

RELY ON EXCELLENCE

Class E unbalanced seals E01, E02, E11, E12

Mechanical Seals | Mechanical seals for pumps | Pusher seals



Features

- Rotating single-spring pusher seals
- Unbalanced
- Robust seal design
- Available as O-Ring or wedge variants
- Hard/hard seal face combination available
- Independent of direction of rotation (E11, E12)
- Available as single, dual and tandem arrangements

Advantages

- Ideal for general purpose applications
- Suitable for abrasive, corrosive and viscous fluids
- Over 35 years of running reference in the field
- Narrow cross-section allows the seal fitment in narrow stuffing boxes
- "Lower inventory since all parts except seal ring composite and follower are interchangeable with Class E balanced seals (E03, E04, E13, E14).

Operating range

Shaft diameter: $d = 25 \dots 100 \text{ mm}$ (1" ... 3.94")

Pressure: $p = \text{vacuum to } 16 \text{ bar}$ (232 PSI)

Temperature:

$t = -75 \text{ }^\circ\text{C} \dots +260 \text{ }^\circ\text{C}$ (-103 °F ... +500 °F)

Sliding velocity: $v_g = 15 \text{ m/s}$ (49 ft/s)

Axial movement: $\pm 1.5 \text{ mm}$

(Consult EB for applications outside above limits).

Materials

Seal ring: Carbon graphite resin impregnated, Carbon graphite antimony impregnated, Tungsten carbide, Silicon carbide
Mating ring: Silicon carbide, Tungsten carbide
Secondary seals: FKM, NBR, FFKM, PTFE
Springs: SS 316
Metal parts: SS 316, other materials on request.

Recommended applications

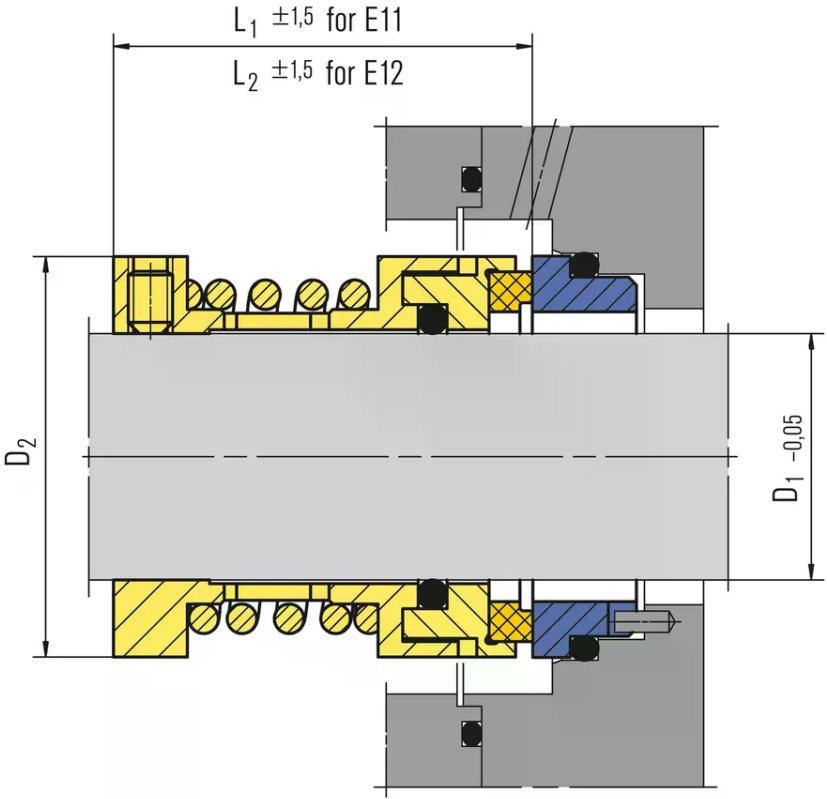
- Process industry
- Oil and gas industry
- Refining technology
- Petrochemical industry
- Chemical industry
- Pharmaceutical industry
- Power plant technology
- Pulp and paper industry
- Water and waste water technology
- Mining industry
- Building services industry
- Food and beverage industry
- Sugar industry
- Horizontal and vertical pumps, agitators, mixers

Recommended piping plans

API Plans 01, 02, 03, 11, 12, 13, 14, 21, 22, 23, 31, 32, 41, 52, 53A, 53B, 53C, 54, 55, 61, 62, 65A, 65B, 66

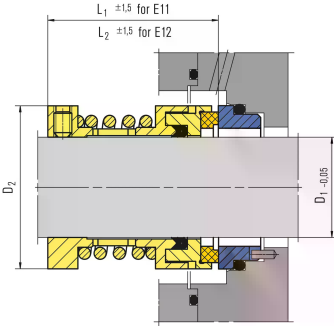
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Drawing shows
E01/E11 unbalanced seal



Product variants

E02 / E12 Variant with wedge as secondary seal.



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Dimensions

Dash size	D1	D2	L1	L2
D016	25.40	39.0	45.0	48.0
D018	28.57	42.0	47.0	49.0
D020	31.75	46.0	50.0	52.5
D022	34.93	49.0	53.0	56.0
D024	38.10	54.0	53.5	56.0
D026	41.27	59.0	53.5	56.0
D028	44.45	61.0	54.0	56.0
D030	47.62	64.0	62.0	63.5
D032	50.80	66.0	65.0	66.5
D034	53.97	69.0	67.0	69.0
D036	57.15	78.0	67.0	69.0
D038	60.32	80.0	70.0	72.0
D040	63.50	83.0	70.5	72.0
D042	66.67	86.0	74.0	75.5
D044	69.85	90.0	74.0	75.0
D046	73.02	93.0	79.0	80.5
D048	76.20	99.0	85.5	84.5
D050	79.37	104.0	86.5	82.0
D052	82.55	103.0	86.5	86.0
D054	85.72	109.0	86.5	86.0
D056	88.90	114.0	86.0	86.0
D058	92.07	114.0	91.0	90.5
D060	95.25	119.0	91.0	90.5
D062	98.42	122.0	91.0	90.5
D064	101.6	126.0	98.0	97.5

Imperial size

Seal size	D1	D2	L1	L2
0025	25.0	39.0	45.0	48.0
0028	28.0	42.0	47.0	49.0
0030	30.0	44.0	47.0	49.0
0032	32.0	46.0	50.0	52.5
0033	33.0	47.0	50.0	52.5
0035	35.0	49.0	53.5	56.0
0038	38.0	54.0	53.5	56.0
0040	40.0	56.0	53.5	56.0
0043	43.0	59.0	53.5	56.0
0045	45.0	61.0	54.0	56.0
0048	48.0	64.0	62.0	63.0
0050	50.0	66.0	65.0	66.5
0053	53.0	69.0	67.0	69.0
0055	55.0	71.0	67.0	69.0
0058	58.0	78.0	67.0	69.0
0060	60.0	80.0	70.0	72.0
0063	63.0	83.0	70.5	72.0
0065	65.0	85.0	70.5	72.0
0068	68.0	88.0	70.5	72.0

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Seal size	D1	D2	L1	L2
0070	70.0	90.0	74.0	75.0
0075	75.0	99.0	85.5	84.5
0080	80.0	104.0	86.5	82.0
0085	85.0	109.0	86.0	86.0
0090	90.0	114.0	86.5	86.0
0095	95.0	119.0	91.0	90.5
0100	100.0	124.0	91.0	90.5

Metric size