Product Description

1. Single seal configuration
2. Balanced design
3. Independent of direction of rotation
4. Cartridge construction
5. Available for standard (CTX-ASPN) and big bore (CTX-ABPN) seal chambers
6. Single seals with flush (-ASPN, -ABPN) and with quench combined with lip seal (-ASQN, - ABQN) or throttle ring (-ASTN, -ABTN)

Technical Features

1. Ideal for use in ANSI process pumps
2. O-ring is dynamically loaded to prevent shaft damage.
3. Dimensional modification of the stuffing box chamber is not required due to short radial installation height
4. Ideal to convert and retrofit pumps with packings and large volume OEM production
5. Cartridge unit factory assembled for easy installation, which reduces down-time
6. Rugged design for long operating life

Typical Industrial Applications

ANSI process pumps	Hydrocarbons
Acids	Lubricating liquid
Aqueous solutions	Marine
Caustics	Petrochemical
Chemicals	Pharmaceutical
Crystallizing fluids	Solvents
Fertilizer	Water and waste water
Food and beverage	

Standards

ANSI

Materials

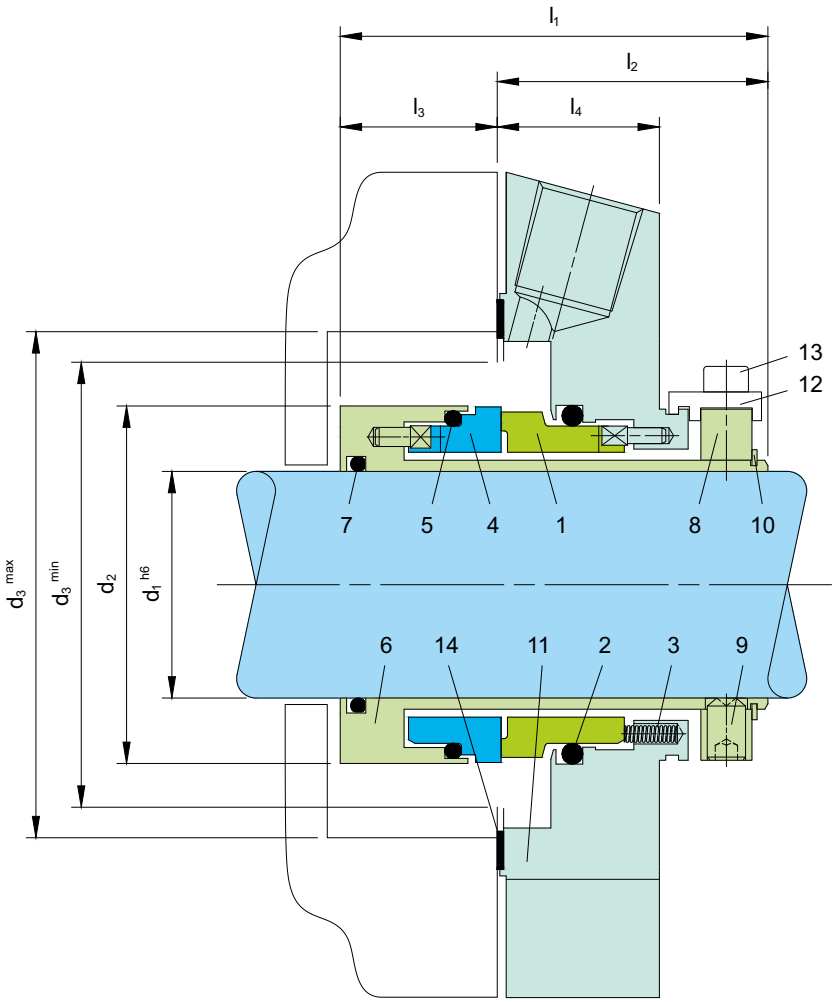
Seal face	Silicon carbide (Q1), Carbon graphite resin impregnated (B), Tungsten carbide (U2)
Seat	Silicon carbide (Q1)
Secondary seals	FKM (V), EPDM (E), FFKM (K), Perflourocarbon rubber/PTFE (U1)
Springs	Hastelloy® C-4 (M)
Metal parts	CrNiMo steel (G), CrNiMo cast steel (G)

Performance Capabilities

CTX-ASPN, -ABPN, -ASTN, -ABTN, -ASQN, -ABQN	
Sizes	d_1 = 1.000" ... 3.750" Other sizes on request
Temperature	t = -40°C...+220°C (-40°F...+428°F) (Check O-ring resistance)
Sliding face material combination BQ1	
Pressure	p_1 = 25 bar (363 PSI)
Speed	16 m/s (52 ft/s)
Sliding face material combination Q1Q1 or U2Q1	
Pressure	p_1 = 12 bar (175 PSI)
Speed	10 m/s (33 ft/s)

Permissible Axial Movement:

d_1< 2.935" = ± 0.039", d_1 ≥ 2.935" ± 0.059

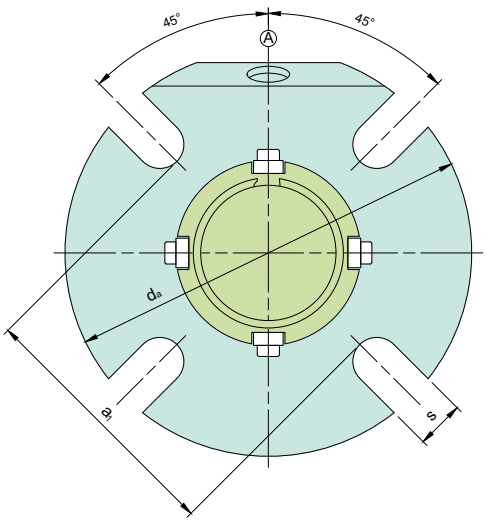


Note: The item numbers as depicted above are based on our technical experience and knowledge and are placed in the chronological order of their assembly procedure.

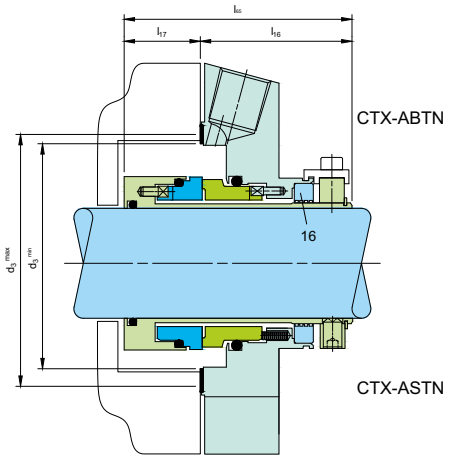
Item	Description
1	Seal face
2, 5, 7	O-ring
3	Spring
4	Seat
6	Shaft sleeve
8	Drive collar
9	Set screw

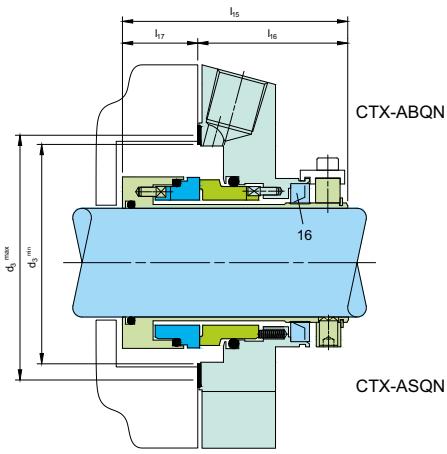
Item	Description
10	Snap ring
11	Cover
12	Assembly fixture (remove after installation)
13	HSH Cap Screw
14	Gasket
16	Lip seal (-QN), throttle ring (-TN)

Installation, Details, Options



Product Variants





CTX-ASTN and -ABTN

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

CTX-ASQN and -ABQN

Single seal for operation with unpressurized quench for standard (S) and big bore (B) seal chambers. Same as CTX-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), FKM (V), PTFE carbon reinforced (T3)

Dimensional Data

BIG BORE : Dimensions in inch

d_1	d_2	d_3 min	d_3 max	l_1	l_2	l_3	l_4	l_{15}	l_{16}	l_{17}	a_1	d_a	s	Connection
1.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.125	1.713	1.752	2.795	2.638	1.669	0.969	1.000	2.937	1.909	1.028	3.311	4.500	0.437	1/4 NPT
1.250	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.375	1.960	2.000	3.189	2.638	1.669	0.969	1.000	2.947	1.919	1.028	3.543	5.118	0.437	1/4NPT
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	1.000	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	1.945	0.639	1.276	3.130	2.102	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	2.102	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	2.102	1.028	5.512	7.795	0.709	3/8 NPT
2.625	3.338	3.170	5.118	2.638	1.919	0.719	1.250	3.130	2.102	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	2.102	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-

STANDARD BORE : Dimensions in inch

d_1	d_2	d_3 min	d_3 max	l_1	l_2	l_3	l_4	l_{15}	l_{16}	l_{17}	a_1	d_a	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	3.130	2.102	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	1.000	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	1.000	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	7.480	0.709	3/8 NPT
3.000	3.937	4.016	4.724	3.307	2.260	1.047	1.000	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	1.000	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

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