

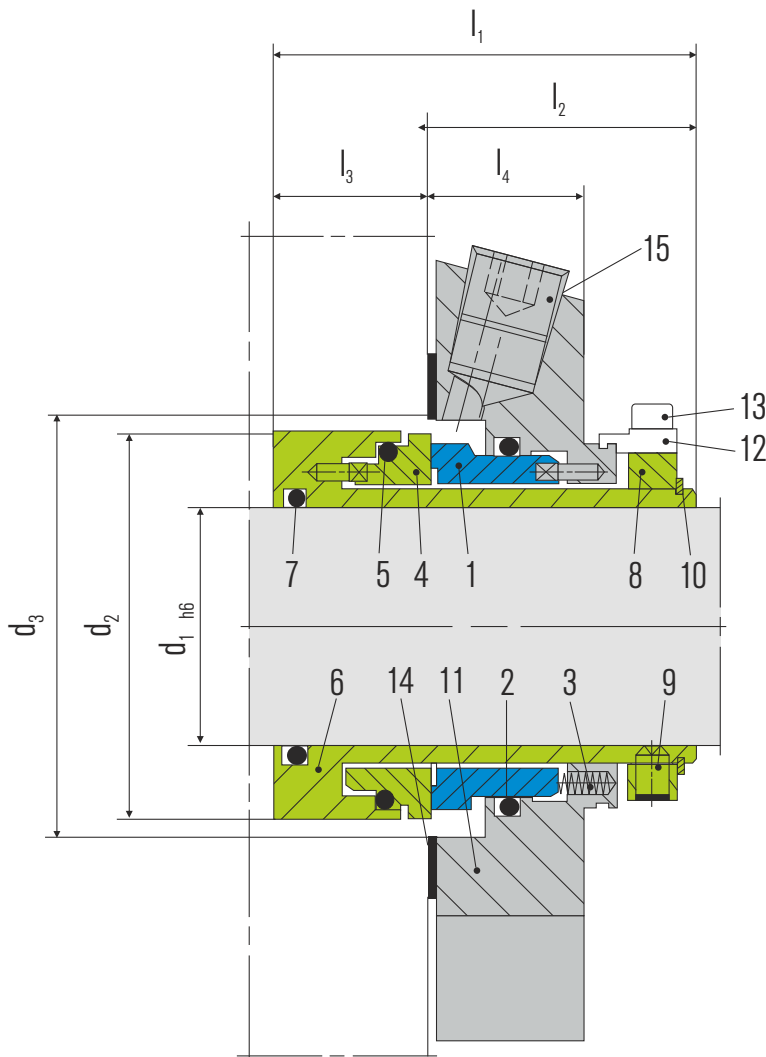


### Product Description

1. Additional variants available for ANSI pumps
2. Balanced
3. Cartridge
4. Independent of direction of rotation
5. Single seal

### Technical Features

1. Cost-effective
2. Easy installation due to pre-assembled unit (reduced down-times)
3. Ideal seal for standardizations
4. No damage caused by dirt entered during assembly
5. No damage of the shaft by dynamically loaded O-Ring
6. Universal applicable for packings conversions, retrofits or original equipment



### Typical Industrial Applications

Chemical industry  
 Food and beverage industry  
 Petrochemical industry  
 Pharmaceutical industry  
 Universally applicable  
 Water and waste water technology  
 Centrifugal pumps  
 Eccentric screw pumps  
 Process pumps

### 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-SN, -SNO, -QN, -TN

Sizes: Upto 100 mm (Upto 4.000")

Other sizes on request

Temperature:  $t = -40\text{ °C} \dots 220\text{ °C}$  ( $-40\text{ °F} \dots 428\text{ °F}$ )

(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)

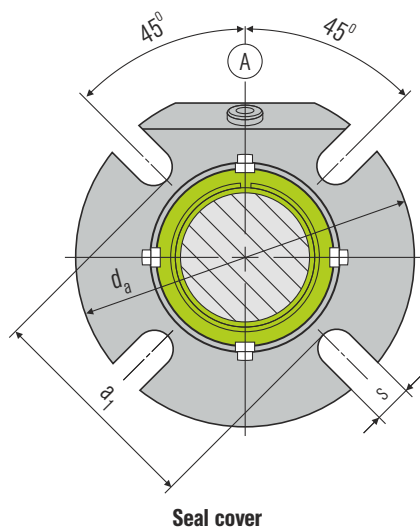
Permissible axial movement:  $\pm 1.0\text{ mm}$ ,  $d_1 \geq 75\text{ mm}$   
 $\pm 1.5\text{ mm}$

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

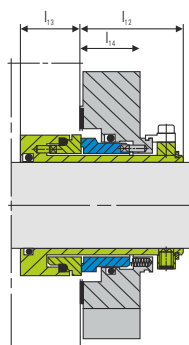
Item	Description
10	Snap ring
11	Cover
12	Assembly fixture
13	Screw
14	Gasket
15	Screw plug
16	Lip seal (-QN), throttle ring (-TN)

# National - sealmatic

## Installation, Details, Options

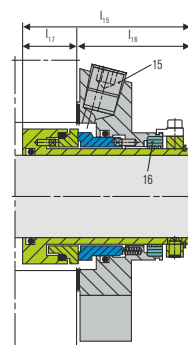


## Design Variations



### CTX-SNO

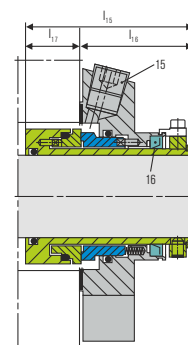
Single seal without connections, for dead-end operation.



### CTX-TN

Single seal for operation with unpressurized quench. Same as CTX-SN but with throttle ring (item 16). The cover has auxiliary connections for flushing and quench.

Throttle ring: PTFE carbon-graphite reinforced (T12).



### CTX-QN

Single seal for operation with unpressurized quench. Same as 'SN' version but with outboard lip seal (item 16). The cover has auxiliary connections for flushing and quench.

Lip seal: NBR (P), PTFE carbon reinforced (T3).

## Dimensional Data

d <sub>1</sub>	d <sub>2</sub>	d <sub>3min.</sub>	d <sub>3max.</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>
1.000	1.693	1.750	2.000	2.640	1.669	0.969	1.000
1.125	1.811	1.875	2.050	2.640	1.669	0.969	1.000
1.250	1.960	2.000	2.250	2.640	1.669	0.969	1.000
1.375	2.086	2.125	2.420	2.640	1.669	0.969	1.000
1.500	2.200	2.250	2.625	2.640	1.669	0.969	1.000
1.625	2.340	2.375	2.700	2.640	1.669	0.969	1.000
1.750	2.460	2.500	2.812	2.640	1.669	0.969	1.000
1.875	2.582	2.625	2.940	2.640	1.669	0.969	1.000
2.000	2.677	2.750	3.190	2.640	1.669	0.969	1.000
2.125	2.834	2.875	3.437	2.640	1.669	0.969	1.000
2.250	2.960	3.000	3.560	2.640	1.669	0.969	1.000
2.375	3.070	3.125	3.590	2.640	1.669	0.969	1.000
2.500	3.212	3.250	3.800	2.640	1.669	0.969	1.000
2.625	3.338	3.375	3.937	2.640	1.669	0.969	1.000
2.750	3.660	3.750	4.250	2.640	1.669	0.969	1.000
2.875	3.937	4.000	4.646	3.307	2.260	1.047	1.000
3.000	3.937	4.000	4.646	3.307	2.260	1.047	1.102
3.125	4.190	4.125	4.764	3.307	2.260	1.047	1.102
3.250	4.189	4.250	4.882	3.307	2.260	1.047	1.102
3.375	4.311	4.375	5.039	3.307	2.260	1.047	1.102
3.500	4.437	4.500	5.157	3.307	2.260	1.047	1.102
3.625	4.563	4.625	5.315	3.307	2.260	1.047	1.102
3.750	4.689	4.750	5.433	3.307	2.260	1.047	1.102
4.000	4.937	5.000	5.669	3.307	2.260	1.047	1.102

Dimensions in inch

d <sub>1</sub>	d <sub>2</sub>	d <sub>3min.</sub>	d <sub>3max.</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>
25	43.0	44.0	51.5	67	42.4	24.6	25.4
28	46.0	47.0	52.0	67	42.4	24.6	25.4
30	48.0	49.0	56.0	67	42.4	24.6	25.4
32	49.8	51.0	57.0	67	42.4	24.6	25.4
33	49.8	51.0	57.0	67	42.4	24.6	25.4
35	53.0	54.0	61.5	67	42.4	24.6	25.4
38	56.0	57.0	66.0	67	42.4	24.6	25.4
40	58.0	59.0	68.0	67	42.4	24.6	25.4
42	60.5	61.5	69.5	67	42.4	24.6	25.4
43	60.5	61.5	70.5	67	42.4	24.6	25.4
45	62.5	64.0	73.0	67	42.4	24.6	25.4
48	65.6	67.0	75.0	67	42.4	24.6	25.4
50	68.0	69.0	78.0	67	42.4	24.6	25.4
53	72.0	73.0	87.0	67	42.4	24.6	25.4
55	73.0	74.0	83.0	67	42.4	24.6	25.4
60	78.0	79.0	91.0	67	42.4	24.6	25.4
65	84.8	85.7	98.5	67	42.4	24.6	25.4
70	93.0	95.0	108.0	67	42.4	24.6	25.4
75	100.0	101.6	118.0	84	57.4	26.6	28.0
80	106.4	108.0	124.0	84	57.4	26.6	28.0
85	109.5	111.1	128.0	84	57.4	26.6	28.0
90	115.9	117.5	135.0	84	57.4	26.6	28.0
95	119.1	120.7	138.0	84	57.4	26.6	28.0
100	125.4	127.0	144.0	84	57.4	26.6	28.0

Dimensions in Millimeter

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