

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:
 $d_1 = 25 \dots 100 \text{ mm (1.000" } \dots 4.000\text{")}$
 Other sizes on request
 Temperature:
 $t = -40 \text{ }^\circ\text{C} \dots 220 \text{ }^\circ\text{C (-40 }^\circ\text{F} \dots 428 \text{ }^\circ\text{F)}$
 (Check O-Ring resistance)

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

Sliding face material combination Q1Q1 or U2Q1
 Pressure: $p_1 = 20 \text{ bar (290 PSI)}$
 Sliding velocity: $v_g = 10 \text{ m/s (33 ft/s)}$

Barrier fluid circulation system:
 $p_{3\text{max}} = 25 \text{ bar (363 PSI)}$
 $\Delta p (p_3 - p_1)_{\text{ideal}} = 2 \dots 3 \text{ bar (29 } \dots 44 \text{ PSI)}$,
 7 bar (102 PSI) for barrier media with poor lubricating properties)

Pump startup:
 $\Delta p (p_3 - p_1)_{\text{max}} = 25 \text{ bar (363 PSI)}$ allowed

Recommended supply medium:
 max. ISO VG 5

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

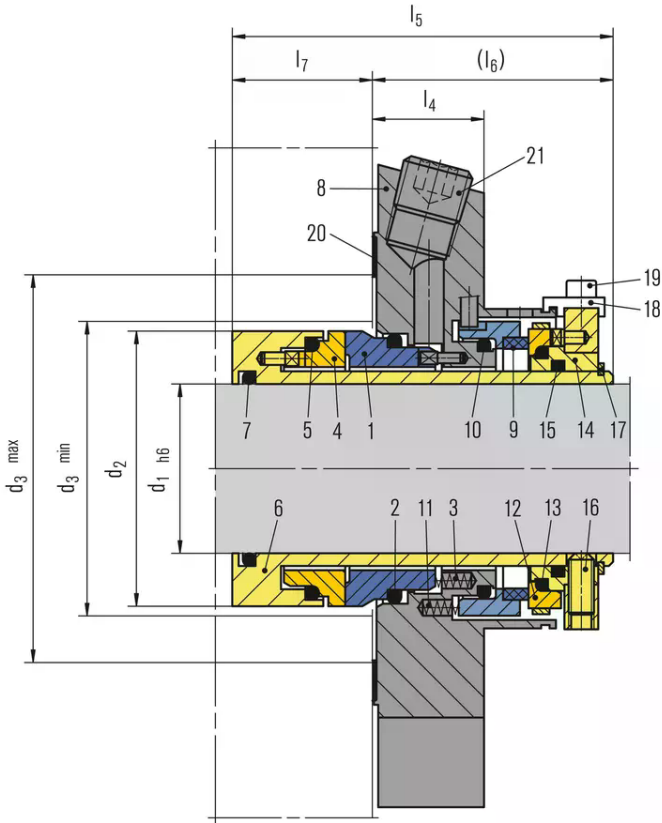
- ANSI

Recommended applications

- Universally applicable
- 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
- CCUS
- Power generation
- ANSI process pumps

RELY ON EXCELLENCE

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

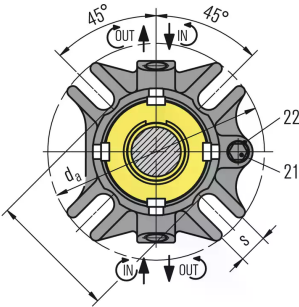


Item	Description
1	Seal face
2, 5, 7, 10, 13, 15	O-Ring
3	Spring
4	Seat
6	Shaft sleeve
8	Cover
9	Seal face
11	Spring
12	Seat
14	Drive collar
16	Set screw
17	Snap ring
18	Assembly fixture
19	Hex socket head screw
20	Gasket
21	Screw plug
22	Gasket

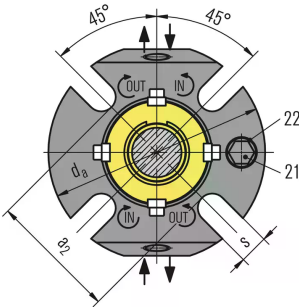
RELY ON EXCELLENCE

Installation, details, options

Seal cover
Cast version



Seal cover
Machined version



RELY ON EXCELLENCE

Dimensions

d ₁	d ₂	d-3 min~	d-3 max~	l ₄	l ₅	l ₆	l _{7</sub></sub>}	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

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	-	-	-	-	-	-	-	-	-	-	-
1.125	1.713	1.752	2.795	1.000	3.228	1.886	1.343	3.311	4.500	0.437	1/4 NPT
1.250	-	-	-	-	-	-	-	-	-	-	-
1.375	1.960	2.000	3.189	1.000	3.406	2.083	1.323	3.543	5.118	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