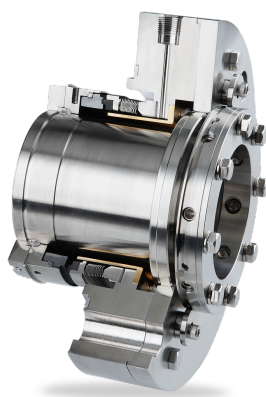


RELY ON EXCELLENCE

## LY9TC

Mechanical seals | Mechanical seals for pumps | Metal bellows seals



### Features

- API 682 Category 2 and 3, Type C, Arrangement 1 seal
- Single seal
- Balanced
- Cartridge unit
- Stationary metal bellows
- Shrink fitted seal ring and solid mating ring

### Advantages

- Suitable for higher speeds
- Good followability due to no influence from run-out, squareness or vibration of the shaft
- Compact design
- Low heat generation and power consumption due to narrow seal face width
- Longer seal life
- Also available in double ply design
- Suited for applications with extreme high and low temperatures
- Absence of dynamic O-Ring eliminates/ reduces seal face hang-up
- Bellows design minimizes variation in face load due to shaft expansion or face wear
- Resistant to abrasive particles in the medium, no shaft or sleeve fretting

### Operating range

Shaft diameter:  $d_1 = 20 \dots 110 \text{ mm}$  (0.79" ... 4.33")  
 Pressure single ply bellows:  $p = \text{vacuum} \dots 20 \text{ bar}$  (... 290 PSI),  
 Pressure double ply bellows:  $p = \text{vacuum} \dots 35 \text{ bar}$  (... 508 PSI)  
 Temperature:  $t = -130 \text{ }^\circ\text{C} \dots +400 \text{ }^\circ\text{C}$  (-202  $^\circ\text{F}$  ... +752  $^\circ\text{F}$ )  
 Sliding velocity:  $v_g \dots 50 \text{ m/s}$  (... 164 ft/s)

### Materials

Seal ring: Blister resistant carbon, Silicon carbide SSiC (Q1), RBSiC (Q2)  
 Mating ring: Silicon carbide SSiC (Q1), RBSiC (Q2)  
 Bellows: Inconel® 718 (M6)  
 Secondary seals: Graphite (G)  
 Metal parts: CrNiMo steel 316 (G), Carpenter® 42 (T4)

### Standards and approvals

- API 682 / ISO 21049
- API 682 4th ed. Cat. 2/3 - 1CW-FL

### Recommended applications

- Refining technology
- Oil and gas industry
- Petrochemical industry
- Chemical industry
- Power plant technology
- LPG plants
- API 610 / ISO 13709 pumps
- Process pumps

### Recommended piping plans

Process side:

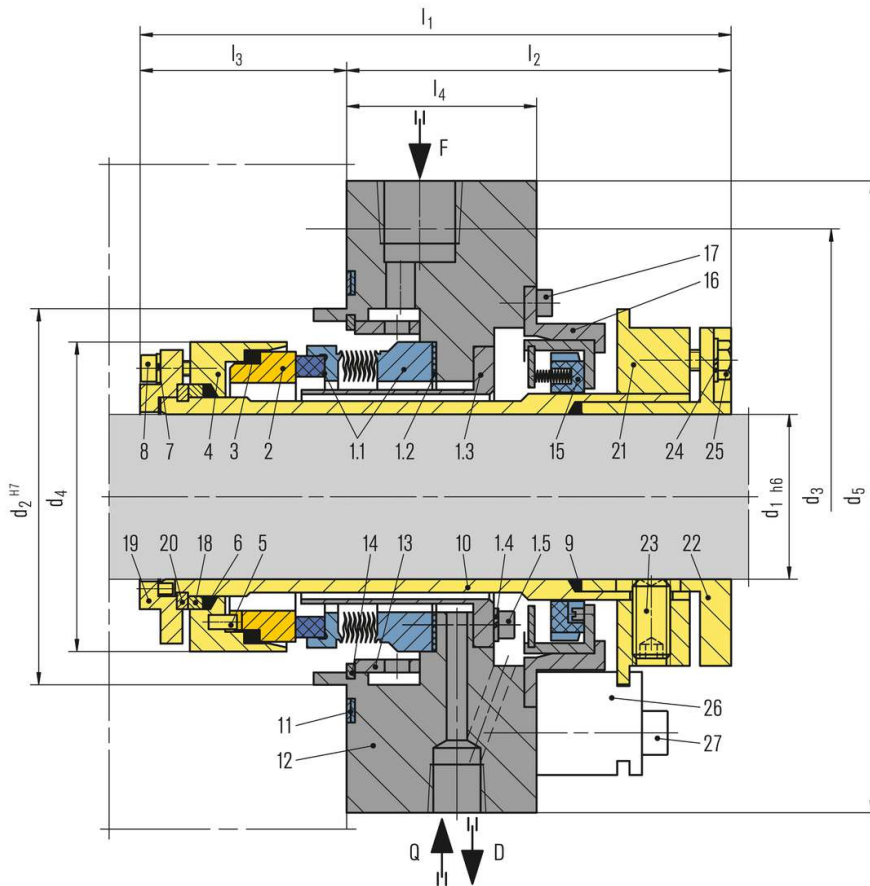
[API Plan 01](#)  
[API Plan 02](#)  
[API Plan 03](#)  
[API Plan 11](#)  
[API Plan 12](#)  
[API Plan 13](#)  
[API Plan 14](#)  
[API Plan 21](#)  
[API Plan 22](#)  
[API Plan 23](#)  
[API Plan 31](#)  
[API Plan 32](#)  
[API Plan 41](#)

Atmospheric side:

[API Plan 51](#)  
[API Plan 61](#)

## RELY ON EXCELLENCE

API Plan 62  
API Plan 65A  
API Plan 65B  
API Plan 66A  
API Plan 66B



Item	Description
1.1	Seal ring with bellows unit
1.2, 11	Gasket
1.3	Baffle sleeve
1.4, 7, 24	Spring washer
1.5, 8, 17, 27	HSH Cap screw
2	Mating ring
3, 6, 9	Graphite ring
4	Retainer
5	Pin
10	Seal sleeve
12	Gland plate
13	Flow distributor
14	Retaining ring
15	Throttle bushing
16	Adapter
18	Thrust ring
19	Drive ring
20	Split ring
21	Drive collar
22	Clamp sleeve
23	Set screw
25	Hexagon bolt
26	Setting device

F Flush  
Q Quench  
D Drain

## RELY ON EXCELLENCE

### Dimensions

API/d <sub>1</sub>	API/d <sub>2</sub>	API/d <sub>3</sub>	d <sub>4</sub>	d <sub>5</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>
20	70	105	-	-	-	-	-	-
30	80	115	71	138	142.5	90.3	52.2	47
40	90	125	81	148	143.3	87.3	56	43
50	100	140	91	168	146.3	94.3	52	51
60	120	160	104	188	150.3	94.3	56	47
70	130	170	115	198	151.5	95	56.5	48
80	140	180	129	208	150.6	90.7	59.9	48
90	160	205	143	248	167.3	104.3	63	56
100	170	215	154	258	176.9	111.9	65	63
110	180	225	170	268	182.8	111.3	71.5	60

Dimensions in millimeter, for single ply bellows - dimensions for double ply bellows on request.