Meccanotecnica
Umbra / Turkey

a Story of Excellence

SEALING SOLUTIONS CATALOGUE

MEGASEAL®

CITY LINE
world wide seals

CARRARA®
GLOBAL SEALING SOLUTIONS

MEGASEAL®

Meccanotecnica
Umbra / Turkey

GUIDING
ON THE ROAD
TO INNOVATION.

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STATIONARY PARTS COMPARISON TABLE

TABLE OF STATIONARY PARTS			
MEGASEAL	UNIVERSAL	MEGASEAL	UNIVERSAL
US1	G-60	US9	G-9 CARBON
US2	G-50	US10	G-13
US3	G-4	US11	G-46
US5	G-6	US12	G-16
US7	G-9 (ONE-PIECE SIC)	DE3	G-45
US8	G-9 (SHIRINK-FIT SIC)		

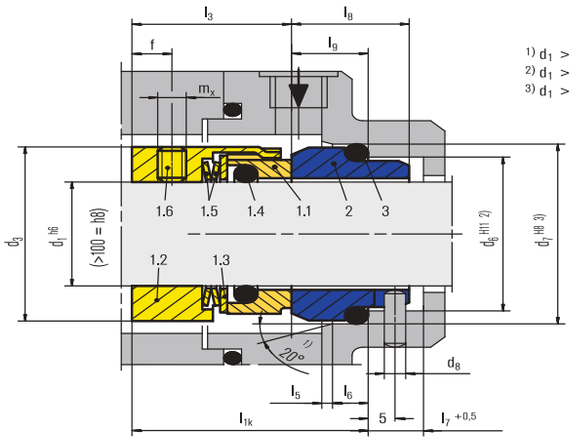
Table of Materials DIN 24960									
Primary Rings		Mating Rings		Secondary seals		Springs		Metal parts	
Sintered silicon carbide	Q	Ceramic	V1	NBR	P	Stainless 304	F1	Stainless 304	F1
Reaction bonded silicon carbide	Q1	Sintered silicon carbide	Q	Viton	V	Stainless 316	G	Stainless 316	G
Tungsten carbide	U	Reaction bonded silicon carbide	Q1	Food Compliant Viton	V3	Hastelloy	M	Hastelloy	M
Phenolic graphite	B	Tungsten carbide	U	EPDM	E	Stainless Steel	F	Stainless Steel	F
Carbon - double resin impreg	B1	Carbon - double resin impreg	B1	PTFE	T				
Carbon - Furan resin impreg	B2	Carbon - Furan resin impreg	B2	Aflas	K				
Carbon - Antimony impreg	A	Carbon - Antimony impreg	A	Kalrez	X				
Graphite filled silicon carbide	Q4	Graphite filled silicon carbide	Q4	Fep	M				

Example

Q1	B1	V	M	F1
Primary Rings	Mating Rings	Secondary seals	Springs	Metal parts
Reaction bonded silicon carbide	Carbon - double resin impreg	Viton	Hastelloy	Stainless 304

MEGASEAL®

MS - 7 / MS - 7 N



Product Description

- 1,1-Seal face
- 1,2-Drive collar
- 1,3-Thrust Ring
- 1,4-O-Ring
- 1,5-Wave Spring
- 1,6-Set Screw
- 3-O-Ring

Technical Features

- Single Seal
- Unbalanced
- Independent of rotation direction

Operating Range

- d1 = 14 - 200 mm
- p1 = 16 (25) bar
- t = -50 / 220 ˚C
- Vg = 20 m/sn

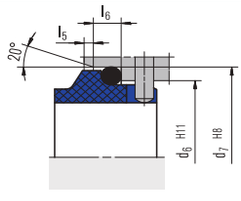
Material

- Rotary seal faces: Chrome Nickel Silicon carbide, Tungsten Carbide
- Stationary seal faces: Silicon carbide, Carbon,Tungsten Carbide, Chrome Nickel
- Elastomers : Viton (FKM), EPDM, Nitril (NBR) Silicon

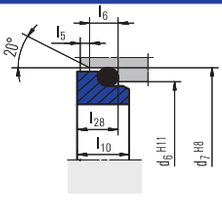
Stationary Seat Alternatives

- G-13 G-9 G-6 G-4 G-60

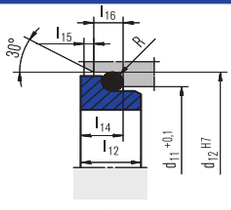
Seat alternatives



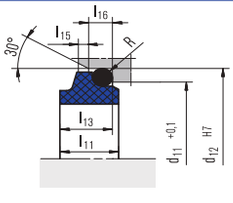
G9 (EN 12756)



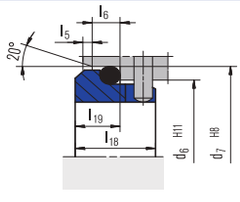
G6 (EN 12756)



G4



G13

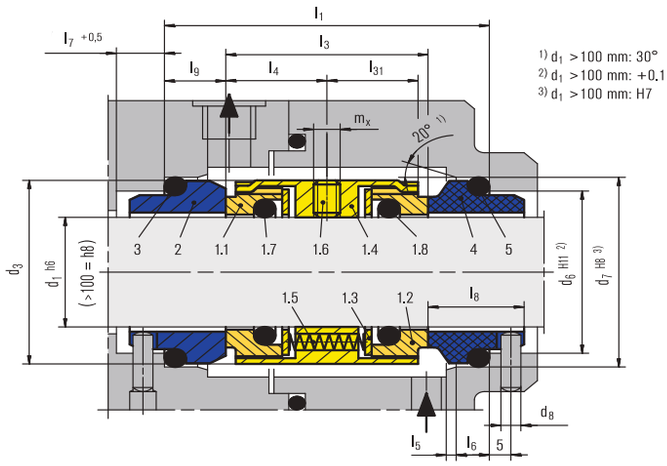


G16 (EN 12756, but l_{1k} is shorter than specified)

Dimensions in mm

d1	d3	d6	d7	d8	d11	d12	d24	ds	l1k	l3	l5	l6	l7	l8	l9	l10	l11	l12	l13	l14	l15	l16	l18	l19	l28	b	f	mx	umax.	t	R
14*	25	21	25	3	20.5	24.6	16	34	35	25	1.5	4	8.5	17.5	10	7.5	10	6.5	7.6	5.6	1.2	3.8	–	–	6.6	4	6	M5	10	1.5	1.2
16*	27	23	27	3	22	28	18	36	35	25	1.5	4	8.5	17.5	10	7.5	11.5	8.5	9	7.5	1.2	3.8	–	–	6.6	4	6	M5	10	1.5	1.5
18*	33	27	33	3	24	30	20	38	37.5	26	2	5	9	19.5	11.5	8.5	12.5	9	10	8	1.5	5	15	7	7.5	5	7	M5	12	1.1	1.5
20*	35	29	35	3	29.5	35	22	40	37.5	26	2	5	9	19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5	15	7	7.5	5	7	M5	12	1.1	1.5
22*	37	31	37	3	29.5	35	24	42	37.5	26	2	5	9	19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5	15	7	7.5	6	7	M5	12	1.5	1.5
24*	39	33	39	3	32	38	26	44	40	28.5	2	5	9	19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5	15	7	7.5	6	8	M5	12	1.5	1.5
25*	40	34	40	3	32	38	27	45	40	28.5	2	5	9	19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5	15	7	7.5	6	8	M5	12	1.5	1.5
28*	43	37	43	3	36	42	30	47	42.5	31	2	5	9	19.5	11.5	8.5	14	10	11	9	1.5	5	15	7	7.5	6	8	M6	13	1.5	1.5
30*	45	39	45	3	39.2	45	32	49	42.5	31	2	5	9	19.5	11.5	8.5	14	11.5	11	10.5	1.5	5	15	7	7.5	6	8	M6	13	1.5	1.5
32*	47	42	48	3	42.2	48	34	51	42.5	31	2	5	9	19.5	11.5	8.5	14	11.5	11	10.5	1.5	5	15	7	7.5	6	8	M6	13	1.5	1.5
33*	48	42	48	3	44.2	50	35	51	42.5	31	2	5	9	19.5	11.5	8.5	14.5	12	11.5	10.5	1.5	5	15	7	7.5	6	8	M6	13	1.5	1.5
35*	50	44	50	3	46.2	52	37	54	42.5	31	2	5	9	19.5	11.5	8.5	14.5	12	11.5	11	1.5	5	15	7	7.5	6	8	M6	13	1.5	1.5
38*	55	49	56	4	49.2	55	40	59	45	31	2	6	9	22	14	10	14.5	11.3	11.5	10.3	1.5	5	16	8	9	6	8	M6	13	1.5	1.5
40*	57	51	58	4	52.2	58	42	61	45	31	2	6	9	22	14	10	14.5	11.8	11.5	10.8	1.5	5	16	8	9	6	8	M6	13	1.5	1.5
43*	60	54	61	4	53.3	62	45	65	45	31	2	6	9	22	14	10	17	13.2	14.3	12	2	6	16	8	9	6	8	M6	13	1.5	2.5
45*	62	56	63	4	55.3	64	47	66	45	31	2	6	9	22	14	10	17	12.8	14.3	11.6	2	6	16	8	9	6	8	M6	13	1.5	2.5
48*	65	59	66	4	59.7	68.4	50	69	45	31	2	6	9	22	14	10	17	12.8	14.3	11.6	2	6	16	8	9	6	8	M6	13	1.5	2.5
50*	67	62	70	4	60.8	69.3	52	71	47.5	32.5	2.5	6	9	23	15	10.5	17	12.8	14.3	11.6	2	6	17	9.5	9.5	6	8	M6	13	1.5	2.5
53*	70	65	73	4	63.8	72.3	55	75	47.5	32.5	2.5	6	9	23	15	12	17	13.5	14.3	12.3	2	6	17	9.5	11	6	8	M6	13	1.5	2.5
55*	72	67	75	4	66.5	75.4	57	76	47.5	32.5	2.5	6	9	23	15	12	18	14.5	15.3	13.3	2	6	17	9.5	11	6	8	M6	13	1.5	2.5
58*	79	70	78	4	69.5	78.4	60	83	52.5	37.5	2.5	6	9	23	15	12	18	14.5	15.3	13.3	2	6	18	10.5	11	8	9	M8	13	1.9	2.5
60*	81	72	80	4	71.5	80.4	62	85	52.5	37.5	2.5	6	9	23	15	12	18	14.5	15.3	13.3	2	6	18	10.5	11	8	9	M8	13	1.9	2.5
63*	84	75	83	4	74.5	83.4	65	88	52.5	37.5	2.5	6	9	23	15	12	18	14.2	15.3	13.3	2	6	18	10.5	11	8	9	M8	13	1.9	2.5
65*	86	77	85	4	76.5	85.4	67	95	52.5	37.5	2.5	6	9	23	15	12	18	14.2	15.3	13	2	6	18	10.5	11	8	9	M8	13	1.9	2.5
68*	89	81	90	4	82.7	91.5	70	93	52.5	34.5	2.5	7	9	26	18	12.5	19	14.9	16	13.7	2	6	18.5	11	11.3	8	9	M8	13	1.9	2.5
70*	91	83	92	4	83	92	72	95	60	42	2.5	7	9	26	18	12.5	18	14.2	15.3	13	2	6	19	11.5	11.3	8	9	M8	16	1.9	2.5
75*	99	88	97	4	90.2	99	77	105	60	42	2.5	7	9	26	18	12.5	18	15.2	15.3	14	2	6	19	11.5	11.3	8	10	M8	16	1.9	2.5
80*	104	95	105	4	95.2	104	82	109	60	41.8	3	7	9	26.2	18.2	13	19	16.2	16.3	15	2	6	19	11.5	12	8	10	M8	16	1.9	2.5
85*	109	100	110	4	100.2	109	87	114	60	41.8	3	7	9	26.2	18.2	15	19	16	16.3	14.8	2	6	19	11.5	14	8	10	M8	16	1.9	2.5
90*	114	105	115	4	105.2	114	92	119	65	46.8	3	7	9	26.2	18.2	15	19	16	16.3	14.8	2	6	20.5	13	14	10	10	M8	20	2.3	2.5
95*	119	110	120	4	111.6	120.3	97	124	65	47.8	3	7	9	25.2	17.2	15	20	17	17.3	15.8	2	6	20.5	13	14	10	10	M8	20	2.3	2.5
100*	124	115	125	4	114.5	123.3	102	129	65	47.8	3	7	9	25.2	17.2	15	20	17	17.3	15.8	2	6	20.5	13	14	10	10	M8	20	2.3	2.5
105	138	122.2	134.3	5	–	–	108	143	67	47	2	10	12	30	20	–	–	–	–	–	–	–	–	–	–	10	10	M8	20	2.3	–
110	143	128.2	140.3	5	–	–	113	148	67	47	2	10	12	30	20	–	–	–	–	–	–	–	–	–	–	10	10	M8	20	2.3	–
115	148	136.2	148.3	5	–	–	118	153	67	47	2	10	12	30	20	–	–	–	–	–	–	–	–	–	–	10	10	M8	20	2.3	–
120	153	138.2	150.3	5	–	–	123	158	67	47	2	10	12	30	20	–	–	–	–	–	–	–	–	–	–	10	10	M8	20	2.3	–
125	158	142.2	154.3	5	–	–	128	163	67	47	2	10	12	30	20	–	–	–	–	–	–	–	–	–	–	10	10	M8	20	2.3	–
130	163	146.2	158.3	5	–	–	133	168	67	47	2	10	12	30	20	–	–	–	–	–	–	–	–	–	–	10	10	M8	20	2.3	–
135	168	152.2	164.3	5	–	–	138	173	67	47	2	10	12	30	20	–	–	–	–	–	–	–	–	–	–	10	10	M8	20	2.3	–
140	173	156.2	168.3	5	–	–	143	178	67	47	2	10	12	30	20	–	–	–	–	–	–	–	–	–	–	10	10	M8	20	2.3	–
145	178	161.2	173.3	5	–	–	148	183	67	47	2	10	12	30	20	–	–	–	–	–	–	–	–	–	–	10	10	M8	20	2.3	–
150	183	168.2	180.3	5	–	–	153	188	69	47	2	10	12	32	22	–	–	–	–	–	–	–	–	–	–	10	10	M8	20	2.3	–
155	191	173.2	185.3	5	–	–	158	196	80	56	2	12	12	34	24	–	–	–	–	–	–	–	–	–	–	12	12	M8	24	2.1	–
160	196	178.2	190.3	5	–	–	163	201	80	56	2	12	12	34	24	–	–	–	–	–	–	–	–	–	–	12	12	M8	24	2.1	–
165	201	183.2	195.3	5	–	–	168	206	80	56	2	12	12	34	24	–	–	–	–	–	–	–	–	–	–	12	12	M8	24	2.1	–
170	206	188.2	200.3	5	–	–	173	211	80	56	2	12	12	34	24	–	–	–	–	–	–	–	–	–	–	12	12	M8	24	2.1	–
175	211	193.2	205.3	5	–	–	178	216	80	56	2	12	12	34	24	–	–	–	–	–	–	–	–	–	–	12	12	M8	24	2.1	–
180	216	207.5	219.3	5	–	–	183	221	84	56	2	12	12	38	28	–	–	–	–	–	–	–	–	–	–	12	12	M8	24	2.1	–
185	221	212.5	224.3	5	–	–	188	226	84	56	2	12	12	38	28	–	–	–	–	–	–	–	–	–	–	12	12	M8	24	2.1	–
190	226	217.5	229.3	5	–	–	193	231	84	56	2	12	12	38	28	–	–	–	–	–	–	–	–	–	–	12	12	M8	24	2.1	–
195	231	222.5	234.3	5	–	–	198	236	84	56	2	12	12	38	28	–	–	–	–	–	–	–	–	–	–	12	12	M8	24	2.1	–
200	236	227.5	239.3	5	–	–	203	241	84	56	2	12	12	38	28	–	–	–	–	–	–	–	–	–	–	12	12	M8	24	2.1	–

* EN 12756
d_1 >200 on request



Product Description

- 1,1+1,2-Seal face
- 1,3-Drive collar
- 1,4-Housing
- 1,5-Spring
- 1,6-Set screws
- 1.7+1.8-O-Ring
- 2+4-Stationary Seat
- 3+5-O-Ring

Technical Features

- Double seal
- Unbalanced
- Independent of rotation direction

Operating Range

- d1 = 18 - 200mm
- p = 16 (25) bar
- t = -50 / 220 ˚C
- Vg = 20 m/sn

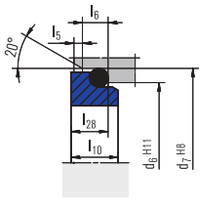
Material

- Rotary seal faces: Carbon, Silicon carbide, Tungsten Carbide, Chrome Nickel
- Stationary seal faces: Silicon carbide, Tungsten Carbide, Chrome Nickel, Ceramic
- Elastomers : Viton (FKM), EPDM, Nitril (NBR)

Stationary Seat Alternatives:

- G-9 G-13 G-4 G-6

Seat alternatives



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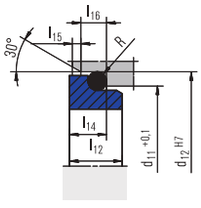
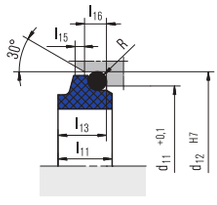


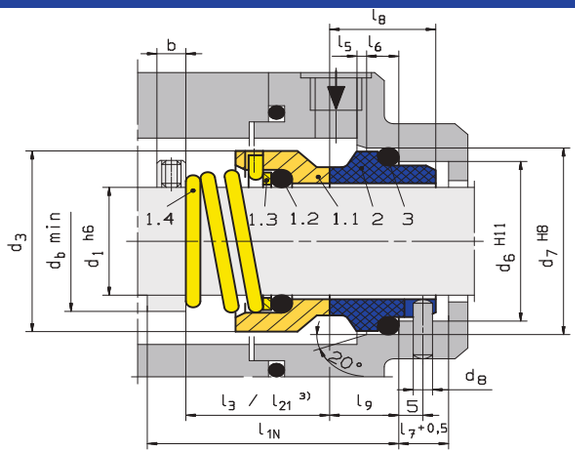
G4



G13

Dimensions in mm

d1	d3	d6	d7	d8	d9	d11	d12	ds	l1	l3	l4	l5	l6	l7	l8	l9	l10	l11	l12	l13	l14	l15	l16	l28	l31	l35	mx	t	R
18	33	27	33	3	4	24	30	–	61	38	19	2	5	9	19.5	11.5	8.5	12.5	9	10	8	1.5	5	7.5	17	15	M5	3.5	1.5
20	35	29	35	3	4	29.5	35	–	61	38	19	2	5	9	19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5	7.5	17	15	M5	3.5	1.5
22	37	31	37	3	4	29.5	35	42	61	38	19	2	5	9	19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5	7.5	17	15	M5	3.5	1.5
24	39	33	39	3	4	32	38	44	61	38	19	2	5	9	19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5	7.5	17	15	M5	3.5	1.5
25	40	34	40	3	4	32	38	45	61	38	19	2	5	9	19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5	7.5	17	15	M5	3.5	1.5
28	43	37	43	3	4	36	42	47	62	39	19.5	2	5	9	19.5	11.5	8.5	14	10	11	9	1.5	5	7.5	17.5	15	M6	3.5	1.5
30	45	39	45	3	4	39.2	45	49	62	39	19.5	2	5	9	19.5	11.5	8.5	14	11.5	11	10.5	1.5	5	7.5	17.5	15	M6	3.5	1.5
32	47	42	48	3	4	42.2	48	51	62	39	19.5	2	5	9	19.5	11.5	8.5	14	11.5	11	10.5	1.5	5	7.5	17.5	15	M6	3.5	1.5
33	48	42	48	3	4	44.2	50	51	62	39	19.5	2	5	9	19.5	11.5	8.5	14.5	12	11.5	10.5	1.5	5	7.5	17.5	15	M6	3.5	1.5
35	50	44	50	3	4	46.2	52	54	62	39	19.5	2	5	9	19.5	11.5	8.5	14.5	12	11.5	11	1.5	5	7.5	17.5	15	M6	3.5	1.5
38	55	49	56	4	4	49.2	55	59	69	41	20.5	2	6	9	22	14	10	14.5	11.3	11.5	10.3	1.5	5	9	18.5	15	M6	3.5	1.5
40	57	51	58	4	4	52.2	58	61	70	42	21	2	6	9	22	14	10	14.5	11.8	11.5	10.8	1.5	5	9	19	15	M6	3.5	1.5
43	60	54	61	4	4	53.3	62	65	70	42	21	2	6	9	22	14	10	17	13.2	14.3	12	2	6	9	19	15	M6	3.5	2.5
45	62	56	63	4	4	55.3	64	66	70	42	21	2	6	9	22	14	10	17	12.8	14.3	11.6	2	6	9	19	15	M6	3.5	2.5
48	65	59	66	4	4	59.7	68.4	69	70	42	21	2	6	9	22	14	10	17	12.8	14.3	11.6	2	6	9	19	15	M6	3.5	2.5
50	67	62	70	4	4	60.8	69.3	71	73	43	21.5	2.5	6	9	23	15	10.5	17	12.8	14.3	11.6	2	6	9.5	19.5	15	M6	3.5	2.5
53	70	65	73	4	4	63.8	72.3	75	73	43	21.5	2.5	6	9	23	15	12	17	13.5	14.3	12.3	2	6	11	19.5	15	M6	3.5	2.5
55	72	67	75	4	4	66.5	75.4	76	73	43	21.5	2.5	6	9	23	15	12	18	14.5	15.3	13.3	2	6	11	19.5	15	M8	3.5	2.5
58	79	70	78	4	5	69.5	78.4	83	86	56	28	2.5	6	9	23	15	12	18	14.5	15.3	13.3	2	6	11	23.5	19	M8	3.5	2.5
60	81	72	80	4	5	71.5	80.4	85	86	56	28	2.5	6	9	23	15	12	18	14.5	15.3	13.3	2	6	11	23.5	19	M8	3.5	2.5
63	84	75	83	4	5	74.5	83.4	88	85	55	27.5	2.5	6	9	23	15	12	18	14.2	15.3	13.3	2	6	11	24.5	19	M8	3.5	2.5
65	86	77	85	4	5	76.5	85.4	95	85	55	27.5	2.5	6	9	23	15	12	18	14.2	15.3	13	2	6	11	24.5	19	M8	3.5	2.5
68	89	81	90	4	5	82.7	91.5	93	91	55	27.5	2.5	7	9	26	18	12.5	19	14.9	16	13.7	2	6	11.3	24.5	19	M8	3.5	2.5
70	91	83	92	4	5	83	92	95	92	56	28	2.5	7	9	26	18	12.5	18	14.2	15.3	13	2	6	11.3	23.5	19	M8	3.5	2.5
75	99	88	97	4	5	90.2	99	105	92	56	28	2.5	7	9	26	18	12.5	18	15.2	15.3	14	2	6	11.3	25.5	19	M8	3.5	2.5
80	104	95	105	4	5	95.2	104	109	92.5	56	28	3	7	9	26.2	18.2	13	19	16.2	16.3	15	2	6	12	25.5	19	M8	3.5	2.5
85	109	100	110	4	5	100.2	109	114	92.5	56	28	3	7	9	26.2	18.2	15	19	16	16.3	14.8	2	6	14	25	19	M8	3.5	2.5
90	114	105	115	4	5	105.2	114	119	92.5	56	28	3	7	9	26.2	18.2	15	19	16	16.3	14.8	2	6	14	25.5	19	M8	3.5	2.5
95	119	110	120	4	5	111.6	120.3	124	90.5	56	28	3	7	9	25.2	17.2	15	20	17	17.3	15.8	2	6	14	25	19	M8	3.5	2.5
100	124	115	125	4	5	114.5	123.3	129	90.5	56	28	3	7	9	25.2	17.2	15	20	17	17.3	15.8	2	6	14	25	19	M8	3.5	2.5
105	138	122.2	134.3	5	7	–	–	143	108	68	34	2	10	–	30	20	–	–	–	–	–	–	–	–	30.5	22	M8	3.5	–
110	143	128.2	140.3	5	7	–	–	148	110	70	35	2	10	–	30	20	–	–	–	–	–	–	–	–	31.5	22	M8	3.5	–
115	148	136.2	148.3	5	7	–	–	153	110	70	35	2	10	–	30	20	–	–	–	–	–	–	–	–	31.5	22	M8	3.5	–
120	153	138.2	150.3	5	7	–	–	158	110	70	35	2	10	–	30	20	–	–	–	–	–	–	–	–	31.5	22	M8	3.5	–
125	158	142.2	154.3	5	7	–	–	163	110	70	35	2	10	–	30	20	–	–	–	–	–	–	–	–	31.5	22	M8	3.5	–
130	163	146.2	158.3	5	7	–	–	168	110	70	35	2	10	–	30	20	–	–	–	–	–	–	–	–	31.5	22	M8	3.5	–
135	168	152.2	164.3	5	7	–	–	173	110	70	35	2	10	–	30	20	–	–	–	–	–	–	–	–	31.5	22	M8	3.5	–
140	173	156.2	168.3	5	7	–	–	178	110	70	35	2	10	–	30	20	–	–	–	–	–	–	–	–	31.5	22	M8	3.5	–
145	178	161.2	173.3	5	7	–	–	183	110	70	35	2	10	–	30	20	–	–	–	–	–	–	–	–	31.5	22	M8	3.5	–
150	183	168.2	180.3	5	7	–	–	188	114	70	35	2	10	–	32	22	–	–	–	–	–	–	–	–	31.5	22	M8	3.5	–
155	191	173.2	185.3	5	7	–	–	196	127	79	39.5	2	12	–	34	24	–	–	–	–	–	–	–	–	35.5	22	M8	3.5	–
160	196	178.2	190.3	5	7	–	–	201	127	79	39.5	2	12	–	34	24	–	–	–	–	–	–	–	–	35.5	22	M8	3.5	–
165	201	183.2	195.3	5	7	–	–	206	127	79	39.5	2	12	–	34	24	–	–	–	–	–	–	–	–	35.5	22	M8	3.5	–
170	206	188.2	200.3	5	7	–	–	211	127	79	39.5	2	12	–	34	24	–	–	–	–	–	–	–	–	35.5	22	M8	3.5	–
175	211	193.2	205.3	5	7	–	–	216	127	79	39.5	2	12	–	34	24	–	–	–	–	–	–	–	–	35.5	22	M8	3.5	–
180	216	207.5	219.3	5	7	–	–	221	135	79	39.5	2	12	–	38	28	–	–	–	–	–	–	–	–	35.5	22	M8	3.5	–
185	221	212.5	224.3	5	7	–	–	226	135	79	39.5	2	12	–	38	28	–	–	–	–	–	–	–	–	35.5	22	M8	3.5	–
190	226	217.5	229.3	5	7	–	–	231	135	79	39.5	2	12	–	38	28	–	–	–	–	–	–	–	–	35.5	22	M8	3.5	–
195	231	222.5	234.3	5	7	–	–	236	135	79	39.5	2	12	–	38	28	–	–	–	–	–	–	–	–	35.5	22	M8	3.5	–
200	236	227.5	239.3	5	7	–	–	241	135	79	39.5	2	12	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–



Product Description

- 1,1-Seal face
- 1,2-O-Ring
- 1,3-Thrust Ring
- 1,4-Spring
- 2-Seat
- 3-O-Ring

Technical Features

- Single Seal
- Unbalanced
- Conical spring
  Dependent of
  rotation direction

Operating Range

- d1 = 6 - 80mm
- p = 10 bar
- t = -50 / 220 ˚C
- Vg = 10 (15) m/sn

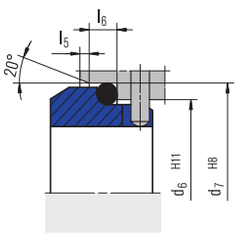
Material

- Rotary seal faces: Chrome Nickel
- Stationary seal faces: Carbon,
- Elastomers : Viton (FKM), EPDM, Nitril (NBR) Silicon

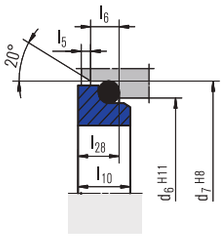
Stationary Seat Alternatives

- G-13 G-9 G-6 G-4 G-60

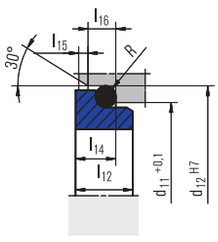
Seat alternatives



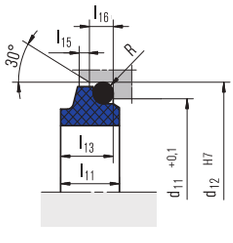
G9 (EN 12756)



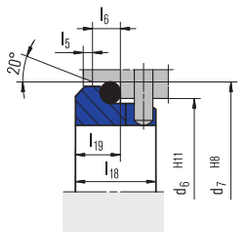
G6 (EN 12756)



G4



G13

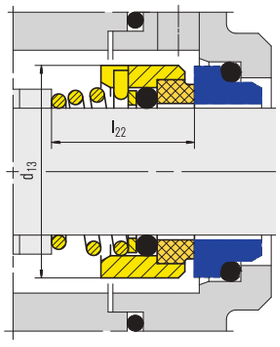


G16 (EN 12756)

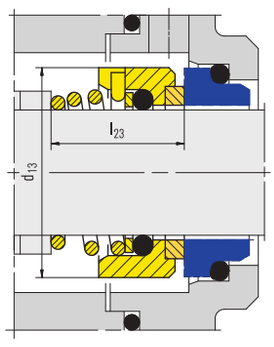
Dimensions in mm

d_1	d_3	d_6	d_7	d_8	d_{11} 1)	d_{12} 1)	d_{13}	db	l_{1N}	l_3 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_{18}	l_{19}	l_{21} 3)	l_{22}	l_{23}	l_{28}	$b^{2)}$	R
6	14	–	–	–	11.5	16	16	8	–	–	–	–	–	–	–	–	9	6.5	7.1	5.6	1.2	3.8	–	–	10.5	11.9	–	–	–	1.2
8	18	–	–	–	15.5	19.2	18	11	–	–	–	–	–	–	–	–	9	8	7.1	7	1.2	3.8	–	–	15.5	16.9	–	–	–	1.2
10*	19	17	21	3	15.5	19.2	20	13	40	15.5	1.5	4	8.5	17.5	10	7.5	9	7.5	7.1	6.6	1.2	3.8	–	–	15.5	16.9	–	6.6	(8)	1.2
12*	21	19	23	3	17.5	21.6	22	16	40	16	1.5	4	8.5	17.5	10	7.5	10	6.5	7.6	5.6	1.2	3.8	–	–	15.5	17.4	–	6.6	(8)	1.2
14*	23	21	25	3	20.5	24.6	24	18	40	16.5	1.5	4	8.5	17.5	10	7.5	10	6.5	7.6	5.6	1.2	3.8	–	–	15.5	17.4	16.5	6.6	(8)	1.2
15	24	–	–	–	20.5	24.6	25	19	–	–	–	–	–	–	–	–	11	7.5	8.6	6.6	1.2	3.8	–	–	15.5	17.4	–	–	–	1.2
16*	26	23	27	3	22	28	26	21	40	18	1.5	4	8.5	17.5	10	7.5	11.5	8.5	9	7.5	1.5	5	–	–	17.5	19.5	16.5	6.6	(8)	1.5
18*	29	27	33	3	24	30	31	23	45	19.5	2	5	9	19.5	11.5	8.5	12.5	9	10	8	1.5	5	15	7	18.5	20.5	18	7.5	(8)	1.5
20*	31	29	35	3	29.5	35	34	26	45	22	2	5	9	19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5	15	7	20	22	19	7.5	(8)	1.5
22*	33	31	37	3	29.5	35	36	28	45	21.5	2	5	9	19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5	15	7	21.5	23.5	20.5	7.5	(8)	1.5
24*	35	33	39	3	32	38	38	30	50	23.5	2	5	9	19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5	15	7	23	25	22	7.5	(8)	1.5
25*	36	34	40	3	32	38	39	31	50	26.5	2	5	9	19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5	15	7	24.5	26.5	23.5	7.5	(8)	1.5
26	37	–	–	–	34	40	40	32	–	–	–	–	9	–	–	–	13	9	10	8	1.5	5	–	–	24.5	26.5	23.5	–	–	1.5
28*	40	37	43	3	36	42	42	35	50	26.5	2	5	9	19.5	11.5	8.5	14	10	11	9	1.5	5	15	7	24.5	26.5	24.5	7.5	(8)	1.5
30*	43	39	45	3	39.2	45	44	37	50	26.5	2	5	9	19.5	11.5	8.5	14	11.5	11	10.5	1.5	5	15	7	24.5	25	24.5	7.5	(8)	1.5
32*	46	42	48	3	42.2	48	46	39	55	28.5	2	5	9	19.5	11.5	8.5	14	11.5	11	10.5	1.5	5	15	7	28	28.5	28	7.5	(8)	1.5
33*	47	42	48	3	–	–	47	40	55	28.5	2	5	9	19.5	11.5	8.5	–	12	–	–	–	–	15	7	–	–	–	7.5	(8)	1.5
35*	49	44	50	3	46.2	52	49	43	55	28.5	2	5	9	19.5	11.5	8.5	14.5	12	11.5	11	1.5	5	15	7	28	28.5	28	7.5	(8)	1.5
38*	53	49	56	4	49.2	55	54	45	55	33.5	2	6	9	22	14	10	14.5	11.3	11.5	10.3	1.5	5	16	8	31	32.2	31	9	7.5	1.5
40*	56	51	58	4	52.2	58	56	49	55	36	2	6	9	22	14	10	14.5	11.8	11.5	10.8	1.5	5	16	8	34	34.7	34	9	(8)	1.5
42	59	–	–	–	53.3	62	58	52	–	–	–	–	9	–	–	–	17	13.2	14.3	12	2	6	–	–	35	37.3	35	–	–	2.5
43*	59	54	61	4	–	–	59	52	60	38.5	2	6	9	22	14	10	–	13.2	–	–	2	–	16	8	–	–	–	9	7.5	2.5
45*	61	56	63	4	55.3	64	61	55	60	39.5	2	6	9	22	14	10	17	12.8	14.3	11.6	2	6	16	8	36.5	39.2	36.5	9	(8)	2.5
48*	64	59	66	4	59.7	68.4	64	58	60	46	2	6	9	22	14	10	17	12.8	14.3	11.6	2	6	16	8	42	44.7	42	9	(8)	2.5
50*	66	62	70	4	60.8	69.3	66	61	60	45	2.5	6	9	23	15	10.5	17	12.8	14.3	11.6	2	6	17	9.5	43	45.7	43	9.5	(8)	2.5
53*	69	65	73	4	–	–	69	64	70	47	2.5	6	9	23	15	12	–	13.5	–	–	–	–	17	9.5	–	–	–	11	8	2.5
55*	71	67	75	4	66.5	75.4	71	66	70	49	2.5	6	9	23	15	12	18	14.5	15.3	13.3	2	6	17	9.5	47	49	47	11	(8)	2.5
58*	76	70	78	4	69.5	78.4	78	69	70	55	2.5	6	9	23	15	12	18	14.5	15.3	13.3	2	6	18	10.5	50	52	50	11	(8)	2.5
60*	78	72	80	4	71.5	80.4	79	71	70	55	2.5	6	9	23	15	12	18	14.5	15.3	13.3	2	6	18	10.5	51	53	51	11	(8)	2.5
63*	83	75	83	4	–	–	83	74	70	55	2.5	6	9	23	15	12	–	14.2	–	–	–	–	18	10.5	–	–	–	11	(8)	2.5
65*	84	77	85	4	76.5	85.4	85	77	80	55	2.5	6	9	23	15	12	18	14.2	15.3	13	2	6	18	10.5	52	54.3	52	11	(8)	2.5
68*	88	81	90	4	82.7	91.5	88	80	80	55	2.5	7	9	26	18	12.5	19	14.9	16	13.7	2	6	18.5	11	53	55.3	52.7	11.3	(8)	2.5
70*	90	83	92	4	83	92	90	83	80	57	2.5	7	9	26	18	12.5	18	14.2	15.3	13	2	6	19	11.5	54	56.3	54	11.3	(10)	2.5
75*	98	88	97	4	90.2	99	98	88	80	62	2.5	7	9	26	18	12.5	18	15.2	15.3	14	2	6	19	11.5	55	56.3	54	11.3	(10)	2.5
80*	100	95	105	4	95.2	104	103	93	90	61.8	3	7	9	26.2	18.2	13	19	16.2	16.3	15	2	6	19	11.5	58	59.3	58	12	10	2.5

MS 32



MS 37/377



Product Description

- 1+5-Shrink-fitted face and housing
- 2-O-Ring
- 3- Spring
- 4-Thrust ring
- 6-Stationary Seat
- 7-O-Ring

Technical Features

- Single Seal
- Unbalanced
- Spring
- Dependent of rotation direction

Operating Range

- d1 = 6 - 80mm
- p = 10 bar
- t = -50 / 220 ˚C
- Vg = 20 m/sn

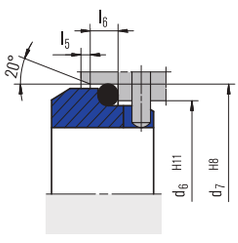
Material

- Rotary seal faces: Silicon carbide, Tungsten Carbide, Carbon
- Stationary seal faces: Silicon carbide, Ceramic,Tungsten Carbide, Chrome Nickel
- Elastomers : Viton (FKM), EPDM, Nitril (NBR) Silicon

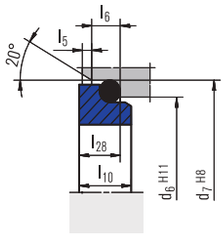
Stationary Seat Alternatives

- G-9 G-13 G-60 G-6 G-4

Seat alternatives



G9 (EN 12756)



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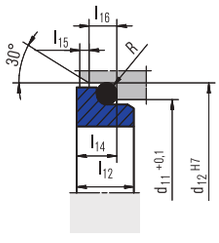
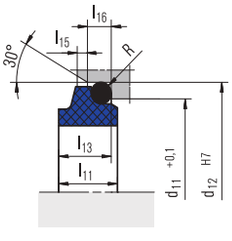
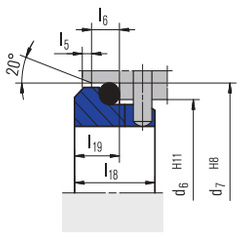


G4



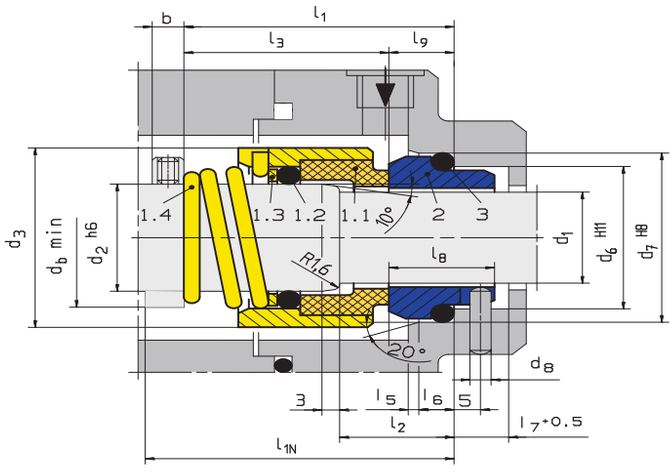
G13



G16 (EN 12756)

Dimensions in mm

d_1	d_3	d_6	d_7	d_8	d_{11} [1]	d_{12} [1]	d_{13}	db	l_{1N}	l_3 [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_{18}	l_{19}	l_{21} [3]	l_{22}	l_{23}	l_{28}	b [2]	R
6	14	–	–	–	11.5	16	16	8	–	–	–	–	–	–	–	–	9	6.5	7.1	5.6	1.2	3.8	–	–	10.5	11.9	–	–	–	1.2
8	18	–	–	–	15.5	19.2	18	11	–	–	–	–	–	–	–	–	9	8	7.1	7	1.2	3.8	–	–	15.5	16.9	–	–	–	1.2
10*	19	17	21	3	15.5	19.2	20	13	40	15.5	1.5	4	8.5	17.5	10	7.5	9	7.5	7.1	6.6	1.2	3.8	–	–	15.5	16.9	–	6.6	(8)	1.2
12*	21	19	23	3	17.5	21.6	22	16	40	16	1.5	4	8.5	17.5	10	7.5	10	6.5	7.6	5.6	1.2	3.8	–	–	15.5	17.4	–	6.6	(8)	1.2
14*	23	21	25	3	20.5	24.6	24	18	40	16.5	1.5	4	8.5	17.5	10	7.5	10	6.5	7.6	5.6	1.2	3.8	–	–	15.5	17.4	16.5	6.6	(8)	1.2
15	24	–	–	–	20.5	24.6	25	19	–	–	–	–	–	–	–	–	11	7.5	8.6	6.6	1.2	3.8	–	–	15.5	17.4	–	–	–	1.2
16*	26	23	27	3	22	28	26	21	40	18	1.5	4	8.5	17.5	10	7.5	11.5	8.5	9	7.5	1.5	5	–	–	17.5	19.5	16.5	6.6	(8)	1.5
18*	29	27	33	3	24	30	31	23	45	19.5	2	5	9	19.5	11.5	8.5	12.5	9	10	8	1.5	5	15	7	18.5	20.5	18	7.5	(8)	1.5
20*	31	29	35	3	29.5	35	34	26	45	22	2	5	9	19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5	15	7	20	22	19	7.5	(8)	1.5
22*	33	31	37	3	29.5	35	36	28	45	21.5	2	5	9	19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5	15	7	21.5	23.5	20.5	7.5	(8)	1.5
24*	35	33	39	3	32	38	38	30	50	23.5	2	5	9	19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5	15	7	23	25	22	7.5	(8)	1.5
25*	36	34	40	3	32	38	39	31	50	26.5	2	5	9	19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5	15	7	24.5	26.5	23.5	7.5	(8)	1.5
26	37	–	–	–	34	40	40	32	–	–	–	–	9	–	–	–	13	9	10	8	1.5	5	–	–	24.5	26.5	23.5	–	–	1.5
28*	40	37	43	3	36	42	42	35	50	26.5	2	5	9	19.5	11.5	8.5	14	10	11	9	1.5	5	15	7	24.5	26.5	24.5	7.5	(8)	1.5
30*	43	39	45	3	39.2	45	44	37	50	26.5	2	5	9	19.5	11.5	8.5	14	11.5	11	10.5	1.5	5	15	7	24.5	25	24.5	7.5	(8)	1.5
32*	46	42	48	3	42.2	48	46	39	55	28.5	2	5	9	19.5	11.5	8.5	14	11.5	11	10.5	1.5	5	15	7	28	28.5	28	7.5	(8)	1.5
33*	47	42	48	3	–	–	47	40	55	28.5	2	5	9	19.5	11.5	8.5	–	12	–	–	–	–	15	7	–	–	–	7.5	(8)	1.5
35*	49	44	50	3	46.2	52	49	43	55	28.5	2	5	9	19.5	11.5	8.5	14.5	12	11.5	11	1.5	5	15	7	28	28.5	28	7.5	(8)	1.5
38*	53	49	56	4	49.2	55	54	45	55	33.5	2	6	9	22	14	10	14.5	11.3	11.5	10.3	1.5	5	16	8	31	32.2	31	9	7.5	1.5
40*	56	51	58	4	52.2	58	56	49	55	36	2	6	9	22	14	10	14.5	11.8	11.5	10.8	1.5	5	16	8	34	34.7	34	9	(8)	1.5
42	59	–	–	–	53.3	62	58	52	–	–	–	–	9	–	–	–	17	13.2	14.3	12	2	6	–	–	35	37.3	35	–	–	2.5
43*	59	54	61	4	–	–	59	52	60	38.5	2	6	9	22	14	10	–	13.2	–	–	2	–	16	8	–	–	–	9	7.5	2.5
45*	61	56	63	4	55.3	64	61	55	60	39.5	2	6	9	22	14	10	17	12.8	14.3	11.6	2	6	16	8	36.5	39.2	36.5	9	(8)	2.5
48*	64	59	66	4	59.7	68.4	64	58	60	46	2	6	9	22	14	10	17	12.8	14.3	11.6	2	6	16	8	42	44.7	42	9	(8)	2.5
50*	66	62	70	4	60.8	69.3	66	61	60	45	2.5	6	9	23	15	10.5	17	12.8	14.3	11.6	2	6	17	9.5	43	45.7	43	9.5	(8)	2.5
53*	69	65	73	4	–	–	69	64	70	47	2.5	6	9	23	15	12	–	13.5	–	–	–	–	17	9.5	–	–	–	11	8	2.5
55*	71	67	75	4	66.5	75.4	71	66	70	49	2.5	6	9	23	15	12	18	14.5	15.3	13.3	2	6	17	9.5	47	49	47	11	(8)	2.5
58*	76	70	78	4	69.5	78.4	78	69	70	55	2.5	6	9	23	15	12	18	14.5	15.3	13.3	2	6	18	10.5	50	52	50	11	(8)	2.5
60*	78	72	80	4	71.5	80.4	79	71	70	55	2.5	6	9	23	15	12	18	14.5	15.3	13.3	2	6	18	10.5	51	53	51	11	(8)	2.5
63*	83	75	83	4	–	–	83	74	70	55	2.5	6	9	23	15	12	–	14.2	–	–	–	–	18	10.5	–	–	–	11	(8)	2.5
65*	84	77	85	4	76.5	85.4	85	77	80	55	2.5	6	9	23	15	12	18	14.2	15.3	13	2	6	18	10.5	52	54.3	52	11	(8)	2.5
68*	88	81	90	4	82.7	91.5	88	80	80	55	2.5	7	9	26	18	12.5	19	14.9	16	13.7	2	6	18.5	11	53	55.3	52.7	11.3	(8)	2.5
70*	90	83	92	4	83	92	90	83	80	57	2.5	7	9	26	18	12.5	18	14.2	15.3	13	2	6	19	11.5	54	56.3	54	11.3	(10)	2.5
75*	98	88	97	4	90.2	99	98	88	80	62	2.5	7	9	26	18	12.5	18	15.2	15.3	14	2	6	19	11.5	55	56.3	54	11.3	(10)	2.5
80*	100	95	105	4	95.2	104	103	93	90	61.8	3	7	9	26.2	18.2	13	19	16.2	16.3	15	2	6	19	11.5	58	59.3	58	12	10	2.5



Product Description

- 1,1-Shrink-fitted face and collar
- 1,2-O-Ring
- 1,3-Thrust ring
- 1,4-Spring
- 2-Stationary Seat
- 3-O-Ring

Technical Features

- Single Seal
- Balanced
- Spring
- Dependent of rotation direction

Operating Range

- d1 = 10 - 80mm
- p = 25 bar
- t = -50 / 220 °C
- Vg = 20 m/sn

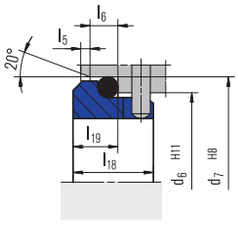
Material

- Rotary seal faces: Shrink-fitted Carbon ring
- Stationary seal faces: Silicon carbide, Ceramic,Tungsten Carbide, Chrome Nickel
- Elastomers : Viton (FKM), EPDM, Nitril (NBR) Silicon

Stationary Seat Alternatives

- G-9 G-60

Seat alternatives

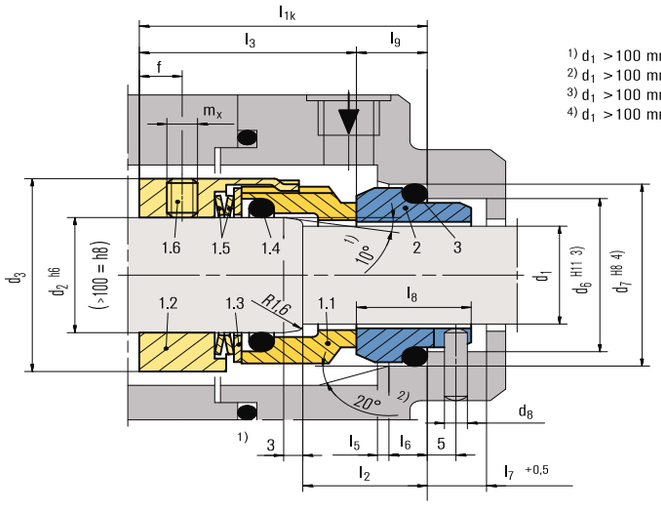


G16 (EN 12756 but l_{1k} and l_2 are shorter than specified)

Dimensions in mm

d_1	d_2	d_3	d_6	d_7	d_8	d_{21}	d_{22}	d_b	l_{1N}	l_1	l_2	l_3	l_5	l_6	l_7	l_8	l_9	l_{18}	l_{19}	l_{39}	l_{40}	a	b	e	h_1	h_2	k	b*
10	14	24	17	21	3	–	–	18	50	35.5	18	25.5	1.5	4	8.5	17.5	10.0	–	–	–	–	–	5	–	–	–	–	8.0
12	16	26	19	23	3	–	–	21	50	36.5	18	26.5	1.5	4	8.5	17.5	10.0	–	–	–	–	–	5	–	–	–	–	8.0
14	18	31	21	25	3	–	–	23	55	39.5	18	29.5	1.5	4	8.5	17.5	10.0	–	–	–	–	–	6	–	–	–	–	8.0
16	20	34	23	27	3	–	–	26	55	41.0	18	31.0	1.5	4	8.5	17.5	10.0	–	–	–	–	–	6	–	–	–	–	8.0
18	22	36	27	33	3	–	–	28	55	44.0	20	32.5	2.0	5	9.0	19.5	11.5	15	7	–	–	–	6	–	–	–	–	8.0
20	24	38	29	35	3	–	–	30	60	44.0	20	32.5	2.0	5	9.0	19.5	11.5	15	7	–	–	–	6	–	–	–	–	8.0
22	26	40	31	37	3	–	–	31	60	44.0	20	32.5	2.0	5	9.0	19.5	11.5	15	7	–	–	–	6	–	–	–	–	8.0
24	28	42	33	39	3	–	–	35	60	44.0	20	32.5	2.0	5	9.0	19.5	11.5	15	7	–	–	–	6	–	–	–	–	8.0
25	30	44	34	40	3	–	–	37	60	45.0	20	33.5	2.0	5	9.0	19.5	11.5	15	7	–	–	–	6	–	–	–	–	8.0
28	33	47	37	43	3	44.65	50.57	40	65	47.0	20	35.5	2.0	5	9.0	19.5	11.5	15	7	24.0	8.5	24.0	6	8.0	6.6	22.6	9	8.0
30	35	49	39	45	3	47.83	53.75	43	65	47.0	20	35.5	2.0	5	9.0	19.5	11.5	15	7	24.5	9.0	24.0	6	8.0	6.6	22.6	9	8.0
32	38	54	42	48	3	47.83	53.75	45	65	51.0	20	39.5	2.0	5	9.0	19.5	11.5	15	7	24.5	9.0	24.0	6	8.0	6.6	22.6	9	7.5
33	38	54	42	48	3	47.83	53.75	45	65	51.0	20	39.5	2.0	5	9.0	19.5	11.5	15	7	24.5	9.0	24.0	6	8.0	6.6	22.6	9	7.5
35	40	56	44	50	3	51.00	56.92	49	65	55.0	20	43.5	2.0	5	9.0	19.5	11.5	15	7	24.5	9.0	24.0	6	8.0	6.6	22.6	9	8.0
38	43	59	49	56	4	54.18	60.10	52	75	60.0	23	46.0	2.0	6	9.0	22.0	14.0	16	8	26.0	11.0	24.0	6	8.0	6.6	22.6	9	7.5
40	45	61	51	58	4	60.53	66.45	55	75	62.0	23	48.0	2.0	6	9.0	22.0	14.0	16	8	26.0	11.0	24.0	6	8.0	6.6	22.6	9	8.0
43	48	64	54	61	4	63.70	69.62	58	75	65.0	23	51.0	2.0	6	9.0	22.0	14.0	16	8	26.0	11.0	24.0	6	8.0	6.6	22.6	9	8.0
45	50	66	56	63	4	63.70	69.62	61	75	69.0	23	55.0	2.0	6	9.0	22.0	14.0	16	8	26.0	11.0	24.0	6	8.0	6.6	22.6	9	(8)
48	53	69	59	66	4	66.88	72.80	64	85	69.0	23	55.0	2.0	6	9.0	22.0	14.0	16	8	26.0	11.0	24.0	8	8.0	6.6	22.6	9	8.0
50	55	71	62	70	4	70.05	75.97	66	85	73.0	25	58.0	2.5	6	9.0	23.0	15.0	17	9.5	26.5	12.5	24.0	8	8.0	6.6	22.6	9	8.0
53	58	78	65	73	4	76.40	82.32	69	85	75.0	25	60.0	2.5	6	9.0	23.0	15.0	17	9.5	26.5	12.5	24.0	8	8.0	6.6	22.6	9	8.0
55	60	79	67	75	4	76.40	82.32	71	85	75.0	25	60.0	2.5	6	9.0	23.0	15.0	17	9.5	28.5	12.5	26.0	8	8.0	6.6	24.6	11	8.0
58	63	83	70	78	4	79.58	85.50	74	85	75.0	25	60.0	2.5	6	9.0	23.0	15.0	18	10.5	28.5	12.5	26.0	8	8.0	6.6	24.6	11	8.0
60	65	85	72	80	4	82.75	88.67	77	95	75.0	25	60.0	2.5	6	9.0	23.0	15.0	18	10.5	28.5	12.5	26.0	8	8.0	6.6	24.6	11	8.0
63	68	88	75	83	4	85.93	91.85	80	95	75.0	25	60.0	2.5	6	9.0	23.0	15.0	18	10.5	28.5	12.5	26.0	8	8.0	6.6	24.6	11	8.0
65	70	90	77	85	4	85.93	91.85	83	95	76.0	25	61.0	2.5	6	9.0	23.0	15.0	18	10.5	28.5	12.5	26.0	8	8.0	6.6	24.6	11	10.0
70	75	98	83	92	4	89.10	95.02	88	95	81.0	28	63.0	2.5	7	9.0	26.0	18.0	19	11.5	30.5	14.5	26.0	8	8.0	6.6	24.6	11	10.0
75	80	103	88	97	4	98.63	104.55	93	105	86.0	28	68.0	2.5	7	9.0	26.0	18.0	19	11.5	30.5	14.5	26.0	10	8.0	6.6	24.6	11	10.0
80	85	109	95	105	4	101.80	107.72	98	105	86.0	28	68.0	3.0	7	9.0	26.2	18.2	19	11.5	30.2	14.0	26.0	10	8.0	6.6	24.6	11	10.0

* l_{1N} acc. to EN 12756 is exceeded



1) d_1 >100 mm: 2 mm x 30°
2) d_1 >100 mm: 30°
3) d_1 >100 mm: +0.1
4) d_1 >100 mm: H7

Product Description

- 1,1-Seal face
- 1,2-Drive collar
- 1,3-Thrust Ring
- 1,4-O-Ring
- 1,5-Wave Spring
- 1,6-Set Screw
- 3-O-Ring

Technical Features

- Single Seal
- Unbalanced
- Independent of rotation direction

Operating Range

- d1 = 14 - 200 mm
- p1 = 16 (25) bar
- t = -50 / 220 ˚C
- Vg = 20 m/sn

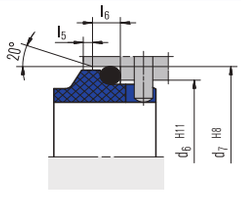
Material

- Rotary seal faces: Chrome Nickel Silicon carbide, Tungsten Carbide
- Stationary seal faces: Silicon carbide, Carbon,Tungsten Carbide, Chrome Nickel
- Elastomers : Viton (FKM), EPDM, Nitril (NBR) Silicon

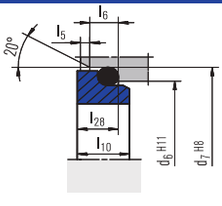
Stationary Seat Alternatives

- G-13 G-9 G-6 G-4 G-60

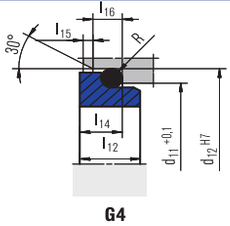
Seat alternatives



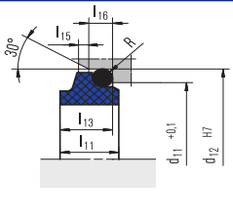
G9 (EN 12756)



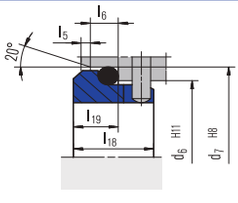
G6 (EN 12756)



G4



G13

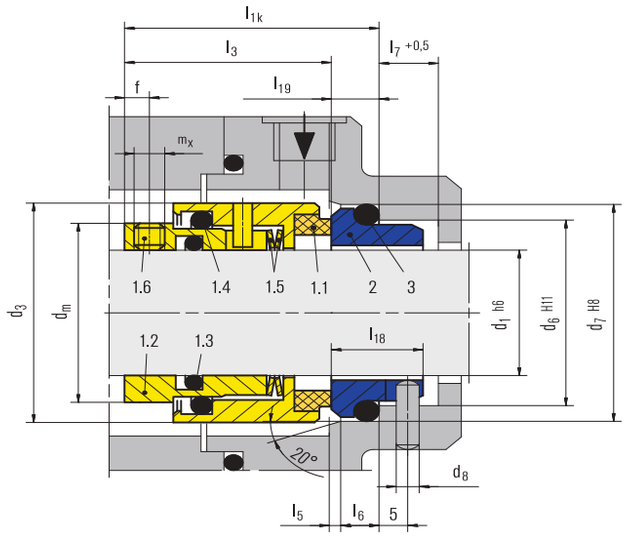


G16 (EN 12756, but l_{1k} is shorter than specified)

Dimensions in mm

d_1	d_2	d_3	d_6	d_7	d_8	d_{24}	d_{21}	d_{22}	ds	l_{1k}	l_{1N}	l_2	l_3	l_5	l_6	l_7	l_8	l_9	l_{39}	l_{40}	a	b	e	f	h_1	h_2	k	m_x	$u_{max.}$	t
14*	18	33	21	25	3	20	–	–	38	42.5	–	18	32.5	1.5	4	8.5	17.5	10	–	–	–	5	–	6	–	–	–	M5	9	1.1
16*	20	35	23	27	3	22	–	–	40	42.5	–	18	32.5	1.5	4	8.5	17.5	10	–	–	–	5	–	6	–	–	–	M5	9	1.1
18*	22	37	27	33	3	24	–	–	42	45	55	20	33.5	2	5	9	19.5	11.5	–	–	–	6	–	7	–	–	–	M5	9	1.5
20*	24	39	29	35	3	26	–	–	44	45	60	20	33.5	2	5	9	19.5	11.5	–	–	–	6	–	5.5	–	–	–	M5	9	1.5
22*	26	41	31	37	3	28	–	–	45	45	60	20	33.5	2	5	9	19.5	11.5	–	–	–	6	–	8	–	–	–	M5	9	1.5
24*	28	43	33	39	3	30	–	–	47	47.5	60	20	36	2	5	9	19.5	11.5	–	–	–	6	–	5.5	–	–	–	M6	9	1.5
25*	30	45	34	40	3	32	–	–	49	47.5	60	20	36	2	5	9	19.5	11.5	–	–	–	6	–	5.5	–	–	–	M6	9	1.5
28*	33	48	37	43	3	35	44.65	50.57	51	50	65	20	38.5	2	5	9	19.5	11.5	24	8.5	24	6	8	8	6.6	22.6	9	M6	12	1.5
30*	35	50	39	45	3	37	47.83	53.75	54	50	65	20	38.5	2	5	9	19.5	11.5	24.5	9	24	6	8	8	6.6	22.6	9	M6	12	1.5
32*	38	55	42	48	3	40	47.83	53.75	59	50	65	20	38.5	2	5	9	19.5	11.5	24.5	9	24	6	8	8	6.6	22.6	9	M6	12	1.5
33*	38	55	42	48	3	40	47.83	53.75	59	50	65	20	38.5	2	5	9	19.5	11.5	24.5	9	24	6	8	8	6.6	22.6	9	M6	12	1.5
35*	40	57	44	50	3	42	51	56.92	61	50	65	20	38.5	2	5	9	19.5	11.5	24.5	9	24	6	8	8	6.6	22.6	9	M6	12	1.5
38*	43	60	49	56	4	45	54.18	60.1	65	52.5	75	23	38.5	2	6	9	22	14	26	11	24	6	8	8	6.6	22.6	9	M6	12	1.5
40*	45	62	51	58	4	47	60.53	66.45	66	52.5	75	23	38.5	2	6	9	22	14	26	11	24	6	8	8	6.6	22.6	9	M6	12	1.5
43*	48	65	54	61	4	50	63.7	69.62	69	52.5	75	23	38.5	2	6	9	22	14	26	11	24	6	8	8	6.6	22.6	9	M6	12	1.5
45*	50	67	56	63	4	52	63.7	69.62	71	52.5	75	23	38.5	2	6	9	22	14	26	11	24	6	8	8	6.6	22.6	9	M6	12	1.5
48*	53	70	59	66	4	55	66.88	72.8	75	52.5	85	23	38.5	2	6	9	22	14	26	11	24	6	8	8	6.6	22.6	9	M6	12	1.5
50*	55	72	62	70	4	57	70.05	75.97	76	57.5	85	25	42.5	2.5	6	9	23	15	26.5	12.5	24	6	8	8	6.6	22.6	9	M6	12	1.5
53*	58	79	65	73	4	60	76.4	82.32	83	57.5	85	25	42.5	2.5	6	9	23	15	26.5	12.5	24	8	8	9	6.6	22.6	9	M8	12	1.9
55*	60	81	67	75	4	62	76.4	82.32	85	57.5	85	25	42.5	2.5	6	9	23	15	28.5	12.5	26	8	8	9	6.6	24.6	11	M8	12	1.9
58*	63	84	70	78	4	65	79.58	85.5	88	62.5	85	25	47.5	2.5	6	9	23	15	28.5	12.5	26	8	8	9	6.6	24.6	11	M8	15	1.9
60*	65	86	72	80	4	67	82.75	88.67	95	62.5	95	25	47.5	2.5	6	9	23	15	28.5	12.5	26	8	8	9	6.6	24.6	11	M8	15	1.9
63*	68	89	75	83	4	70	85.93	91.85	93	62.5	95	25	47.5	2.5	6	9	23	15	28.5	12.5	26	8	8	9	6.6	24.6	11	M8	14	1.9
65*	70	91	77	85	4	72	85.93	91.85	95	62.5	95	25	47.5	2.5	6	9	23	15	28.5	12.5	26	8	8	9	6.6	24.6	11	M8	15	1.9
70*	75	99	83	92	4	77	89.1	95.02	105	70	95	28	52	2.5	7	9	26	18	30.5	14.5	26	8	8	10	6.6	24.6	11	M8	15	1.9
75*	80	104	88	97	4	82	98.63	104.55	109	70	105	28	52	2.5	7	9	26	18	30.5	14.5	26	8	8	10	6.6	24.6	11	M8	15	1.9
80*	85	109	95	105	4	87	101.8	107.72	114	70	105	28	51.8	3	7	9	26.2	18.2	30.2	14	26	8	8	10	6.6	24.6	11	M8	15	1.9
85*	90	114	100	110	4	92	108.15	114.07	119	75	105	28	56.8	3	7	9	26.2	18.2	30.2	14	26	10	8	10	6.6	24.6	11	M8	18	2.3
90*	95	119	105	115	4	97	114.5	120.42	124	75	105	28	56.8	3	7	9	26.2	18.2	30.2	14	26	10	8	10	6.6	24.6	11	M8	18	2.3
95*	100	124	110	120	4	102	117.68	123.6	129	75	105	28	57.8	3	7	9	25.2	17.2	29.2	14	26	10	8	10	6.6	24.6	11	M8	18	2.3
100*	105	129	115	125	4	107	124.03	129.95	134	75	105	28	57.8	3	7	9	25.2	17.2	29.2	14	26	10	8	10	6.6	24.6	11	M8	18	2.3
105*	115	148	122.2	134.3	5	118	128.98	134.9	153	73	–	32	53	2	10	–	30	20	29.2	15.2	26	10	8	10	6.6	24.6	11	M8	18	2.3
110*	120	153	128.2	140.3	5	123	135.3	141.2	158	73	–	32	53	2	10	–	30	20	32.5	14.5	30	10	9.5	10	6.6	28.6	13	M8	18	2.3
115*	125	158	136.2	148.3	5	128	140.3	146.2	163	73	–	32	53	2	10	–	30	20	32.5	14.5	30	10	9.5	10	6.6	28.6	13	M8	18	2.3
120*	130	163	138.2	150.3	5	133	145.3	151.2	168	73	–	32	53	2	10	–	30	20	32.5	14.5	30	10	9.5	10	6.6	28.6	13	M8	18	2.3
125*	135	168	142.2	154.3	5	138	150.3	156.2	173	73	–	32	53	2	10	–	30	20	32.5	14.5	30	10	9.5	10	6.6	28.6	13	M8	18	2.3
130*	140	173	146.2	158.3	5	143	155.3	161.2	178	73	–	32	53	2	10	–	30	20	32.5	14.5	30	10	9.5	10	6.6	28.6	13	M8	18	2.3
135*	145	178	152.2	164.3	5	148	160.3	166.2	183	73	–	32	53	2	10	–	30	20	32.5	14.5	30	10	9.5	10	6.6	28.6	13	M8	18	2.3
140*	150	183	156.2	168.3	5	153	165.3	171.2	188	73	–	32	53	2	10	–	30	20	32.5	14.5	30	10	9.5	10	6.6	28.6	13	M8	18	2.3
145*	155	191	161.2	173.3	5	158	172.3	178.2	196	83	–	34	63	2	10	–	30	20	34.5	16.5	32	12	10	12	7.1	30.1	14	M8	22	2.1
150*	160	196	168.2	180.3	5	163	177.3	183.2	201	85	–	36	63	2	10	–	32	22	34.5	16.5	32	12	10	12	7.1	30.1	14	M8	22	2.1
155*	165	201	173.2	185.3	5	168	182.3	188.2	206	87	–	38	63	2	12	–	34	24	34.5	16.5	32	12	10	12	7.1	30.1	14	M8	22	2.1
160*	170	206	178.2	190.3	5	173	187.3	193.2	211	87	–	38	63	2	12	–	34	24	34.5	16.5	32	12	10	12	7.1	30.1	14	M8	22	2.1
165*	175	211	183.2	195.3	5	178	192.3	198.2	216	87	–	38	63	2	12	–	34	24	34.5	16.5	32	12	10	12	7.1	30.1	14	M8	22	2.1
170*	180	216	188.2	200.3	5	183	197.3	203.2	221	87	–	38	63	2	12	–	34	24	37	16.5	34.5	12	10	12	7.1	32.1	16	M8	22	2.1
175*	185	221	193.2	205.3	5	188	202.3	208.2	226	87	–	38	63	2	12	–	34	24	37	16.5	34.5	12	10	12	7.1	32.1	16	M8	22	2.1
180*	190	226	207.5	219.3	5	193	207.3	213.2	231	91	–	42	63	2	12	–	38	28	37	16.5	34.5	12	10	12	7.1	32.1	16	M8	22	2.1
185*	195	231	212.5	224.3	5	198	212.3	218.2	236	91	–	42	63	2	12	–	38	28	37	16.5	34.5	12	10	12	7.1	32.1	16	M8	22	2.1
190*	200	236	217.5	229.3	5	203	217.3	223.2	241	91	–	42	63	2	12	–	38	28	37	16.5	34.5	12	10	12	7.1	32.1	16	M8	22	2.1
195*	205	245	222.5	234.2	5	208	225.3	231.2	250	94	–	43	66	2	12	–	38	28	37	17.5	34.5	12	10	14	7.1	32.1	16	M10	22	2.1
200*	210	250	227.5	239.3	5	213	230.3	236.2	255	94	–	43	66	2	12	–	38	28	37	17.5	34.5	12	10	14	7.1	32.1	16	M10	22	2.1

* EN 12756



Product Description

- 1,1-Shrink-fitted face and housing
- 1,2-Drive collar 1,3-O-Ring
- 1,4-O-Ring
- 1,5-Spring
- 1,6-Set Screws
- 2-Stationary Seat
- 3-O-Ring

Technical Features

- Single Seal
- Balanced
- Spring
- Independent of rotation direction

Operating Range

- d1 = 18 - 100mm
- p = 0.8- 25 bar
- t = -50 / 220 ˚C
- Vg = 20 m/sn

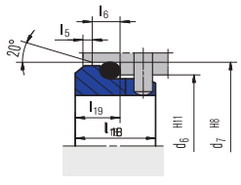
Material

- Rotary seal faces: Carbon ring Shrink-fitted into the seal face housing
- Stationary seal faces: Silicon carbide, Ceramic,Tungsten Carbide, Chrome Nickel
- Elastomers : Viton (FKM), EPDM, Nitril (NBR) Silicon

Stationary Seat Alternatives

- G-16 G-9

Seat alternatives

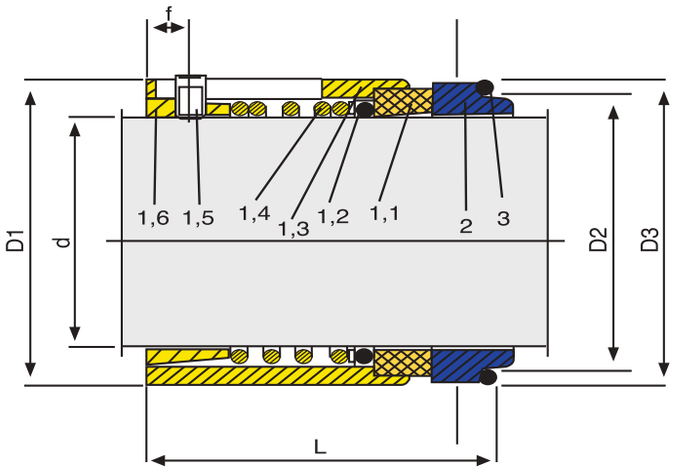


G16 (EN 12756 but l_{1k} and l_2 are shorter than specified)

Dimensions in mm

d1	d2	d3	d6	d7	d8	d21	d22	db	l1N	l1	l2	l3	l5	l6	l7	l8	l9	l18	l19	l39	l40	a	b	e	h1	h2	k	b*
10	14	24	17	21	3	–	–	18	50	35.5	18	25.5	1.5	4	8.5	17.5	10.0	–	–	–	–	–	5	–	–	–	–	8.0
12	16	26	19	23	3	–	–	21	50	36.5	18	26.5	1.5	4	8.5	17.5	10.0	–	–	–	–	–	5	–	–	–	–	8.0
14	18	31	21	25	3	–	–	23	55	39.5	18	29.5	1.5	4	8.5	17.5	10.0	–	–	–	–	–	6	–	–	–	–	8.0
16	20	34	23	27	3	–	–	26	55	41.0	18	31.0	1.5	4	8.5	17.5	10.0	–	–	–	–	–	6	–	–	–	–	8.0
18	22	36	27	33	3	–	–	28	55	44.0	20	32.5	2.0	5	9.0	19.5	11.5	15	7	–	–	–	6	–	–	–	–	8.0
20	24	38	29	35	3	–	–	30	60	44.0	20	32.5	2.0	5	9.0	19.5	11.5	15	7	–	–	–	6	–	–	–	–	8.0
22	26	40	31	37	3	–	–	31	60	44.0	20	32.5	2.0	5	9.0	19.5	11.5	15	7	–	–	–	6	–	–	–	–	8.0
24	28	42	33	39	3	–	–	35	60	44.0	20	32.5	2.0	5	9.0	19.5	11.5	15	7	–	–	–	6	–	–	–	–	8.0
25	30	44	34	40	3	–	–	37	60	45.0	20	33.5	2.0	5	9.0	19.5	11.5	15	7	–	–	–	6	–	–	–	–	8.0
28	33	47	37	43	3	44.65	50.57	40	65	47.0	20	35.5	2.0	5	9.0	19.5	11.5	15	7	24.0	8.5	24.0	6	8.0	6.6	22.6	9	8.0
30	35	49	39	45	3	47.83	53.75	43	65	47.0	20	35.5	2.0	5	9.0	19.5	11.5	15	7	24.5	9.0	24.0	6	8.0	6.6	22.6	9	8.0
32	38	54	42	48	3	47.83	53.75	45	65	51.0	20	39.5	2.0	5	9.0	19.5	11.5	15	7	24.5	9.0	24.0	6	8.0	6.6	22.6	9	7.5
33	38	54	42	48	3	47.83	53.75	45	65	51.0	20	39.5	2.0	5	9.0	19.5	11.5	15	7	24.5	9.0	24.0	6	8.0	6.6	22.6	9	7.5
35	40	56	44	50	3	51.00	56.92	49	65	55.0	20	43.5	2.0	5	9.0	19.5	11.5	15	7	24.5	9.0	24.0	6	8.0	6.6	22.6	9	8.0
38	43	59	49	56	4	54.18	60.10	52	75	60.0	23	46.0	2.0	6	9.0	22.0	14.0	16	8	26.0	11.0	24.0	6	8.0	6.6	22.6	9	7.5
40	45	61	51	58	4	60.53	66.45	55	75	62.0	23	48.0	2.0	6	9.0	22.0	14.0	16	8	26.0	11.0	24.0	6	8.0	6.6	22.6	9	8.0
43	48	64	54	61	4	63.70	69.62	58	75	65.0	23	51.0	2.0	6	9.0	22.0	14.0	16	8	26.0	11.0	24.0	6	8.0	6.6	22.6	9	8.0
45	50	66	56	63	4	63.70	69.62	61	75	69.0	23	55.0	2.0	6	9.0	22.0	14.0	16	8	26.0	11.0	24.0	6	8.0	6.6	22.6	9	(8)
48	53	69	59	66	4	66.88	72.80	64	85	69.0	23	55.0	2.0	6	9.0	22.0	14.0	16	8	26.0	11.0	24.0	8	8.0	6.6	22.6	9	8.0
50	55	71	62	70	4	70.05	75.97	66	85	73.0	25	58.0	2.5	6	9.0	23.0	15.0	17	9.5	26.5	12.5	24.0	8	8.0	6.6	22.6	9	8.0
53	58	78	65	73	4	76.40	82.32	69	85	75.0	25	60.0	2.5	6	9.0	23.0	15.0	17	9.5	26.5	12.5	24.0	8	8.0	6.6	22.6	9	8.0
55	60	79	67	75	4	76.40	82.32	71	85	75.0	25	60.0	2.5	6	9.0	23.0	15.0	17	9.5	28.5	12.5	26.0	8	8.0	6.6	24.6	11	8.0
58	63	83	70	78	4	79.58	85.50	74	85	75.0	25	60.0	2.5	6	9.0	23.0	15.0	18	10.5	28.5	12.5	26.0	8	8.0	6.6	24.6	11	8.0
60	65	85	72	80	4	82.75	88.67	77	95	75.0	25	60.0	2.5	6	9.0	23.0	15.0	18	10.5	28.5	12.5	26.0	8	8.0	6.6	24.6	11	8.0
63	68	88	75	83	4	85.93	91.85	80	95	75.0	25	60.0	2.5	6	9.0	23.0	15.0	18	10.5	28.5	12.5	26.0	8	8.0	6.6	24.6	11	8.0
65	70	90	77	85	4	85.93	91.85	83	95	76.0	25	61.0	2.5	6	9.0	23.0	15.0	18	10.5	28.5	12.5	26.0	8	8.0	6.6	24.6	11	10.0
70	75	98	83	92	4	89.10	95.02	88	95	81.0	28	63.0	2.5	7	9.0	26.0	18.0	19	11.5	30.5	14.5	26.0	8	8.0	6.6	24.6	11	10.0
75	80	103	88	97	4	98.63	104.55	93	105	86.0	28	68.0	2.5	7	9.0	26.0	18.0	19	11.5	30.5	14.5	26.0	10	8.0	6.6	24.6	11	10.0
80	85	109	95	105	4	101.80	107.72	98	105	86.0	28	68.0	3.0	7	9.0	26.2	18.2	19	11.5	30.2	14.0	26.0	10	8.0	6.6	24.6	11	10.0

* l_{1N} acc. to EN 12756 is exceeded



Product Description

- 1,1-Seal face
- 1,2-O-Ring (For
- rotary seal)
- 1,3-Housing
- 1,4-Spring
- 1,5-Set screws
- 1,6-Drive collar
- 2-Stationary Seat
- 3-O-Ring

Technical Features

- Single Seal
- Unbalanced
- Independent of rotation direction

Operating Range

- d1 = 18 - 65mm
- p = 10 bar
- t = -20 / 220 °C
- Vg = 20 m/sn

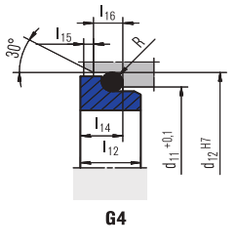
Material

- Rotary seal faces: Carbon,
- Stationary seal faces: Chrome Nickel Silicon carbide, Ceramic, Tungsten Carbide,
- Elastomers : Viton (FKM), EPDM,

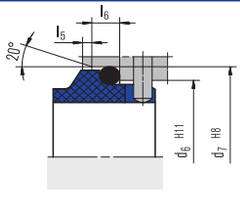
Stationary Seat Alternatives

- G-4 G-9

Seat alternatives



G4

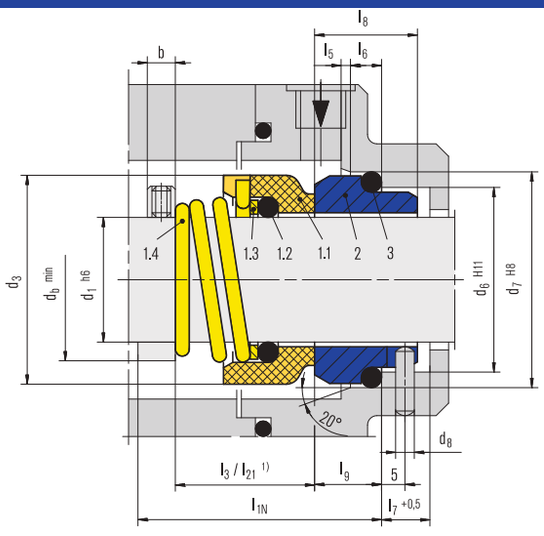


G9 (EN 12756)

Dimensions in mm

d	D1	L	F	D2	D3
18	36	43	6.0	24.0	30.0
20	38	43	6.0	29.5	35.0
22	40	43	6.0	29.5	35.0
24	42	43	6.0	32.0	38.0
25	43	43	6.0	32.0	38.0
28	46	45	70	36.0	42.0
30	48	47	70	39.2	45.0
32	50	49	7.5	42.2	48.0
35	53	49.5	7.5	46.2	52.0
38	59	55.3	7.5	49.2	55.0

d	D1	L	F	D2	D3
40	62	55.3	7.5	52.2	58.0
42	64	62.3	7.5	53.3	62.0
45	67	62.3	8.0	55.3	64.0
48	69	65.3	8.0	59.7	68.4
50	72	69.3	8.0	60.8	69.3
55	77	70.3	8.0	66.5	75.4
58	80	72.3	8.0	69.5	78.4
60	82	74.3	8.0	71.5	80.4
65	90	76.3	9.0	76.5	85.4



Product Description

- 1,1-Seal face
- 1,2-Drive collar
- 1,3-Thrust Ring
- 1,4-O-Ring
- 1,5-Waev Spring
- 1,6-Set Screw
- 3-O-Ring

Technical Features

- Single Seal
- Unbalanced
- Independent of rotation direction

Operating Range

- d1 = 14 - 200 mm
- p1 = 16 (25) bar
- t = -50 / 220 ˚C
- Vg = 20 m/sn

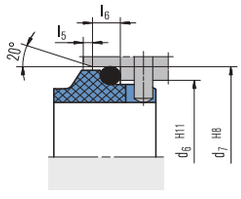
Material

- Rotary seal faces: Chrome Nickel Silicon carbide, Tungsten Carbide
- Stationary seal faces: Silicon carbide, Carbon,Tungsten Carbide, Chrome Nickel
- Elastomers : Viton (FKM), EPDM, Nitril (NBR) Silicon

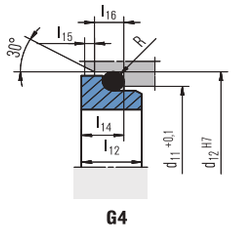
Stationary Seat Alternatives

- G-13 G-9 G-6 G-4 G-60

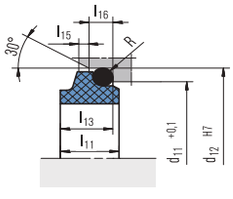
Seat alternatives



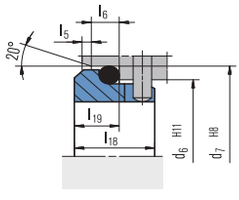
G9 (EN 12756)



G4



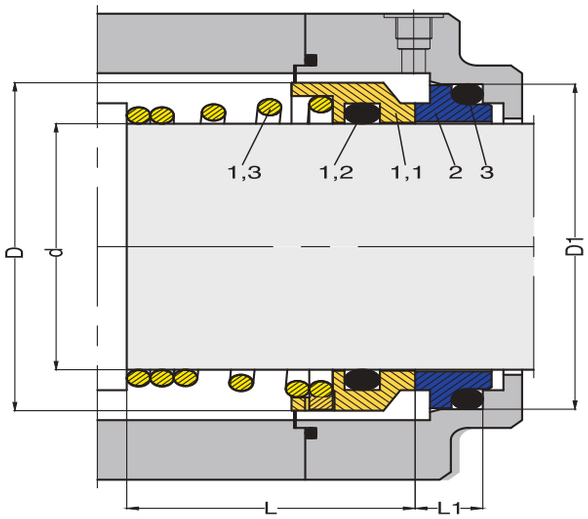
G13



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

Dimensions in mm

d_1	d_3	d_6	d_7	d_8	d_{11}	d_{12}	d_b	l_{1N}	l_3 1)	l_5	l_6	l_7	l_8	l_{10}	l_{12}	l_{14}	l_{15}	l_{16}	l_{18}	l_{19}	l_{21} 1)	l_{28}	b	R
6	15	–	–	–	11.8	16	8	–	–	–	–	–	–	–	6.5	5.6	1.2	3.8	–	–	10.9	–	–	1.2
8	18	–	–	–	15.5	19.2	11	–	–	–	–	–	–	–	8	7	1.2	3.8	–	–	15.5	–	–	1.2
10	20	17	21	3	15.5	19.2	13	40	17.5	1.5	4	8.5	17.5	7.5	7.5	6.6	1.2	3.8	–	–	15.9	6.6	8	1.2
12	22	19	23	3	17.5	21.6	16	40	17.5	1.5	4	8.5	17.5	7.5	8	7	1.2	3.8	–	–	16	6.6	8	1.2
14	25	21	25	3	20.5	24.6	18	40	17.5	1.5	4	8.5	17.5	7.5	8	7	1.2	3.8	–	–	16	6.6	8	1.2
15	27	–	–	–	20.5	24.6	19	–	–	–	–	–	–	–	7.5	6.6	1.2	3.8	–	–	17.4	–	–	1.2
16	27	23	27	3	22	28	21	40	19.5	1.5	4	8.5	17.5	7.5	8.5	7.5	1.5	5	–	–	19	6.6	8	1.5
18	30	27	33	3	24	30	23	45	20.5	2	5	9	19.5	8.5	9	8	1.5	5	15	7	20.5	7.5	8	1.5
20	32	29	35	3	29.5	35	26	45	22	2	5	9	19.5	8.5	8.5	7.5	1.5	5	15	7	22	7.5	8	1.5
22	35	31	37	3	29.5	35	28	45	23.5	2	5	9	19.5	8.5	8.5	7.5	1.5	5	15	7	23.5	7.5	8	1.5
24	38	33	39	3	32	38	30	50	25	2	5	9	19.5	8.5	8.5	7.5	1.5	5	15	7	25	7.5	8	1.5
25	40	34	40	3	32	38	31	50	26.5	2	5	9	19.5	8.5	8.5	7.5	1.5	5	15	7	26.5	7.5	8	1.5
26	41	–	–	–	34	40	32	–	–	–	–	–	–	–	9	8	1.5	5	–	–	26.5	–	–	1.5
28	43	37	43	3	36	42	35	50	26.5	2	5	9	19.5	8.5	10	9	1.5	5	15	7	26.5	7.5	8	1.5
30	47	–	–	–	39.2	45	37	–	–	–	–	–	–	–	11.5	10.5	1.5	5	15	7	25	–	–	1.5
32	48	–	–	–	42.2	48	39	–	–	–	–	–	–	–	13	10.5	1.5	5	15	7	28.5	–	–	1.5
35	53	–	–	–	46.2	52	43	–	–	–	–	–	–	–	13.5	11	1.5	5	15	7	28.5	–	–	1.5
38	56	–	–	–	49.2	55	47	–	–	–	–	–	–	–	13	10.3	1.5	5	16	8	32	–	–	1.5



Product Description

- 1,1-Seal face
- 1,2-O-Ring
- 1,3-Spring
- 2-Stationary Seat
- 3-O-Ring

Technical Features

- Single Seal
- Unbalanced
- Dependent of rotation direction

Operating Range

- d1 = 6 - 110mm
- p = 10 bar
- t = -50 / 220 ˚C
- Vg = 20 m/sn

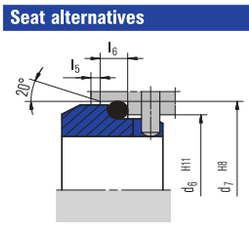
Material

- Rotary seal faces: Chrome Nickel, Silicon carbide,Tungsten Carbide
- Stationary seal faces: Silicon carbide, Tungsten Carbide, Carbon
- Elastomers : Viton (FKM), EPDM, Nitril (NBR) Silicon

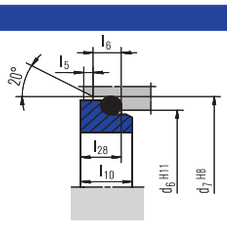
Stationary Seat Alternatives

- G-45 G-9 G-4

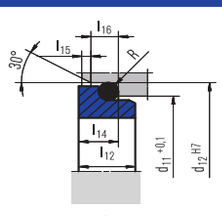
Seat alternatives



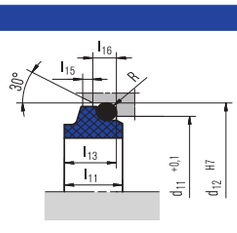
G9 (EN 12756)



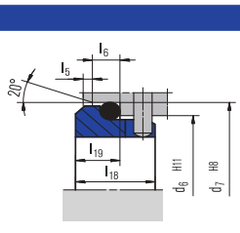
G6 (EN 12756)



G4



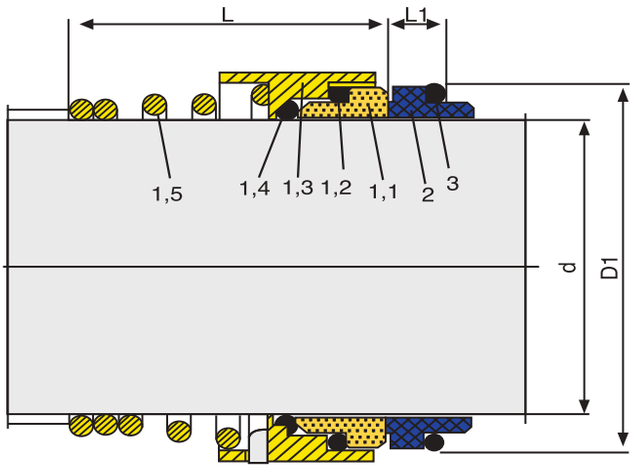
G13



G16 (EN 12756)

Dimensions in mm

d	D	D1	L	L1	d	D	D1	L	L1
6	12	13.1	15	4.5	33	47	53.5	39	11.5
8	16	17.1	15	5.5	35	49	53.5	39	11.5
10	20	18.1	15	5.5	38	54	60.5	39	11.5
12	22	20.6	18	5.5	40	56	60.5	39	11.5
14	24	23.1	22	6.0	42	57	60.5	39	11.5
15	24	26.9	22	7.0	45	61	65.5	41	11.5
16	26	26.9	23	7.0	48	64	65.5	41	11.5
17	26	26.9	23	7.0	50	66	72.5	45	11.5
18	32	30.9	24	8.0	55	71	72.5	47	11.5
19	32	30.9	25	8.0	60	80	79.3	49	11.5
20	34	30.9	25	8.0	65	85	84.5	51	11.5
22	36	35.4	25	8.0	70	90	89.5	51	11.5
24	38	35.4	27	8.0	75	99	94.5	57	11.5
25	39	38.2	27	8.5	80	104	99.5	59	11.5
26	39	38.2	27	8.5	85	109	105.5	59	13.5
28	42	43.3	29	9.0	90	114	111.5	62	13.5
30	44	43.3	30	9.0	95	119	116.5	62	13.5
32	46	43.3	30	9.0	100	124	119.5	75	13.5
					110	143	132.2	75	17.5



Product Description

- 1,1-Seal face
- 1,2-O-Ring
- 1,3-Housing
- 1,4-O-Ring
- 1,5-Spring
- 2-Stationary Seat
- 3-O-Ring

Technical Features

- Single Seal
- Unbalanced
- Dependent of rotation direction

Operating Range

- d1 = 14 - 150mm
- p = 10 bar
- t = -50 / 220 ˚C
- Vg = 20 m/sn

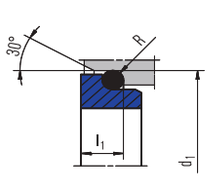
Material

- Rotary seal faces: Carbon, Silicon carbide, Tungsten Carbide
- Stationary seal faces: Silicon carbide, Ceramic,Tungsten Carbide, Chrome Nickel
- Elastomers : Viton (FKM), EPDM, Nitril (NBR) Silicon

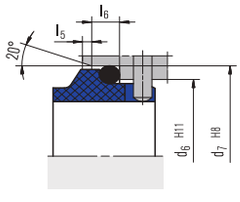
Stationary Seat Alternatives

- G-9 G-4

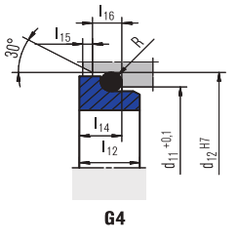
Seat alternatives



G45



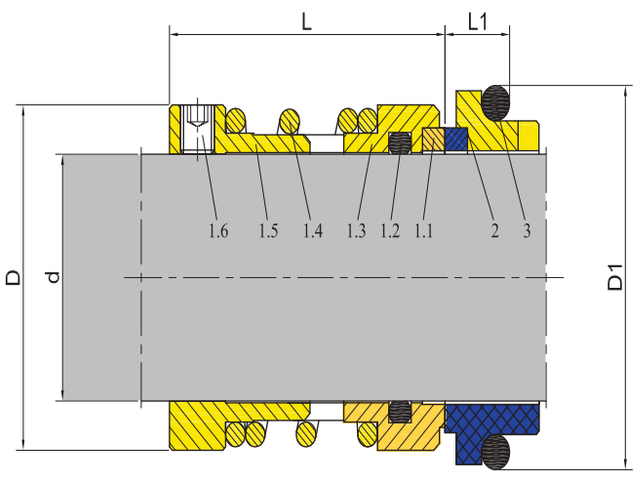
G9 (EN 12756)



G4

Dimensions in mm

d	L	D1	L1	d	L	D1	L1
14	27	23.1	6	**45**	51	65.5	11.5
15	27	26.9	7	**48**	51	65.5	11.5
16	28	26.9	7	**50**	55	72.5	11.5
18	30	30.9	8	**55**	57	72.5	11.5
19	30	30.9	8	**60**	61	79.5	11.5
20	30	30.9	8	**65**	63	84.5	11.5
22	30	35.4	8	**70**	63	89.5	11.5
24	32	35.4	8	**75**	68	94.5	11.5
25	33	38.2	8.5	**80**	70	99.5	11.5
28	36	43.3	9	**85**	72	105.5	13.5
30	37	43.3	9	**90**	75	111.5	13.5
32	37	43.3	9	**95**	75	116.5	13.5
33	48	53.5	11.5	**100**	85	119.5	13.5
35	48	53.5	11.5	**110**	89	132.5	17.5
38	48	60.5	11.5	**120**	97	142.5	17.5
40	48	60.5	11.5	**130**	108	153.5	17.5
42	48	60.5	11.5	**140**	110	164.5	18.5
43	48	60.5	11.5	**150**	120	174.5	18.5



Product Description

- 1,1-Seal face
- 1,2-Ring
- 1,3-Housing
- 1,4-Spring
- 1,5-Drive collar
- 1,6-Set Screws
- 2-Stationary Seat
- 3-O-Ring

Technical Features

- Single Seal
- Unbalanced
- Independent of rotation direction

Operating Range

- d1 = 20 - 100mm
- p = 12 bar
- t = -35 / 220 ˚C
- Vg = 20 m/sn

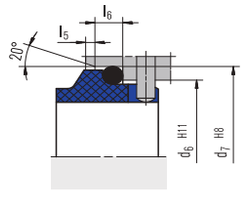
Material

- Rotary seal faces: Carbon, Silicon carbide, Tungsten Carbide
- Stationary seal faces: Silicon carbide, Ceramic,Tungsten Carbide, Chrome Nickel
- Elastomers : Viton (FKM), EPDM, Nitril (NBR) Silicon

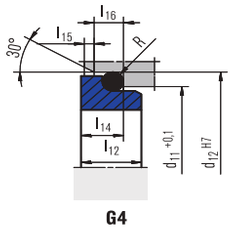
Stationary Seat Alternatives

- G-9 G-4

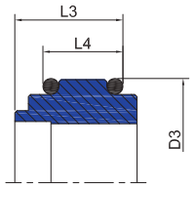
Seat alternatives



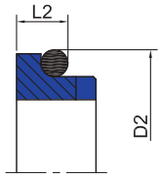
G9 (EN 12756)



G4



PS2

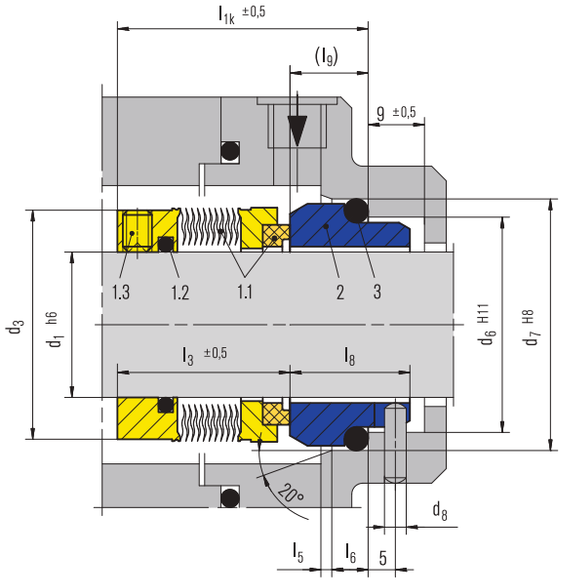


LS9

Dimensions in mm

	MS - 250			LS7		LS9		PS2		
d	d(in)	D	L	D1	L1	D2	L2	D3	L3	L4
20	0.750	34	41	35	13	33.32	6.2	42	23	18
22	-	36	41	37	13	34.93	6.2	44	23	18
24	0.875	38	43	39	13	-	-	46	23	18
25	1.000	39	43	40	13	39.67	7.2	47	23	18
28	1.125	42	45	43	13	42.88	9.2	50	23	18
30	-	44	45	45	13	44.45	9.2	52	23	18
32	1.250	46	45	48	13	46.02	9.2	54	23	18
33	-	47	45	48	13	46.02	9.2	55	23	18
35	1.375	49	49	50	13	49.20	9.2	57	23	18
38	1.500	54	53	56	13	52.37	9.2	64	25	20
40	-	56	55	58	13	53.98	9.2	66	25	20
42	-	58	55	61	13	55.58	9.2	69	25	20
43	1.625	59	55	61	13	55.58	9.2	69	25	20
45	1.750	61	55	63	13	58.72	9.2	71	25	20
48	1.875	64	55	66	13	63.50	9.2	74	25	20
50	2.000	66	60	70	13	65.07	9.2	76	25	20
53	2.125	69	61	73	13	66.68	9.2	79	25	20
55	-	71	61	75	13	69.85	9.2	81	25	20

	MS - 250			LS7		LS9		PS2		
d	d(in)	D	L	D1	L1	D2	L2	D3	L3	L4
58	2.250	76	63	78	16	7320	9.2	89	28	28
60	2.375	78	63	80	16	76.20	9.2	91	28	22
63	2.500	81	63	84	16	79.38	9.2	94	28	22
65	-	84	67	85	16	80.98	9.2	96	28	22
-	2.625	86	67	-	-	-	-	-	-	-
68	-	87	67	90	16	82.55	9.2	99	30	24
70	2.750	90	68	92	16	85.73	9.2	101	30	24
-	2.875	93	72	-	-	-	-	-	-	-
75	3.000	95	72	97	16	90.47	9.2	110	30	24
80	3.125	100	72	105	16	98.43	9.2	115	31	25
-	3.250	103	77	-	-	-	-	-	-	-
85	3.375	107	77	110	16	104.77	9.2	120	31	25
90	3.500	112	77	115	16	109.52	9.2	125	31	25
-	3.625	114	77	-	-	-	-	-	-	-
95	3.750	119	82	120	16	114.30	9.2	130	31	25
-	3.875	120	82	-	-	-	-	-	-	-
100	4.000	124	82	125	16	119.07	9.2	135	31	25



Product Description

- 1,1-Seal face and metal bellows
- 1,2-O-Ring
- 1,3-Set Screws
- 2-Stationary Seat
- 3-O-Ring

Technical Features

- Single Seal
- Balanced
- Metal bellows Independent of rotation direction

Operating Range

- d1 = 16 - 100mm
- p = 25 bar
- t = -40 220˚C
- Vg = 20 m/sn

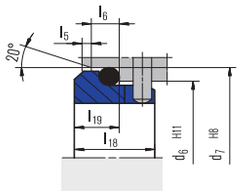
Material

- Rotary seal faces: Carbon, Silicon carbide, Tungsten Carbide
- Stationary seal faces: Chrome Nickel, Silicon carbide, Ceramic,Tungsten Carbide,
- Elastomers : Viton (FKM), EPDM,

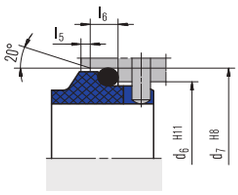
Stationary Seat Alternatives

- G-16 G-9 G-4 G-6

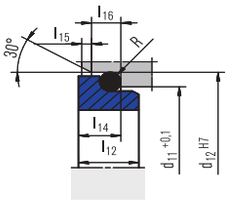
Seat alternatives



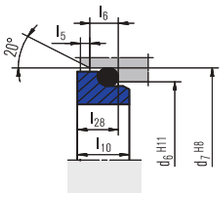
G16 (EN 12756, but l_{1k} is shorter than specified)



G9 (EN 12756)



G4

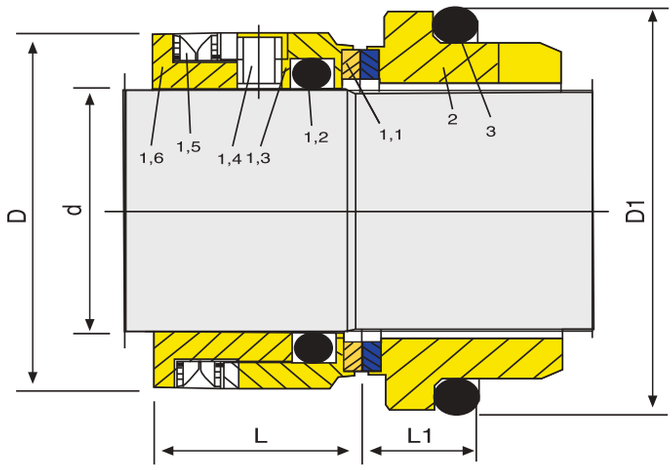


G6 (EN 12756)

Dimensions in mm

d_1	d_3	d_6	d_7	d_8	d_s	l_{1K}	l_3	l_5	l_6	l_8	l_9	l_{18}	l_{19}	b	s
16	30.0	23	27	3	38	42.5*	32.5	1.5	4	17.5	10.0	–	–	1.6	9.0
18	32.0	27	33	3	39	42.0	30.5	2.0	5	14.0	11.5	15.0	7.0	1.6	10.0
20	33.5	29	35	3	41	42.0	30.5	2.0	5	14.0	11.5	15.0	7.0	1.6	10.0
22	36.5	31	37	3	44	37.5	30.5	2.0	5	14.0	11.5	15.0	7.0	1.6	10.0
24	39.0	33	39	3	47	40.0	28.5	2.0	5	19.5	11.5	15.0	7.0	1.6	8.2
25	39.6	34	40	3	48	40.0	28.5	2.0	5	19.5	11.5	15.0	7.0	1.6	8.5
28	42.8	37	43	3	51	42.5	31.0	2.0	5	19.5	11.5	15.0	7.0	1.6	9.0
30	45.0	39	45	3	53	42.5	31.0	2.0	5	19.5	11.5	15.0	7.0	1.6	8.5
32	46.0	42	48	3	55	42.5	31.0	2.0	5	19.5	11.5	15.0	7.0	1.6	9.2
33	48.0	42	48	3	56	42.5	31.0	2.0	5	19.5	11.5	15.0	7.0	1.6	9.2
35	49.2	44	50	3	58	42.5	31.0	2.0	5	19.5	11.5	15.0	7.0	1.6	9.5
38	52.3	49	56	4	61	45.0	31.0	2.0	6	22.0	14.0	16.0	8.0	1.6	9.2
40	55.5	51	58	4	64	45.0	31.0	2.0	6	22.0	14.0	16.0	8.0	1.6	9.2
43	57.5	54	61	4	67	45.0	31.0	2.0	6	22.0	14.0	16.0	8.0	1.6	9.2
45	58.7	56	63	4	69	45.0	31.0	2.0	6	22.0	14.0	16.0	8.0	1.6	9.5
48	61.9	59	66	4	72	45.0	31.0	2.0	6	22.0	14.0	16.0	8.0	1.6	9.2
50	65.0	62	70	4	74	47.5	32.5	2.5	6	23.0	15.0	17.0	9.5	1.6	10.5
53	68.2	65	73	4	77	47.5	32.5	2.5	6	23.0	15.0	17.0	9.5	1.6	10.5
55	70.0	67	75	4	80	47.5	32.5	2.5	6	23.0	15.0	17.0	9.5	1.6	10.0
58	71.7	70	78	4	83	52.5	37.5	2.5	6	23.0	15.0	18.0	10.5	3.0	14.0
60	74.6	72	80	4	85	52.5	37.5	2.5	6	23.0	15.0	18.0	10.5	3.0	14.0
63	79.0	75	83	4	88	52.5	37.5	2.5	6	23.0	15.0	18.0	10.5	3.0	14.0
65	84.1	77	85	4	95	52.5	37.5	2.5	6	23.0	15.0	18.0	10.5	3.0	14.0
68	87.3	81	90	4	96	52.5	34.5	2.5	7	26.0	18.0	18.5	11.0	1.6	10.0
70	87.3	83	92	4	96	60.0	42.0	2.5	7	26.0	18.0	19.0	11.5	3.0	17.0
75	95.0	88	97	4	104	60.0	42.0	2.5	7	26.0	18.0	19.0	11.5	3.0	16.0
80	98.4	95	105	4	109	60.0	41.8	3.0	7	26.2	18.2	19.0	11.5	3.0	16.0
85	104.7	100	110	4	114	60.0	41.8	3.0	7	26.2	18.2	19.0	11.5	3.0	16.0
90	111.0	105	115	4	119	65.0	46.8	3.0	7	26.2	18.2	20.5	13.0	3.0	21.0
95	114.0	110	120	4	124	65.0	47.8	3.0	7	25.2	17.2	20.5	13.0	3.0	21.0
100	117.4	115	125	4	129	65.0	47.8	3.0	7	25.2	17.2	20.5	13.0	3.0	20.0

* Installation length is longer than l_{1k} specified by EN 12756



Product Description	Technical Features	Operating Range	Material
▶ 1,1-Seal face ▶ 1,2-O-Ring ▶ 1,3-Housing ▶ 1,4-Set screws ▶ 1,5-Spring ▶ 1,6-Drive collar ▶ 2-Stationary Seat ▶ 3-L-Ring	▶ Single seal ▶ Balanced ▶ Rubber bellows ▶ Independent of rotation direction	▶ d1 = 10 - 100mm ▶ p = 12 bar ▶ t = -35 / 220 ˚C ▶ Vg = 15 m/sn	▶ Rotary seal faces: Carbon, Silicon carbide, Tungsten Carbide, Chrome Nickel ▶ Stationary seal faces: Silicon carbide, Ceramic,Tungsten Carbide, Chrome Nickel ▶ Elastomers : Viton (FKM), EPDM, Nitril (NBR)

Stationary Seat Alternatives:

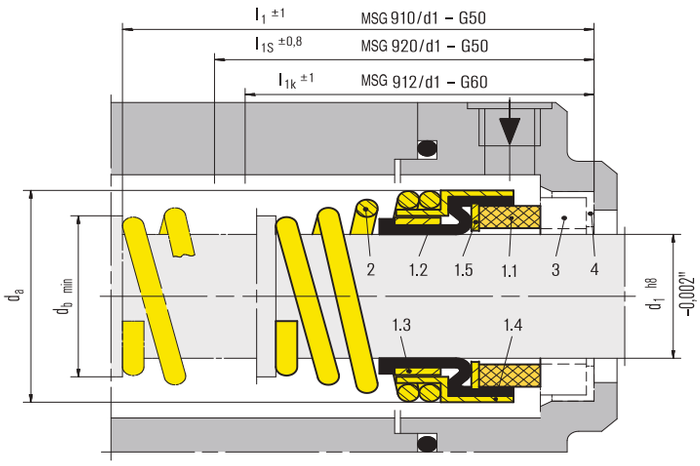
▶ Standard seats

Seat alternatives

★ STANDARD SEATS

Dimensions in mm

d	D	D1	L	L1	d	D	D1	L	L1
10	21	18.1	18.0	5.5	**40**	55	60.5	21.1	11.5
12	23	20.6	18.0	5.5	**43**	60	60.5	21.1	11.5
14	25	23.1	18.0	6.0	**45**	60	65.5	21.1	11.5
15	26	26.9	19.1	7.0	**48**	65	65.5	21.1	11.5
16	29	26.9	19.1	7.0	**50**	65	72.5	21.1	11.5
18	29	30.9	19.1	8.0	**55**	74	72.5	22.1	11.5
20	32	30.9	19.1	8.0	**60**	79	79.3	25.8	11.5
22	35	35.4	19.1	8.0	**65**	87	84.5	25.8	11.5
24	37	35.4	19.1	8.0	**70**	93	89.5	25.8	11.5
25	41	38.2	19.1	8.5	**75**	98	94.5	25.8	11.5
28	41	43.3	19.1	9.0	**80**	102	99.5	25.8	11.5
30	47	43.3	19.1	9.0	**85**	108	105.5	25.8	13.5
32	47	43.3	19.1	9.0	**90**	113	111.5	25.8	13.5
33	48	53.5	19.1	11.5	**95**	118	116.5	25.8	13.5
35	49	53.5	19.1	11.5	**100**	123	119.5	25.8	13.5
38	53	60.5	21.1	11.5					



Product Description

- 1,1-Seal Face
- 1,2-Bellows
- 1,3-Drive Collar
- 1.4-L ring
- 2-Spring
- 3-Seat
- 4-Rubber Cup

Technical Features

- Single Seal
- Unbalanced
- Spring
- Dependent of rotation direction

Operating Range

- d1 = 10 - 100mm
- p = 12 bar
- t = -20 / 140 ˚C
- Vg = 10 m/sn

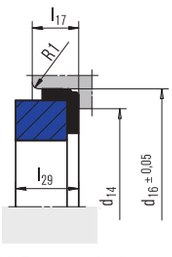
Material

- Rotary seal faces: Silicon carbide, Tungsten Carbide, Carbon
- Stationary seal faces: Silicon carbide, Ceramic,Tungsten Carbide, Chrome Nickel
- Elastomers : Viton (FKM), EPDM, Nitril (NBR) Silicon

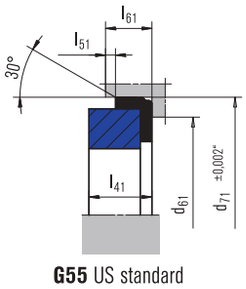
Stationary Seat Alternatives

- G-50 G-55 G-60

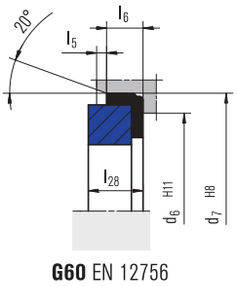
Seat alternatives



G50 Euro standard



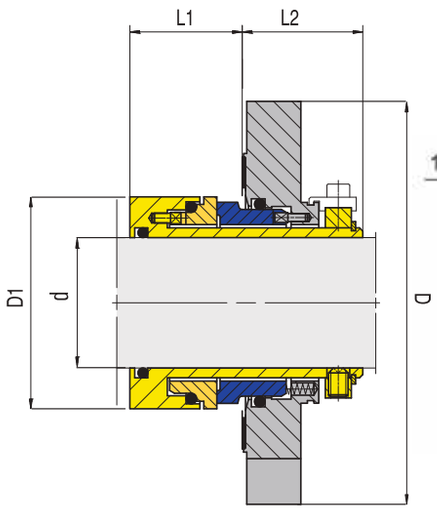
G55 US standard

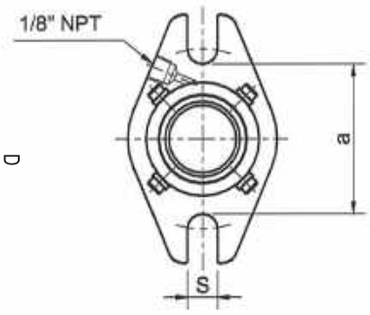


G60 EN 12756

Dimensions in mm

d1	d6	d7	d14	d16	da	db	l1	l1k	l1N	l1S	l5	l6	l17	l28	l29
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





Product Description

- Single cartridge seal
- Balanced
- Fixed multiple springs
- Isolated springs from the environment
- Rotary seal faces
- Depending on demand, the gas chamber / input cooling capability is available

Technical Features

- d1 = 24 - 100mm, 1.000 - 4.000”
- p = 20 bar
- t = -35 160 ˚C
- Vg = 30 m/sn

Operating Range

- Rotary seal faces: Carbon, Silicon carbide, Tungsten Carbide,
- Stationary seal faces: , Silicon carbide, Tungsten Carbide,
- Elastomers :EPDM,FPM,FEPM, HNBR
- Springs : AISI 316
- Othermetal parts: AISI 304 , 316

Material

Stationary Seat Alternatives

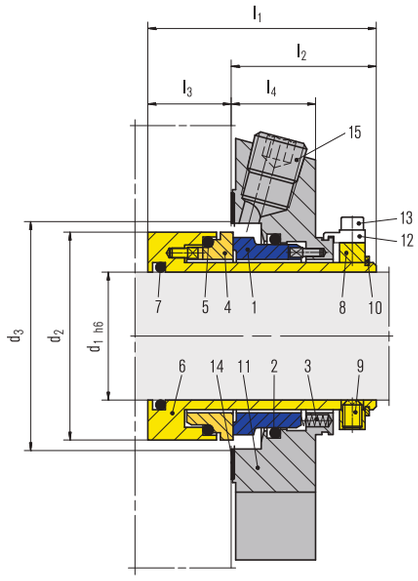
- Standart seats

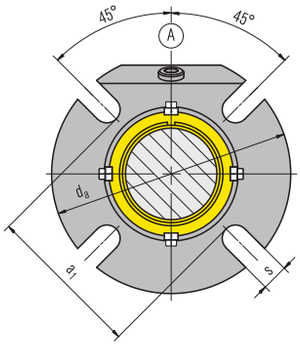
Seat alternatives

★ STANDARD SEATS

Dimensions in mm

d	d (in)	D	D1	L1	L2	a	S
24	-	104	43.5	19	38	62	12.5
25	1.000	104	43.5	19	38	62	12.5
28	1.125	104	46.5	19	38	62	12.5
30	-	104	48.5	19	38	65	12.5
32	1.250	104	50.0	19	38	67	12.5
33	-	104	50.0	19	38	67	12.5
35	1.375	115	53.5	19	38	70	12.5
38	1.500	125	56.5	19	38	75	14.7
40	-	125	58.5	19	38	75	14.7
42	1.625	133	60.5	19	38	80	14.7
43	-	133	61.5	19	38	80	14.7
45	1.750	140	63.5	19	38	81	14.7
48	1.875	140	66.5	19	38	84	14.7
50	2.000	140	68.5	19	38	87	14.7
53	2.125	150	71.5	19	38	90	17.5
55	-	150	73.5	19	38	92	17.5
58	2.250	155	76.6	19	38	95	17.5
60	2.375	160	78.5	19	38	100	17.5
63	2.500	165	81.5	19	38	103	17.5
65	-	165	83.5	19	38	105	17.5
-	2.625	170	85.5	19	38	110	17.5
68	-	170	86.5	19	38	110	17.5
70	2.750	180	88.5	19	38	120	17.5
-	2.875	190	98.0	26	36	123	17.5
75	3.000	190	100.0	26	36	125	17.5
80	3.125	190	105.0	26	36	130	17.5
-	3.250	220	108.0	26	36	133	20.5
85	3.375	220	110.0	26	36	135	20.5
90	3.500	220	115.0	26	36	140	20.5
-	3.625	220	117.0	26	36	142	20.5
95	3.750	220	120.0	26	36	145	20.5
100	4.000	220	125.0	26	36	150	20.5





Product Description

- 1-Stationary seal face
- 2+5+7-O-Ring
- 3-Spring
- 4-Rotary seal face
- 6-Bushes
- 9-Set screws
- 11-Cover
- 14-Gasket

Technical Features

- Single seal cartridge
- Balanced
- Cooled with liquid
- Independent of rotation direction

Operating Range

- d1 = 25 - 100mm
- p = 25 bar
- t = -40 220 ˚C
- Vg = 16 m/sn

Material

- Rotary seal faces: Carbon, Silicon carbide, Tungsten Carbide, Chrome Nickel, Ceramic.
- Stationary seal faces: Carbon, Silicon carbide, Tungsten Carbide, Chrome Nickel, Ceramic.
- Elastomers : Viton (FKM), EPDM, Nitril (NBR)

Stationary Seat Alternatives:

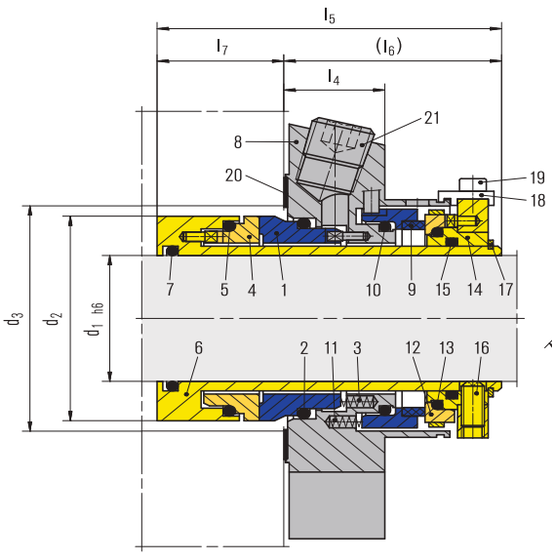
- Standard seats

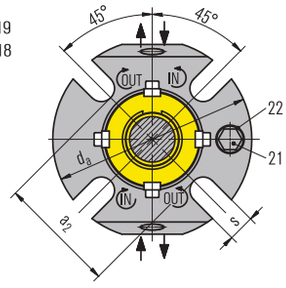
Seat alternatives

★ STANDARD SEATS

Dimensions in mm

d_1	d_2	$d_{3min.}$	$d_{3max.}$	l_1	l_2	l_3	l_4	l_{12}	l_{13}	l_{14}	l_{15}	l_{16}	l_{17}	a_1	d_a	s
25	43.0	44.0	51.5	67	42.4	24.6	25.4	35.0	32.0	17.5	79.5	53.4	26.1	62	105	13.2
28	46.0	47.0	52.0	67	42.4	24.6	25.4	35.0	32.0	17.5	79.5	53.4	26.1	62	105	13.2
30	48.0	49.0	56.0	67	42.4	24.6	25.4	35.0	32.0	17.5	79.5	53.4	26.1	65	105	13.2
32	49.8	51.0	57.0	67	42.4	24.6	25.4	35.0	32.0	17.5	79.5	53.4	26.1	67	108	13.2
33	49.8	51.0	57.0	67	42.4	24.6	25.4	35.0	32.0	17.5	79.5	53.4	26.1	67	108	13.2
35	53.0	54.0	61.5	67	42.4	24.6	25.4	35.0	32.0	17.5	79.5	53.4	26.1	70	113	13.2
38	56.0	57.0	66.0	67	42.4	24.6	25.4	35.0	32.0	17.5	79.5	53.4	26.1	75	123	13.2
40	58.0	59.0	68.0	67	42.4	24.6	25.4	35.0	32.0	17.5	79.5	53.4	26.1	75	123	14.2
42	60.5	61.5	69.5	67	42.4	24.6	25.4	35.0	32.0	17.5	79.5	53.4	26.1	80	133	14.2
43	60.5	61.5	70.5	67	42.4	24.6	25.4	35.0	32.0	17.5	79.5	53.4	26.1	80	133	14.2
45	62.5	64.0	73.0	67	42.4	24.6	25.4	35.0	32.0	17.5	79.5	53.4	26.1	81	138	14.2
48	65.6	67.0	75.0	67	42.4	24.6	25.4	35.0	32.0	17.5	79.5	53.4	26.1	84	138	14.2
50	68.0	69.0	78.0	67	42.4	24.6	25.4	35.0	32.0	17.5	79.5	53.4	26.1	87	148	14.2
53	72.0	73.0	87.0	67	42.4	24.6	25.4	35.0	32.0	17.5	79.5	53.4	26.1	97	148	18.0
55	73.0	74.0	83.0	67	42.4	24.6	25.4	35.0	32.0	17.5	79.5	53.4	26.1	90	148	18.0
60	78.0	79.0	91.0	67	42.4	24.6	25.4	35.0	32.0	17.5	79.5	53.4	26.1	102	157	18.0
65	84.8	85.7	98.5	67	42.4	24.6	25.4	35.0	32.0	17.5	79.5	53.4	26.1	109	163	18.0
70	93.0	95.0	108.0	67	42.4	24.6	25.4	35.0	32.0	17.5	79.5	53.4	26.1	118	178	18.0
75	100.0	101.6	118.0	84	57.4	26.6	28.0	46.1	37.9	22.0	98.0	63.9	34.1	129	190	18.0
80	106.4	108.0	124.0	84	57.4	26.6	28.0	46.1	37.9	22.0	98.0	63.9	34.1	135	195	18.0
85	109.5	111.1	128.0	84	57.4	26.6	28.0	46.1	37.9	22.0	98.0	63.9	34.1	139	198	22.0
90	115.9	117.5	135.0	84	57.4	26.6	28.0	46.1	37.9	22.0	98.0	63.9	34.1	145	205	22.0
95	119.1	120.7	138.0	84	57.4	26.6	28.0	46.1	37.9	22.0	98.0	63.9	34.1	148	208	22.0
100	125.4	127.0	144.0	84	57.4	26.6	28.0	46.1	37.9	22.0	98.0	63.9	34.1	154	218	22.0





Product Description

- 1+12-Stationary seal face
- 2+5+7+10+13+15-O-Ring
- 3+11-Spring
- 4+9-Rotary seal face
- 6-Bushes
- 8-Cover
- 14-Drive Collar
- 16-Set screws
- 17-Snap ring
- 20- Gasket

Technical Features

- Single seal cartridge
- Balanced
- Cooled with liquid
- Independent of rotation direction

Operating Range

- d1 = 25 - 100mm
- p = 25 bar
- t = -40 220 °C
- Vg = 16 m/sn

Stationary Seat Alternatives:

- Standard seats

Material

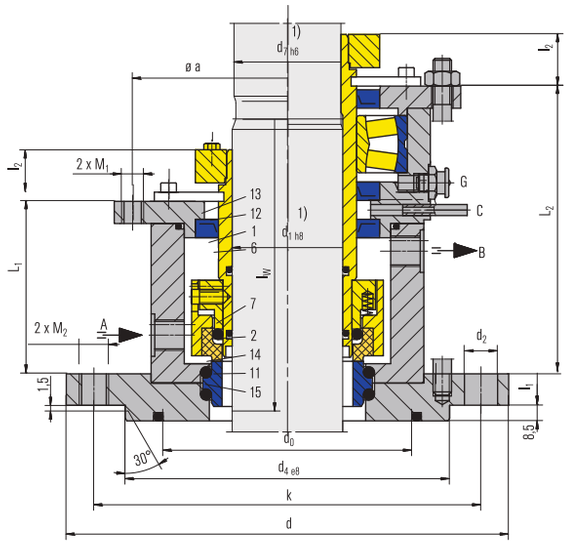
- Rotary seal faces: Carbon, Silicon carbide, Tungsten Carbide, Chrome Nickel Ceramic.
- Stationary seal faces: Carbon, Silicon carbide, Tungsten Carbide, Chrome Nickel
- Elastomers : Viton (FKM), EPDM, Nitril (NBR)

Seat alternatives

★ STANDARD SEATS

Dimensions in mm

d_1	d_2	$d_{3min.}$	$d_{3max.}$	l_4	l_5	l_6	l_7	a_2	d_a	s
25	43.0	44.0	51.5	25.4	86.5	53.4	33.1	62	105	13.2
28	46.0	47.0	52.0	25.4	86.5	53.4	33.1	61	105	13.2
30	48.0	49.0	56.0	25.4	86.5	53.4	33.1	67	105	13.2
32	49.8	51.0	57.0	25.4	86.5	53.4	33.1	70	108	13.2
33	49.8	51.0	57.0	25.4	86.5	53.4	33.1	70	108	13.2
35	53.0	54.0	61.5	25.4	86.5	53.4	33.1	72	113	13.2
38	56.0	57.0	66.0	25.4	86.5	53.4	33.1	75	123	13.2
40	58.0	59.0	68.0	25.4	86.5	53.4	33.1	77	123	14.2
42	60.5	61.5	69.5	25.4	86.5	53.4	33.1	80	133	14.2
43	60.5	61.5	70.5	25.4	86.5	53.4	33.1	80	133	14.2
45	62.5	64.0	73.0	25.4	86.5	53.4	33.1	82	138	14.2
48	65.6	67.0	75.0	25.4	86.5	53.4	33.1	85	138	14.2
50	68.0	69.0	78.0	25.4	86.5	53.4	33.1	87	148	14.2
53	72.0	73.0	87.0	25.4	86.5	53.4	33.1	97	148	18.0
55	73.0	74.0	83.0	25.4	86.5	53.4	33.1	92	148	18.0
60	78.0	79.0	91.0	25.4	86.5	53.4	33.1	102	157	18.0
65	84.8	85.7	98.5	25.4	86.5	53.4	33.1	109	163	18.0
70	93.0	95.0	108.0	25.4	86.5	53.4	33.1	118	178	18.0
75	100.0	101.6	118.0	28.0	108.0	63.9	44.1	129	190	18.0
80	106.4	108.0	124.0	28.0	108.0	63.9	44.1	135	195	18.0
85	109.5	111.1	128.0	28.0	108.0	63.9	44.1	139	198	22.0
90	115.9	117.5	135.0	28.0	108.0	63.9	44.1	145	205	22.0
95	119.1	120.7	138.0	28.0	108.0	63.9	44.1	148	208	22.0
100	125.4	127.0	144.0	28.0	108.0	63.9	44.1	154	218	22.0



Product Description

- ▶ 2-Seal face
- ▶ 4-Housing
- ▶ 5- Spring
- ▶ 6-O-Ring
- ▶ 8-Set screws
- ▶ 11-Stationary seat
- ▶ 14-O-Ring
- ▶ 15-O-Ring
- ▶ 34-Shaft seal

Technical Features

- ▶ Single seal
- ▶ Unbalanced
- ▶ Awailable with or without bearings
- ▶ Independent of rotation direction

Operating Range

- ▶ d1 = 40 - 220mm
- ▶ p = 6 bar
- ▶ t = -30 220 ˚C
- ▶ Vg = 5 m/sn

Material

- ▶ Rotary seal faces: Carbon, Silicon carbide, Tungsten Carbide, Chrome Nickel, Ceramic.
- ▶ Stationary seal faces: Carbon, Silicon carbide, Tungsten Carbide, Chrome Nickel, Ceramic.
- ▶ Elastomers : Viton (FKM), EPDM, Nitril (NBR)

Stationary Seat Alternatives:

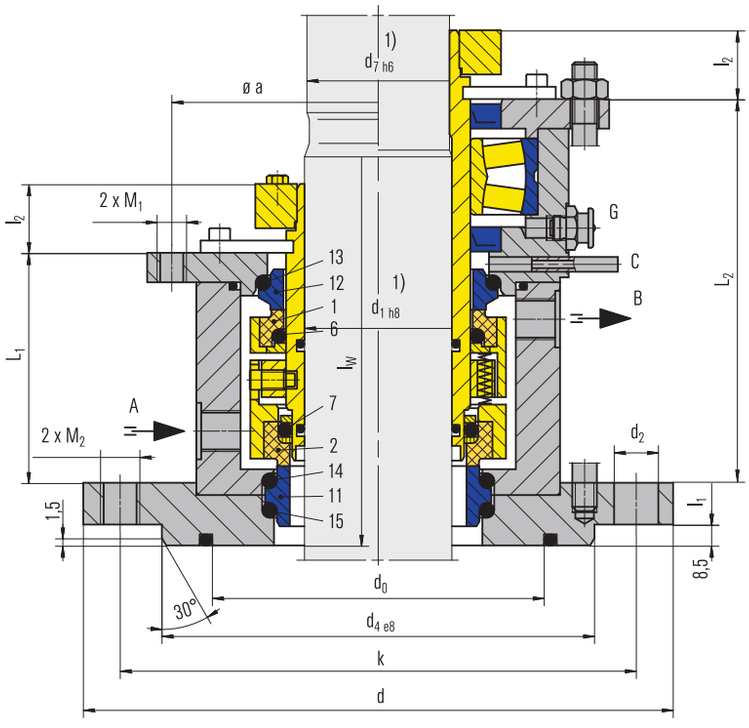
- ▶ Standard seats

Seat alternatives

★ STANDARD SEATS

Dimensions in mm

d_1 1)	d_7 1)	d	n x d_2	d_4	d_0	k	L_1	L_2	L_W 2)	l_1	l_2	a	M_1	M_2	A. B
40	38	175	4 x 18	110	90	145	87	136	143	15	28	122	M12	M16	G3/8
50	48	240	8 x 18	176	135	210	89	149	148	17	28	157	M12	M16	G3/8
60	58	240	8 x 18	176	135	210	93.5	156	158	17	28	168	M12	M16	G3/8
80	78	275	8 x 22	204	155	240	104.5	189	168	20	34	203	M16	M20	G1/2
100	98	305	8 x 22	234	190	270	109	190	178	20	34	228	M16	M20	G1/2
125	120	330	8 x 22	260	215	295	110	205	203	20	40	268	M20	M20	G1/2
140	135	395	12 x 22	313	250	350	124	222	208	20	40	285	M20	M20	G1/2
160	150	395	12 x 22	313	265	350	127.5	219.5	213	25	40	297	M20	M20	G1/2
180	170	445	12 x 22	364	310	400	132.5	230	233	25	45	332	M24	M20	G1/2
200	190	445	12 x 22	364	310	400	137.5	237.5	243	25	45	352	M24	M20	G1/2
220	210	505	16 x 22	422	340	460	149.5	249.5	263	25	50	381	M24	M20	G1/2



Product Description

- 1+2-Seal face
- 4-Housing
- 5- Spring
- 6+7-O-Ring
- 8-Set screws
- 11+12-Stationary seat
- 13+14+15 -O-Ring

Technical Features

- Double seal
- Unbalanced
- Awailable with or without bearings
- Independent of rotation direction

Operating Range

- d1 = 40 - 220mm
- p = 16 bar
- t = -30 220 °C
- Vg = 5 m/sn

Material

- Rotary seal faces: Carbon, Silicon carbide, Tungsten Carbide, Chrome Nickel, Ceramic.
- Stationary seal faces: Carbon, Silicon carbide, Tungsten Carbide, Chrome Nickel, Ceramic.
- Elastomers : Viton (FKM), EPDM, Nitril (NBR)

Stationary Seat Alternatives:

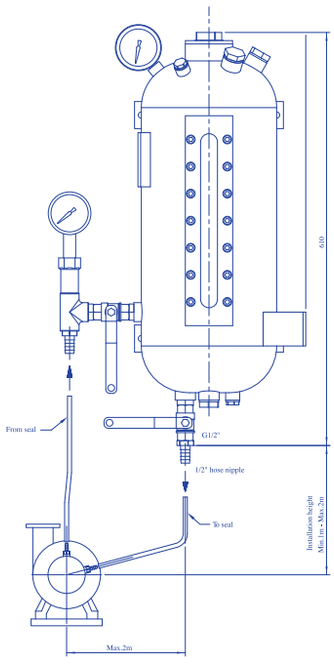
Standard seats

Seat alternatives

★ STANDARD SEATS

Dimensions in mm

d_1 1)	d_7 1)	d	n x d_2	d_4	d_0	k	L_1	L_2	L_W 2)	l_1	l_2	a	M_1	M_2	A. B
40	38	175	4 x 18	110	90	145	87	136	143	15	28	122	M12	M16	G3/8
50	48	240	8 x 18	176	135	210	89	149	148	17	28	157	M12	M16	G3/8
60	58	240	8 x 18	176	135	210	93.5	156	158	17	28	168	M12	M16	G3/8
80	78	275	8 x 22	204	155	240	104.5	189	168	20	34	203	M16	M20	G1/2
100	98	305	8 x 22	234	190	270	109	190	178	20	34	228	M16	M20	G1/2
125	120	330	8 x 22	260	215	295	110	205	203	20	40	268	M20	M20	G1/2
140	135	395	12 x 22	313	250	350	124	222	208	20	40	285	M20	M20	G1/2
160	150	395	12 x 22	313	265	350	127.5	219.5	213	25	40	297	M20	M20	G1/2
180	170	445	12 x 22	364	310	400	132.5	230	233	25	45	332	M24	M20	G1/2
200	190	445	12 x 22	364	310	400	137.5	237.5	243	25	45	352	M24	M20	G1/2
220	210	505	16 x 22	422	340	460	149.5	249.5	263	25	50	381	M24	M20	G1/2



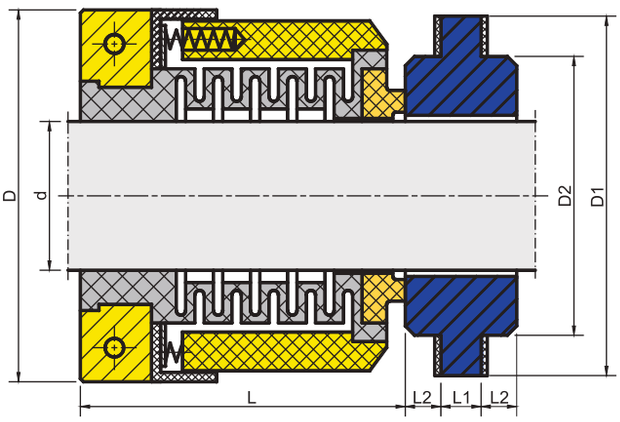
A thermosiphon vessel binds and balances pressure. The vessel is the main element of mechanical seal and its circulation system. The thermosiphon vessel is used for retaining the pressure and cooling fluid inside Cartex mechanical seal. When pressure occurs, it puts compressing air or nitrogen into balance vessel and increases the internal pressure about 0.5-1 bar thus it guarantees the Cartex seal to work normally.

Dimensions in mm

Type	Pressure(Bar)	Volume(L)	d	L1	H	Joints	Material	Media
MGSL 1.4 - 25B	25	4	ø 133	175	470	G3 / 8	SUS 304	Water,Alcohol, Diesel oil, Organic Oil and etc.
MGSL 1.6 - 25B	25	6	ø 159	260	690	G1 / 2	SUS 316	

MS 136 / 186

MS JCS2 / MS SE2



Technical Features

- Single seal
- Multiple springs
- Bi-directional
- PTFE bellows
- Externally mounted
- Replaceable seal face

Operating Range

- d1 = 25 - 65 mm
- p = 10 bar
- t = -40 / 120 ˚C
- Vg = 16 m/sn

Material

- Rotary seal faces: Carbon, Silicon carbide, Tungsten Carbide, Chrome Nickel
- Stationary seal faces: Silicon carbide, Ceramic,Tungsten Carbide, Chrome Nickel
- Elastomers : Viton (FKM), EPDM, Nitril (NBR)

Stationary Seat Alternatives:

- Standard seats

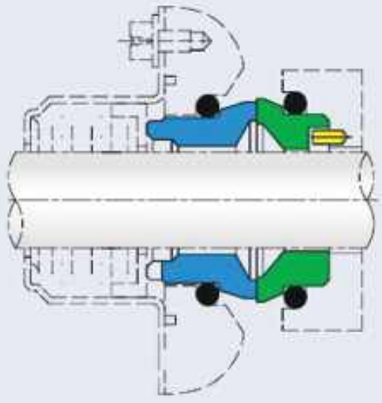
Seat alternatives

★ STANDARD SEATS

Dimensions in mm

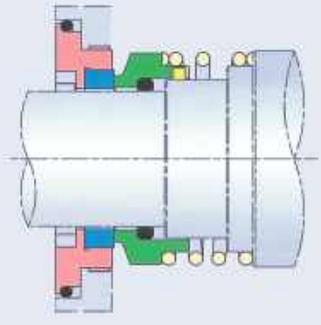
d	D	D1	D2	L	L1	L2
25	60	60	47	43.5	11	8.0
25.400	60	60	47	43.5	11	8.0
28.575	67	65	53	43.5	11	8.0
30	67	65	53	43.5	11	8.0
34.925	72	70	57	43.5	11	8.0
35	72	70	57	43.5	11	7.5
40	78	76	62	43.5	11	7.5
45	84	80	70	47.5	11	8.0
50	88	85	72	47.5	11	8.0
55	93	90	77	47.5	11	8.0
60	98	95	82	52.0	11	8.0
65	103	100	87	52.0	11	8.0

MS - 090



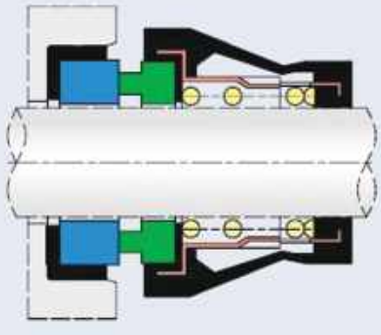
- APV W+(Size) 25, 35mm
  (For APV W+ pumps, size 25,35 mm)

MS - 0120



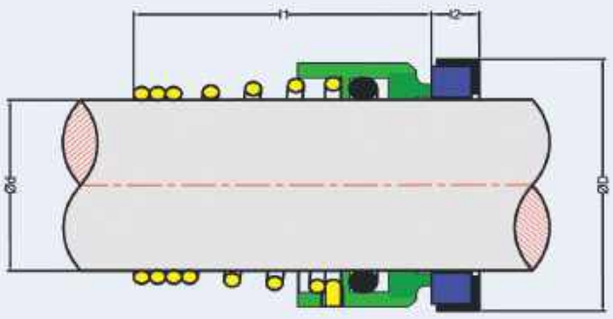
- CMIA, CMIB, CMIC, CIMD, EMIC, EMID, 22, 31,75, 42 mm
  (For CMIA, CMIB, CMIC, CIMD, EMIC and EMID Pumps size 22, 31,75, 42 mm)

MS - 0160



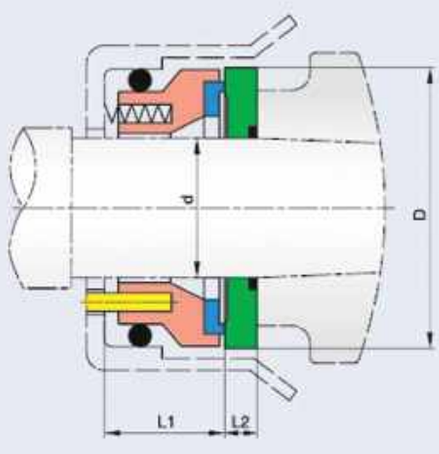
- Alfa Laval LKR, 30, 35 mm
  (Alfa Laval LKR, Agaitators size 30, 35 mm)

MS - 325



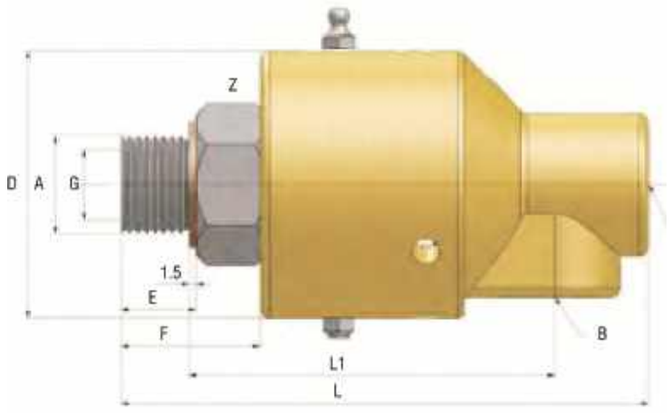
- (Size) 28mm, 38mm, 48mm
- KSB (For KSB pumps)

MS - 0180



- Inoxpa Prolac, (For Inoxpa Prolac pumps)
  (Multi-spring design)

Size (Inch)	d	D	L1	L2
0,625	15,875	44,5	26	10,5
1,000	25,400	53,5	26	10,0
1,500	38,100	74	31	15,5

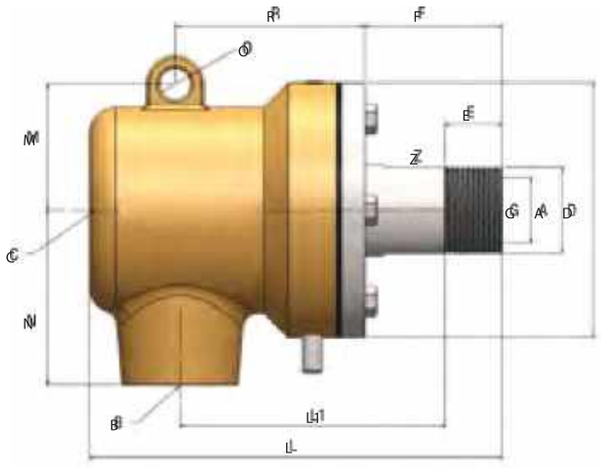


Technical Features

Max. Water Pressure		: 50bar	750psi
Max. Water Temperature		: 160°C	320°F
Max. Steam Pressure		: 1 bar	14 psi
Max. Steam Temperature		: 120°C	250°F
Max. Hot Oil Pressure		: 7 bar	100psi
Max. Hot Oil Temperature		: 160°C	320°F
Max. Speed	(1/4"-3/4")	: 3500 RPM	3500 min^{-1}
	(1")	: 3000 RPM	3000 min^{-1}
	(1 1/4" - 1 1/2")	: 2500 RPM	2500 min^{-1}
	(2")	: 750 RPM	750 min^{-1}

Avoid working with max. speed at max. pressure

SHAFT SIZE			B	C	D	E	F	G	L	L1	M	N	nxO	P	R	T	U	V	Z
A		THREAD TYPE																	
DN08	1/4"	1/4" BSPP	1/4" NPT	1/8" NPT	45	12	24.5	8	91.5	65	-	-	-	-	-	-	-	-	22
		1/4" BSPP	1/4" BSPP	1/8" BSPP															
DN10	3/8"	3/8" BSPP	3/8" NPT	1/4" NPT	45	12	24.5	9	91.5	65	-	-	-	-	-	-	-	-	22
		3/8" BSPP	3/8" BSPP	1/4" BSPP															
DN15	1/2"	1/2" BSPP	1/2" NPT	3/8" NPT	57	16	30	15	113	78	-	-	-	-	-	-	-	-	30
		1/2" BSPP	1/2" BSPP	3/8" BSPP															
		PLOT M20x1.5				16.5	34.75	15	117.75	77	-	-	-	-	-	-	5	22 g6	30
		QR				-	-	15	119	99	-	-	-	24	22	6	11	25	-
DN20	3/4"	3/4" BSPP	3/4" NPT	1/2" NPT	67	17	33.5	20	132.5	90.5	-	-	-	-	-	-	-	-	35
		3/4" BSPP	3/4" BSPP	1/2" BSPP															
		PLOT M27x1.5				15	37.5	20	136.5	89	-	-	-	-	-	-	6	28 g6	35
		M35x1.5				15	37.5	20	136.5	96.5	-	-	-	-	-	-	-	-	41
		QR				-	-	20	138	111.5	-	-	-	30	28	8	14	25	-
		FLANGED						20	136	109.5	75	55	4x9	30	-	8	12	25	
DN25	1"	1" BSPP	1" NPT	3/4" NPT	75	20	39.5	25	151.5	104.5	-	-	-	-	-	-	-	-	41
		1" BSPP	1" BSPP	3/4" BSPP							-	-	-	-	-	-	-	-	
		M35x1.5																	
		QR				-	-		150.75	122	-	-	-	35	33	8	14	24.75	-
		FLANGED							150	121	80	60	4x9	35	-	8	12	25.75	
DN32	1 1/4"	1 1/4" BSPP	1 1/4" NPT	1" NPT	88	26	53	32	190	131.5	-	-	-	-	-	-	-	-	50
		1 1/4" BSPP	1 1/4" BSPP	1" BSPP															
		QR				-	-	32	181	147	-	-	-	45	43	8	14	30	-
		FLANGED						32	179	145	100	75	4x11	45	-	8	12	30	
DN40	1 1/2"	1 1/2" BSPP	1 1/2" NPT	1 1/4" NPT	105	28	56	40	206.5	139.5	-	-	-	-	-	-	-	-	60
		1 1/2" BSPP	1 1/2" BSPP	1 1/4" BSPP							-	-	-	-	-	-	-	-	
		M50x1.5																	
		QR				-	-		197.5	157	-	-	-	50	48	10	17	30	-
		FLANGED							195.5	155	105	80	4x11	50	-	10	15	30	
DN50	2"	2" BSPP	2" NPT	1 1/2" NPT	115	30	62	50	238	159.5	-	-	-	-	-	-	-	-	70
		2" BSPP	2" BSPP	1 1/2" BSPP															
		QR				-	-		223	173	-	-	-	65	63	10	17	30	-
		FLANGED							221	171	130	100	4x11	65	-	10	15	30	



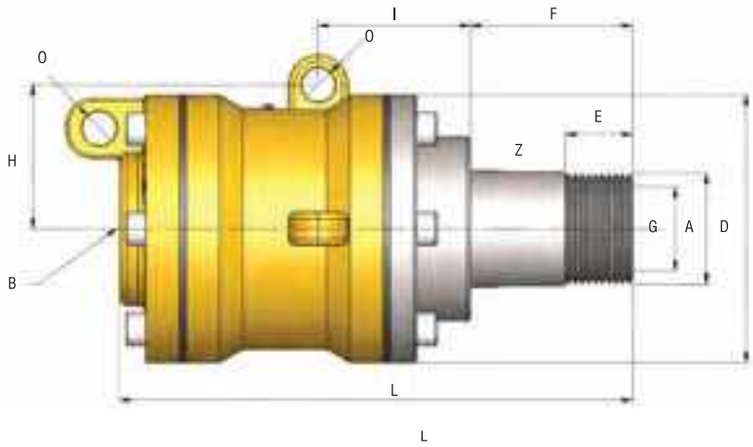
Technical Features

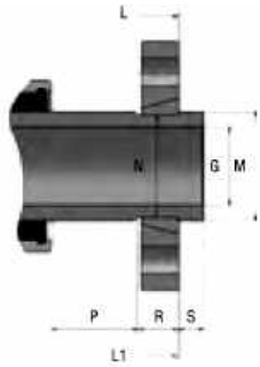
- Single and dual flow
- Self supported rotating joint
- Cast iron housing
- Stainless steel shaft
- Torque lugs on housing
- Seal wear indicator on shaft

Max. Steam Pressure	: 17 bar	250psi
Max. Steam Tempereture	: 200°C	400°F
Max. Hot Oil Pressure*	: 10 bar	150psi
Max. Hot Oil Temperature*	: 315°C	600°F
Max. Speed	: 400 RPM	400 min^{-1}

Avoid working with max. speed at max. pressure

SHAFT SIZE			B	C	D	E	F	G	H	I	L	L1	M	N	O	R	T	U	V	Z	WEIGHT kg (lb)
A		THREAD TYPE																			
DN15	1/2"	1/2" NPT RH	1/2" NPT	3/8" NPT	83	17	44	15	-	-	128	85	42.5	52.5	12	55.5	-	-	-	22	2.25 (4.60)
		1/2" NPT LH																			
		1/2" BSP RH	1/2" BSPP	3/8" BSPP																	
		1/2" BSP LH																			
		1/2" QR							24	22	123	97					6	11	27	-	
		1/2" QR/1							20.7	20	119	93					9.5	16	18		
DN20	3/4"	3/4" NPT RH	3/4" NPT	1/2" NPT	88.5	19	48	20	-	-	143	92,5	45	60	12	66	-	-	-	27	2.75 (5.6)
		3/4" NPT LH																			
		3/4" BSP RH	3/4" BSPP	1/2" BSPP																	
		3/4" BSP LH																			
		3/4" QR							30	28	135	104.5					8	13	27	-	
		3/4" QR/1							26	25	132	101					11.1	17	20		
DN25	1"	1" NPT RH	1" NPT	3/4" NPT	98	22	53	25	-	-	159	102	48.5	67	12	73	-	-	-	33	3.25 (6.64)
		1" NPT LH																			
		1" BSP RH	1" BSPP	3/4" BSPP																	
		1" BSP LH																			
		1" QR							35	33	151	116					8	13	32	-	
		1" QR/1							32.5	31	148	113					11.1	17	25		
DN32	1 1/4"	1 1/4" NPT RH	1 1/4" NPT	1" NPT	108	22	58	32	-	-	180.5	117	57	76	15	76.5	-	-	-	42	5 (10.2)
		1 1/4" NPT LH																			
		1 1/4" BSP RH	1 1/4" BSPP	1" BSPP																	
		1 1/4" BSP LH																			
		1 1/4" QR							45	43	172.5	129.5					8	13	37	-	
		1 1/4" QR/1							41.3	39.5	168	125					12.7	19	26		
DN40	1 1/2"	1 1/2" NPT RH	1 1/2" NPT	1 1/4" NPT	138	22	67	40	-	-	207	139	69.5	89	15	98.5	-	-	-	48	6.5 (13.2)
		1 1/2" NPT LH																			
		1 1/2" BSP RH	1 1/2" BSPP	1 1/4" BSPP																	
		1 1/2" BSP LH																			
		1 1/2" QR							50	48	197	152					10	16	41	-	
		1 1/2" QR/1							47.6	45	194	149					12.7	22	32.5		
DN50	2"	2" NPT RH	2" NPT	1 1/2" NPT	158	27	72	50	-	-	237	152.5	81	102	16	114	-	-	-	62	12 (26.5)
		2" NPT LH																			
		2" BSP RH	2" BSPP	1 1/2" BSPP																	
		2" BSP LH																			
		2" QR							65	63	227	170					10	16	46	-	
		2" QR/1							59.1	57	221	164					15.9	22	34		





Technical Features

- Self supported rotating joint
- Single and dual flow
- Cast iron housing
- Nickel plated steel shaft
- Torque lugs on housing
- Seal wear indicator on shaft

Max. Steam Pressure	: 17 bar	250psi
Max. Steam Temperature	: 200°C	400°F
Max. Hot Oil Pressure	: 10 bar	150psi
Max. Hot Oil Temperature	: 315°C	600°F
Max. Speed	: 600 RPM	600 min^{-1}

Avoid working with max. speed at max. pressure

A			MODEL	B	D	E	F	G	H	I	L	M	N	O	P	R	S	Z	WEIGHT kg (lb)
SIZE		THREAD TYPE																	
DN15	1/2"	THREADED	905	1/2"	68	18	40	15	36	44.5	134	-	-	10	-	-	-	21	1.6 (3.28)
		QR									127	24	22		23	11	6	-	
		QR/1									123	20.7	20		14.5	16	9.5		
DN20	3/4"	THREADED	907	3/4"	74	20	46.5	20	40	44.5	141.5	-	-	10	-	-	-	28	2 (4.1)
		QR									133.5	30	28		25.5	13	8	-	
		QR/1									128	26	24.5		18.4	17	11.1		
DN25	1"	THREADED	910	1"	80	20	48.5	25	43	46.5	151.5	-	-	10	-	-	-	34	2.5 (5.12)
		QR									143.5	35	33		27.5	13	8	-	
		QR/1									140.4	32.5	31		20.4	17	11.1		
DN32	1 1/4"	THREADED	912	1 1/4"	103	23	50	32	56	52	167	-	-	14	-	-	-	43	4 (8.2)
		QR									159	45	43		29	13	8	-	
		QR/1									154.5	41.3	39.5		18.3	19	12.7		
DN40	1 1/2"	THREADED	915	1 1/2"	112	23	55	40	62	53	180	-	-	18	-	-	-	52	4.6 (9.43)
		QR									170	50	48		29	16	10	-	
		QR/1									167	47.6	45		20.3	22	12.7		
DN50	2"	THREADED	920	2"	124	25	56	50	68	55.5	200	-	-	18	-	-	-	62	6.2 (12.81)
		QR									190.2	65	63		30.2	16	9.8	-	
		QR/1									183	59	57		18.1	22	15.9		
DN65	2 1/2"	THREADED	925	2 1/2"	159	25	67.5	62	84.5	68	229.5	-	-	22	-	-	-	80	15 (30.75)
		QR									219.5	85	82		41.5	16	10	-	
		QR/1									225.5	72.2	69		20	28.5	19		
DN80	3"	THREADED	930	3"	186	30	77.5	73	99	77	263	-	-	28	-	-	-	91	20 (41)
		QR									-	-	-		-	-	-	-	
		QR/1									241	87.3	84		23.3	32	22.2		
DN100	4"	THREADED	940	4"	226	35	129	98	118	86	353	-	-	28	-	-	-	118	37.5 (76.87)
		QR									341	114	110		95	22	12	-	
		QR/1									328	112.70	109.5		65.6	38	25.40		
DN125	5"	THREADED	950	5"	265	35	130	122	137	93	376	-	-	28	-	-	-	146	48 (98.4)
		QR									341	150	145		56	39	35	-	
		QR/1									344	139.2	136		56	42	32		

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