

LY9TCR



Operating range

Shaft diameter:
d1 = 20 mm ... 110 mm (0.79" ... 4.33")
Pressure single ply bellows:
p = vacuum ... 25 bar* (... 363 PSI*)
Pressure double ply bellows:
p = vacuum ... 35 bar (... 508 PSI)
Temperature:
t = -75 °C* ... +400 °C (-103 °F* ... 752 °F)
Sliding velocity:
vg = ... 23 m/s (... 75 ft/s)

* Please contact an EagleBurgmann engineering expert when the operating range of the required seal exceeds the range shown above.

Materials

Seal ring: Blister resistant carbon (C4), Silicon carbide SSiC (Q1), RBSiC (Q2)
Mating ring: Silicon carbide SSiC (Q1), RBSiC (Q2)
Bellows: Inconel® 718 (M6)
Secondary seal: Graphite (G)
Metal parts: CrNiMo steel 316/316L (G), Carpenter® 42 (T4)

Standards and approvals

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

Recommended applications

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

Recommended piping plans

Process side (Dual seal / Single seal):

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

Between seals (Dual seal):

API Plan 52
API Plan 53A
API Plan 53B
API Plan 53C
API Plan 54
API Plan 55

Atmospheric side (Dual seal):

API Plan 61
API Plan 62
API Plan 65A
API Plan 65B

Atmospheric side (Single seal):

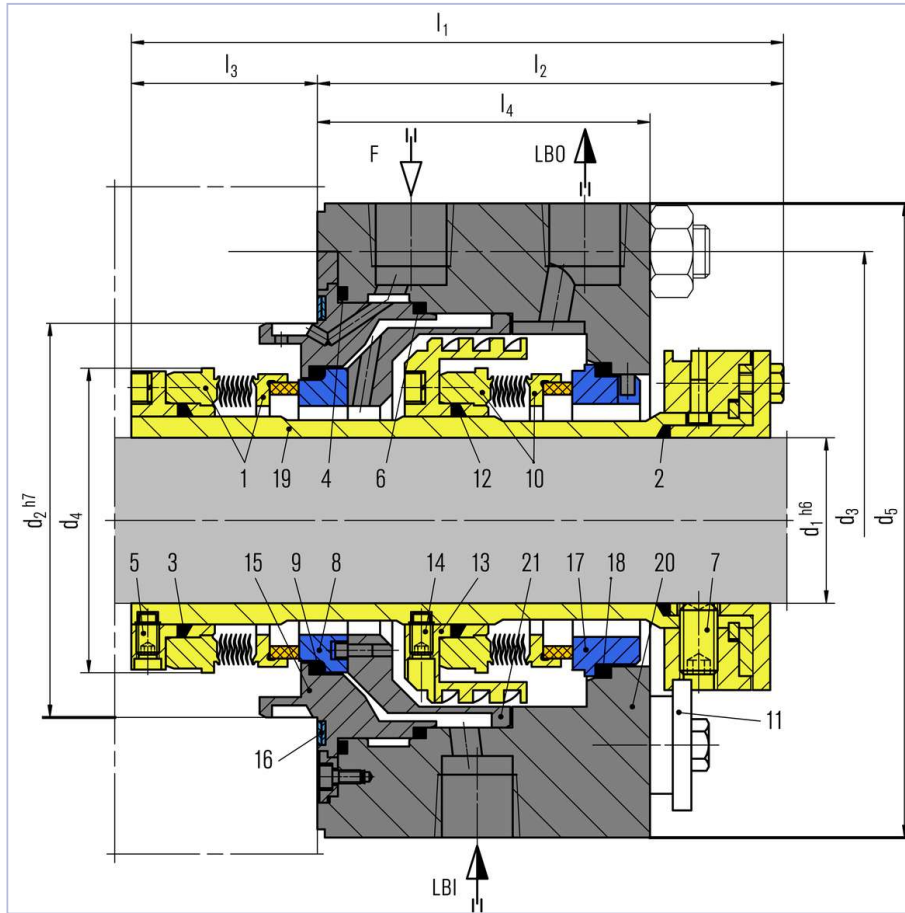
API Plan 51
API Plan 61
API Plan 62
API Plan 65A
API Plan 65B
API Plan 66A
API Plan 66B

Features

- API 682 Category 2 and 3, Type C seal
- Balanced
- Cartridge unit
- Rotating metal bellows
- Shrink fitted seal rings and solid mating rings

Advantages

- Compact design
- Also available in double ply design
- Suited for application with extreme high and low temperature
- 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



LY9TCR-T

Dual seal

Arrangement: Face-to-back (Tandem),
2CW-CW, 3CW-FB

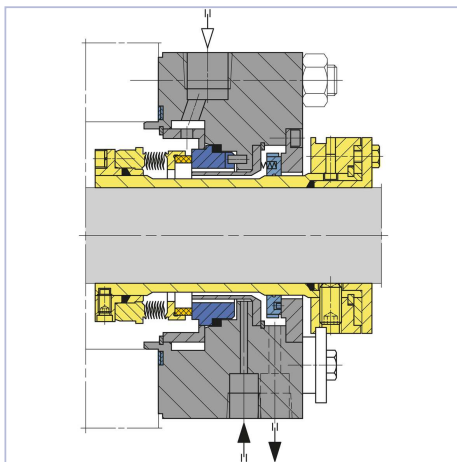
Item	Description
1,10	Seal ring with bellows unit
2, 3, 4, 6, 9, 12, 18	Graphite ring
5, 7, 14	Set screw
8, 17	Mating ring
11	Assembly fixture
13	Driver with pumping screw
15	Adapter
16	Spiral wound gasket
19	Seal sleeve
20	Gland plate
21	Insert

F Flush

LBO Liquid buffer/barrier OUT

LBI Liquid buffer/barrier IN

Product variants



LY9TCR-S

Single seal

Arrangement: 1CW-FL

Dimensions

API/d ₁	API/d ₂	API/d ₃	d ₄	d ₅	l ₁	l ₂	l ₃	l ₄
20	70	105	52.3	128	140.5	94.5	46	70.5
30	80	115	62.3	138	145	97.5	47.5	71
40	90	125	72.3	148	147	98	49	71.5
50	100	140	82.7	168	150.5	101.5	49	75
60	120	160	94.3	188	159	105	54	78.5
70	130	170	105.9	198	162.5	104.5	58	78
80	140	180	117.9	208	163.5	107.5	56	79.5
90	160	205	128.7	248	167	112	55	83
100	170	215	141	258	169	114	55	83
110	180	225	151	268	169	114	55	83

LY9TCR-T Dimensions in millimeter - for single ply bellows. Dimension for double ply bellows on request.

Dimensions

API/d ₁	API/d ₂	API/d ₃	d ₄	d ₅	l ₁	l ₂	l ₃	l ₄
20	70	105	52.3	128	106	82	24	58
30	80	115	62.3	138	109	84.5	24.5	58
40	90	125	72.3	148	111.5	84.5	27	58
50	100	140	82.7	168	113.5	84.5	29	58
60	120	160	94.3	188	116.5	89.5	27	63
70	130	170	105.9	198	117.5	89.5	28	63
80	140	180	117.9	208	119	91	28	63
90	160	205	128.7	248	120.5	92	28.5	63
100	170	215	141	258	122.5	94	28.5	63
110	180	225	151	268	122.5	94	28.5	63

LY9TCR-S Dimensions in millimeter - for single ply bellows. Dimension for double ply bellows on request.