

MG9



Operating range

Shaft diameter:
d1 = 10 ... 100 mm (0.375" ... 4")
Pressure: p1 = 12 bar (174 PSI),
vacuum up to 0.5 bar (7.25 PSI),
up to 1 bar (14.5 PSI) with seat locking
Temperature:
t = -20 °C ... +140 °C (-4 °F ... +284 °F)
Sliding velocity: vg = 10 m/s (33 ft/s)
Axial movement: ±0.5 mm

Materials

Seal face: Carbon graphite antimony
impregnated (A), Carbon graphite resin
impregnated (B), Silicon carbide (Q1)
Seat: Silicon carbide (Q1, Q2), Aluminium oxide
(V)
Elastomer: NBR (P), EPDM (E), FKM (V),
HNBR (X4)
Metal parts: CrNiMo steel (G)

Standards and approvals

- EN 12756

Various material approvals available (depending
on type and material combinations).

Please inquire!

- FDA
- WRAS
- KTW
- ACS
- W270
- NSF

Notes

A modular principle comprising a bellows unit for
each shaft diameter and a correspondingly long
spring (tapered or cylindrical spring) for
individual length compensation regarding I1K,
I1N and other installation lengths.

The MG9 can also be used as a multiple seal in
tandem or in a back-to-back arrangement.

Recommended applications

- Water and waste water technology
- Pulp and paper industry
- Chemical industry
- Cooling fluids
- Media with low solids content
- Pressure oils for bio diesel fuels
- Circulating pumps
- Submersible pumps
- Multi-stage pumps (non-drive side)
- Water and waste water pumps
- Oil applications

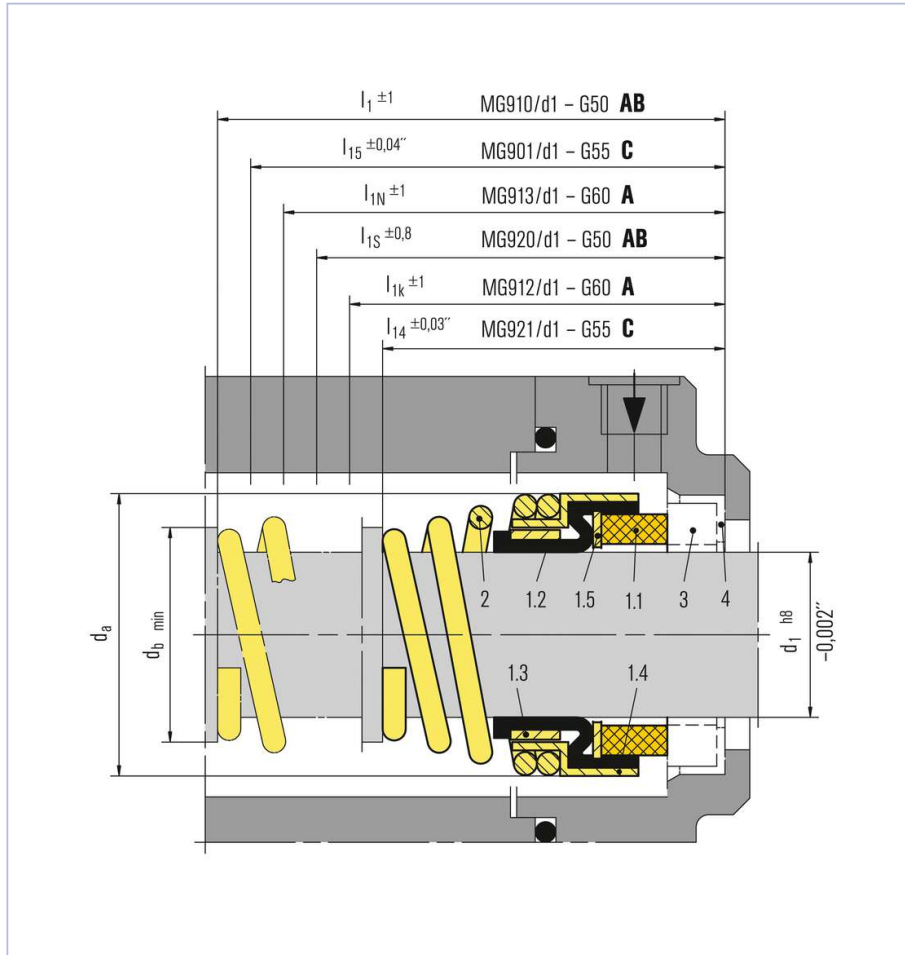
Features

- For plain shafts
- Single and dual seal
- Elastomer bellows rotating
- Unbalanced
- Independent of direction of rotation
- No torsion on bellows and spring
- Conical or cylindrical spring
- Metric and inch sizes available
- Special seat dimensions available
- US Patent No. 6.220.601

Advantages

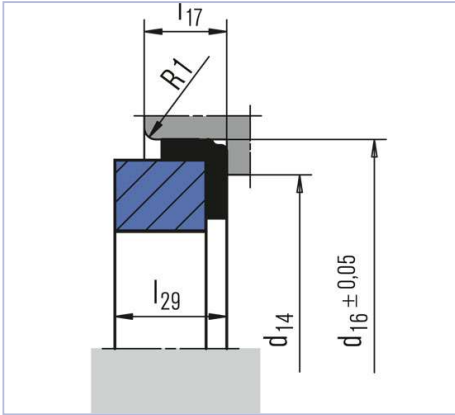
- Fits into any installation space due to
smallest outer seal diameter
- Important material approvals available
- Individual installation length can be achieved
- High flexibility due to extended selection of
materials
- Universal application (standardization)

Installation proposals can be supplied on request.
The entire MG9 series is available in metric and inch sizes.

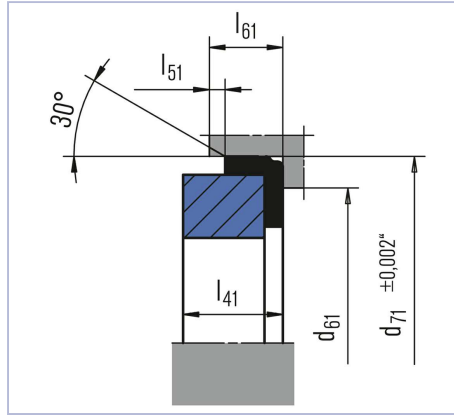


Item	Part no. to DIN 24250	Description
1.1	472	Seal face
1.2	481	Bellows
1.3	485	Driver collar
1.4	484.1	"L" ring (spring collar)
1.5	474	Washer
2	477	Spring
3	475	Seat
4	412	Rubber cup

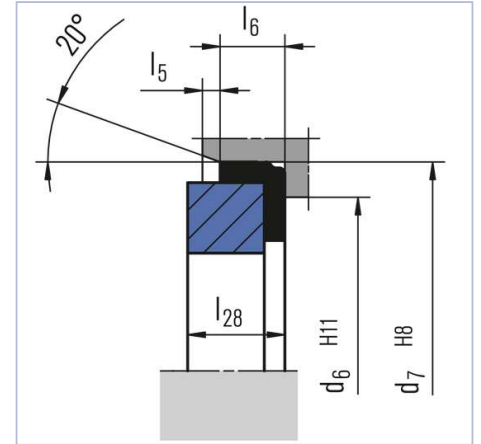
Seat alternatives



G50
Euro standard



G55
US standard



G60
EN 12756

Dimensions

EagleBurgmann*	Crane*	Sealol*	Dimensions	Table
MG910/d1-G50	1A	43 CE long	Inch/mm	B
	1A	43 CE long	mm	A
MG920/d1-G50	2	43 CE short	Inch/mm	B
	2	43 CE short	mm	A
MG901/d1-G55	1	43 CU long	Inch (USA only)	C
MG921/d1-G55	2	43 CU short	Inch (USA only)	C
	21	43 CU short	Inch (USA only)	C
MG912/d1-G60	502	43 DIN	mm	A
	521	43 DIN	mm	A
	2100-l1k	43 DIN	mm	A
MG913/d1-G60	2100-l1N		mm	A

MG9 ... the alternative * Connection dimensions identical

Dimensions

d ₁	d ₆	d ₇	d ₁₄	d ₁₆	d _a	d _b	l ₁	l _{1k}	l _{1N}	l _{1S}	l ₅	l ₆	l ₁₇	l ₂₈	l ₂₉
10	17	21	11.0	24.60	19.6	13.0	53.0	32.5	40	34.0	1.5	4	7.5	6.6	9.0
12	19	23	13.5	27.80	21.6	15.0	53.0	32.5	40	34.0	1.5	4	7.5	6.6	9.0
14	21	25	17.0	30.95	24.0	18.0	54.5	35.0	40	35.5	1.5	4	9.0	6.6	10.5
15	–	–	17.0	30.95	25.0	19.0	54.5	–	–	35.5	–	–	9.0	–	10.5
16	23	27	17.0	30.95	26.5	20.0	54.5	35.0	40	35.5	1.5	4	9.0	6.6	10.5
18	27	33	20.0	34.15	29.0	22.0	54.5	37.5	45	35.5	2.0	5	9.0	7.5	10.5
20	29	35	21.5	35.70	31.5	24.5	54.5	37.5	45	35.5	2.0	5	9.0	7.5	10.5
22	31	37	23.0	37.30	33.0	27.0	54.5	37.5	45	35.5	2.0	5	9.0	7.5	10.5
24	33	39	26.5	40.50	37.0	29.0	54.5	40.0	50	35.5	2.0	5	9.0	7.5	10.5
25	34	40	26.5	40.50	38.0	30.0	54.5	40.0	50	35.5	2.0	5	9.0	7.5	10.5
28	37	43	29.5	47.65	41.0	34.0	72.0	42.5	50	45.0	2.0	5	10.5	7.5	12.0
30	39	45	32.5	50.80	43.0	36.0	72.0	42.5	50	45.0	2.0	5	10.5	7.5	12.0
32	42	48	32.5	50.80	45.0	38.0	72.0	42.5	55	45.0	2.0	5	10.5	7.5	12.0
33	42	48	36.5	54.00	46.0	39.0	72.0	42.5	55	45.0	2.0	5	10.5	7.5	12.0
35	44	50	36.5	54.00	48.0	41.0	72.0	42.5	55	45.0	2.0	5	10.5	7.5	12.0
38	49	56	39.5	57.15	52.5	44.5	72.0	45.0	55	45.0	2.0	6	10.5	9.0	12.0
40	51	58	42.5	60.35	55.5	47.5	72.0	45.0	55	45.0	2.0	6	10.5	9.0	12.0
43	54	61	46.0	63.50	58.5	50.5	83.0	45.0	60	53.0	2.0	6	10.5	9.0	12.0
45	56	63	46.0	63.50	60.5	52.5	83.0	45.0	60	53.0	2.0	6	10.5	9.0	12.0
48	59	66	49.0	66.70	64.0	56.0	83.0	45.0	60	53.0	2.0	6	10.5	9.0	12.0
50	62	70	52.0	69.85	66.0	58.0	84.5	47.5	60	54.5	2.5	6	12.0	9.5	13.5
53	65	73	55.5	73.05	69.0	61.0	84.5	47.5	70	54.5	2.5	6	12.0	11.0	13.5
55	67	75	58.5	76.20	71.0	63.0	84.5	47.5	70	54.5	2.5	6	12.0	11.0	13.5
58	70	78	61.5	79.40	76.0	66.0	84.5	52.5	70	54.5	2.5	6	12.0	11.0	13.5
60	72	80	61.5	79.40	78.0	68.0	84.5	52.5	70	54.5	2.5	6	12.0	11.0	13.5
63	75	83	65.0	82.55	82.0	71.5	84.5	52.5	70	54.5	2.5	6	12.0	11.0	13.5
65	77	85	68.0	92.10	84.0	73.5	86.0	52.5	80	65.0	2.5	6	14.5	11.0	16.0
68	81	90	71.0	95.25	87.0	76.5	86.0	52.5	80	65.0	2.5	7	14.5	11.3	16.0
70	83	92	71.0	95.25	89.0	79.0	86.0	60.0	80	65.0	2.5	7	14.5	11.3	16.0
75	88	97	77.5	101.60	95.0	85.0	89.0	60.0	80	68.0	2.5	7	14.5	11.3	16.0
80	95	105	84.0	114.30	101.5	91.5	99.0	60.0	90	76.0	3.0	7	18.5	12.0	20.0
85	100	110	87.0	117.50	107.0	97.0	99.0	60.0	90	76.0	3.0	7	18.5	14.0	20.0
90	105	115	93.5	123.85	111.5	103.0	103.0	65.0	90	79.0	3.0	7	18.5	14.0	20.0
95	110	120	96.5	127.00	117.5	108.0	103.0	65.0	90	79.0	3.0	7	18.5	14.0	20.0
100	115	125	103.0	133.35	122.5	114.0	106.0	65.0	90	82.0	3.0	7	18.5	14.0	20.0

Table A - Dimensions in Millimeter

Dimensions

	d ₁	d ₁	d ₁₄	d ₁₆	d _a	d _b	l ₁	l _{1S}	l ₁₇	l ₂₉
0.375"	9.53	11.0	24.60	18.8	12.5	53.0	34.0	7.5	9.0	
0.500"	12.70	13.5	27.80	22.3	16.0	53.0	34.0	7.5	9.0	
0.625"	15.88	17.0	30.95	26.5	20.0	54.5	35.5	9.0	10.5	
0.750"	19.05	20.0	34.15	29.5	23.0	54.5	35.5	9.0	10.5	
0.875"	22.23	23.0	37.30	33.0	27.0	54.5	35.5	9.0	10.5	
1.000"	25.40	26.5	40.50	38.0	30.5	54.5	35.5	9.0	10.5	
1.125"	28.58	29.5	47.65	41.5	34.5	72.0	45.0	10.5	12.0	
1.250"	31.75	32.5	50.80	45.0	38.0	72.0	45.0	10.5	12.0	
1.375"	34.93	36.5	54.00	48.0	41.0	72.0	45.0	10.5	12.0	
1.500"	38.10	39.5	57.15	52.5	44.5	72.0	45.0	10.5	12.0	
1.625"	41.28	42.5	60.35	57.0	48.5	72.0	45.0	10.5	12.0	
1.750"	44.45	46.0	63.50	60.5	51.5	83.0	53.0	10.5	12.0	
1.875"	47.63	49.0	66.70	64.0	55.0	83.0	53.0	10.5	12.0	
2.000"	50.80	52.0	69.85	66.0	58.0	84.5	54.5	12.0	13.5	
2.125"	53.98	55.5	73.05	71.0	61.5	84.5	54.5	12.0	13.5	
2.250"	57.15	58.5	76.20	76.5	65.0	84.5	54.5	12.0	13.5	
2.375"	60.33	61.5	79.40	78.5	68.5	84.5	54.5	12.0	13.5	
2.500"	63.50	65.0	82.55	82.0	72.0	84.5	54.5	12.0	13.5	
2.625"	66.68	68.0	92.10	84.0	75.0	86.0	65.0	14.5	16.0	
2.750"	69.85	71.0	95.25	89.0	79.0	86.0	65.0	14.5	16.0	
2.875"	73.03	74.5	98.45	92.5	82.0	89.0	68.0	14.5	16.0	
3.000"	76.20	77.5	101.60	95.5	85.5	89.0	68.0	14.5	16.0	
3.125"	79.38	80.5	111.15	101.5	91.0	99.0	76.0	18.5	20.0	
3.250"	82.55	84.0	114.30	104.7	94.0	99.0	76.0	18.5	20.0	
3.375"	85.73	87.0	117.50	107.0	98.0	99.0	76.0	18.5	20.0	
3.500"	88.90	90.5	120.65	111.5	100.0	99.0	76.0	18.5	20.0	
3.625"	92.08	93.5	123.85	114.5	104.0	103.0	79.0	18.5	20.0	
3.750"	95.25	96.5	127.00	118.0	108.0	103.0	79.0	18.5	20.0	
3.875"	98.43	100.0	130.20	121.0	112.0	106.0	82.0	18.5	20.0	
4.000"	101.60	103.0	133.35	125.0	116.0	106.0	82.0	18.5	20.0	

Table B - Dimensions in inch / millimeter

Dimensions

d ₁	d ₆₁	d ₇₁	d _a	d _b	l ₁₄	l ₁₅	l ₄₁	l ₅₁	l ₆₁
0.375	0.625	0.875	0.740	0.492	1.125	1.500	0.313	0.050	0.250
0.500	0.750	1.000	0.878	0.630	1.125	1.500	0.313	0.050	0.250
0.625	0.937	1.250	1.043	0.787	1.281	1.718	0.406	0.050	0.344
0.750	1.062	1.375	1.161	0.905	1.281	1.718	0.406	0.050	0.344
0.875	1.187	1.500	1.299	1.063	1.343	1.781	0.406	0.050	0.344
1.000	1.312	1.625	1.496	1.200	1.437	2.000	0.437	0.050	0.375
1.125	1.437	1.750	1.634	1.358	1.500	2.062	0.437	0.050	0.375
1.250	1.563	1.875	1.772	1.496	1.500	2.062	0.437	0.050	0.375
1.375	1.687	2.000	1.890	1.614	1.562	2.124	0.437	0.050	0.375
1.500	1.813	2.125	2.067	1.752	1.562	2.124	0.437	0.050	0.375
1.625	2.000	2.375	2.244	1.909	1.875	2.500	0.500	0.050	0.437
1.750	2.125	2.500	2.382	2.028	1.875	2.500	0.500	0.050	0.437
1.875	2.250	2.625	2.520	2.165	2.000	2.625	0.500	0.050	0.437
2.000	2.375	2.750	2.598	2.283	2.000	2.625	0.500	0.050	0.437
2.125	2.375	3.000	2.795	2.421	2.249	2.937	0.562	0.050	0.500
2.250	2.437	3.125	2.992	2.559	2.249	2.937	0.562	0.050	0.500
2.375	2.563	3.250	3.071	2.697	2.375	3.062	0.562	0.050	0.500
2.500	2.687	3.375	3.228	2.834	2.375	3.062	0.562	0.050	0.500
2.625	2.812	3.375	3.307	2.953	2.562	3.375	0.625	0.100	0.562
2.750	2.937	3.500	3.504	3.110	2.562	3.375	0.625	0.100	0.562
2.875	3.062	3.750	3.642	3.228	2.687	3.500	0.625	0.100	0.562
3.000	3.187	3.875	3.760	3.366	2.687	3.500	0.625	0.100	0.562
3.125	3.312	4.000	4.000	3.583	2.968	3.906	0.781	0.100	0.656
3.250	3.437	4.125	4.122	3.700	2.968	3.906	0.781	0.100	0.656
3.375	3.562	4.250	4.213	3.858	2.968	3.906	0.781	0.100	0.656
3.500	3.687	4.375	4.390	3.937	2.968	3.906	0.781	0.100	0.656
3.625	3.812	4.500	4.508	4.095	3.093	4.031	0.781	0.100	0.656
3.750	3.937	4.625	4.646	4.252	3.093	4.031	0.781	0.100	0.656
3.875	4.062	4.750	4.764	4.409	3.218	4.156	0.781	0.100	0.656
4.000	4.187	4.875	4.921	4.567	3.218	4.156	0.781	0.100	0.656

Table C - Dimensions in inch