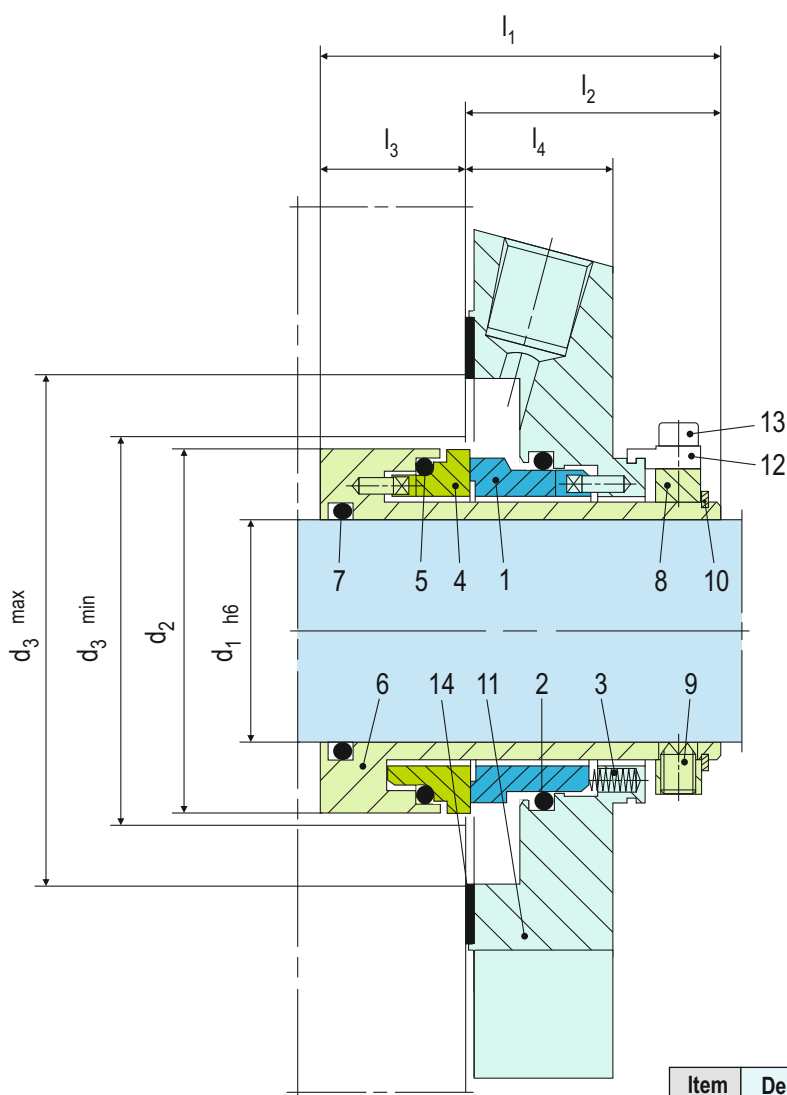


### Product Description

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 downtime
6. Rugged design for long operating life



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

### 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)

### Performance Capabilities

CTX-ASPN, -ABPN, -ASTN, -ABTN, -ASQN, -ABQN  
 Sizes:  $d_1 = 1.000'' \dots 3.750''$   
 Other sizes on request  
 Temperature:  $t = -40^\circ\text{C} \dots +220^\circ\text{C} (-40^\circ\text{F} \dots +428^\circ\text{F})$   
 (Check O-ring resistance)

#### Sliding face material combination BQ1

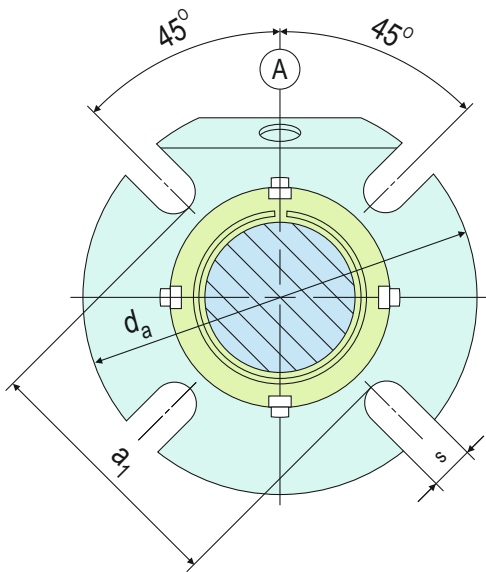
Pressure:  $p_1 = 25 \text{ bar (363 PSI)}$   
 Speed = 16 m/s (52 ft/s)

#### Sliding face material combination Q1Q1 or U2Q1

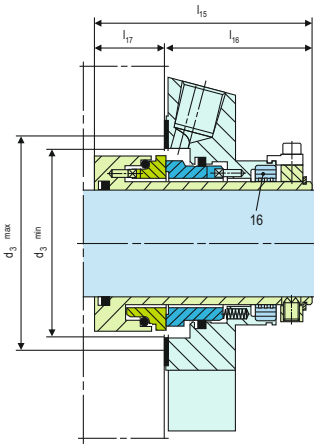
Pressure:  $p_1 = 12 \text{ bar (175 PSI)}$   
 Speed = 10 m/s (33 ft/s)  
 Permissible axial movement:  $\pm 1.0 \text{ mm}, d_1 \geq 75 \text{ mm}$   
 $\pm 1.5 \text{ mm}$

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

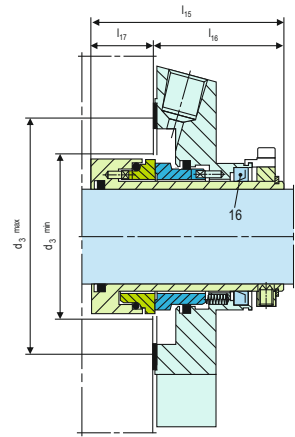


### Product Variants



#### 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 <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub> min	d <sub>3</sub> max	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	l <sub>5</sub>	l <sub>6</sub>	l <sub>7</sub>	a <sub>1</sub>	d <sub>a</sub>	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	1.669	0.969	1.000	3.012	1.984	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	2.120	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	1.000	3.130	2.120	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	2.120	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	2.120	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 <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub> min	d <sub>3</sub> max	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	l <sub>5</sub>	l <sub>6</sub>	l <sub>7</sub>	a <sub>1</sub>	d <sub>a</sub>	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	3.012	1.984	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	7.441	0.709	3/8 NPT
3.000	3.937	4.016	4.724	3.307	2.260	1.047	1.260	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	1.260	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.