EagleBurgmann
Rely on excellence

M7N



Features

- For plain shafts
- Single seal
- Unbalanced
- Super-Sinus-spring or multiple springs rotating
- Independent of direction of rotation
- Variant with PTFE secondary seals for high chemical resistance (M78N)

Advantages

- Universal application opportunities
- Efficient stock keeping due to easily interchangeable faces
- Extended selection of materials
- Insensitive to low solids contents
- Flexibility in torque transmissions
- Self cleaning effect
- Short installation length possible (G16)
- Pumping screw for media with higher viscosity (M7..F)

Operating range

Shaft diameter:
d1 = 14 ... 100 mm (0.55 " … 3.94 ")
Pressure:
p1 = 25 bar (363 PSI)
Temperature:
t = -50 °C ... +220 °C
(-58 °F ... +428 °F)
Sliding velocity:
vg = 20 m/s (66 ft/s)

Axial movement:
d1 = up to 25 mm: ±1.0 mm
d1 = 28 up to 63 mm: ±1.5 mm
d1 = from 65 mm: ±2.0 mm

Materials

Seal face: Special cast CrMo steel (S), Silicon carbide (Q1, Q2), Aluminium oxide (V)
Seat G9: Carbon graphite antimony impregnated (A), Carbon graphite resin impregnated (B), Silicon carbide (Q1*, Q2*)
Seat G4: Silicon carbide (Q1*, Q2*)
Seat G6: Silicon carbide (Q1*, Q2*)
Seat G13: Carbon graphite antimony impregnated (A), Carbon graphite resin impregnated (B)

Secondary seals: EPDM (E), NBR (P), FKM (V), FFKM (K)
Springs: CrNiMo steel (G) Metal parts: CrNiMo steel (G), Duplex (G1)

* Cannot be combined with seal face made of S

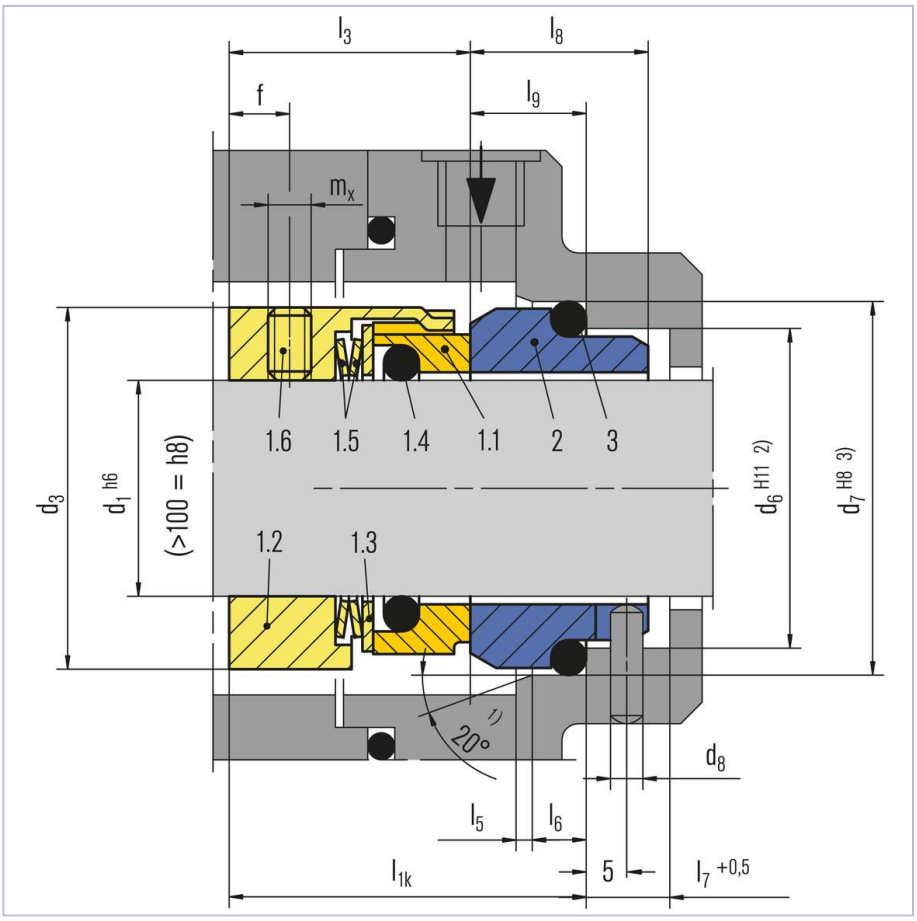
Standards and approvals

- EN 12756

Recommended applications

- Process industry
- Chemical industry
- Pulp and paper industry
- Water and waste water technology
- Shipbuilding
- Lube oils
- Low solids content media
- Water / sewage water pumps
- Chemical standard pumps
- Vertical screw pumps
- Gear wheel feed pumps
- Multistage pumps (drive side)
- Circulation of printing colors with viscosity 500 ... 15,000 mm^2/s.

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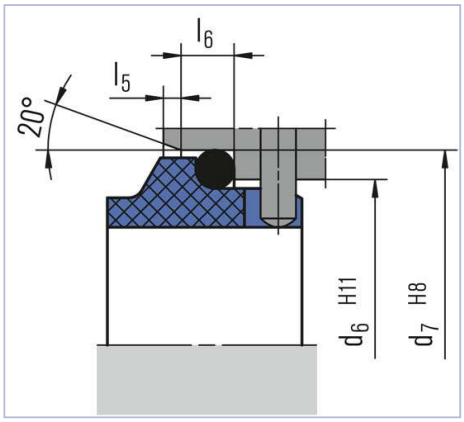


Item	Part no. to DIN 24250	Description
1.1	472	Seal face
1.2	485	Drive collar
1.3	474	Thrust ring
1.4	412.1	O-Ring
1.5	477	Spring
1.6	904	Set screw
2	475	Seat (G9)
3	412.2	O-Ring

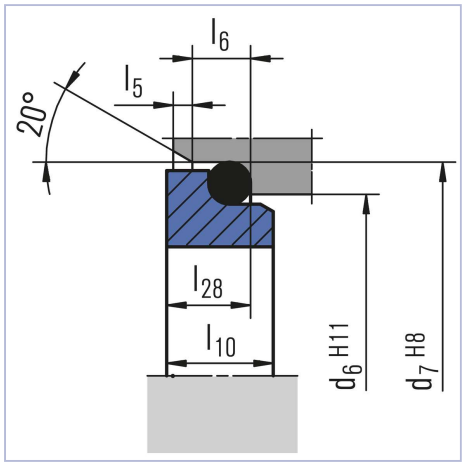
1) d1 > 100 mm: 30°
2) d1 > 100 mm: +0.1
3) d1 > 100 mm: H7

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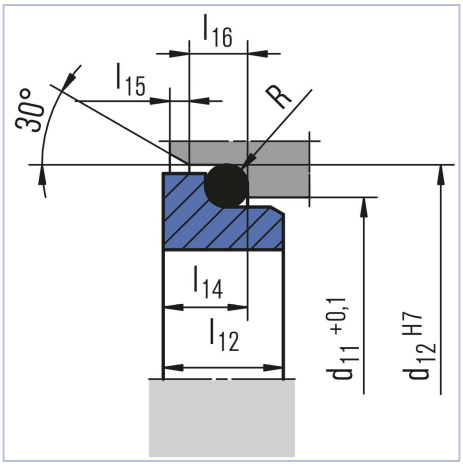
Seat alternatives



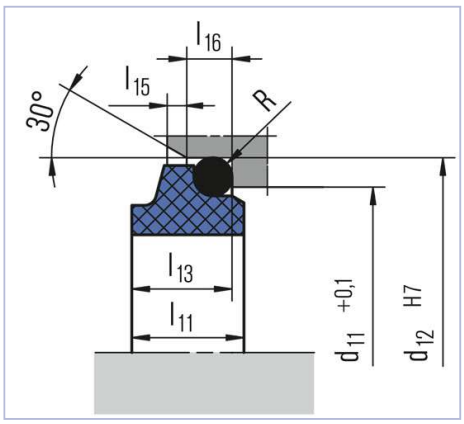
G9 (EN 12756)



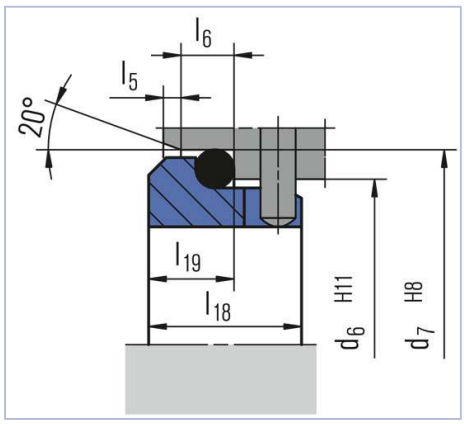
G6 (EN 12756)



G4



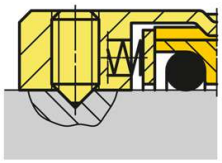
G13



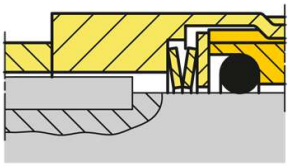
G16
(EN 12756, but l_{1k} is shorter than specified)

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Torque transmissions



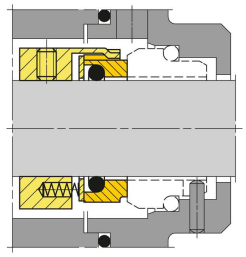
d1 > 100 mm (3.94")
Torque transmission by 4 set screws with cone points. Offset: 90°



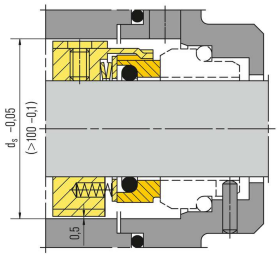
Drive key
(M7S2 / M74S2)

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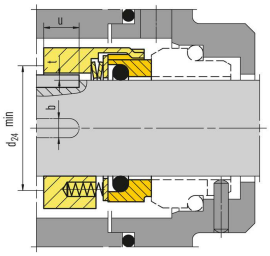
Product variants



M74
Dimensions, items and descriptions as for M7N, but with multiple springs (Item no. 1.5).
Preferably for d1 >100 mm (3.94").



M7F
Shaft diameter d1 = max. 100 mm (3.94")
Dimensions, items and descriptions as for type M7N, but with pumping screw, dependent on direction of rotation.
(Viscosity ≤ ISO VG10).



M7S2
Shaft diameter: d1 = max. 100 mm (3.94").
Dimensions, items and descriptions as for type M7N, but with drive key.
(without item no. 1.6)

M74F
Shaft diameter:
d1 = 14 ... 200 mm (0.55" ... 7.87")
Dimensions, items and descriptions as for type M7N, but with multiple springs and pumping screw, dependent on direction of rotation.
(Viscosity ≤ ISO VG10).

M74S2
Shaft diameter:
d1 = 28 … 200 mm (1.10" ... 7,87")
Dimensions, items and descriptions as for type M7N, but with multiple springs and drive key.
(without item no. 1.6)

M78N
Shaft diameter:
d1 = 18 … 100 mm (0.71" … 3.94")
Temperature: t = max. 180 °C (356 °F)

Dimensions, items and description as for M7N.
Design of the seal face especially for secondary sealing element made of PTFE (T).
Seal face: Carbon graphite antimony impregnated (A), Carbon graphite resin impregnated (B), Silicon carbide (Q1)*
Seat G9: Special cast CrMo steel (S)*, Silicon carbide (Q1)

* Cannot be combined with seal face made of silicon carbide (Q1)

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Dimensions

d_1	d_3	d_6	d_7	d_8	d_{11}	d_{12}	d_{24}	d_5	l_{1k}	l_3	l_5	l_6	l_7	l_8	l_9	l_{10}	l_{11}	l_{12}	l_{13}	l_{14}	l_{15}	l_{16}	l_{28}	b	f	m_x	$u_{max.}$	t	R
14*	25	21.0	25.0	3	20.5	24.6	16	34	35.0	25.0	1.5	4	8.5	17.5	10.0	7.5	10.0	6.5	7.6	5.6	1.2	3.8	6.6	4	6	M5	10	1.5	1.2
16*	27	23.0	27.0	3	22.0	28.0	18	36	35.0	25.0	1.5	4	8.5	17.5	10.0	7.5	11.5	8.5	9.0	7.5	1.2	3.8	6.6	4	6	M5	10	1.5	1.5
18*	33	27.0	33.0	3	24.0	30.0	20	38	37.5	26.0	2.0	5	9.0	19.5	11.5	8.5	12.5	9.0	10.0	8.0	1.5	5.0	7.5	5	7	M5	12	1.1	1.5
20*	35	29.0	35.0	3	29.5	35.0	22	40	37.5	26.0	2.0	5	9.0	19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5.0	7.5	5	7	M5	12	1.1	1.5
22*	37	31.0	37.0	3	29.5	35.0	24	42	37.5	26.0	2.0	5	9.0	19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5.0	7.5	6	7	M5	12	1.5	1.5
24*	39	33.0	39.0	3	32.0	38.0	26	44	40.0	28.5	2.0	5	9.0	19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5.0	7.5	6	8	M5	12	1.5	1.5
25*	40	34.0	40.0	3	32.0	38.0	27	45	40.0	28.5	2.0	5	9.0	19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5.0	7.5	6	8	M5	12	1.5	1.5
28*	43	37.0	43.0	3	36.0	42.0	30	47	42.5	31.0	2.0	5	9.0	19.5	11.5	8.5	14.0	10.0	11.0	9.0	1.5	5.0	7.5	6	8	M6	13	1.5	1.5
30*	45	39.0	45.0	3	39.2	45.0	32	49	42.5	31.0	2.0	5	9.0	19.5	11.5	8.5	14.0	11.5	11.0	10.5	1.5	5.0	7.5	6	8	M6	13	1.5	1.5
32*	47	42.0	48.0	3	42.2	48.0	34	51	42.5	31.0	2.0	5	9.0	19.5	11.5	8.5	14.0	11.5	11.0	10.5	1.5	5.0	7.5	6	8	M6	13	1.5	1.5
33*	48	42.0	48.0	3	44.2	50.0	35	51	42.5	31.0	2.0	5	9.0	19.5	11.5	8.5	14.5	12.0	11.5	10.5	1.5	5.0	7.5	6	8	M6	13	1.5	1.5
35*	50	44.0	50.0	3	46.2	52.0	37	54	42.5	31.0	2.0	5	9.0	19.5	11.5	8.5	14.5	12.0	11.5	11.0	1.5	5.0	7.5	6	8	M6	13	1.5	1.5
38*	55	49.0	56.0	4	49.2	55.0	40	59	45.0	31.0	2.0	6	9.0	22.0	14.0	10.0	14.5	11.3	11.5	10.3	1.5	5.0	9.0	6	8	M6	13	1.5	1.5
40*	57	51.0	58.0	4	52.2	58.0	42	61	45.0	31.0	2.0	6	9.0	22.0	14.0	10.0	14.5	11.8	11.5	10.8	1.5	5.0	9.0	6	8	M6	13	1.5	1.5
43*	60	54.0	61.0	4	53.3	62.0	45	65	45.0	31.0	2.0	6	9.0	22.0	14.0	10.0	17.0	13.2	14.3	12.0	2.0	6.0	9.0	6	8	M6	13	1.5	2.5
45*	62	56.0	63.0	4	55.3	64.0	47	66	45.0	31.0	2.0	6	9.0	22.0	14.0	10.0	17.0	12.8	14.3	11.6	2.0	6.0	9.0	6	8	M6	13	1.5	2.5
48*	65	59.0	66.0	4	59.7	68.4	50	69	45.0	31.0	2.0	6	9.0	22.0	14.0	10.0	17.0	12.8	14.3	11.6	2.0	6.0	9.0	6	8	M6	13	1.5	2.5
50*	67	62.0	70.0	4	60.8	69.3	52	71	47.5	32.5	2.5	6	9.0	23.0	15.0	10.5	17.0	12.8	14.3	11.6	2.0	6.0	9.5	6	8	M6	13	1.5	2.5
53*	70	65.0	73.0	4	63.8	72.3	55	75	47.5	32.5	2.5	6	9.0	23.0	15.0	12.0	17.0	13.5	14.3	12.3	2.0	6.0	11.0	6	8	M6	13	1.5	2.5
55*	72	67.0	75.0	4	66.5	75.4	57	76	47.5	32.5	2.5	6	9.0	23.0	15.0	12.0	18.0	14.5	15.3	13.3	2.0	6.0	11.0	6	8	M6	13	1.5	2.5
58*	79	70.0	78.0	4	69.5	78.4	60	83	52.5	37.5	2.5	6	9.0	23.0	15.0	12.0	18.0	14.5	15.3	13.3	2.0	6.0	11.0	8	9	M8	13	1.9	2.5
60*	81	72.0	80.0	4	71.5	80.4	62	85	52.5	37.5	2.5	6	9.0	23.0	15.0	12.0	18.0	14.5	15.3	13.3	2.0	6.0	11.0	8	9	M8	13	1.9	2.5
63*	84	75.0	83.0	4	74.5	83.4	65	88	52.5	37.5	2.5	6	9.0	23.0	15.0	12.0	18.0	14.2	15.3	13.3	2.0	6.0	11.0	8	9	M8	13	1.9	2.5
65*	86	77.0	85.0	4	76.5	85.4	67	95	52.5	37.5	2.5	6	9.0	23.0	15.0	12.0	18.0	14.2	15.3	13.0	2.0	6.0	11.0	8	9	M8	13	1.9	2.5
68*	89	81.0	90.0	4	82.7	91.5	70	93	52.5	34.5	2.5	7	9.0	26.0	18.0	12.5	19.0	14.9	16.0	13.7	2.0	6.0	11.3	8	9	M8	13	1.9	2.5
70*	91	83.0	92.0	4	83.0	92.0	72	95	60.0	42.0	2.5	7	9.0	26.0	18.0	12.5	18.0	14.2	15.3	13.0	2.0	6.0	11.3	8	9	M8	16	1.9	2.5
75*	99	88.0	97.0	4	90.2	99.0	77	105	60.0	42.0	2.5	7	9.0	26.0	18.0	12.5	18.0	15.2	15.3	14.0	2.0	6.0	11.3	8	10	M8	16	1.9	2.5
80*	104	95.0	105.0	4	95.2	104.0	82	109	60.0	41.8	3.0	7	9.0	26.2	18.2	13.0	19.0	16.2	16.3	15.0	2.0	6.0	12.0	8	10	M8	16	1.9	2.5
85*	109	100.0	110.0	4	100.2	109.0	87	114	60.0	41.8	3.0	7	9.0	26.2	18.2	15.0	19.0	16.0	16.3	14.8	2.0	6.0	14.0	8	10	M8	16	1.9	2.5
90*	114	105.0	115.0	4	105.2	114.0	92	119	65.0	46.8	3.0	7	9.0	26.2	18.2	15.0	19.0	16.0	16.3	14.8	2.0	6.0	14.0	10	10	M8	20	2.3	2.5
95*	119	110.0	120.0	4	111.6	120.3	97	124	65.0	47.8	3.0	7	9.0	25.2	17.2	15.0	20.0	17.0	17.3	15.8	2.0	6.0	14.0	10	10	M8	20	2.3	2.5
100*	124	115.0	125.0	4	114.5	123.3	102	129	65.0	47.8	3.0	7	9.0	25.2	17.2	15.0	20.0	17.0	17.3	15.8	2.0	6.0	14.0	10	10	M8	20	2.3	2.5
105	138	122.2	134.3	5	–	–	108	143	67.0	47.0	2.0	10	12.0	30.0	20.0	–	–	–	–	–	–	–	–	10	10	M8	20	2.3	-
110	143	128.2	140.3	5	–	–	113	148	67.0	47.0	2.0	10	12.0	30.0	20.0	–	–	–	–	–	–	–	–	10	10	M8	20	2.3	-
115	148	136.2	148.3	5	–	–	118	153	67.0	47.0	2.0	10	12.0	30.0	20.0	–	–	–	–	–	–	–	–	10	10	M8	20	2.3	-
120	153	138.2	150.3	5	–	–	123	158	67.0	47.0	2.0	10	12.0	30.0	20.0	–	–	–	–	–	–	–	–	10	10	M8	20	2.3	-
125	158	142.2	154.3	5	–	–	128	163	67.0	47.0	2.0	10	12.0	30.0	20.0	–	–	–	–	–	–	–	–	10	10	M8	20	2.3	-
130	163	146.2	158.3	5	–	–	133	168	67.0	47.0	2.0	10	12.0	30.0	20.0	–	–	–	–	–	–	–	–	10	10	M8	20	2.3	-
135	168	152.2	164.3	5	–	–	138	173	67.0	47.0	2.0	10	12.0	30.0	20.0	–	–	–	–	–	–	–	–	10	10	M8	20	2.3	-
140	173	156.2	168.3	5	–	–	143	178	67.0	47.0	2.0	10	12.0	30.0	20.0	–	–	–	–	–	–	–	–	10	10	M8	20	2.3	-
145	178	161.2	173.3	5	–	–	148	183	67.0	47.0	2.0	10	12.0	30.0	20.0	–	–	–	–	–	–	–	–	10	10	M8	20	2.3	-
150	183	168.2	180.3	5	–	–	153	188	69.0	47.0	2.0	10	12.0	32.0	22.0	–	–	–	–	–	–	–	–	10	10	M8	20	2.3	-
155	191	173.2	185.3	5	–	–	158	196	80.0	56.0	2.0	12	12.0	34.0	24.0	–	–	–	–	–	–	–	–	12	12	M8	24	2.1	-

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d_1	d_3	d_6	d_7	d_8	d_{11}	d_{12}	d_{24}	d_5	l_{1k}	l_3	l_5	l_6	l_7	l_8	l_9	l_{10}	l_{11}	l_{12}	l_{13}	l_{14}	l_{15}	l_{16}	l_{28}	b	f	m_x	$u_{max.}$	t	R
160	196	178.2	190.3	5	–	–	163	201	80.0	56.0	2.0	12	12.0	34.0	24.0	–	–	–	–	–	–	–	–	12	12	M8	24	2.1	-
165	201	183.2	195.3	5	–	–	168	206	80.0	56.0	2.0	12	12.0	34.0	24.0	–	–	–	–	–	–	–	–	12	12	M8	24	2.1	-
170	206	188.2	200.3	5	–	–	173	211	80.0	56.0	2.0	12	12.0	34.0	24.0	–	–	–	–	–	–	–	–	12	12	M8	24	2.1	-
175	211	193.2	205.3	5	–	–	178	216	80.0	56.0	2.0	12	12.0	34.0	24.0	–	–	–	–	–	–	–	–	12	12	M8	24	2.1	-
180	216	207.5	219.3	5	–	–	183	221	84.0	56.0	2.0	12	12.0	38.0	28.0	–	–	–	–	–	–	–	–	12	12	M8	24	2.1	-
185	221	212.5	224.3	5	–	–	188	226	84.0	56.0	2.0	12	12.0	38.0	28.0	–	–	–	–	–	–	–	–	12	12	M8	24	2.1	-
190	226	217.5	229.3	5	–	–	193	231	84.0	56.0	2.0	12	12.0	38.0	28.0	–	–	–	–	–	–	–	–	12	12	M8	24	2.1	-
195	231	222.5	234.3	5	–	–	198	236	84.0	56.0	2.0	12	12.0	38.0	28.0	–	–	–	–	–	–	–	–	12	12	M8	24	2.1	-
200	236	227.5	239.3	5	–	–	203	241	84.0	56.0	2.0	12	12.0	38.0	28.0	–	–	–	–	–	–	–	–	12	12	M8	24	2.1	-

Dimensions in millimeter
d_1 >200 on request
* EN 12756

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