

RELY ON EXCELLENCE

M461K

Mechanical Seals | Agitator seals | Liquid lubricated seals



Features

- Cartridge double seal for top entry drives
- For glass-lined vessels
- Liquid lubricated
- Self-closing on product side
- Unbalanced
- Independent of direction of rotation
- Multiple springs rotating

Notes

Options:

- Cooling resp. heating flange
- Leakage drain resp. flush

Advantages

- Ready-to-fit and factory-tested unit
- Available with or without bearing
- Suitable for standardizations
- Seal can be applied at higher pressure and rotating speed than specified by DIN
- The seal can be lifted off the glass-lined flange as a complete cartridge. The sensitive glass lined basic flange remains mounted on the vessel.
- ATEX certification on request

Operating range

Shaft diameter:

$d1 = 40 \dots 160 \text{ mm (1.57" } \dots 6.30\text{")}$

Pressure:

$p1 = \text{vacuum } \dots 16 \text{ bar (232 PSI)}$,

$p3 = \text{max. } 18 \text{ bar (261 PSI)}$

Temperature:

$t1 = -40 \text{ }^\circ\text{C } \dots +200 \text{ (250*) }^\circ\text{C}$

$(-40 \text{ }^\circ\text{F } \dots +392 \text{ (482*) }^\circ\text{F)}$

Sliding velocity:

$vg = 0 \dots 5 \text{ m/s (0 } \dots 16 \text{ ft/s)}$

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 T3 (for glass-lined vessels)
- DIN 28137 T2 (flange connection for glass-lined vessels)
- DIN 28159 (shaft end for glass-lined vessels)

Recommended applications

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

Recommended piping plans

Closed circuit TS system, open circuit SPA, SPN

Product links:

[EagleBurgmann TS1000](#)

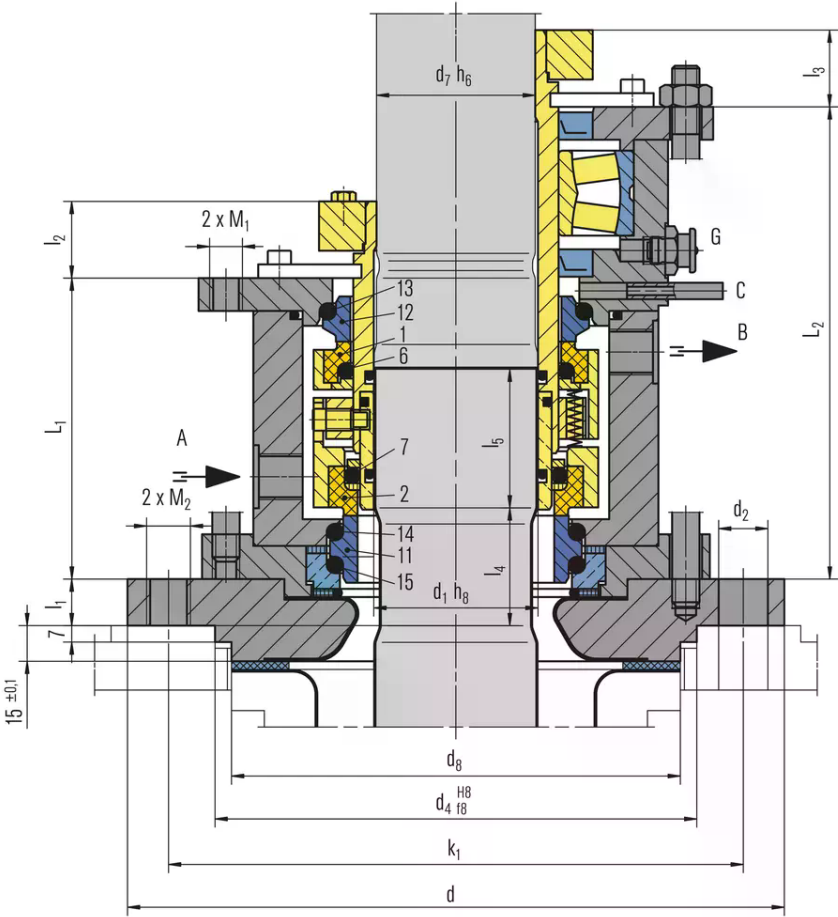
[EagleBurgmann TS2000](#)

[EagleBurgmann SPA](#)

[EagleBurgmann SPN manual](#)

[EagleBurgmann SPN automatic](#)

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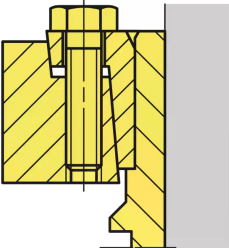


Item	Description
1	Seal face, atmosphere side
2	Seal face, product side
6, 7, 13, 14, 15	O-Ring
11	Seat, product side
12	Seat, atmosphere side

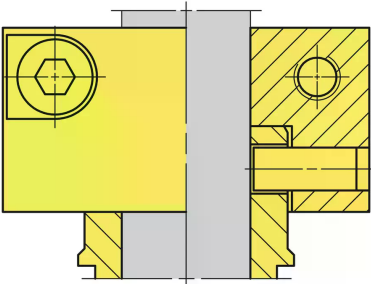
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Torque transmissions

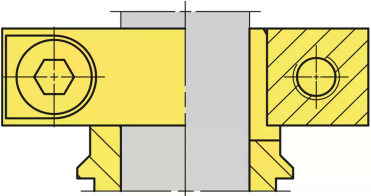
Shrink disk



Clamping ring with pin

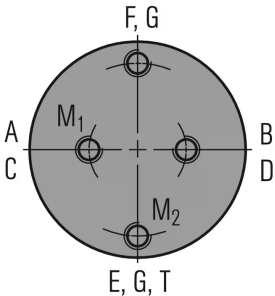


Clamping ring



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Installation, details, options

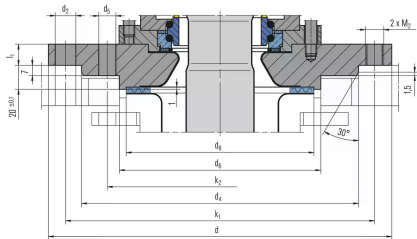


Supply connections

Designation and positions of screwed connections, pull-off and jacket threads acc. to DIN 28138 T3.

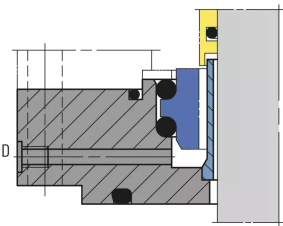
- A Liquid IN
- B Liquid OUT
- C Drainage
- D Leakage drain
- E Cooling IN
- F Cooling OUT
- G Grease
- T Temperature metering

Flange connections acc. to DIN 28137 T2 for nominal diameters 125 ... 161.



Leakage drain

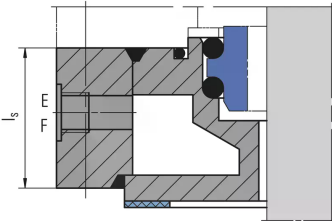
Can be used alternatively as a flush.



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Cooling flange

Can be used alternatively as a heating flange.



Product variants

M461KL-D

The variant with integrated floating bearing.

M56K(L)

Double seal without/with floating bearing
for PN 25 (Special seal on request.)

M491KL

The series for unstepped shafts (all diameters) and connection diamentions not covered by DIN.
Customized design or e.g. different drives (torque transmissions) are available.

Dimensions

d ₁)	d ₇)	Nominal size	Flange size ²⁾	d	nxd ₂	d ₄	nxd ₅	d ₆	d ₇	k ₁	k ₂	L ₁	L ₂	l ₁	l ₂	l ₃	l ₄	l ₅	M ₁	M ₂	A, B
40	38	40	E125	175	4x18	110	-	-	102	145	-	142	184	25	35	28	50	50	M12	M16	G3/8
50	48	50	E200	240	8x18	176	-	-	138	210	-	147	195	25	40	28	50	50	M12	M16	G3/8
60	58	60	E250	275	8x22	204	-	-	188	240	-	158	203	25	42	28	50	60	M12	M20	G3/8
80	78	80	E300	305	8x22	234	-	-	212	270	-	170	240	30	45	34	60	60	M16	M20	G1/2
100	98	100	E400	395	12x22	313	-	-	268	350	-	177	240	30	52	34	60	60	M16	M20	G1/2
100	98	100	E500	395	12x22	313	-	-	268	350	-	177	240	30	52	34	60	60	M16	M20	G1/2
125	120	125	E700	505	4x22	422	12x22	320	306	460	350	208	266	30	75	40	60	80	M20	M20	G1/2
140	135	140	E700	505	4x22	422	12x22	320	306	460	350	223	282	30	79	40	60	80	M20	M20	G1/2
160	150	160	E700	505	4x22	422	12x22	320	306	460	350	228	282	30	77	40	60	85	M20	M20	G1/2
160	150	160	E900	505	4x22	422	12x22	320	306	460	350	228	282	30	77	40	60	85	M20	M20	G1/2
160	150	161	E901	565	4x26	474	12x22	370	356	515	400	228	282	30	77	40	60	85	M20	M20	G1/2

Dimensions in millimeter 1) Shaft diameters d₁~ and d₇~ to DIN 28159 2) Flange size to DIN 28137 T2