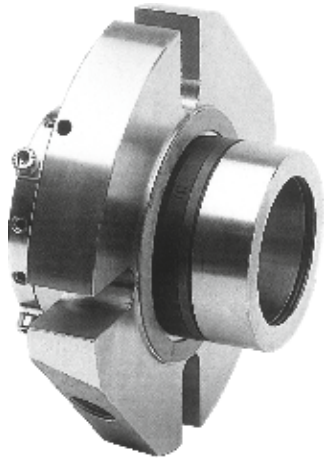


CMS ANSI DUAL



Description

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

Technical Features

Ideal for use in ANSI process pumps
 No damage of the shaft by dynamically
 loaded O-Ring
 No dimensional modification of the seal
 chamber necessary, small radial installation
 height
 Universal applicable for packings
 conversions, retrofits or OEM

Typical Industrial Applications

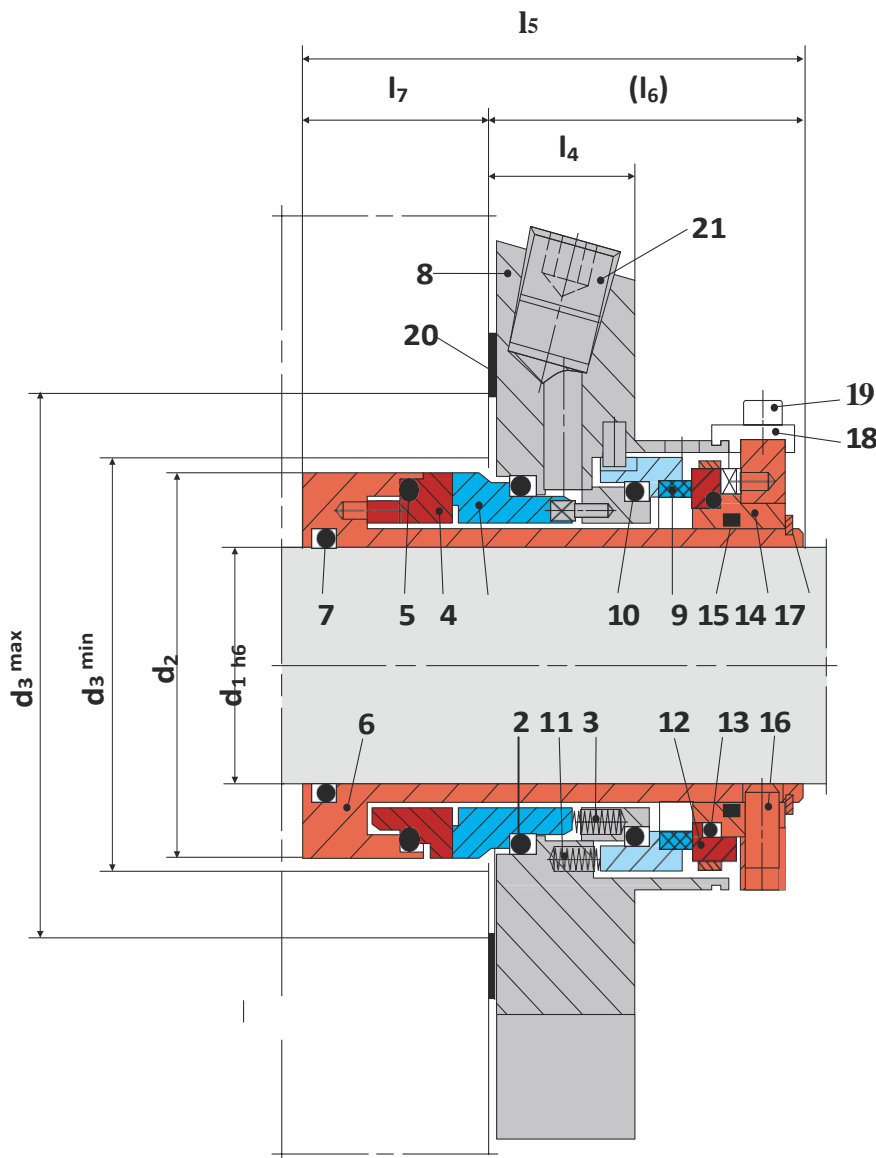
ANSI process pumps
 Chemical industry
 Food and beverage industry
 Petrochemical industry
 Pharmaceutical industry
 Universally applicable
 Water and waste water technology

Standards

ANSI

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)



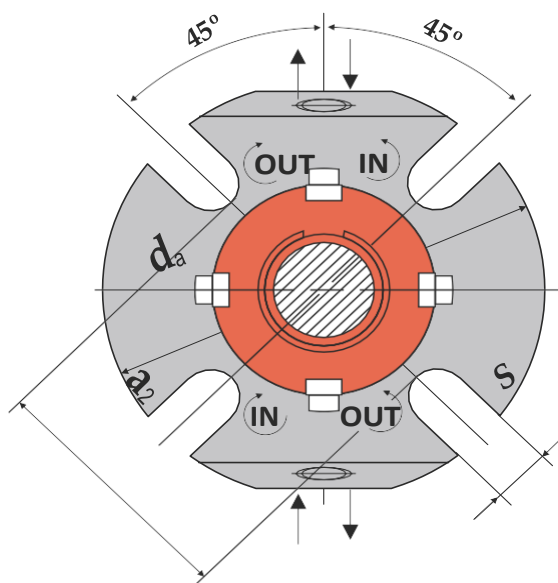
Note: Additional technical & dimensional information will be provided on request.

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

Performance Capabilities

Sizes: d1 = Upto 100 mm (Upto 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) Speed = 16 m/s (52 ft/s)
 Sliding face material combination Q1Q1 or U2Q1 Pressure: p1 = 20 bar (290 PSI)
 Speed = 10 m/s (33 ft/s) Barrier fluid circulation system:
 p3max = 25 bar (363 PSI)
 $\Delta p (p3 - p1) \text{ ideal} = 2 \dots 3 \text{ bar} (29 \dots 44 \text{ PSI})$,
 7 bar (102 PSI) for barrier media with poor lubricating properties)
 Pump startup:
 $\Delta p (p3 - p1)_{\text{max}} = 25 \text{ bar} (363 \text{ PSI})$ allowed Recommended supply medium: max. ISO VG 5 Permissible axial movement: $\pm 1.0 \text{ mm}$,
 $d1 \geq 75 \text{ mm} \pm 1.5 \text{ mm}$

Installation, Details, Options



Dimensional Data

BIG 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	3.170	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	-	-	-	-	-	-	-	-	-	-	-

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	1.693	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

Note: Additional technical & dimensional information will be provided on request.