

RELY ON EXCELLENCE

Cartex ANSI Dual seals

Mechanical seals | Mechanical seals for pumps | Standard cartridge seals



Features

- Dual seal
- Available for standard (Cartex-ASDN) and big bore (Cartex-ABDN) seal chambers
- Cartridge
- Balanced
- Independent of direction of rotation
- Double pressure balanced
- Integrated pumping device

Advantages

- Ideal for use in ANSI process pumps
- Universal applicable for packings conversions, retrofits or OEM
- Ideal 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
- No damage caused by dirt entered during assembly
- Straightforward and easy installation due to pre-assembled unit

Operating range

Shaft diameter:
d1 = 25 ... 100 mm (1.000" ... 4.000")
Other sizes on request
Temperature:
t = -40 °C ... 220 °C (-40 °F ... 428 °F)
(Check O-Ring resistance)

Sliding face material combination BQ1
Pressure: p1 = 25 bar (363 PSI)
Sliding velocity: vg = 16 m/s (52 ft/s)

Sliding face material combination Q1Q1 or U2Q1
Pressure: p1 = 20 bar (290 PSI)
Sliding velocity: vg = 10 m/s (33 ft/s)

Barrier fluid circulation system:
p3max = 25 bar (363 PSI)
 $\Delta p (p3 - p1)_{ideal} = 2 \dots 3 \text{ bar (29 ... 44 PSI)}$,
7 bar (102 PSI) for barrier media with poor lubricating properties)

Pump startup:
 $\Delta p (p3 - p1)_{max} = 25 \text{ bar (363 PSI)}$ allowed

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), CrNiMo cast steel (G)

Standards and approvals

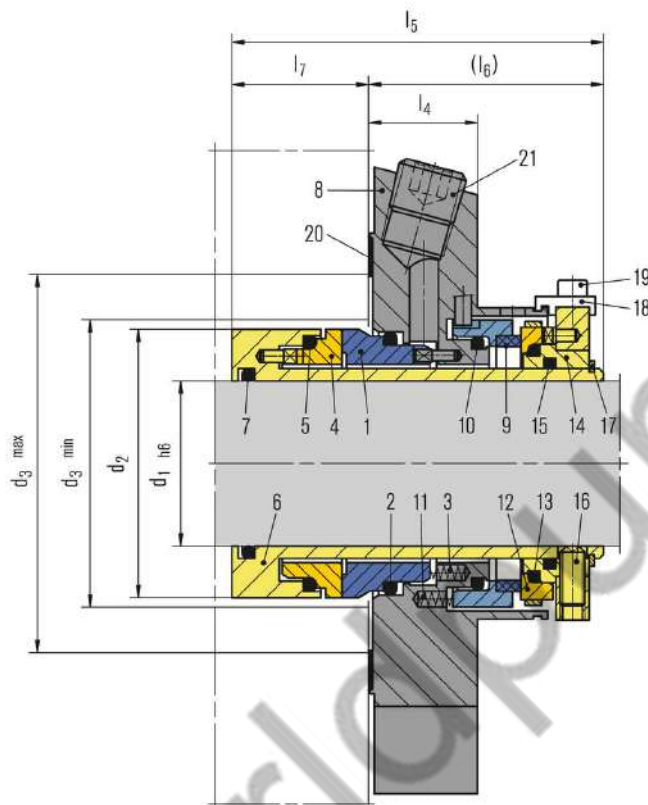
- ANSI

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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Recommended supply medium:
max. ISO VG 5
Axial movement:
 ± 1.0 mm, $d_1 \geq 75$ mm ± 1.5 mm



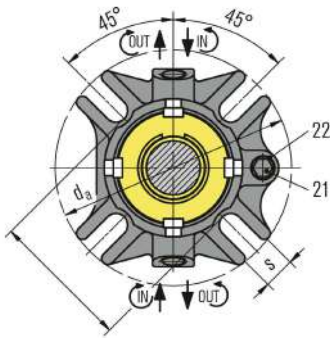
Item	Description
1	Seal face
2, 5, 7, 10, 13, 15	O-Ring
3	Spring
4	Seat
6	Shaft sleeve
8	Cover
9	Seal face
11	Spring
12	Seat
14	Drive collar
16	Set screw
17	Snap ring
18	Assembly fixture
19	Hex socket head screw
20	Gasket
21	Screw plug
22	Gasket

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Installation, details, options

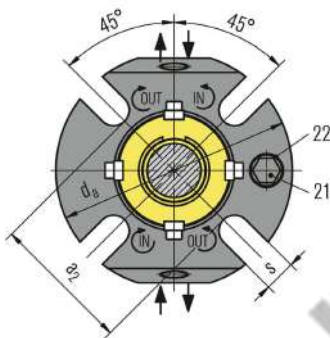
Seal cover

Cast version



Seal cover

Machined version



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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