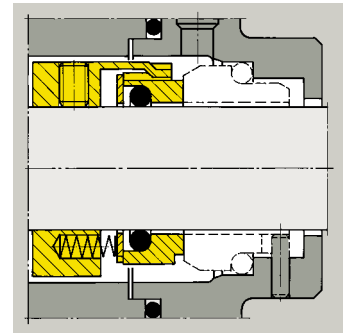
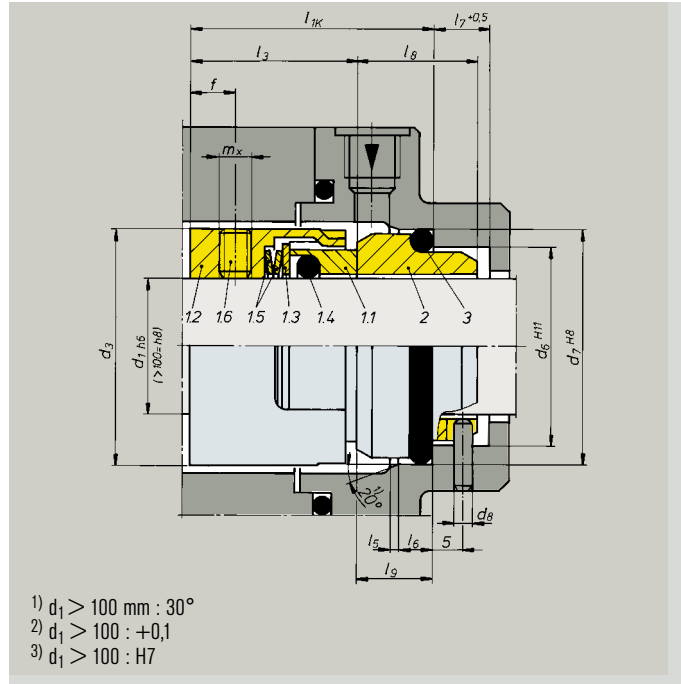


For plain shafts, spring(s) rotating

# M7N



## M74

Dimensions, item no's and descriptions as for M7N, but with **multiple springs** (Item no. 1.5). Preferably for  $d_1 > 100 \text{ mm}$ .



- **Single seal**
- **Unbalanced**
- **Independent of direction of rotation**
- **To EN 12756\***

The M7 mechanical seal range is designed for universal application and ideal suited for standardisation. The loosely inserted seal faces are easily exchanged, permitting all combinations of materials and stock rationalisation. With Super-Sinus spring (see page 139).

### Operating limits (see note on page 1)

$d_1 = 14 \dots 200 \text{ mm}$   $0.55'' \dots 8''$   
 $p_1 = 16 (25) \text{ bar}$   $230 (360) \text{ PSI}$   
 $t = -50 \dots 220 \text{ }^\circ\text{C}$   
 $-58 \text{ }^\circ\text{F} \dots 430 \text{ }^\circ\text{F}$   
 $v_g = 20 \text{ m/s}$   $66 \text{ ft/s}$

Axial movement:  
 $d_1$  up to 25 mm:  $\pm 1.0 \text{ mm}$   
 $d_1$  28 bis 63 mm:  $\pm 1.5 \text{ mm}$   
 $d_1$  ab 65 mm and above:  $\pm 2.0 \text{ mm}$

### Seal code explanation

- $d_1 = 53 \text{ mm}$
  - Seal face made of cast Cr-steel (S)
  - Type G13 stationary seat made of carbon graphite (B)
  - Viton® O-rings (V)
  - Metal parts including spring material 1.4571 (G)
  - Rotating unit M74  
 → M74/53-G13-SBVG
- The basic description M74N/53 - SBVG indicates a G9 seat, installation dimensions to EN 12756.

## M7N

( $d_1 = \text{max. } 100 \text{ mm}$ )

**Item no.** **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	Type G9 stationary seat
3	412.2	O-ring

### Combination of materials

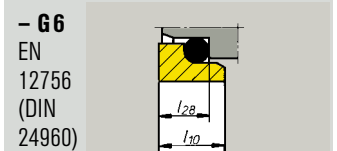
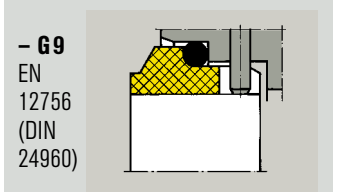
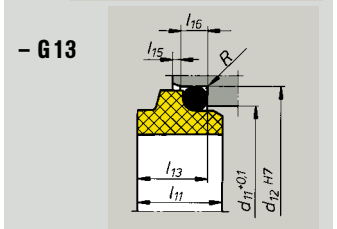
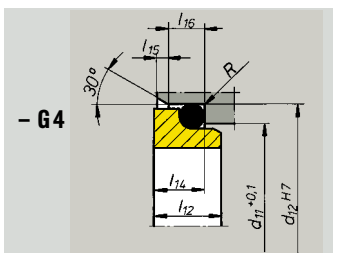
Seal faces	Stationary seats			
	G4	G13	G9	G6
	Q <sub>1</sub> (Q <sub>2</sub> )	A;B	A;B	Q <sub>1</sub> (Q <sub>2</sub> )
S	-	●	●	-
V	-	●	●	-
Q <sub>1</sub>	●	●	●	●
Q <sub>2</sub>	●	●	●	●

Only M78N:

	G9		
	S	V	Q <sub>1</sub>
B	●	●	●
A	●	●	●
Q <sub>1</sub>	-	-	●

(Designations to EN 12756, see inside the back cover of this manual)

### Stationary seats

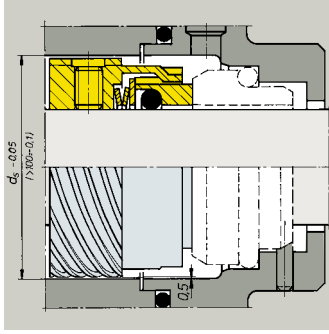


Unquoted dimensions as for item no. 2

### Torque transmission $d_1 > 100 \text{ mm}$

4 set screws with cone points (standard arrangement).





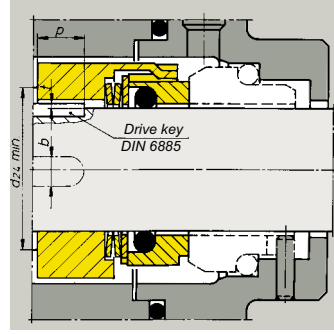
### M7F

d<sub>1</sub> max. 100 mm

### M74F

d<sub>1</sub> = 14 ... 200 mm

Dimensions, item no's and descriptions as for type M7N, but with **pumping screw**. Dependent on direction of rotation!



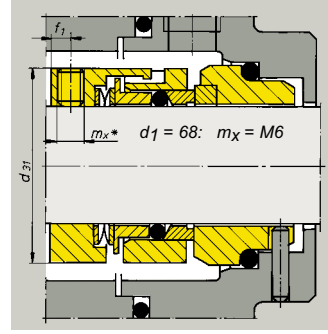
### M7 S2

d<sub>1</sub> max. 100 mm

### M74 S2

d<sub>1</sub> = 28 ... 200 mm

Dimensions, item no's and descriptions as for type M7N, but with **drive key**. (without item no. 1.6)



### M78N

d<sub>1</sub> = 18 ... 100 mm

t max. 180 °C

Items no's, description and unspecified dimensions as for M7N. Design of the rotating portion especially for secondary sealing element made of PTFE (T).



M7N

	d <sub>1</sub>	d <sub>3</sub>	d <sub>6</sub>	d <sub>7</sub>	d <sub>8</sub>	d <sub>11</sub>	d <sub>12</sub>	d <sub>24</sub>	d <sub>31</sub>	d <sub>s</sub>	l <sub>1K</sub>	l <sub>3</sub>	l <sub>5</sub>	l <sub>6</sub>	l <sub>7</sub>	l <sub>8</sub>	l <sub>9</sub>	l <sub>10</sub>	l <sub>11</sub>	l <sub>12</sub>	l <sub>13</sub>	l <sub>14</sub>	l <sub>15</sub>	l <sub>16</sub>	l <sub>28</sub>	b	f	f <sub>1</sub>	m <sub>x</sub>	P <sub>max.</sub>	t	
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		
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	12.5	9.0	10.0	8.0	1.5	5.0	7.5	5	7	3.5	M5	10	1.1
18*	33	27.0	33.0	3	24.0	30.0	20	32	38	37.5	26.0	2.0	5	9.0	19.5	11.5	8.5	12.5	9.0	11.5	8.5	9.5	7.5	1.5	5.0	7.5	5	7	3.5	M5	10	1.1
20*	35	29.0	35.0	3	29.5	35.0	22	34	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	6	7	3.5	M5	10	1.1		
22*	37	31.0	37.0	3	29.5	35.0	24	36	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	3.5	M5	10	1.5		
24*	39	33.0	39.0	3	32.0	38.0	26	38	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	3.5	M5	13	1.5		
25*	40	34.0	40.0	3	32.0	38.0	27	39	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	3.5	M5	13	1.5		
28*	43	37.0	43.0	3	36.0	42.0	30	42	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	4.0	M6	13	1.5		
30*	45	39.0	45.0	3	39.2	45.0	32	44	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	4.0	M6	13	1.5		
32*	47	42.0	48.0	3	42.2	48.0	34	46	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	4.0	M6	13	1.5		
33*	48	42.0	48.0	3	44.2	50.0	35	47	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	4.0	M6	13	1.5		
35*	50	44.0	50.0	3	46.2	52.0	37	49	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	4.0	M6	13	1.5		
38*	55	49.0	56.0	4	49.2	55.0	40	54	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	4.0	M6	13	1.5		
40*	57	51.0	58.0	4	52.2	58.0	42	56	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	4.0	M6	13	1.5		
43*	60	54.0	61.0	4	53.3	62.0	45	59	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	4.0	M6	13	1.5		
45*	62	56.0	63.0	4	55.3	64.0	47	61	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	4.0	M6	13	1.5		
48*	65	59.0	66.0	4	59.7	68.4	50	64	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	4.0	M6	13	1.5		
50*	67	62.0	70.0	4	60.8	69.3	52	66	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	4.5	M6	13	1.5		
53*	70	65.0	73.0	4	63.8	72.3	55	69	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	4.5	M6	13	1.5		
55*	72	67.0	75.0	4	66.5	75.4	57	71	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	4.5	M6	13	1.5		
58*	79	70.0	78.0	4	69.5	78.4	60	78	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	5.5	M8	13	1.9		
60*	81	72.0	80.0	4	71.5	80.4	62	80	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	5.5	M8	13	1.9		
63*	84	75.0	83.0	4	74.5	83.4	65	83	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	5.5	M8	13	1.9		
65*	86	77.0	85.0	4	76.5	85.4	67	85	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	5.5	M8	13	1.9		
68*	89	81.0	90.0	4	82.7	91.5	70	88	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	4.0	M8	13	1.9		
70*	91	83.0	92.0	4	83.0	92.0	72	90	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	5.5	M8	16	1.9		
75*	99	88.0	97.0	4	90.2	99.0	77	99	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	5.5	M8	16	1.9		
80*	104	95.0	105.0	4	95.2	104.0	82	104	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	5.5	M8	16	1.9		
85*	109	100.0	110.0	4	100.2	109.0	87	109	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	5.5	M8	16	1.9		
90*	114	105.0	115.0	4	105.2	114.0	92	114	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	8.0	M8	22	2.3		
95*	119	110.0	120.0	4	111.6	120.3	97	119	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	8.0	M8	22	2.3		
100*	124	115.0	125.0	4	114.5	123.3	102	124	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	8.0	M8	22	2.3		
105	138	122.2	134.3	5	-	-	108	-	143	67.0	47.0	2.0	10	-	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	-	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	-	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	-	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	-	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	-	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	-	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	-	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	-	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	-	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	-	34.0	24.0	-	-	-	-	-	-	-	-	-	-	12	12	-	M8	24	2.1
160	196	178.2	190.3	5	-	-	163	-	201	80.0	56.0	2.0	12	-	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	-	34.0	24.0	-	-	-	-	-	-	-	-	-	-	12	12	-	M8	24	2.1
170																																