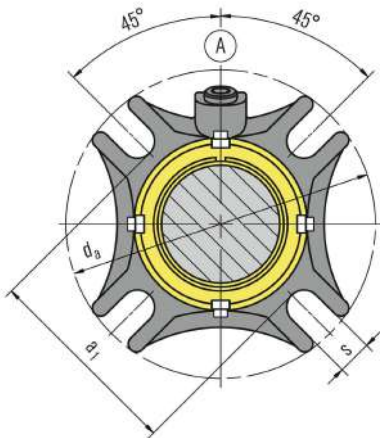
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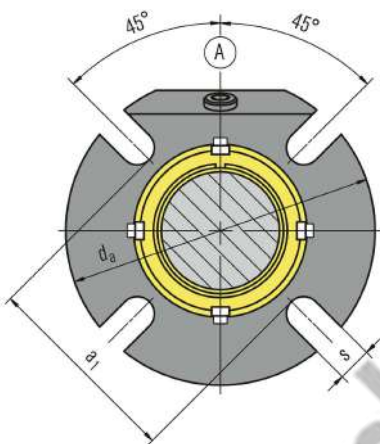
Item	Description
1	Seal face
2, 5, 7	O-Ring
3	Spring
4	Seat
6	Shaft sleeve
8	Drive collar
9	Set screw
10	Snap ring
11	Cover
12	Assembly fixture (remove after installation)
13	Screw
14	Gasket
15	Screw plug
16	Lip seal (-QN), throttle ring (-TN)

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Installation, details, options



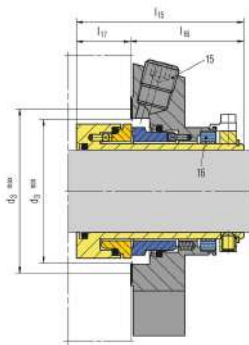
Seal cover
Cast version



Seal cover
Machined version

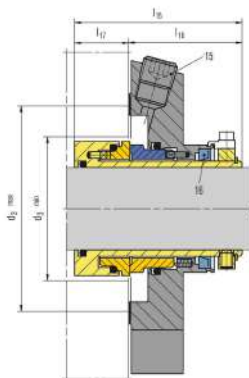
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Product variants



eCartex-ASTN and -ABTN

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



eCartex-ASQN and -ABQN

Single seal for operation with unpressurized quench for standard (S) and big bore (B) seal chambers. Same as eCartex-ASPN 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 ₁	d ₂	d _{3 min}	d _{3 max}	l ₄	l ₅	l ₆	l ₇	a ₂	d _a	s	Connection
1.000	1.693	1.732	2.205	1.000	3.406	2.102	1.303	2.441	3.937	0.433	1/4 NPT
1.125	1.713	1.752	2.205	1.000	3.228	3.228	1.343	2.441	4.134	0.437	1/4 NPT
1.250	1.969	2.008	2.402	1.000	3.406	2.102	1.303	2.756	4.252	0.433	1/4 NPT
1.375	1.961	2.000	2.402	1.000	3.406	2.083	1.303	2.756	4.213	0.437	1/4 NPT
1.500	2.200	2.244	2.717	1.000	3.406	2.102	1.303	2.953	4.488	0.551	3/8 NPT
1.625	2.340	2.421	2.795	1.000	3.406	2.102	1.303	3.091	4.921	0.551	3/8 NPT
1.750	2.461	2.500	2.953	1.000	3.406	2.102	1.303	3.228	5.118	0.559	3/8 NPT
1.875	2.583	2.661	3.070	1.000	3.406	2.102	1.303	3.307	5.118	0.551	3/8 NPT
2.000	2.677	2.756	3.189	1.000	3.406	2.102	1.303	3.425	5.472	0.630	3/8 NPT
2.125	2.834	2.913	3.583	1.000	3.406	2.102	1.303	3.819	5.512	0.650	3/8 NPT
2.250	2.960	3.039	3.583	1.000	3.406	2.102	1.303	3.858	5.866	0.650	3/8 NPT
2.375	3.070	3.125	3.590	1.000	-	-	-	-	6.181	0.709	3/8 NPT
2.500	3.212	3.291	3.937	1.122	3.406	2.102	1.303	4.528	6.693	0.709	3/8 NPT
2.625	3.338	3.417	4.016	1.250	3.406	2.102	1.303	4.528	6.378	0.630	3/8 NPT
2.750	3.660	3.740	4.370	1.260	3.406	2.102	1.303	4.646	7.441	0.709	3/8 NPT
3.000	3.937	4.016	4.724	1.260	4.252	2.516	1.736	5.000	7.835	0.709	3/8 NPT
3.250	4.189	4.268	4.921	1.260	4.252	2.516	1.736	5.315	7.830	0.709	3/8 NPT
3.750	4.689	4.750	5.433	1.000	-	-	-	-	8.189	0.866	3/8 NPT

STANDARD BORE - Dimensions in inch

Dimensions

d ₁	d ₂	d _{3 min}	d _{3 max}	l ₄	l ₅	l ₆	l ₇	a ₂	d _a	s	Connection
1.000	-	-	-	-	-	-	-	-	-	-	-
1125	1713	1752	2795	1000	3228	1886	1343	3311	4500	0.437	1/4 NPT
1250	-	-	-	-	-	-	-	-	-	-	-
1375	1960	2000	3189	1000	3406	2083	1323	3543	5118	0.437	1/4 NPT
1.500	-	-	-	-	-	-	-	-	-	-	-
1.625	-	-	-	-	-	-	-	-	-	-	-
1.750	2.461	2.500	4.055	1.000	3.406	2.083	1.323	4.567	6.496	0.559	3/8 NPT
1.875	2.583	2.661	3.937	1.000	3.406	2.083	1.323	4.409	5.984	0.551	3/8 NPT
2.000	2.677	2.756	4.567	1.260	3.406	2.102	1.303	4.882	6.260	0.551	3/8 NPT
2.125	2.834	2.913	4.528	1.000	3.406	2.102	1.303	5.276	6.890	0.709	3/8 NPT
2.250	2.960	3.093	4.409	1.276	3.406	2.102	1.303	4.685	6.417	0.709	3/8 NPT
2.500	3.212	3.299	5.276	1.250	3.406	2.102	1.303	5.512	7.795	0.709	3/8 NPT
2.625	3.338	3.417	5.118	1.250	3.406	2.102	1.303	5.354	6.890	0.709	3/8 NPT
2.750	3.660	3.740	5.236	1.276	3.406	2.102	1.303	5.512	7.480	0.630	3/8 NPT
3.000	3.937	4.016	5.512	1.276	3.406	2.516	1.303	5.906	8.228	0.650	3/8 NPT
3.250	-	-	-	-	-	-	-	-	-	-	-

BIG BORE - Dimensions in inch