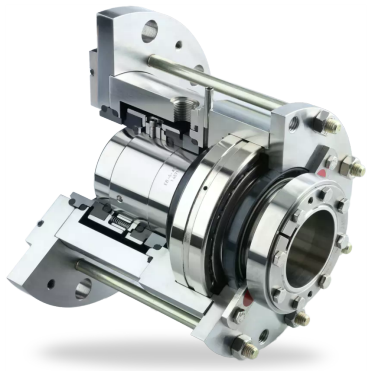
EagleBurgmann
a member of EKK and FREUDENBERG

RELY ON EXCELLENCE

M481K

Mechanical Seals | Agitator seals | Liquid lubricated seals



Features

- Liquid-lubricated double seal for top-entry drives
- Cartridge unit
- Self-closing on the product side
- For stepped and unstepped shafts
- Unbalanced
- Independent of direction of rotation
- Multiple springs rotating

Notes

Options:

- Cooling resp. heating flange
- Leakage drain
- Flush
- Polymerization barrier
- Axial expansion joint (shaft movement)
- Wiper ring (shaft movement)

Please inquire.

Advantages

- Ready-to-fit and factory-tested units
- The M481K and its variants will remain closed even during pressure variations or pressure reversal. Operation is possible with buffer fluid (p1max = 6 bar (87 PSI)) or pressurized with barrier fluid as double seal
- Available with or without bearing
- Suitable for standardizations
- Seal can be applied at higher pressure and rotating speed than specified by DIN

Operating range

Shaft diameter:
d1 = 40 ... 220 mm (1.57" .... 8.66")

Pressure:
p1 = vacuum ... 16 bar (232 PSI),

p3 = max. 18 bar (261 PSI)
Temperature:
t1 = -40 °C ... +200 (350*) °C
(-40 °F ... +392 (662*) °F)

Sliding velocity:
vg = 0 ... 5 m/s (0 ... 16 ft/s)

For applications beyond this range, please inquire.

* with cooling flange

! It should be noted that the extremal values of each operating parameter cannot be applied at the same time because of their interaction.

Materials

Seal faces: Carbon graphite or Silicon carbide, FDA conform
Seats: Silicon carbide, FDA conform
Secondary seals and metallic parts acc. to application and customers' requirement

Standards and approvals

- FDA
- ATEX
- DIN 28138 (mechanical seals for agitator shafts)
- DIN 28136 T2 (for steel vessels)
- DIN 28141 (flange connection for steel vessels)
- DIN 28154 (shaft end for steel vessels)
- Compliant to TA Luft (German Clean Air Act)

Recommended applications

- Refining technology
- Petrochemical industry
- Chemical industry
- Pharmaceutical industry
- Food and beverage industry
- Agitators
- Reactors

Recommended piping plans

Closed circuit EagleBurgmann TS system, open circuit EagleBurgmann SPA, SPN

Product links:
EagleBurgmann TS1000
EagleBurgmann TSA2
EagleBurgmann SPA
EagleBurgmann SPN manual
EagleBurgmann SPN automatic

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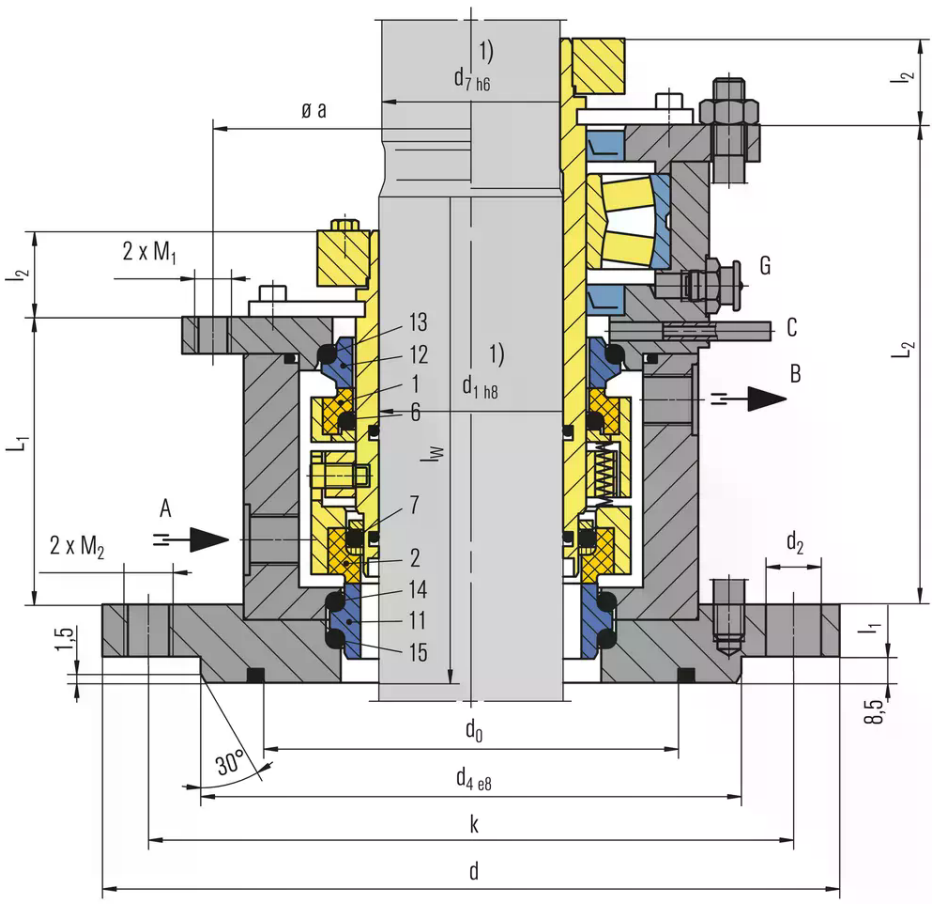
All technical specifications are based on extensive tests and our many years of experience. The diversity of possible applications means, however, that they can serve only as guide values.
We must be notified of the exact conditions of application before we can provide any guarantee for a specific case. Subject to change.



Item	Description
1	Seal face, atmosphere side
2	Seal face, product side
6, 7, 13, 14, 15	O-Ring
11	Seat, product side
12	Seat, atmosphere side

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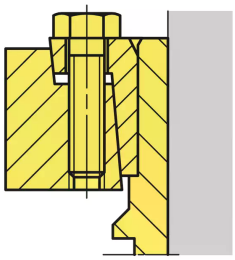
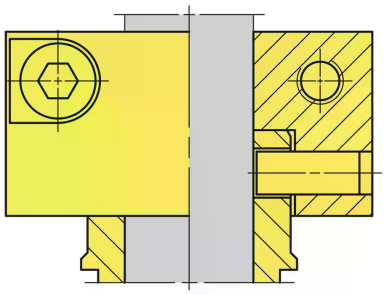
Torque transmissions

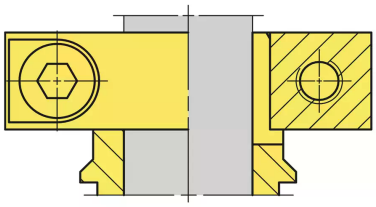
Shrink disk



Clamping ring with pin



Clamping ring



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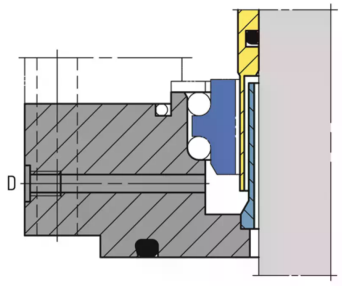
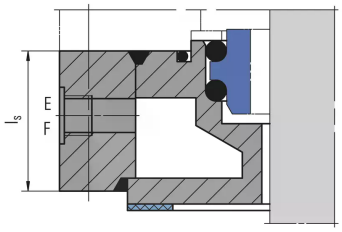
Installation, details, options

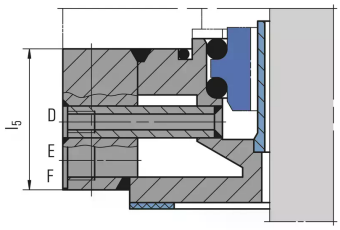


Polymerization barrier
Can be used alternatively as a leakage drain or a flush.

Cooling flange
Can be used alternatively as a heating flange.



Leakage drain with cooling flange
Can be used alternatively as a flush or as a heating flange.



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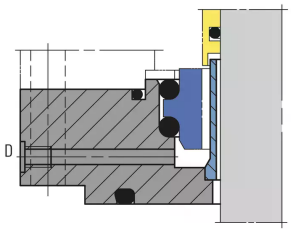
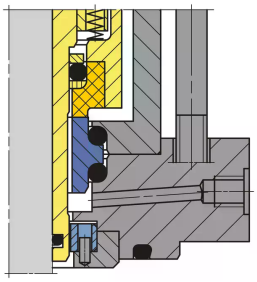
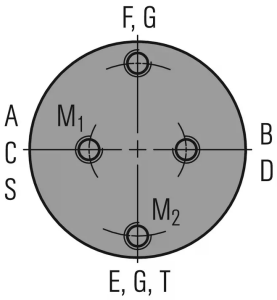
Leakage drain
Can be used alternatively as a flush.



Flush



Supply connections
Designation and position acc. to DIN 28138 T3.



A Supply liquid IN
B Supply liquid OUT
C Drainage
D Leakage drain
E Cooling IN
F Cooling OUT
G Grease
S Flush
T Temperature metering
For reasons of standardization, the supply connections of single seals are matched to those of the double seals (in deviation from DIN 28138 T3).

Product variants

M481KL
Variant with integrated floating bearing

M451K
Variant for unstepped shafts or customer-specific connection dimensions. The seal is available for any diameter. Further customer-specific adaptations are also possible.

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Dimensions

$d_1$1)	$d_7$1)	d	n x d_2	d_4	d_0	k	L_1	L_2	L_w2)	l_1	l_2	A	M_1	M_2	A, B
40	38	175	4x18	110	90	145	87	136	143	15	28	122	M12	M16	G3/8
50	48	240	8x18	176	135	210	89	149	148	17	28	157	M12	M16	G3/8
60	58	240	8x18	176	135	210	93.5	156	158	17	28	168	M12	M16	G3/8
80	78	275	8x22	204	155	240	104.5	189	168	20	34	203	M16	M20	G1/2
100	98	305	8x22	234	190	270	109	190	178	20	34	228	M16	M20	G1/2
125	120	330	8x22	260	215	295	110	205	203	20	40	268	M20	M20	G1/2
140	135	395	12x22	313	250	350	124	222	208	20	40	285	M20	M20	G1/2
160	150	395	12x22	313	265	350	127.5	219.5	213	25	40	297	M20	M20	G1/2
180	170	445	12x22	364	310	400	132.5	230	233	25	45	332	M24	M20	G1/2
200	190	445	12x22	364	310	400	137.5	237.5	243	25	45	352	M24	M20	G1/2
220	210	505	16x22	422	340	460	149.5	249.5	263	25	50	381	M24	M20	G1/2

Dimensions in millimeter 1) Shaft diameters d~1~ and d~7~ to DIN 28154 2) Shaft step to DIN 28154

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