



# MECHANICAL SEALS

## Product Overview





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## TAPERED SPRING SEALS

		
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## PARALLEL SPRING SEALS - ELASTOMER BELLOWS TYPE

		
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## PARALLEL SPRING SEALS - ELASTOMER DIAPHRAGM TYPE

			
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# PHOTO INDEX

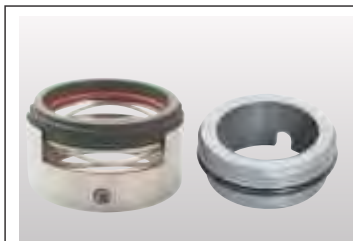
## PARALLEL SPRING SEALS - PTFE BELLOWS TYPE



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## WAVE SPRING SEALS



TYPE 7 & 7B

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TYPE 92

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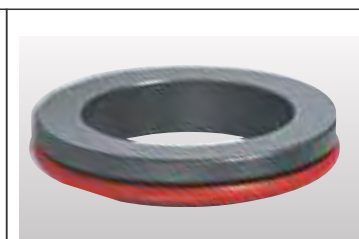
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## STATIONERY SEATS



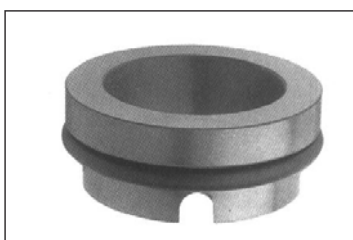
TYPE A, B, C, D

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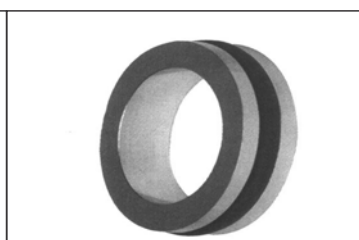
TYPE F, G, I, J, K, L, M, N

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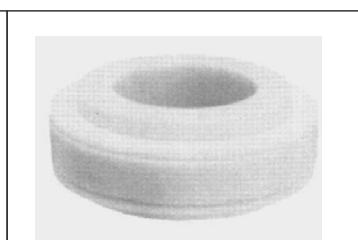
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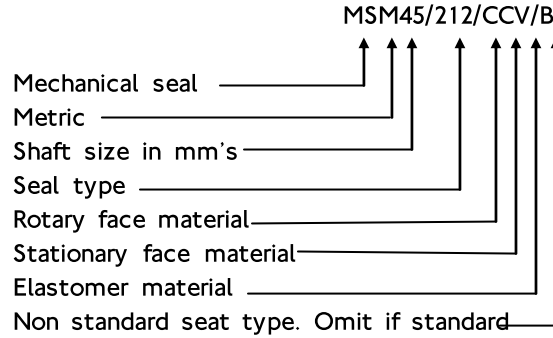


TYPE V

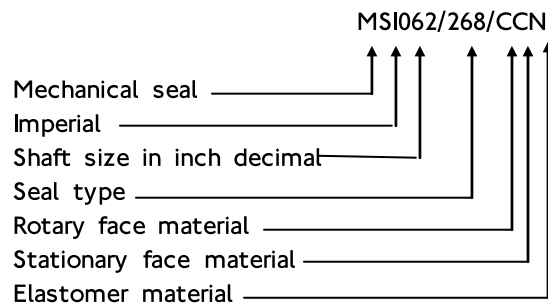
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# PART NUMBERING SYSTEM

## Metric shaft size seals



## Imperial shaft size seal



## Rotary and stationary face materials

- C - CARBON (CAR)
- C - CERAMIC / ALUMINIUM OXIDE (CER)
- S - SILICON CARBIDE (SIC)
- T - TUNGSTEN CARBIDE (TUN)
- ST - STAINLESS STEEL (STL)
- P - PTFE

## Elastomer material / Sealing member

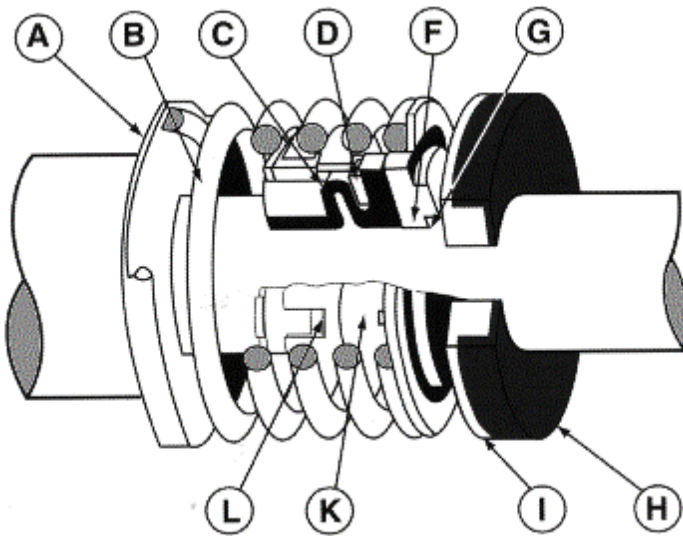
- N - NITRILE (NBR)
- V - VITON (FKM)
- E - EPDM
- S - SILICON (VMQ)
- H - HYDROGENATED NITRILE (HNBR)
- P - PTFE

## Metal parts & springs

All other metal parts are manufactured from stainless steel

# IDENTIFYING A MECHANICAL SEAL

## The Components of a Mechanical Seal



- A Spring Holder
- B Spring
- C Elastomer Rubber Bellows
- D Disc
- E Sealing Washer
- F Lapped Rotary Sealing Face
- G Seat Cup Boot Gasket
- H Stationary Seat Sealing Face
- I Retainer
- K Driving Band
- L

### The data you need

Using the dimensional drawing as a reference, take the following measurements of the sample seal then refer to the photos & drawings to select the required seal. Optional seats can be found in the back of the catalogue.

#### SEAL DIMENSIONS

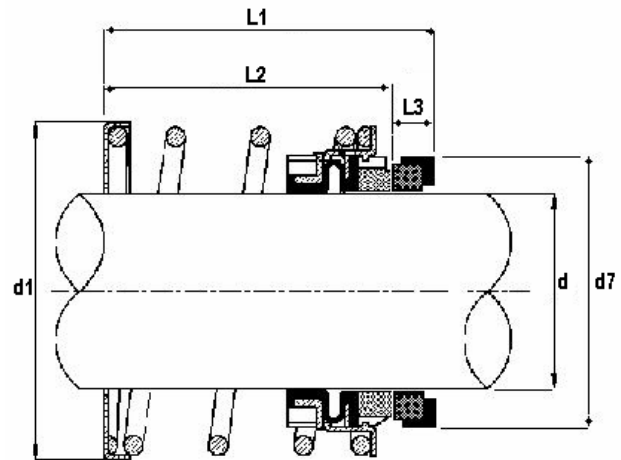
- d = Shaft/Sleeve O.D \_\_\_\_\_
- d1 = O.D. of seal \_\_\_\_\_
- d7 = Gland bore for stationary \_\_\_\_\_
- L1 = Overall height of seal \_\_\_\_\_
- = (L2+L3) \_\_\_\_\_
- L2 = Working length of rotary \_\_\_\_\_
- L3 = Width of stationary \_\_\_\_\_

#### SEAL DESIGN

- 1 - Rotary type & material \_\_\_\_\_
- 2 - Seat type & material \_\_\_\_\_
- 3 - Elastomer \_\_\_\_\_

#### OTHER DATA

- 1 - Product handled \_\_\_\_\_
- 2 - If abrasive (explain) \_\_\_\_\_
- 3 - Concentration \_\_\_\_\_ %
- 4 - Temperature range \_\_\_\_\_ to \_\_\_\_\_ °C
- 5 - Stuffing box pressure \_\_\_\_\_  BAR  KPa



**L2 = Working length of rotary = (Uncompressed length of rotary) - (0.5 x uncompressed length of spring)**

# MATERIAL SPECIFICATIONS

## Elastomer materials

- **NITRILE (NBR)**  
Resistant against most water grades and oils. High elasticity and mechanical strength.  
Temperature range: -30 to 110°C
- **VITON (FKM)**  
Resistant against most oils and chemicals. Suitable for high temperature applications.  
Temperature range: -30 to 200°C
- **EPDM**  
Resistant to various chemicals and specialised oils.  
Temperature range: -40 to 150°C
- **SILICON (VMQ)**  
Not suitable for applications where mechanical strength is required. Can handle very low and high temperatures.  
Temperature range: -90 to 150°C
- **HYDROGENATED NITRILE (HNBR)**  
Very good resistance against petrol and diesel, freons, acids, alkalis and most oils.  
High strength and abrasion resistance  
Temperature range: -20 to 170°C
- **PTFE**  
Resistant against majority of oils, chemicals, acids and alkalis. Only applicable to certain seals.  
Temperature range: -100 to 250°C

## Face materials

- **CARBON**  
Very good lubricating capacity with good strength. Temperatures up to 250°C. Not very resistant against abrasives. Suitable for most oils and water grades. Coupled with ceramic, silicon carbide and tungsten carbide faces.
- **CERAMIC**  
Good resistance to wear and high chemical resistance. Excellent when used in conjunction with carbon. Not suitable where thermal shock occurs. Very low thermal conductivity. Coupled with carbon and PTFE faces
- **SILICON CARBIDE**  
Very good wear resistance with a high thermal conductivity range. Can handle thermal shocks and abrasive mediums. Normally used in conjunction with carbon but also against itself.
- **TUNGSTEN CARBIDE**  
Hardest wearing material with extreme abrasion resistance. Can take mechanical and thermal shock loads.  
Limited use in acid mediums. High cost. Face combinations include ceramic and itself.
- **PTFE**  
Very good self lubricating properties. Almost complete chemical resistance. Low abrasive resistance and low mechanical strength. Normally run against ceramic.



# MECHANICAL SEALS EQUIVALENT LISTING

BMG	AES	BURGMANN	JOHN CRANE	LATTY	STERLING
3 (Q SEAT)	T01DIN	M3N			
3 (J SEAT)					
3 (L SEAT)	T01	M32		32	
3 (M SEAT)	T02	M3		81	
7		M7N			
7B		H7N			
8					
8B	M02S		8B1/8B		
8BT	M06S		8B-1T		
8T	M05S		8-1T		
9	M01		109/9		
9B	M02		109B/9B		
9BT	M06		9BT		
9T	M05		9T		
10T		TF85	10T	40	
19	B02	MG1		11	
19A	B012	MG12		12	
19B	B013	MG13		13	
19C		MG1S20		15	
20	P02U		2-BALANCED	20	
21			2100	21	
21(L1K)		MG912/G60	2100(L1K)	21(L1K)	
21(L1N)		MG913/G60	2100(L1N)	21(L1N)	
34				34	
36	P06			36	225/238
52			502	52	
58B	M04S		58B		
58U	M03S		58U		
59B	M04		59B		
59U	M03		59U		
74		M74			
74B	M01S	H75N			
92		HJ92N			
111				10	
211	P01	MG910/G50 (T100)	1A	31	211
211A	P05	MG901/G55	1		211A
212	P02	MG920/G50	2	30	212
212A	P04	MG921/G55	21		212A
216	B04	T600	6 or 106	60	216
268	B03	T700	6A or 106A	70	268
268A				71	
522	P03	MG912/G60 (T300)	521 or 522	3.3	522
1300	B01	T1300	AR	75	SBT
1400	T04	T1400	FN	50	SR3
1400A	T04DIN			51	SU3
SR2	T03			84	SR2
SU2	T03DIN			83	SR3

# STATIONARY SEAT EQUIVALENT LISTING

BMG	AES	BURGMANN	JOHN CRANE	LATTY	STERLING
A		G50		30A	
B		G55	NG	30B	
C	S04		N (din)	33B	
D	S040	G60	M	11B	
F	T03.DIN	G10			
G			BO	52G	
I	S06				
J		G6	BS	11G	DIN SHORT
K			WM	90G	
L		G4		11K	
M	T02	G13			
N	T03				
O	S05				
P			BP	52L	
Q		G9		11L	DIN LONG
R	S09		AG		
S	S07		W		
T	S070		WG	90F	
V	S08		V	10C	
W		G16			
X					
Z					
AA			BC		
AB			BD		
AC			PG		
AD			CE		
AE			U		
AF			YG		
AG			AG		

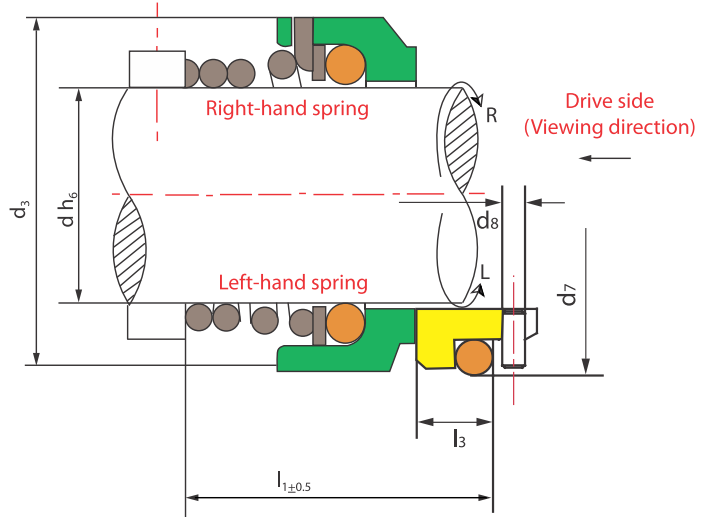
# TAPERED SPRING MECHANICAL SEALS

## TYPE 3 (DIN 24960)

### SINGLE TAPERED SPRING - ELASTOMER O-RING SEAL

#### Design features

- Rugged and reliable unbalanced seal conforming to DIN 24960
- Designed to cover a wide range of applications – water, sewage, submerged and chemical pumps
- Conical spring dependant on the direction of rotation



Seal size d(mm)	d <sub>3</sub>	d <sub>7</sub>	d <sub>8</sub>	l <sub>1</sub>	l <sub>3</sub>
10	19	21	3	25.5	10
12	21	23	3	26.0	10
14	23	25	3	26.5	10
16	26	27	3	28.0	10
18	29	33	3	31.0	11.5
20	31	35	3	33.5	11.5
22	33	37	3	33.0	11.5
24	35	39	3	35.0	11.5
25	36	40	3	38.5	11.5
28	40	43	3	38.0	11.5
30	43	45	3	38.0	11.5
32	46	48	3	40.0	11.5
35	49	50	3	40.0	11.5
38	53	56	4	47.5	14.0
40	56	58	4	50.0	14.0
43	59	61	4	52.5	14.0
45	61	63	4	53.5	14.0
48	64	66	4	60.0	14.0
50	66	70	4	60.0	15.0
53	69	73	4	62.0	15.0
55	71	75	4	64.0	15.0
58	76	78	4	70.0	15.0
60	78	80	4	70.0	15.0
63	83	83	4	70.0	15.0
65	84	85	4	70.0	15.0
68	88	90	4	73.0	18.0
70	90	92	4	57.0	18.0
75	98	97	4	62.0	18.0
80	100	105	4	61.8	18.2

SEAT TYPE		FACE MATERIAL		ELASTOMER		OPERATING LIMITS	
Standard	Q	Standard	On request	Standard	VITON	Pressure	10 Bar
On request	J, L, M	Rotary	CAR	On request	NITRILE, EPDM	Temperature	-20 to 180°C
Refer to data on seats		Stationary	STL			Speed	10m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

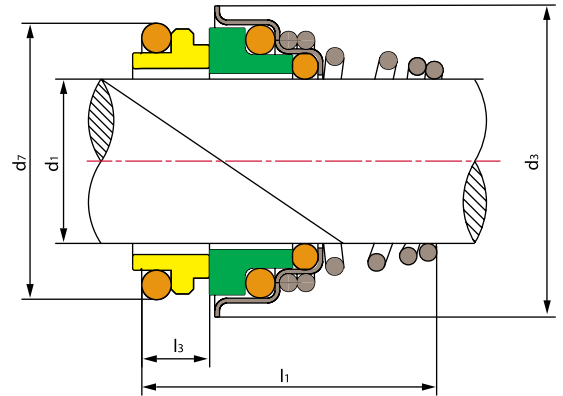
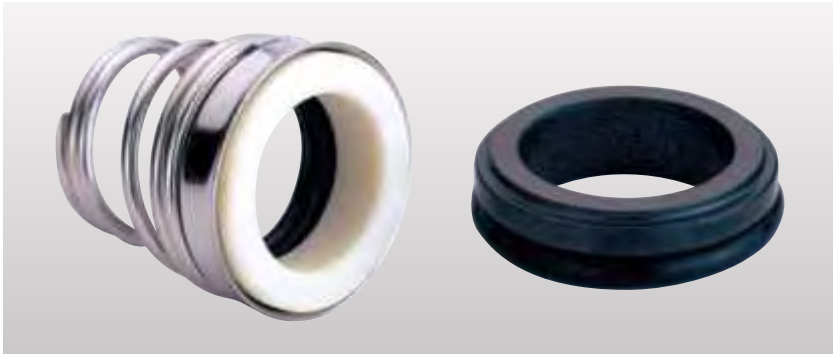
# TAPERED SPRING MECHANICAL SEALS

## TYPE 1400 & 1400A (DIN 24960)

### SINGLE TAPERED SPRING - ELASTOMER O-RING SEAL

#### Design features

- O-Ring mounted seal suitable for light and general duties in rotary pumps, mixers, compressors and agitators
- For handling light fluids and chemicals ranging from water and steam to weak acids
- Non-clogging single coil spring which assists self-alignment



TYPE 1400				
d <sub>1</sub>	d <sub>3</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>3</sub>
10	20	18.1	20.5	5.5
11	22	20.6	23.5	5.5
12	22	20.6	23.5	5.5
13	25	23.1	28.0	6.0
14	25	23.1	28.0	6.0
15	29	26.9	30.0	7.0
16	29	26.9	30.0	7.0
17	29	26.9	30.0	7.0
18	33	30.9	32.0	8.0
19	33	30.9	33.0	8.0
20	33	30.9	33.0	8.0
21	38	35.4	33.0	8.0
22	38	35.4	33.0	8.0
23	38	35.4	35.0	8.0
24	38	35.4	35.0	8.0
25	40	38.2	35.5	8.5
28	46	43.3	39.0	9.0
29	46	43.3	39.0	9.0
30	46	43.3	39.0	9.0
32	46	43.3	39.0	9.0
33	50	53.5	50.5	11.5
35	50	53.5	50.5	11.5
38	60.5	60.5	50.5	11.5
40	60.5	60.5	50.5	11.5

TYPE 1400A			
d <sub>3</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>3</sub>
20.0	21	22	7
-	-	-	-
22.0	23	25	7
-	-	-	-
24.0	25	29	7
-	-	-	-
26.0	27	30	7
-	-	-	-
32.0	33	34	10
-	-	-	-
33.0	35	35	10
-	-	-	-
36.0	37	35	10
-	-	-	-
37.4	39	37	10
38.0	40	37	10
42.0	43	39	10
-	-	-	-
44.0	45	40	10
45.5	48	40	10
46.5	48	49	10
49.0	50	49	10
56.0	56	55	13
58.0	58	55	13

	FACE MATERIAL		ELASTOMER		OPERATING LIMITS	
	Standard	On request	Standard	NITRILE	Pressure	10 Bar
Rotary	CER	SIC, TC	On request	VITON, EPDM	Temperature	-30 to 200°C
Stationary	CAR	SIC, TC			Speed	15m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

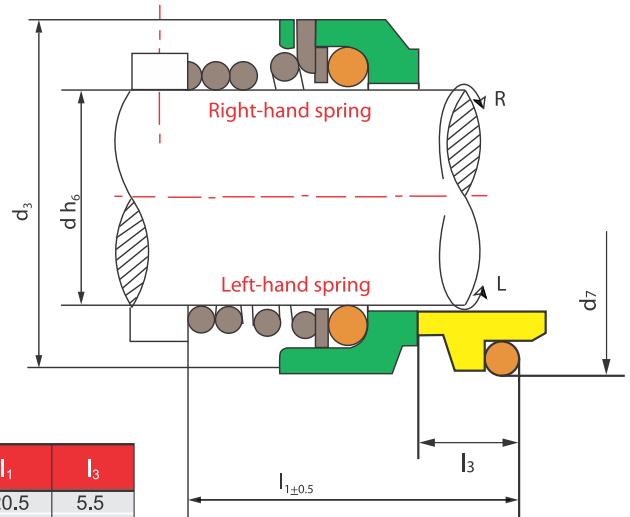
# TAPERED SPRING MECHANICAL SEALS

## TYPE SR2

### SINGLE TAPERED SPRING - ELASTOMER O-RING SEAL

#### Design features

- O-ring mounted seal suitable for light and general duties in rotary pumps, mixers, compressors and agitators
- For handling light fluids and chemicals ranging from water and steam to weak acids
- Non-clogging single coil spring which assists self-alignment



d	d <sub>3</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>3</sub>
8	18	17.1	20.5	5.5
10	19	18.1	20.5	5.5
11	20	20.6	23.5	5.5
12	21	20.6	23.5	5.5
13	22	23.1	28.0	6.0
14	23	23.1	28.0	6.0
15	24	26.9	29.0	7.0
16	26	26.9	30.0	7.0
17	26	26.9	30.0	7.0
18	29	30.9	32.0	8.0
19	31	30.9	33.0	8.0
20	31	30.9	33.0	8.0
22	33	35.4	33.0	8.0
23	36	35.4	35.0	8.0
24	35	35.4	35.0	8.0
25	36	38.2	35.5	8.5
26	37	38.2	35.5	8.5
28	40	43.3	38.0	9.0
30	43	43.3	39.0	9.0
32	46	43.3	39.0	9.0
33	47	53.5	50.5	11.5
34	48	53.5	50.5	11.5
35	49	53.5	50.5	11.5
36	50	53.5	50.5	11.5
38	53	60.5	50.5	11.5
40	56	60.5	50.5	11.5
42	59	60.5	50.5	11.5
43	59	60.5	52.5	11.5
44	60	65.5	52.5	11.5
45	61	65.5	52.5	11.5
48	64	65.5	52.5	11.5
50	66	72.5	56.5	11.5
55	71	72.5	58.5	11.5
60	78	79.3	60.5	11.5
65	84	84.5	62.5	11.5
70	90	89.5	62.5	11.5
75	98	94.5	68.5	11.5
80	100	99.5	70.5	11.5

L1 refers to the compressed length when installed  
Units: mm

FACE MATERIAL		ELASTOMER		OPERATING LIMITS	
Rotary	STL	Standard	NITRILE	Pressure	10 Bar
Stationary	CAR	On request	VITON, EPDM	Temperature	-30 to 110°C
				Speed	10m/s

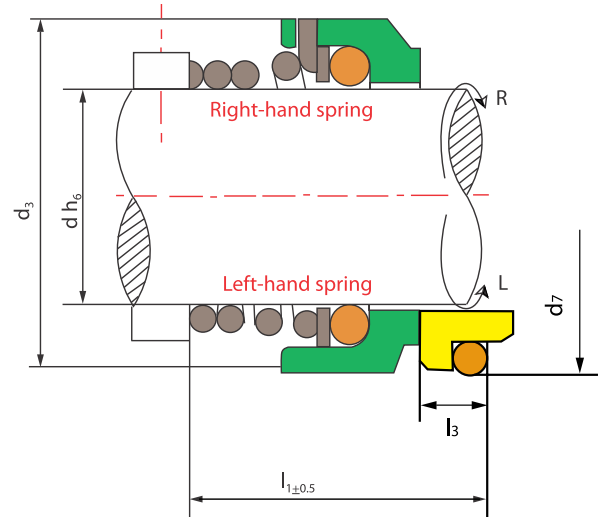
# TAPERED SPRING MECHANICAL SEALS

## TYPE SU2 (DIN 24960)

### SINGLE TAPERED SPRING - ELASTOMER O-RING SEAL

#### Design features

- O-ring mounted seal suitable for light and general duties in rotary pumps, mixers, compressors and agitators
- For handling light fluids and chemicals ranging from water and steam to weak acids
- Non-clogging single coil spring which assists self-alignment



Seal Size d (mm)	d <sub>3</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>3</sub>
10	19	21	22.1	6.6
12	21	23	22.6	6.6
14	23	25	23.1	6.6
16	26	27	24.6	6.6
18	29	33	27.0	7.5
20	31	35	29.5	7.5
22	33	37	29.0	7.5
24	35	39	31.0	7.5
25	36	40	34.0	7.5
28	40	43	34.0	7.5
30	43	45	34.0	7.5
32	46	48	36.0	7.5
35	49	50	36.0	7.5
38	53	56	42.5	9.0
40	56	58	45.0	9.0
43	59	61	47.5	9.0
45	61	63	48.5	9.0
48	64	66	55.0	9.0
50	66	70	54.5	9.5
53	69	70	54.5	9.5
55	71	75	60.0	11.0
58	76	78	66.0	11.0
60	78	80	66.0	11.0
63	83	83	66.0	11.0
65	84	85	66.0	11.0
68	88	90	66.3	11.3
70	90	92	68.3	11.3
75	98	97	73.3	11.3
80	100	105	73.8	12.0

L1 refers to the compressed length when installed  
Units: mm

FACE MATERIAL		ELASTOMER		OPERATING LIMITS	
Rotary	STL	Standard	NITRILE	Pressure	10 Bar
Stationary	CAR	On request	VITON, EPDM	Temperature	-30 to 180°C
				Speed	10m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

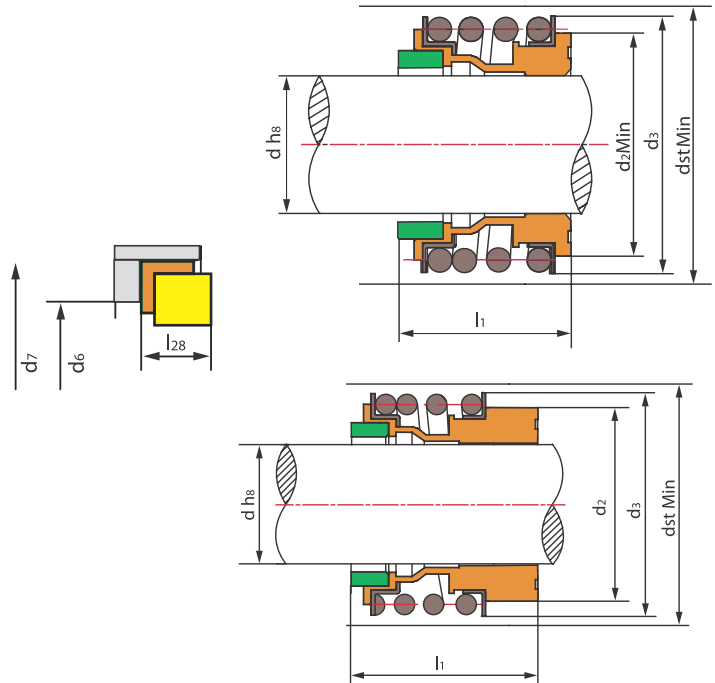
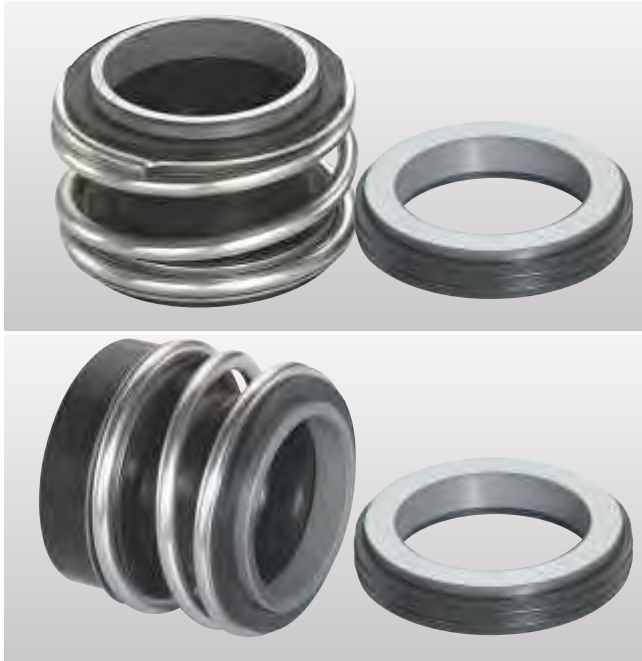
# BELLOWS TYPE MECHANICAL SEALS

## TYPE 19 & 19A

SINGLE PARALLEL SPRING - ELASTOMER BELLOWS SEAL

### Design features

- Rugged and reliable unbalanced seal conforming to DIN 24960
- Designed to cover a wide range of applications – water, sewage, submerged and chemical pumps
- Independent on the direction of rotation



Seal size d(mm)	d <sub>2</sub>	d <sub>3</sub>	d <sub>st</sub>	Type 19 l <sub>1</sub>	Type 19A l <sub>1</sub>	d <sub>6</sub>	d <sub>7</sub>	l <sub>28</sub>
10	20.5	22.5	24	14.5	25.9	17	21	6.6
12	22.5	25.5	26	15.0	25.9	19	23	6.6
14	26.5	28.5	30	17.0	28.4	21	25	6.6
16	26.5	28.5	30	17.0	28.4	23	27	6.6
18	29.0	32.0	33	19.5	30.0	27	33	7.5
20	33.0	37.0	38	21.5	30.0	29	35	7.5
22	33.0	37.0	38	21.5	30.0	31	37	7.5
24	38.0	42.5	44	22.5	32.5	33	39	7.5
25	38.0	42.5	44	23.0	32.5	34	40	7.5
28	44.0	49.0	50	26.5	35.0	37	43	7.5
30	44.0	49.0	50	26.5	35.0	39	45	7.5
32	46.0	53.5	55	27.5	35.0	42	48	7.5
33	46.0	53.5	55	27.5	35.0	42	48	7.5
35	50.0	57.0	59	28.5	35.0	44	50	7.5
38	53.0	59.0	61	30.0	36.0	49	56	9.0
40	55.0	62.0	64	30.0	36.0	51	58	9.0
43	58.0	65.5	67	30.0	36.0	54	61	9.0
45	60.0	68.0	70	30.0	36.0	56	63	9.0
48	63.0	70.5	74	30.5	36.0	59	66	9.0
50	65.0	74.0	77	30.5	38.0	62	70	9.0
53	70.0	78.5	81	33.0	36.5	65	73	11.0
55	72.0	81.0	83	35.0	36.5	67	75	11.0
58	75.0	85.5	88	37.0	41.5	70	78	11.0
60	79.0	88.5	91	38.0	41.5	72	80	11.0
65	84.0	93.5	96	40.0	41.5	77	85	11.0
68	88.0	96.5	100	40.0	41.2	81	90	11.3
70	90.0	99.5	103	40.0	48.7	83	92	11.3
75	95.0	107.0	110	40.0	48.7	88	97	11.3
80	100.0	112.0	116	40.0	48.0	95	105	12.0
85	107.0	120.0	124	41.0	46.0	100	110	14.0
90	114.0	127.0	131	45.0	51.0	105	115	14.0
95	119.0	132.0	136	46.0	51.0	110	120	14.0
100	124.0	137.0	140	47.0	51.0	115	125	14.0

SEAT TYPE		FACE MATERIAL		ELASTOMER		OPERATING LIMITS	
Standard	D	Standard	On request	Standard	VITON	Pressure	10 Bar
On request	A, J, L, Q	Rotary	SIC, CAR, TC	On request	NITRILE, EPDM	Temperature	-30 to 180°C
Refer to data on seats		Stationary	SIC, CER, TC, STL			Speed	10m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

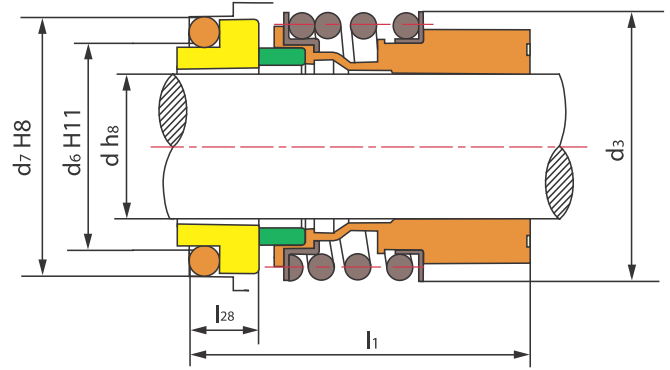
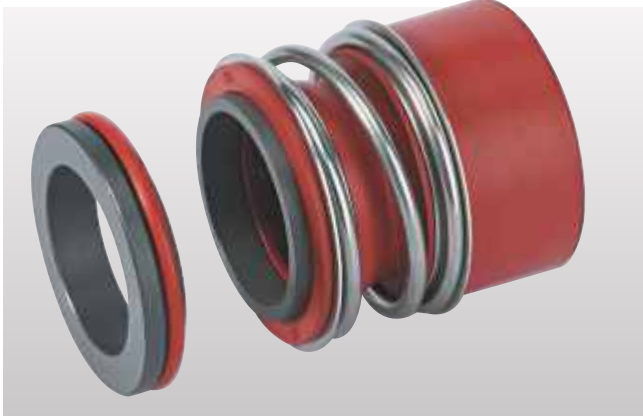
# BELLOWS TYPE MECHANICAL SEALS

## TYPE 19B

SINGLE PARALLEL SPRING - ELASTOMER BELLOWS SEAL

### Design features

- Rugged and reliable unbalanced seal conforming to DIN 24960
- Designed to cover a wide range of applications – water, sewage, submerged and chemical pumps
- Independent on the direction of rotation



Seal size d(mm)	d <sub>3</sub>	d <sub>6</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>28</sub>
20	37.0	29	35	45	7.5
22	37.0	31	37	45	7.5
24	42.5	33	39	50	7.5
25	42.5	34	40	50	7.5
28	49.0	37	43	50	7.5
30	49.0	39	45	50	7.5
32	53.5	42	48	55	7.5
35	57.0	44	50	55	7.5
38	59.0	49	56	55	9.0
40	62.0	51	58	55	9.0
42	65.5	54	61	60	9.0
43	65.5	54	61	60	9.0
45	68.0	56	63	60	9.0

SEAT TYPE		FACE MATERIAL			ELASTOMER		OPERATING LIMITS	
Standard	D	Standard	On request	Standard	VITON	Pressure	10 Bar	
On request	A, J, L, Q	Rotary	SIC	On request	NITRILE, EPDM	Temperature	-30 to 180°C	
Refer to data on seats		Stationary	SIC	CER, TC, STL		Speed	10m/s	

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.



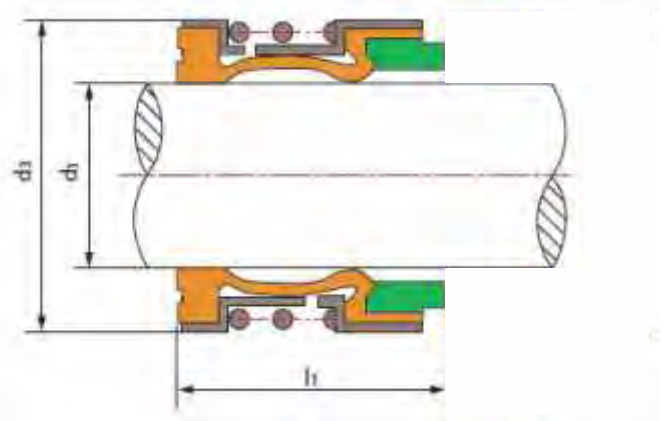
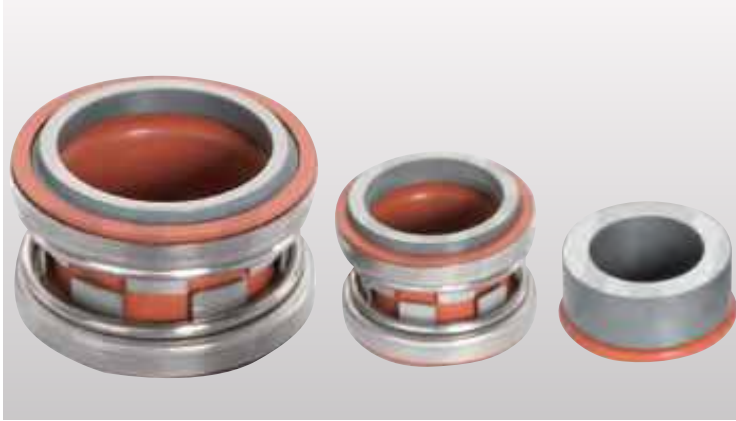
# BELLOWS TYPE MECHANICAL SEALS

## TYPE 21

SINGLE PARALLEL SPRING - ELASTOMER BELLOWS SEAL

### Design features

- Elastomer bellows suitable for general duties in rotary pumps, mixers, compressors and agitators
- Suitable for handling light chemicals ranging from water and steam to weak acids
- Intermeshing drive band design for better torque transmission



METRIC				
d	d <sub>3</sub>	l <sub>1</sub> -STD	l <sub>1</sub> -DIN L1K	l <sub>1</sub> -DIN L1N
10	20	15	27.5	35.0
12	22	15	26.5	34.0
14	24	15	29.0	34.0
15	25	15	29.0	34.0
16	26	15	29.0	34.0
18	32	20	31.5	39.0
20	34	20	31.5	39.0
22	36	20	31.5	39.0
24	38	20	34.0	44.0
25	39	20	34.0	44.0
28	42	26	36.5	44.0
30	44	26	35.5	43.0
32	46	26	35.5	48.0
33	47	26	35.5	48.0
35	49	26	34.5	47.0
38	54	30	37.0	47.0
40	56	30	37.0	47.0
43	59	30	37.0	52.0
45	61	30	37.0	52.0
48	64	30	35.0	50.0
50	66	30	37.5	50.0
53	69	30	37.5	60.0
55	71	30	37.5	60.0
58	78	33	42.5	60.0
60	80	33	40.5	58.0
63	83	33	40.5	58.0
65	85	33	40.5	68.0
68	88	33	40.5	68.0
70	90	33	48.0	68.0
75	99	40	48.0	68.0
80	104	40	47.5	77.5
85	109	40	47.5	77.5
90	114	40	52.5	77.5
95	119	40	52.5	77.5
100	124	40	52.5	77.5

IMPERIAL				
d	d <sub>3</sub>	l <sub>1</sub> -STD	l <sub>1</sub> -DIN L1K	l <sub>1</sub> -DIN L1N
3/8"	20	15	27.5	35.0
1/2"	24	15	29.0	34.0
5/8"	26	15	29.0	34.0
3/4"	32	20	31.5	39.0
7/8"	36	20	31.5	39.0
1"	39	20	31.5	39.0
1 1/8"	42	26	36.5	44.0
1 1/4"	46	26	35.5	48.0
1 3/8"	49	26	34.5	47.0
1 1/2"	54	30	34.0	47.0
1 5/8"	56	30	37.0	52.0
1 3/4"	61	30	37.0	52.0
1 7/8"	64	30	35.0	50.0
2"	66	30	37.5	50.0
2 1/8"	69	30	37.5	60.0
2 1/4"	78	33	42.5	60.0
2 3/8"	80	33	40.5	58.0
2 1/2"	83	33	40.5	58.0
2 5/8"	88	33	40.5	68.0
2 3/4"	90	33	48.0	68.0
2 7/8"	96	33	48.0	68.0
3"	99	40	48.0	68.0
3 1/8"	103	40	47.5	77.5
3 1/4"	104	40	47.5	77.5
3 3/8"	108	40	47.5	77.5
3 1/2"	112	40	52.5	77.5
3 5/8"	114	40	52.5	77.5
3 3/4"	118	40	52.5	77.5
3 7/8"	122	40	52.5	77.5
4"	124	40	52.5	77.5

L3 refers to the compressed length when installed

Units: mm

SEAT TYPE		FACE MATERIAL			ELASTOMER		OPERATING LIMITS	
Standard	D		Standard	Optional	Standard	VITON	Pressure	12 Bar
On request	J, L, Q	Rotary	CAR	SIC, TC	On request	NITRILE, EPDM	Temperature	-30 to 200°C
Refer to data on seats		Stationary	CER	SIC, TC			Speed	10m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

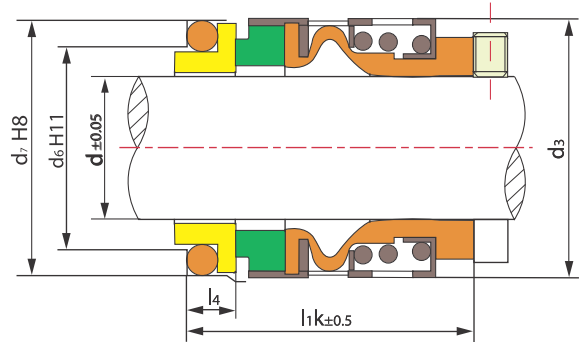
# BELLOWS TYPE MECHANICAL SEALS

## TYPE 52

SINGLE PARALLEL SPRING - ELASTOMER BELLOWS SEAL

**Design features**

- High pressure seal conforming to ISO 3069 & DIN 24960
- Elastomer bellows seal suitable for light and general duties in rotary pumps, mixers, compressors and agitators
- Suitable for handling light chemicals ranging from water to weak acids
- Non-clogging single coil spring



Seal Size d (mm)	d <sub>3</sub>	d <sub>6</sub>	d <sub>7</sub>	l <sub>1k</sub>	l <sub>4</sub>
12	22.6	18.5	22.5	32.5	12.0
14	24	21	25	35.0	12.0
16	26	23	27	35.0	12.0
18	32	27	33	37.5	13.5
20	34	29	35	37.5	13.5
22	36	31	37	37.5	13.5
24	38	33	39	40.0	13.3
25	39	34	40	40.0	13.0
28	42	37	43	42.5	12.5
30	44	39	45	42.5	12.0
32	46	42	48	42.5	12.0
33	46	42	48	42.5	12.0
35	49	44	50	42.5	12.0
38	54	49	56	45.0	13.0
40	55	51	58	45.0	13.0
43	59	54	61	45.0	13.0
45	61	56	63	45.0	13.0
48	64	59	66	45.0	13.0
50	66	62	70	47.5	13.5
55	71	67	75	47.5	13.5
60	80	72	80	52.5	13.5
65	85	77	85	52.5	13.5
70	89	83	92	60.0	14.5
75	96	88	97	60.0	14.5
80	104	95	105	60.0	15.0
85	108	100	110	60.0	15.0
90	114	105	115	65.0	15.0
95	118	110	120	65.0	15.0
100	124	115	125	65.0	15.0

L1 refers to the compressed length when installed  
Units: mm

SEAL TYPE		FACE MATERIAL		ELASTOMER		OPERATING LIMITS	
Standard	G	Standard	On request	Standard	VITON	Pressure	40 Bar
On request	A, B, P	Rotary	CAR, SIC, TC	On request	NITRILE, EPDM	Temperature	-30 to 200°C
Refer to data on seats		Stationary	CER, SIC, TC			Speed	13m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

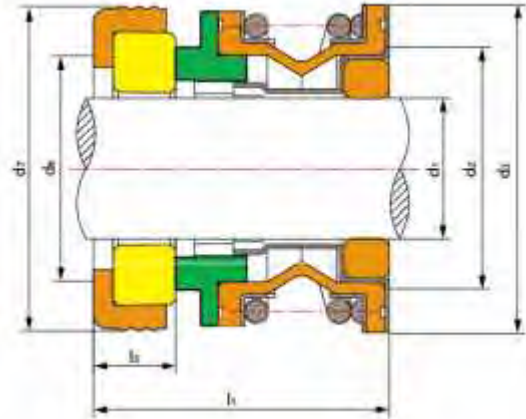
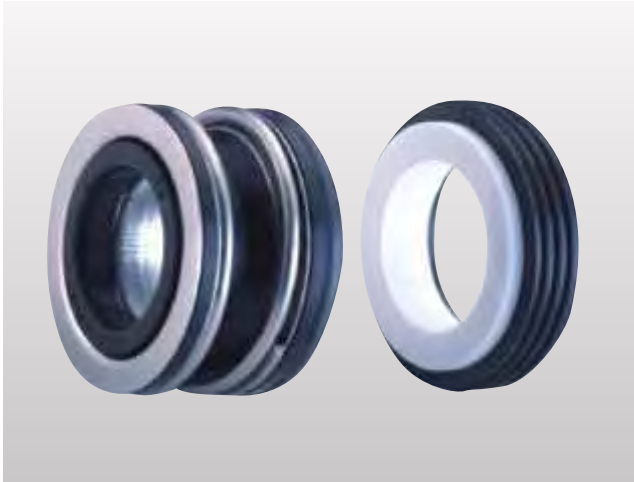
# BELLOWS TYPE MECHANICAL SEALS

## TYPE 216

SINGLE PARALLEL SPRING - ELASTOMER BELLOWS SEAL

**Design features**

- Widely used in swimming pool & water pumps
- Normal duties
- Low pressure applications



BMG CODE	SHAFT SIZE - d <sub>1</sub>		d <sub>2</sub>	d <sub>3</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>6</sub>
	INCHES	MM						
MSI037/216/CCN	3/8"	9.5	17.4	23.8	22.2	22.2	6.2	14.30
MSI050/216/CCN	1/2"	12.7	20.6	27.0	25.4	22.8	6.2	17.45
MSI062/POOLQUIP	5/8"	15.9	23.8	30.9	30.1	26.5	8.7	20.63
MSI062/RAPID	5/8"	15.9	23.8	30.9	31.8	30.0	10.3	20.63
MSI075/216/CCN	3/4"	19.1	26.9	34.1	34.9	30.0	10.3	23.80
MSI100/216/CCN	1"	25.4	33.3	42.9	41.3	31.7	11.1	30.15

L1 refers to the compressed length when installed

Units: mm

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FACE MATERIAL		ELASTOMER		OPERATING LIMITS	
Rotary	CAR	Standard	NITRILE	Pressure	10 Bar
Stationary	CER	On request	VITON, EPDM	Temperature	-30 to 200°C
				Speed	12m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

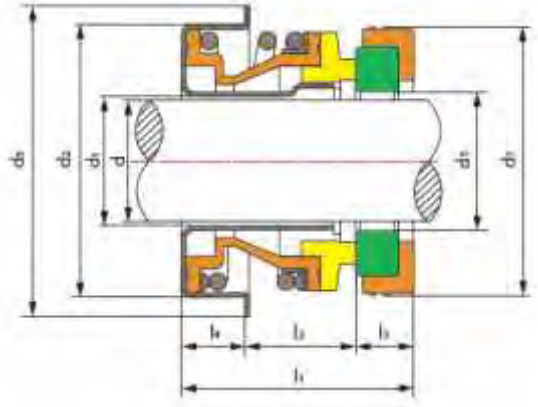
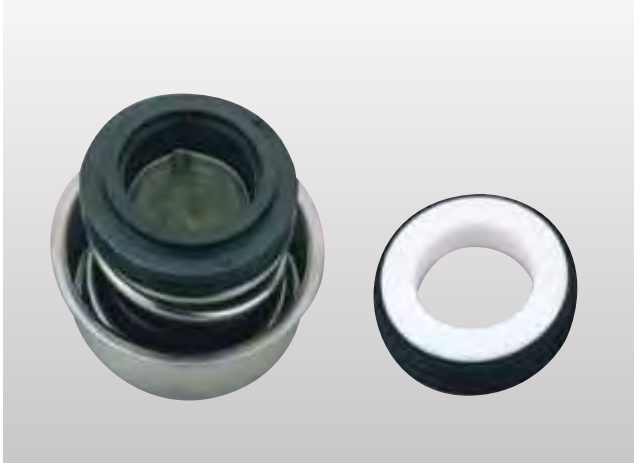
# BELLOWS TYPE MECHANICAL SEALS

## TYPE 268

SINGLE PARALLEL SPRING - ELASTOMER BELLOWS SEAL

### Design features

- Widely used in industrial water and automotive coolant pumps
- Low pressure applications



IMPERIAL									
BMG CODE	SHAFT SIZE	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d <sub>5</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>3</sub>	l <sub>4</sub>
MSI050/268/CCN	1/2"	14.2	30.0	35.0	13.5	25.4	19.2	6.2	8.0
MSI062/268/CCN	5/8"	18.2	36.5	41.5	17.5	31.8	25.0	10.3	8.0
MSI075/268/CCN	3/4"	21.2	40.0	43.8	20.0	35.0	25.8	10.3	10.0
MSI100/268/CCN	1"	26.4	47.0	51.0	27.0	41.3	29.0	11.1	12.0
MSI112/268/CCN	1.1/8"	31.0	52.0	57.0	32.0	48.0	27.0	11.0	8.5

METRIC									
BMG CODE	SHAFT SIZE	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d <sub>5</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>3</sub>	l <sub>4</sub>
MSM10/268/CCN	10	11.0	24.0	29.0	12	23	17.0	4	7.0
MSM12S/268/CCN	12	14.2	28.6	32.0	14	25	18.2	5	8.0
MSM12M/268/CCN	12	14.2	30.0	35.0	15	24	18.0	5	8.0
MSM12L/268/CCN	12	14.2	33.4	38.0	14	25	18.0	5	6.7
MSM16/268/CCN	16	18.2	36.5	41.5	18	31	19.8	5	8.0
MSM16L/268/CCN	16	18.2	38.1	43.5	18	31	19.8	5	8.8
MSM20/268/CCN	20	21.2	38.0	43.8	21	35	20.5	5	10.0
MSM20L/268/CCN	20	21.2	40.0	43.8	21	35	20.5	5	10.0
MSM25S/268/CCN	25	26.4	46.0	51.0	26	44	25.0	7	10.0
MSM25M/268/CCN	25	26.4	47.0	51.0	26	44	25.0	7	12.0
MSM25L/268/CCN	25	26.4	52.0	57.0	27	48	25.0	7	12.0
MSM30/268/CCN	30	31.0	52.0	57.0	32	48	27.0	8	11.0

L1 refers to the compressed length when installed  
Units: mm

	FACE MATERIAL		ELASTOMER		OPERATING LIMITS	
	Standard	On request	Standard	NITRILE	Pressure	3 Bar
Rotary	CER	SIC	On request	VITON, EPDM	Temperature	-30 to 150°C
Stationary	CAR	SIC			Speed	10m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

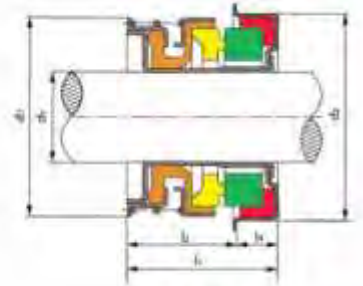
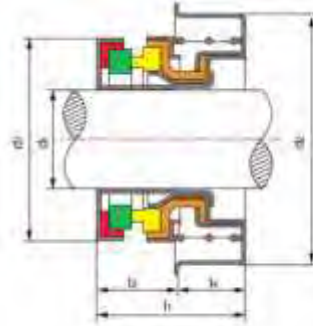
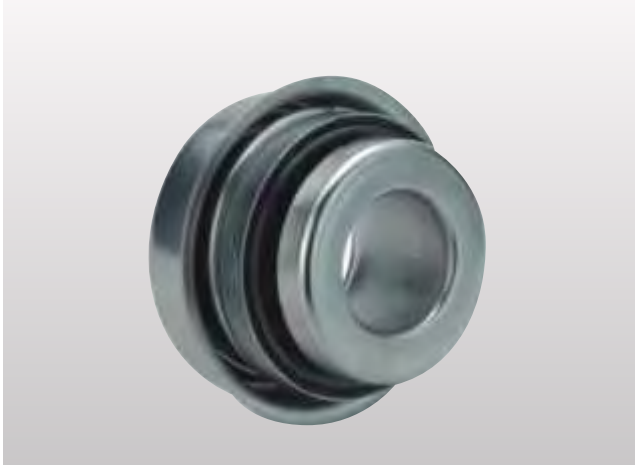
# BELLOWS TYPE MECHANICAL SEALS

## TYPE 268A

SINGLE PARALLEL SPRING - ELASTOMER BELLOWS SEAL

### Design features

- Widely used in industrial and automotive water pumps
- Low pressure applications
- One piece construction



BMG CODE	SHAFT SIZE	d <sub>3</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>4</sub>
MSM15/268A/CCN	15	36.5	32.5	20.8	9.5
MSM16S/268A/CCN	16	36.5	28.5	21.0	9.5
MSM16L/268A/CCN	16	36.5	32.5	20.8	9.5
MSM25/268A/CCN	25	41.3	40.8	30.0	8.8

L1 refers to the compressed length when installed  
Units: mm

	FACE MATERIAL		ELASTOMER		OPERATING LIMITS	
	Standard	On request	Standard	NITRILE	Pressure	3 Bar
Rotary	CER	SIC	On request	VITON, EPDM	Temperature	-30 to 150°C
Stationary	CAR	SIC			Speed	10m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

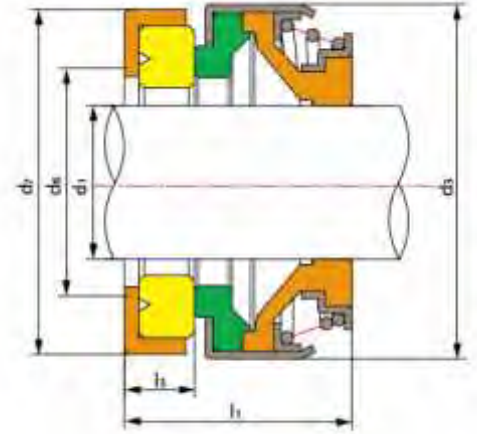
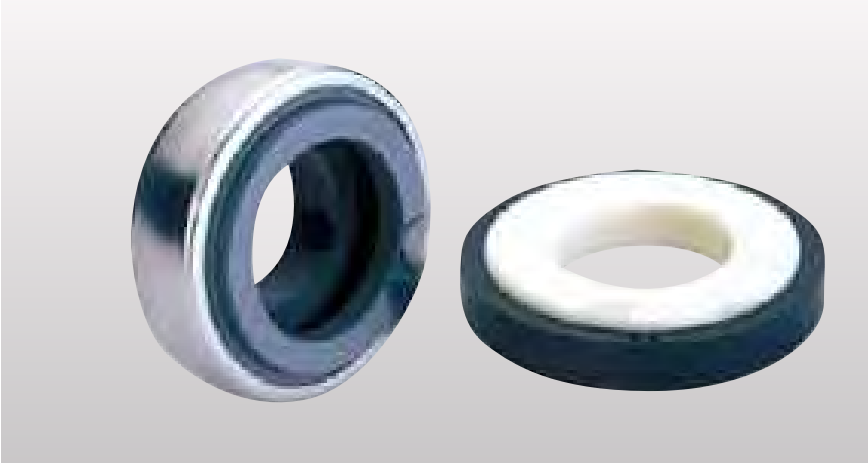
# BELLOWS TYPE MECHANICAL SEALS

## TYPE 1300

SINGLE PARALLEL SPRING - ELASTOMER BELLOWS SEAL

### Design features

- Widely used in industrial and automotive water pumps
- Low pressure applications



MODEL	d <sub>1</sub>	d <sub>3</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>3</sub>
MSM06/1300/CCN	6	18	22.0	14.0	4.0
MSM08/1300/CCN	8	24	26.0	16.5	5.5
MSM10/1300/CCN	10	24	26.0	21.0	8.0
MSM12/1300/CCN	12	24	26.0	21.0	8.0
MSM13/1300/CCN	13	24	26.0	21.0	5.5/8.0
MSM14/1300/CCN	14	28/32	25.4	21.0	8.0
MSM14S/1300/CCN	14	28	28.0	21.0	8.0
MSM14L/1300/CCN	14	32	29.5	21.0	8.0
MSM15/1300/CCN	15	39	38.0	21.0	8.0
MSM15M/1300/CCN	15	32	30.0	21.0	8.0
MSM16/1300/CCN	16	39	29.5	21.0	8.0
MSM16M/1300/CCN	16	32	29.5	21.0	8.0
MSM16L/1300/CCN	16	39	38.0	21.0	8.0
MSM17/1300/CCN	17	39	42.0	21.0	8.0
MSM18/1300/CCN	18	39	42.0	21.0	8.0
MSM19/1300/CCN	19	39	42.0	21.0	8.0
MSM20/1300/CCN	20	39/42	35.0	21.0	8.0
MSM20M/1300/CCN	20	39	42.0	21.0	8.0
MSM20L/1300/CCN	20	42	45.0	23.0	10.0
MSM22/1300/CCN	22	42	45.0	23.0	10.0
MSM24/1300/CCN	24	47	50.0	23.5	10.0
MSM25/1300/CCN	25	42	50.0	23.5	10.0
MSM28/1300/CCN	28	54	57.0	25.0	10.0
MSM30/1300/CCN	30	54	57.0	25.0	10.0
MSM32/1300/CCN	32	54	57.0	25.0	10.0
MSM35/1300/CCN	35	60	63.0	26.0	10.0
MSM38/1300/CCN	38	65	68.0	30.0	12.0
MSM40/1300/CCN	40	65	68.0	30.0	12.0

SPECK PUMP

SPECK PUMP

L1 refers to the compressed length when installed  
Units: mm

	FACE MATERIAL		ELASTOMER		OPERATING LIMITS	
	Standard	On request	Standard	NITRILE	Pressure	6 Bar
Rotary	CER	SIC	On request	VITON, EPDM	Temperature	-30 to 200°C
Stationary	CAR	SIC			Speed	10m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

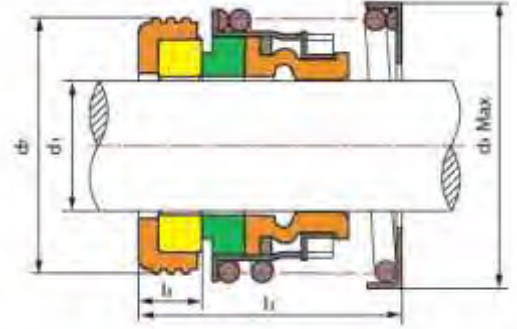
# DIAPHRAGM TYPE MECHANICAL SEALS

## TYPE 20

### SINGLE PARALLEL SPRING – ELASTOMER DIAPHRAGM SEAL

#### Design features

- Elastomer diaphragm seal suitable for high pressure duties in rotary pumps, mixers, compressors and agitators
- Suitable for handling light chemicals ranging from water and steam to weak acids
- Non-clogging single coil spring which assists self-alignment



IMPERIAL					
INCHES	d <sub>1</sub>	d <sub>3</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>3</sub>
3/8"	9.5	23	24.6	33.7	8.7
1/2"	12.7	32	27.8	33.7	8.7
5/8"	15.9	35	31.0	35.3	10.3
3/4"	19.1	40	34.2	35.3	10.3
4/8"	22.2	43	37.3	35.3	10.3
1"	25.4	47	40.5	35.3	10.3
1 1/8"	28.6	56	47.7	44.9	11.9
1 1/4"	31.8	59	50.8	44.9	11.9
1 3/8"	34.9	63	54.0	44.9	11.9
1 1/2"	38.1	67	57.0	44.9	11.9
1 5/8"	41.3	71	60.4	44.9	11.9
1 3/4"	44.5	74	63.5	52.9	11.9
1 7/8"	47.6	77	66.7	52.9	11.9
2"	50.8	81	69.9	54.5	13.5
2 1/8"	54.0	84	73.1	54.5	13.5
2 1/4"	57.2	88	76.2	54.5	13.5
2 3/8"	60.3	91	79.3	54.5	13.5
2 1/2"	63.5	94	82.6	54.5	13.5
2 5/8"	66.7	100	92.1	64.9	15.9
2 3/4"	69.9	103	95.3	64.9	15.9
2 7/8"	73.0	108	98.5	67.9	15.9
3"	76.2	111	101.7	67.9	15.9

METRIC				
d <sub>1</sub>	d <sub>3</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>3</sub>
20	41	35	35	10
22	41	37	35	10
24	47	39	35	10
25	47	40	35	10
28	51	43	45	12
30	55	45	43	10
32	55	48	45	12
35	56	50	43	10
38	66	56	44	11
40	67	58	44	11
43	72	61	52	11
45	72	63	52	11
48	76	66	52	11
50	80	70	52	11
55	88	75	53	12
60	91	80	53	12

L1 refers to the compressed length when installed  
Units: mm

SEAT TYPE		FACE MATERIAL			ELASTOMER		OPERATING LIMITS	
Standard	A	Standard	On request	Standard	VITON	Pressure	28 Bar	
On request	B, K, T	Rotary	CAR	SIC, TC	On request	NITRILE, EPDM	Temperature	-30 to 200°C
Refer to data on seats		Stationary	CER	SIC, TC		Speed	13m/s	

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

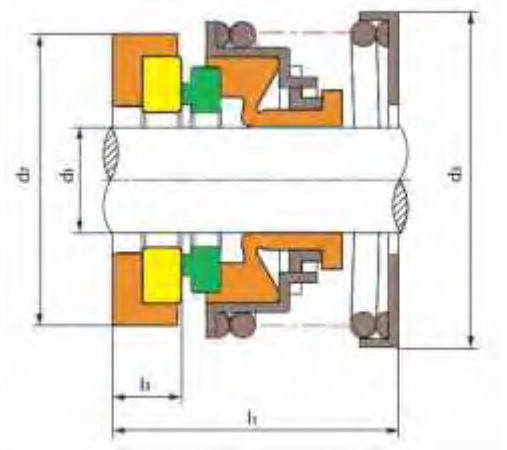
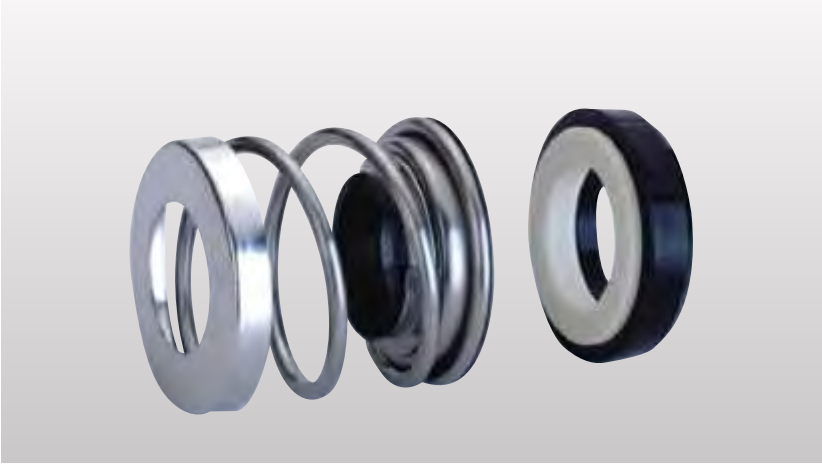
# DIAPHRAGM TYPE MECHANICAL SEALS

## TYPE 34

### SINGLE PARALLEL SPRING – ELASTOMER DIAPHRAGM SEAL

#### Design features

- Elastomer diaphragm suitable for light and general duties in water and rotary pumps.
- Suitable for handling light chemicals ranging from water and steam to weak acids
- Non-clogging single coil spring which assists self-alignment



d <sub>1</sub>	d <sub>3</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>3</sub>
13	31.5	29.5	32	8
14	31.5	29.5	32	8
15	31.5	29.5	26/32	8
16	31.5	29.5	26/32	8

L1 refers to the compressed length when installed  
Units: mm

FACE MATERIAL		ELASTOMER		OPERATING LIMITS	
Rotary	CAR	Standard	NITRILE	Pressure	6 Bar
Stationary	CER	On request	VITON, EPDM	Temperature	-30 to 200°C
				Speed	10m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.



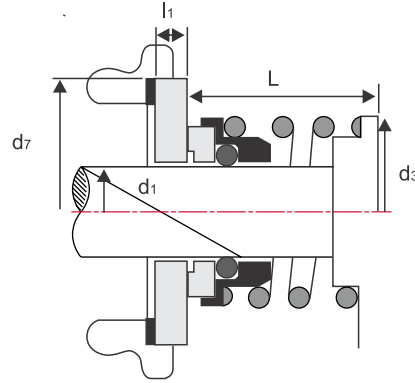
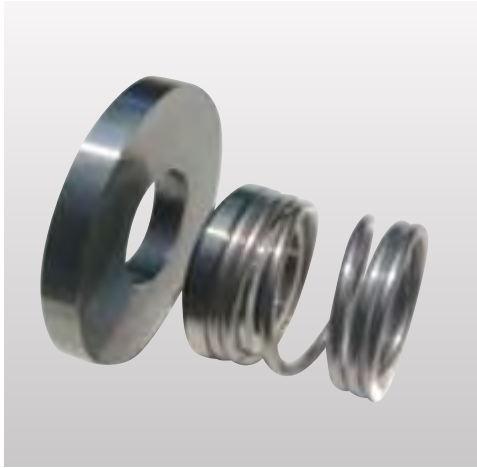
# DIAPHRAGM TYPE MECHANICAL SEALS

## TYPE 36

### SINGLE PARALLEL SPRING – ELASTOMER DIAPHRAGM SEAL

#### Design features

- Imperial seal suitable for low pressure duties in water and rotary pumps
- Typically used in pumps for dairy and beverage industries
- Non-clogging single coil spring which assists self-alignment



$d_1$	$d_3$	$d_7$	$l$	$l_3$
1"	41.25	68.2	25.4	7.8
1 1/2"	55.75	80.1	33.3	9

L2 refers to the compressed length when installed

Units: mm

Commonly used in APV PUMA

FACE MATERIAL		ELASTOMER		OPERATING LIMITS	
Rotary	CAR	Standard	NITRILE	Pressure	6 Bar
Stationary	STL	On request	VITON, EPDM	Temperature	-30 to 110°C
				Speed	10m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

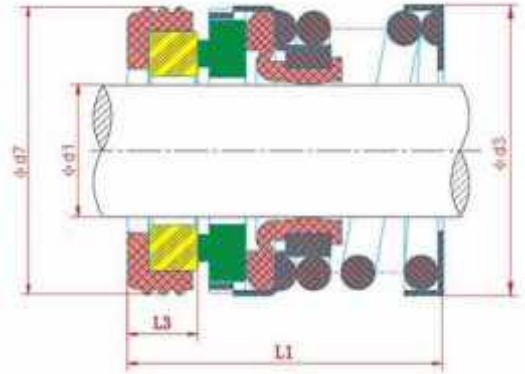
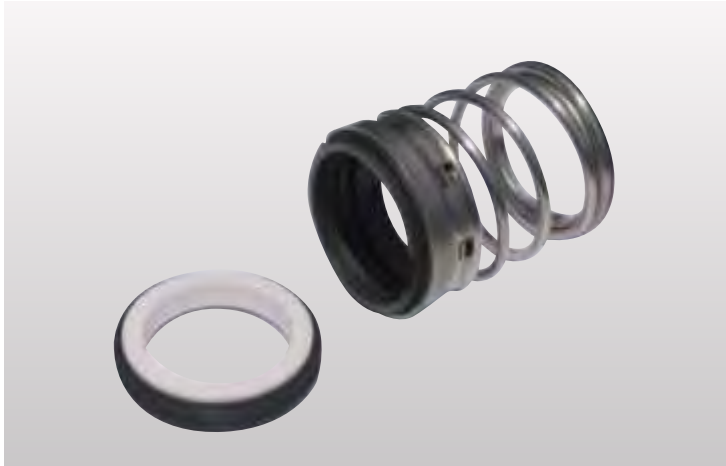
# DIAPHRAGM TYPE MECHANICAL SEALS

## TYPE 111

### SINGLE PARALLEL SPRING – ELASTOMER DIAPHRAGM SEAL

#### Design features

- Balanced seal suitable for high pressure duties in rotary pumps, mixers, compressors and agitators
- Suitable for handling light chemicals ranging from water and steam to weak acids
- Non-clogging single coil spring which assists self-alignment



SHAFT SIZE - d <sub>1</sub>		d <sub>3</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>3</sub>
INCHES	METRIC				
1/2"	12	23.8	27.8	38.9	8.7
5/8"	14, 16	27.8	31.0	43.6	10.3
3/4"	18, 20	30.9	34.2	43.6	10.3
7/8"	22	34.1	37.3	43.6	10.3
1"	25	38.1	40.5	50.0	10.3
1 1/8"	28	41.3	47.6	53.3	12.0
1 1/4"	32	46.0	50.8	53.3	12.0
1 3/8"	37	47.6	54.0	54.9	12.0
1 1/2"	38	50.8	57.2	54.9	12.0
1 5/8"	40	57.2	60.4	62.8	12.0
1 3/4"	45	60.4	63.5	62.8	12.0
1 7/8"	48	63.5	66.7	66.0	12.0
2"	50	66.7	69.9	66.0	12.0
2 1/8"	53	71.4	73.2	73.8	13.5
2 1/4"	58	74.6	79.4	73.8	13.5
2 3/8"	60	78.3	79.4	77.0	13.5
2 1/2"	63	81.0	82.5	77.0	13.5
2 5/8"	65	85.7	92.1	85.8	15.9
2 3/4"	70	88.9	85.5	85.8	15.9
2 7/8"	73	92.1	98.5	88.9	15.9
3"	75	95.3	101.7	88.9	15.9

L1 refers to the compressed length when installed  
Units: mm

SEAT TYPE		FACE MATERIAL			ELASTOMER		OPERATING LIMITS	
Standard	A	Standard	On request	Standard	VITON	Pressure	28 Bar	
On request	B, G, P	Rotary	CAR	On request	NITRILE, EPDM	Temperature	-30 to 200°C	
Refer to data on seats		Stationary	CER	SIC, TC		Speed	15m/s	

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

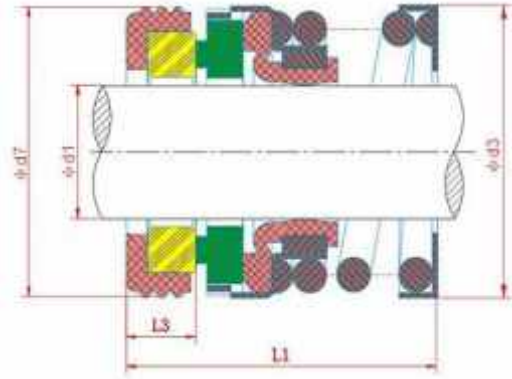
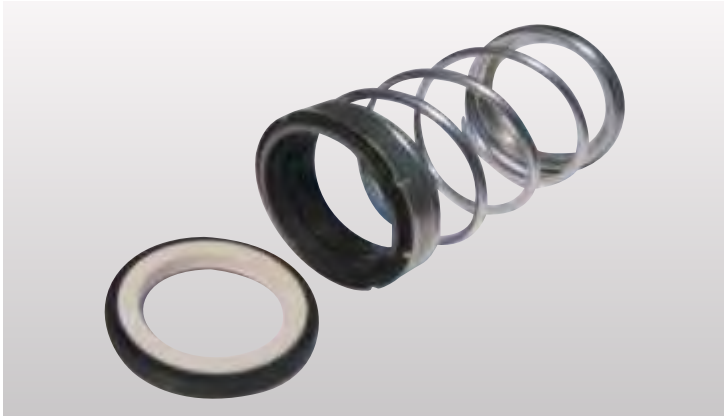
# DIAPHRAGM TYPE MECHANICAL SEALS

## TYPE 211

### SINGLE PARALLEL SPRING – ELASTOMER DIAPHRAGM SEAL

#### Design features

- Elastomer diaphragm seal suitable for light and general duties in rotary pumps, mixers, compressors and agitators
- Suitable for handling light chemicals ranging from water and steam to weak acids
- Non-clogging single coil spring which assists self-alignment



METRIC				
d <sub>1</sub>	d <sub>3</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>3</sub>
10	23.0	24.6	52.4	8.7
12	23.9	27.8	52.4	8.7
13	23.9	27.8	52.4	8.7
14	26.7	31.0	54.0	10.3
15	26.7	31.0	54.0	10.3
16	26.7	31.0	54.0	10.3
18	31.1	34.2	54.0	10.3
19	31.1	34.2	54.0	10.3
20	33.4	35.7	54.0	10.3
22	33.4	37.3	54.0	10.3
24	39.2	40.5	54.0	10.3
25	39.2	40.5	54.0	10.3
28	46.3	47.6	72.3	12.0
30	49.4	50.8	72.3	12.0
32	49.4	50.8	72.3	12.0
33	52.6	54.0	72.3	12.0
35	52.6	54.0	72.3	12.0
38	55.8	57.2	72.3	12.0
40	62.2	60.4	72.3	12.0
42	66.0	63.5	82.6	12.0
43	66.0	63.5	82.6	12.0
44	66.0	63.5	82.6	12.0
45	66.0	63.5	82.6	12.0
48	66.6	66.7	82.6	12.0
50	71.7	69.9	82.6	12.0
53	73.3	73.1	84.5	13.5
55	78.4	76.2	84.5	13.5
58	82.0	79.4	84.5	13.5
60	82.0	79.4	84.5	13.5
63	84.9	82.6	84.5	13.5
65	88.4	92.1	85.9	15.9
70	92.6	95.5	85.9	15.9
75	101.9	101.7	88.9	15.9

IMPERIAL					
INCH	d <sub>1</sub>	d <sub>3</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>3</sub>
3/8"	9.5	23.0	24.6	52.4	8.7
1/2"	12.7	23.9	27.8	52.4	8.7
5/8"	15.8	28.7	31.0	54.0	10.3
3/4"	19.0	31.1	34.2	54.0	10.3
7/8"	22.2	33.4	37.3	54.0	10.3
1"	25.4	39.0	40.5	54.0	10.3
1 1/8"	28.5	46.3	47.6	72.3	12.0
1 1/4"	31.7	49.4	50.8	72.3	12.0
1 3/8"	34.9	52.6	54.0	72.3	12.0
1 1/2"	38.1	55.8	57.2	72.3	12.0
1 5/8"	41.2	62.2	60.4	72.3	12.0
1 3/4"	44.4	66.0	63.5	82.6	12.0
1 7/8"	47.6	66.0	66.7	82.6	12.0
2"	50.8	73.0	69.9	82.6	12.0
2 1/8"	53.9	73.3	73.1	84.5	13.5
2 1/4"	57.1	78.3	76.2	84.5	13.5
2 3/8"	60.3	82.0	79.4	84.5	13.5
2 1/2"	63.5	84.9	82.6	84.5	13.5
2 5/8"	66.6	88.4	92.1	85.9	15.9
2 3/4"	69.8	92.6	95.5	85.9	15.9
2 7/8"	73.0	94.8	98.5	88.9	15.9
3"	76.2	101.9	101.7	88.9	15.9

L1 refers to the compressed length when installed  
Units: mm

SEAT TYPE		FACE MATERIAL		ELASTOMER		OPERATING LIMITS	
Standard	A	Standard	On request	Standard	VITON	Pressure	10 Bar
On request	B, G, P	Rotary	CAR	On request	NITRILE, EPDM	Temperature	-30 to 200°C
Refer to data on seats		Stationary	CER			Speed	12m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

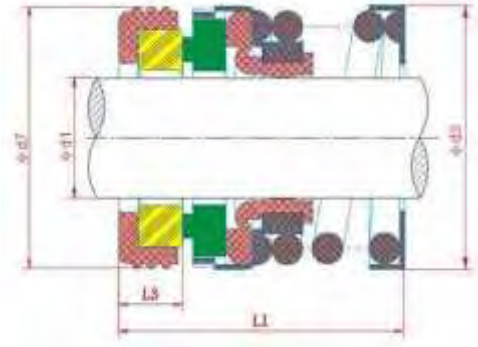
# DIAPHRAGM TYPE MECHANICAL SEALS

## TYPE 212

### SINGLE PARALLEL SPRING – ELASTOMER DIAPHRAGM SEAL

#### Design features

- Elastomer diaphragm suitable for light and general duties in rotary pumps, mixers, compressors and agitators
- Suitable for handling light chemicals ranging from water and steam to weak acids
- Non-clogging single coil spring which assists self-alignment



METRIC				
d <sub>1</sub>	d <sub>3</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>3</sub>
10	22.9	24.6	34.1	8.7
12	23.9	27.8	34.1	8.7
13	23.9	27.8	34.1	8.7
14	26.7	31.0	35.7	10.3
15	26.7	31.0	35.7	10.3
16	26.7	31.0	35.7	10.3
18	31.1	34.2	35.7	10.3
19	31.1	34.2	35.7	10.3
20	33.4	35.7	35.7	10.3
22	33.4	37.3	35.7	10.3
24	39.2	40.5	35.7	10.3
25	39.2	40.5	35.7	10.3
28	46.3	47.6	45.3	12.0
30	49.4	50.8	45.3	12.0
32	49.4	50.8	45.3	12.0
33	52.6	54.0	45.3	12.0
35	52.6	54.0	45.3	12.0
38	55.8	57.2	45.3	12.0
40	62.2	60.4	45.3	12.0
42	66.0	63.5	52.5	12.0
43	66.0	63.5	52.5	12.0
44	66.0	63.5	52.5	12.0
45	66.0	63.5	52.5	12.0
48	66.6	66.7	52.5	12.0
50	71.6	69.9	52.5	12.0
53	73.3	73.1	54.5	13.5
55	78.4	76.2	54.5	13.5
58	82.0	79.4	54.5	13.5
60	82.0	79.4	54.5	13.5
63	84.9	82.6	54.5	13.5
65	88.4	92.1	64.9	15.9
70	92.6	95.5	64.9	15.9
75	101.9	101.7	64.9	15.9

IMPERIAL					
INCH	d <sub>1</sub>	d <sub>3</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>3</sub>
3/8"	9.5	23.0	24.6	34.1	8.7
1/2"	12.7	23.9	27.8	34.1	8.7
5/8"	15.8	28.7	31.0	35.7	10.3
3/4"	19.0	31.1	34.2	35.7	10.3
7/8"	22.2	33.4	37.3	35.7	10.3
1"	25.4	39.0	40.5	43.7	10.3
1 1/8"	28.5	46.3	47.6	45.3	12.0
1 1/4"	31.7	49.4	50.8	45.3	12.0
1 3/8"	34.9	52.6	54.0	45.3	12.0
1 1/2"	38.1	55.8	57.2	45.3	12.0
1 5/8"	41.2	62.2	60.4	45.3	12.0
1 3/4"	44.4	66.0	63.5	52.5	12.0
1 7/8"	47.6	66.0	66.7	52.5	12.0
2"	50.8	73.0	69.9	52.5	12.0
2 1/8"	53.9	73.3	73.1	54.5	13.5
2 1/4"	57.1	78.3	76.2	54.5	13.5
2 3/8"	60.3	82.0	79.4	54.5	13.5
2 1/2"	63.5	84.9	82.6	54.5	13.5
2 5/8"	66.6	88.4	92.1	64.9	15.9
2 3/4"	69.8	92.6	95.5	64.9	15.9
2 7/8"	73.0	94.8	98.5	64.9	15.9
3"	76.2	101.9	101.7	64.9	15.9

L1 refers to the compressed length when installed  
Units: mm

SEAT TYPE		FACE MATERIAL		ELASTOMER		OPERATING LIMITS	
Standard	A	Standard	On request	Standard	VITON	Pressure	10 Bar
On request	B, G, P	Rotary	CAR	On request	NITRILE, EPDM	Temperature	-30 to 200°C
Refer to data on seats		Stationary	CER			Speed	12m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

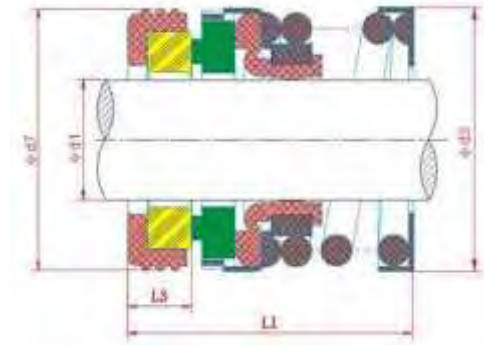
# DIAPHRAGM TYPE MECHANICAL SEALS

## TYPE 211A & 212A

### SINGLE PARALLEL SPRING – ELASTOMER DIAPHRAGM SEAL

#### Design features

- Elastomer diaphragm suitable for light and general duties in rotary pumps, mixers, compressors and agitators
- Suitable for handling light chemicals ranging from water and steam to weak acids
- Non-clogging single coil spring which assists self-alignment



INCH	d <sub>1</sub>	d <sub>3</sub>	d <sub>7</sub>	TYPE 211A	TYPE 212A	l <sub>3</sub>
				l <sub>1</sub>	l <sub>1</sub>	
1/2"	12.7	23.9	25.4	39.7	28.5	7.9
5/8"	15.8	26.7	31.8	45.2	32.5	10.3
3/4"	19.0	31.1	34.9	45.2	32.5	10.3
7/8"	22.2	33.4	38.1	46.8	34.1	10.3
1"	25.4	39.0	41.3	52.4	36.5	11.1
1 1/8"	28.5	46.3	44.5	54.0	38.1	11.1
1 1/4"	31.7	49.4	47.6	54.0	38.1	11.1
1 3/8"	34.9	52.6	50.8	54.0	39.7	11.1
1 1/2"	38.1	55.8	54.0	54.0	39.7	11.1
1 5/8"	41.2	62.2	60.4	63.5	47.6	12.7
1 3/4"	44.4	66.0	63.5	63.5	47.6	12.7
1 7/8"	47.6	66.6	66.7	66.7	50.8	12.7
2"	50.8	73.0	69.9	66.7	50.8	12.7
2 1/8"	53.9	73.3	76.2	74.6	57.2	14.3
2 1/4"	57.1	78.4	79.4	74.6	57.2	14.3
2 3/8"	60.3	82.0	82.5	77.8	60.3	14.3
2 1/2"	63.5	84.9	85.7	77.8	60.3	14.3
2 5/8"	66.6	88.4	85.7	84.2	63.5	14.3
2 3/4"	69.8	92.6	88.9	85.8	65.1	15.9
2 7/8"	73.0	94.9	85.3	88.9	68.3	15.9
3"	76.2	101.9	98.4	88.9	68.3	15.9

L1 refers to the compressed length when installed  
Units: mm

SEAT TYPE		FACE MATERIAL			ELASTOMER		OPERATING LIMITS	
Standard	A	Standard	On request	Standard	VITON	Pressure	10 Bar	
On request	B, G, P	Rotary	CAR	SIC, TC	On request	NITRILE, EPDM	Temperature	-30 to 200°C
Refer to data on seats		Stationary	CER	SIC, TC		Speed	12m/s	

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

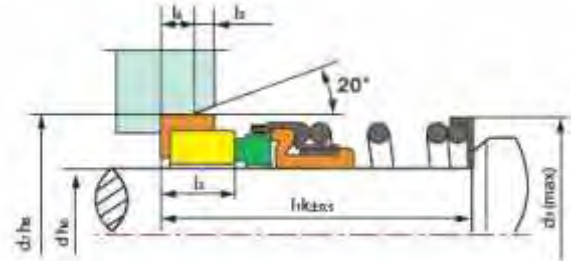
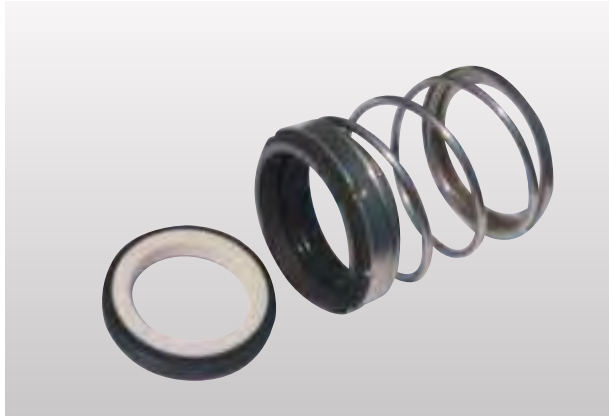
# DIAPHRAGM TYPE MECHANICAL SEALS

## TYPE 522 (DIN 24960)

### SINGLE PARALLEL SPRING – ELASTOMER DIAPHRAGM SEAL

#### Design features

- Elastomer diaphragm seal suitable for light and general duties in rotary pumps, mixers, compressors and agitators
- For handling light chemicals ranging from water and steam to weak acids
- Non-clogging single coil spring which assists self-alignment



d <sub>1</sub>	d <sub>3</sub>	d <sub>7</sub>	l <sub>1k</sub>	l <sub>3</sub>	l <sub>5</sub>	l <sub>6</sub>
10	20.6	21.00	32.5	6.0	1.50	4
12	22.0	23.00	32.5	6.6	1.50	4
14	24.0	25.00	35.0	8.0	1.50	4
16	26.0	27.00	35.0	8.0	1.50	4
18	32.0	33.00	37.5	10.0	2.00	5
20	34.0	35.00	37.5	10.0	2.00	5
22	37.0	37.00	37.5	10.0	2.00	5
24	39.0	39.00	40.0	10.0	2.00	5
25	39.0	40.00	40.0	10.0	2.00	5
28	42.0	43.00	42.5	10.0	2.00	5
30	44.0	45.00	42.5	10.0	2.00	5
32	47.0	48.00	42.5	10.0	2.00	5
33	47.0	48.00	42.5	10.0	2.00	5
35	49.0	50.00	42.5	10.5	2.00	5
38	54.0	56.00	45.0	11.0	2.00	6
40	56.0	58.00	45.0	10.5	2.00	6
43	59.0	61.00	45.0	11.0	2.00	6

d <sub>1</sub>	d <sub>3</sub>	d <sub>7</sub>	l <sub>1k</sub>	l <sub>3</sub>	l <sub>5</sub>	l <sub>6</sub>
45	62	63	45.0	10.5	2.00	6
48	64	66	45.0	10.5	2.00	6
50	66	70	47.5	11.0	2.50	6
53	69	73	47.5	11.5	2.50	6
55	72	75	47.5	12.0	2.50	6
58	80	78	52.5	12.0	2.50	6
60	80	80	52.5	12.0	2.50	6
63	83	83	52.5	12.0	2.50	6
65	85	85	52.5	13.0	2.50	6
68	88	90	52.5	11.36	2.50	7
70	90	92	60.0	11.3	2.50	7
75	99	97	60.0	11.3	2.50	7
80	104	105	60.0	12.0	3.0	7
85	108	110	60.0	14.0	3.0	7
90	114	115	65.0	14.0	3.0	7
95	119	120	65.0	14.0	3.0	7
100	124	125	65.0	14.0	3.0	7

L1 refers to the compressed length when installed  
Units: mm

SEAT TYPE		FACE MATERIAL		ELASTOMER		OPERATING LIMITS	
Standard	C	Standard	On request	Standard	VITON	Pressure	10 Bar
On request	G, P	Rotary	CAR	On request	NITRILE, EPDM	Temperature	-30 to 200°C
Refer to data on seats		Stationary	CER			Speed	10m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

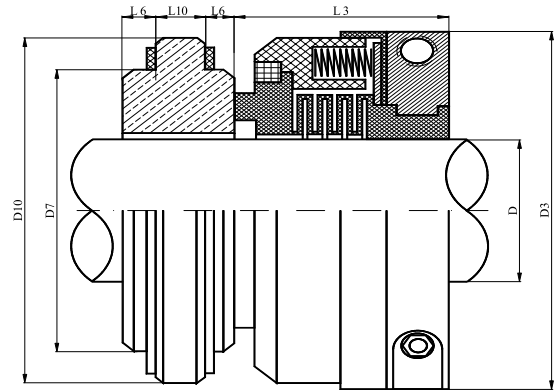
# BELLOWS TYPE MECHANICAL SEALS

## TYPE 10T

### SINGLE PARALLEL SPRING - PTFE BELLOWS SEAL

#### Design features

- External mounted seal for pumps and agitators
- Suitable for extremely corrosive chemicals, acids and oxidising agents
- Flexible PTFE bellows for maximum corrosion resistance



METRIC						
d	d <sub>3</sub>	d <sub>7</sub>	d <sub>10</sub>	l <sub>3</sub>	l <sub>6</sub>	l <sub>10</sub>
25	61	42.9	54	33	4.8	8.0
28	67	50.8	65	36	8.0	11.0
30	70	54.0	68	37	8.0	11.0
32	70	54.0	68	37	8.0	11.0
33	73	57.2	71	38	8.0	11.0
35	73	57.2	71	38	8.0	11.0
38	76	63.5	78	38	8.0	11.0
40	80	66.7	81	40	8.0	11.0
43	83	69.9	84	40	8.0	11.0
45	83	69.9	84	40	8.0	11.0
48	89	79.4	97	43	9.5	14.3
50	89	79.4	97	43	9.5	14.3
53	103	82.6	100	53	9.5	14.3
55	107	85.7	103	53	9.5	14.3
58	110	88.9	106	53	9.5	14.3
60	110	88.9	106	53	9.5	14.3
63	113	92.8	110	53	9.5	14.3
65	116	95.3	113	53	9.5	14.3
68	118	98.4	116	53	9.5	14.3
70	118	98.4	116	53	9.5	14.3
75	126	103.2	121	53	9.5	14.3
80	150	114.3	132	73	9.5	14.3
85	156	120.7	138	73	9.5	14.3
90	163	127.0	144	73	9.5	14.3
95	163	127.0	144	73	9.5	14.3
100	169	133.4	151	73	9.5	14.3

IMPERIAL						
d	d <sub>3</sub>	d <sub>7</sub>	d <sub>10</sub>	l <sub>3</sub>	l <sub>6</sub>	l <sub>10</sub>
1.000"	61	42.9	54	33	4.8	8.0
1.125"	67	50.8	65	36	8.0	11.0
1.250"	70	54.0	68	37	8.0	11.0
1.375"	73	57.2	71	38	8.0	11.0
1.500"	76	63.5	78	38	8.0	11.0
1.625"	80	66.7	81	40	8.0	11.0
1.750"	83	69.9	84	40	8.0	11.0
1.875"	86	73.0	87	43	8.0	11.0
2.000"	89	79.4	97	43	9.5	14.3
2.125"	103	82.6	100	53	9.5	14.3
2.250"	107	85.7	103	53	9.5	14.3
2.375"	110	88.9	106	53	9.5	14.3
2.500"	113	92.1	110	53	9.5	14.3
2.625"	116	95.3	113	53	9.5	14.3
2.750"	118	98.4	116	53	9.5	14.3
2.875"	122	100.0	117	53	9.5	14.3
3.000"	126	103.2	121	53	9.5	14.3
3.250"	150	114.3	132	73	9.5	14.3
3.500"	156	120.7	138	73	9.5	14.3
3.750"	163	127.0	144	73	9.5	14.3
4.000"	169	133.4	151	73	9.5	14.3

L1 refers to the compressed length when installed  
Units: mm

	FACE MATERIAL		BELLOWS MATERIAL	OPERATING LIMITS	
	Standard	On request		Pressure	
Rotary	PTFE	SIC	PTFE	Temperature	-45 to 120°C
Stationary	CER	SIC		Speed	16m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

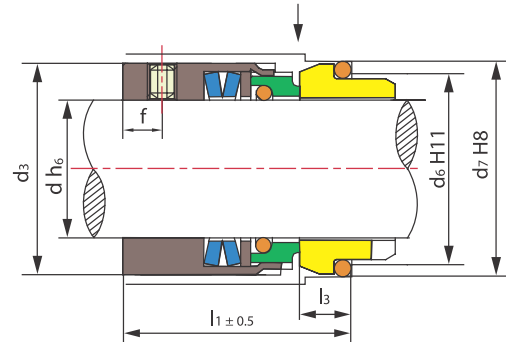
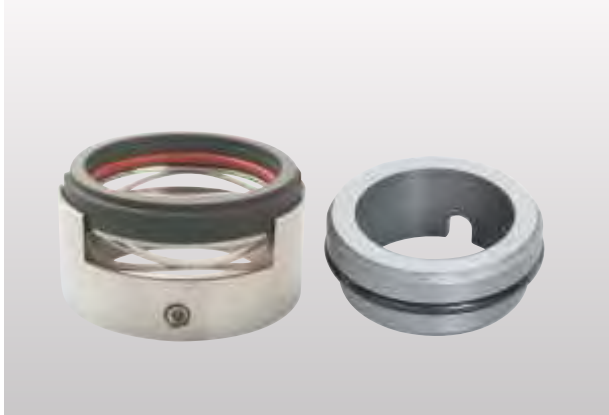
# WAVE SPRING MECHANICAL SEALS

## TYPE 7

UNBALANCED PUSHER SEAL

### Design features

- Conforms to DIN 24960
- Medium pressure sealing duty seal for chemical, processing and petrochemical plants
- O-Ring pusher seal suitable for most solvents, refrigerants, oils, water and food
- Independent on the direction of rotation



d	d <sub>3</sub>	d <sub>6</sub>	d <sub>7</sub>	l <sub>3</sub>	l <sub>1</sub>
25	40	34	40	11.5	40.0
28	43	37	43	11.5	42.5
30	45	39	45	11.5	42.5
32	47	42	48	11.5	42.5
33	48	42	48	11.5	42.5
35	50	44	50	11.5	42.5
38	55	49	56	14.0	45.0
40	57	51	58	14.0	45.0
43	60	54	61	14.0	45.0
45	62	56	63	14.0	45.0
48	65	59	66	14.0	45.0
50	67	62	70	15.0	47.5
53	70	65	73	15.0	47.5
55	72	67	75	15.0	47.5
58	79	70	78	15.0	52.5
60	81	72	80	15.0	52.5
63	84	75	83	15.0	52.5
65	86	77	85	15.0	52.5
70	91	83	92	18.0	60.0
75	99	88	97	18.0	60.0
80	104	95	105	18.2	60.0
85	109	100	110	18.2	60.0
90	114	105	115	18.2	65.0
95	119	110	120	17.2	65.0
100	124	115	125	17.2	65.0

L1 refers to the compressed length when installed  
Units: mm

SEAT TYPE		FACE MATERIAL		ELASTOMER		OPERATING LIMITS	
Standard	Q	Standard	On request	Standard	VITON	Pressure	13 Bar
On request	J, L, M	Rotary	STL	On request	NITRILE, EPDM	Temperature	-45 to 120°C
Refer to data on seats		Stationary	CAR			Speed	16m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.



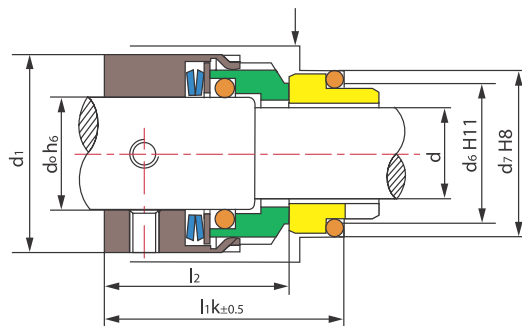
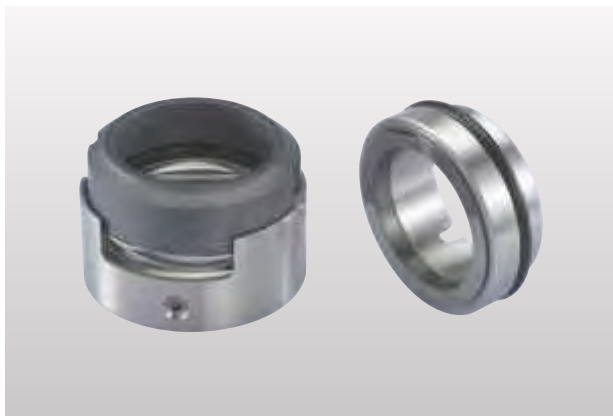
# WAVE SPRING MECHANICAL SEALS

## TYPE 7B

BALANCED PUSHER SEAL

### Design features

- Conforms to DIN 24960
- High pressure sealing duty seal for chemical, processing and petrochemical plants
- O-Ring pusher seal suitable for most solvents, refrigerants, oils, water and food



d	d <sub>0</sub>	d <sub>1</sub>	d <sub>6</sub>	d <sub>7</sub>	l <sub>2</sub>	l <sub>1k</sub>
28	33	48	37	43	38.5	50.0
30	35	50	39	45	38.5	50.0
33	38	55	42	48	38.5	50.0
35	40	57	44	50	38.5	50.0
38	43	60	49	56	38.5	52.5
40	45	62	51	58	38.5	52.5
43	48	65	54	61	38.5	52.5
45	50	67	56	63	38.5	52.5
48	53	70	59	66	38.5	52.5
50	55	72	62	70	42.5	57.5
53	58	79	65	73	42.5	57.5
55	60	81	67	75	42.5	57.5
60	65	86	72	80	47.5	62.5
65	70	91	77	85	47.5	62.5
70	75	99	83	92	42.0	70.0
75	80	104	88	97	42.0	70.0
80	85	109	95	105	51.8	70.0
85	90	114	100	110	56.8	75.0
90	95	119	105	115	56.8	75.0
95	100	124	110	120	57.8	75.0

L1 refers to the compressed length when installed  
Units: mm

SEAT TYPE		FACE MATERIAL		ELASTOMER		OPERATING LIMITS	
Standard	Q	Standard	On request	Standard	VITON	Pressure	25 Bar
		Rotary	SIC, CAR, CER, STL	On request	NITRILE, EPDM	Temperature	-30 to 200°C
		Stationary	SIC, CAR			Speed	20m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

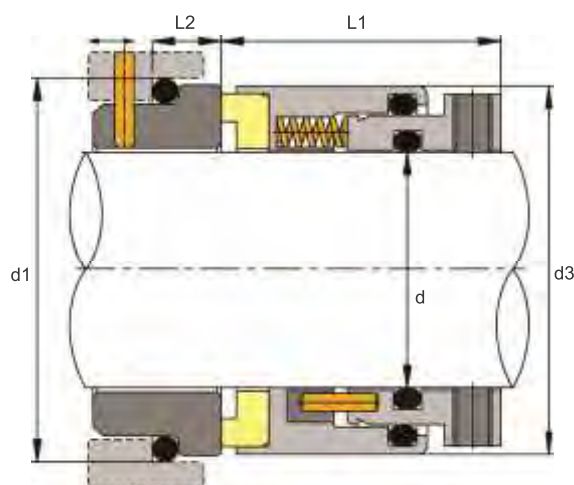
# WAVE SPRING MECHANICAL SEALS

## TYPE 92

BALANCED PUSHER SEAL

### Design features

- Conforms to DIN 24960 & ISO3069
- Medium pressure sealing duty seal for chemical, processing and petrochemical plants
- O-Ring pusher seal suitable for most solvents, refrigerants, oils, water and food



d	d <sub>1</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>
18	33	32.50	30.00	10.00
20	35	34.50	30.00	10.00
22	37	36.50	30.00	10.00
24	39	38.50	30.00	10.00
25	40	39.50	30.00	10.00
28	43	42.50	32.50	10.00
30	45	44.50	32.50	10.00
32	48	46.00	32.50	10.00
33	48	47.00	32.50	10.00
35	50	49.30	32.50	10.00
38	56	52.80	34.00	11.00
40	58	56.00	34.00	11.00
43	61	59.00	34.00	11.00
45	63	59.00	34.00	11.00
48	66	62.40	34.00	11.00
50	70	65.60	34.50	13.00
53	73	68.80	34.50	13.00
55	75	70.80	34.50	13.00
58	78	75.20	34.50	13.00
60	80	75.20	34.50	13.00
63	83	78.30	34.50	13.00
65	85	84.20	36.50	13.00
68	90	85.50	36.50	15.30
70	92	87.50	36.50	15.30
75	97	92.70	36.50	15.30
80	105	100.00	36.50	15.70
85	110	103.00	36.50	15.70
90	115	109.60	36.50	15.70
95	120	112.80	36.50	15.70
100	125	117.50	36.50	15.70

L1 refers to the compressed length when installed  
Units: mm

SEAT TYPE		FACE MATERIAL		ELASTOMER		OPERATING LIMITS	
Standard	W	Standard	On request	Standard	VITON	Pressure	25 Bar
		Rotary	CAR	On request	NITRILE, EPDM	Temperature	-30 to 200°C
		Stationary	CER			Speed	15m/s

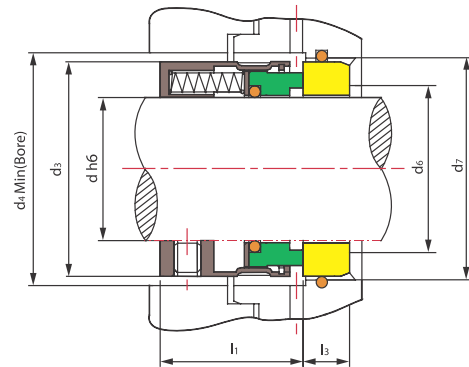
All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

# MULTIPLE SPRING MECHANICAL SEALS

## TYPE 8



### UNBALANCED PUSHER SEAL



Seal size (inches)	d	d <sub>3</sub>	d <sub>4</sub>	d <sub>6</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>3</sub>
0.500	12.70	26.70	30.00	14.5	25.60	21.0	7.90
0.625	15.87	30.70	34.00	17.5	31.95	19.0	10.30
0.750	19.05	34.00	37.00	21.0	35.12	22.2	10.30
0.875	22.22	37.20	40.00	24.0	38.30	24.0	10.30
1.000	25.40	40.30	43.00	27.5	41.48	25.0	11.15
1.125	28.57	43.50	46.00	30.5	44.65	27.0	11.15
1.250	31.75	48.30	51.00	33.5	47.83	27.0	11.15
1.375	34.92	51.50	54.00	37.0	51.00	29.0	11.15
1.500	38.10	54.60	58.00	40.0	54.18	29.0	11.15
1.625	41.27	61.00	64.00	43.5	60.53	35.0	12.75
1.750	44.45	64.20	67.00	46.5	63.70	35.0	12.75
1.875	47.62	67.30	70.00	49.5	66.88	35.0	12.75
2.000	50.80	70.50	73.00	53.0	70.05	35.0	12.75
2.125	53.97	76.90	80.00	56.0	76.40	43.0	14.33
2.250	57.15	80.00	83.00	59.0	79.58	43.0	14.33
2.375	60.32	83.20	86.00	62.5	82.75	43.0	14.33
2.500	63.50	86.40	89.00	65.5	85.93	43.0	14.33
2.625	66.67	89.60	92.00	68.5	85.93	43.0	15.93
2.750	69.85	92.70	96.00	72.0	89.10	43.0	15.93
2.875	73.02	95.90	99.00	75.0	95.45	43.0	15.93
3.000	76.20	97.50	100.00	78.5	98.63	43.0	15.93
3.125	79.37	100.70	104.00	81.5	101.80	43.0	19.84
3.250	82.55	105.40	108.00	84.5	104.98	43.0	19.84
3.375	85.73	108.60	111.00	88.0	108.15	43.0	19.84
3.500	88.90	111.80	115.00	91.0	111.13	43.0	19.84
3.625	92.08	115.00	118.00	94.0	114.35	43.0	19.84
3.750	95.25	118.10	121.00	97.5	117.68	43.0	19.84
3.875	98.43	121.30	124.00	100.5	120.85	43.0	19.84
4.000	104.60	124.50	127.00	103.5	124.03	43.0	19.84
4.125	104.78	130.20	134.00	107.0	130.38	42.9	19.84
4.250	107.65	133.40	137.00	110.0	133.55	42.9	19.84
4.375	111.13	136.50	140.00	113.5	136.72	42.9	19.84
4.500	114.30	139.70	143.00	116.5	139.90	42.9	19.84
4.625	117.48	142.90	146.00	119.5	143.08	42.9	19.84
4.750	120.65	146.10	146.00	122.5	146.25	42.9	19.84
4.875	123.83	149.20	153.00	126.0	149.43	42.9	19.84
5.000	127.00	152.40	156.00	129.0	152.60	42.9	19.84
5.125	130.18	155.60	159.00	132.0	155.77	42.9	19.84
5.250	133.35	165.10	168.00	135.5	158.95	50.8	19.84
5.375	136.53	168.28	171.45	138.5	162.12	50.8	19.84
5.500	139.70	171.50	175.00	141.5	165.30	50.8	19.84
5.625	142.88	174.60	178.00	145.0	168.47	50.8	19.84
5.750	146.05	177.80	181.00	149.0	177.23	50.8	25.40
5.875	149.23	181.00	184.00	152.5	180.41	50.8	25.40
6.000	152.40	184.20	188.00	155.5	183.59	50.8	25.40

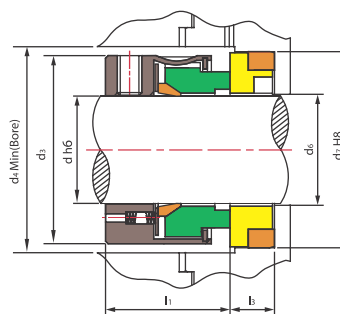
SEAT TYPES	FACE MATERIAL			ELASTOMER / WEDGE MATERIAL	OPERATING LIMITS		
G, P, R, V	Refer to data on seats	Standard	On request	Standard	TYPE 8 - VITON	Pressure	14 Bar
Rotary		SIC	CAR		TYPE 9 - PTFE	Temperature	-30 to 200°C
Stationary		SIC	CER	On request	NITRILE, EPDM	Speed	25m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

# MULTIPLE SPRING MECHANICAL SEALS

## TYPE 9

### UNBALANCED PUSHER SEAL



Seal size d(inches)	d <sub>3</sub>	d <sub>4</sub>	d <sub>6</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>3</sub>
0.500	26.7	29	13.4	25.40	20.6	7.95
0.625	30.7	34	16.6	31.75	19.0	10.3
0.750	34.0	37	19.7	34.93	22.2	10.3
0.875	37.2	40	22.9	38.10	23.8	10.3
1.000	40.3	43	26.1	41.28	25.4	11.1
1.125	43.5	46	29.4	44.45	27.0	11.1
1.250	48.3	51	32.4	47.63	27.0	11.1
1.375	51.5	54	35.6	50.80	28.6	11.1
1.500	54.6	58	38.8	53.98	28.6	11.1
1.625	61.0	64	42.4	60.33	35.0	12.7
1.750	64.2	67	45.5	63.50	35.0	12.7
1.875	67.3	70	48.7	66.68	35.0	12.7
2.000	70.5	73	51.9	69.85	35.0	12.7
2.125	76.9	80	55.0	76.20	43.0	14.3
2.250	80.0	83	58.2	79.38	43.0	14.3
2.375	83.2	86	61.4	82.55	43.0	14.3
2.500	86.4	89	64.6	85.73	43.0	14.6
2.625	89.6	92	67.7	85.73	43.0	15.9
2.750	92.7	96	70.9	88.90	43.0	15.9
2.875	95.9	99	74.1	85.25	43.0	15.9
3.000	97.5	100	77.3	98.43	43.0	15.9
3.125	100.7	104	80.5	101.60	43.0	19.8
3.250	105.4	108	83.6	104.78	43.0	19.8
3.375	108.6	111	86.8	107.95	43.0	19.8
3.500	111.8	115	90.0	111.13	43.0	19.8
3.625	115.0	118	93.1	114.30	43.0	19.8
3.750	118.1	121	96.3	117.48	43.0	19.8
3.875	121.3	124	99.5	120.65	43.0	19.8
4.000	124.5	127	102.7	123.83	43.0	19.8
4.125	127.7	131	106.3	130.18	43.0	19.8
4.250	130.8	134	109.5	133.35	43.0	19.8
4.375	134.0	137	112.7	136.53	43.0	19.8
4.500	137.2	140	115.9	139.70	43.0	19.8
4.625	149.9	153	119.0	142.88	51.0	19.8
4.750	153.1	156	122.2	146.05	51.0	19.8
4.875	156.2	159	125.4	149.23	51.0	19.8
5.000	159.4	165	128.6	152.40	51.0	19.8
5.125	162.6	168	131.7	155.58	51.0	19.8
5.250	165.8	172	134.9	158.75	51.0	19.8
5.375	168.9	175	138.1	161.93	51.0	19.8
5.500	172.1	178	141.3	165.10	51.0	19.8
5.625	175.3	181	\	\	51.0	\
5.750	178.5	184	\	\	51.0	\
5.875	181.6	187	\	\	51.0	\
6.000	184.8	191	\	\	51.0	\

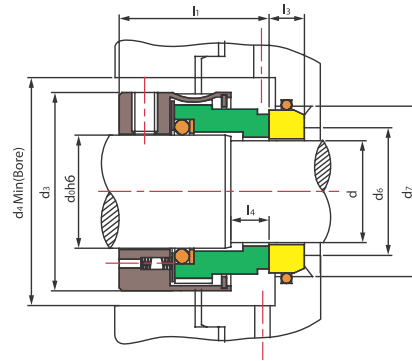
SEAT TYPES	FACE MATERIAL			ELASTOMER / WEDGE MATERIAL	OPERATING LIMITS		
G, P, R, V		Standard	On request	Standard	TYPE 8 - VITON	Pressure	14 Bar
Refer to data on seats	Rotary	SIC	CAR		TYPE 9 - PTFE	Temperature	-30 to 200°C
	Stationary	SIC	CER	On request	NITRILE, EPDM	Speed	25m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

# MULTIPLE SPRING MECHANICAL SEALS

## TYPE 8B

BALANCED PUSHER SEAL



Seal size (inches)	d	d <sub>0</sub>	d <sub>3</sub>	d <sub>4</sub>	d <sub>6</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>3</sub>	l <sub>4</sub>
0.625	12.7	15.87	30.8	34	14.5	25.60	27.0	7.90	7.5
0.750	15.9	19.05	34.0	37	17.5	31.95	30.0	10.30	7.8
0.875	19.1	22.22	37.2	40	21.0	35.12	32.0	10.30	8.0
1.000	22.2	25.40	40.3	43	24.0	38.30	33.0	10.30	8.0
1.125	25.4	28.58	43.4	46	27.5	41.48	35.0	11.15	7.9
1.250	28.6	31.75	48.3	51	30.5	44.65	35.0	11.15	7.9
1.375	28.6	34.93	51.3	54	30.5	44.65	37.0	11.15	8.7
1.500	31.8	38.10	54.5	58	33.5	47.83	37.0	11.15	8.7
1.625	34.9	41.28	60.8	64	37.5	51.00	45.0	11.15	8.7
1.750	38.1	44.45	64.0	67	40.0	54.18	45.0	11.15	9.5
1.875	41.3	47.62	67.2	70	43.5	60.53	45.0	12.75	9.5
2.000	44.5	50.80	70.4	73	46.5	63.70	45.0	12.75	9.5
2.125	47.6	53.98	76.7	80	49.5	66.88	52.0	12.75	11.1
2.250	50.8	57.15	79.9	83	53.0	70.05	52.0	12.75	11.1
2.375	54.0	60.33	83.1	86	56.0	76.40	52.0	14.33	11.1
2.500	57.2	63.50	86.2	89	59.0	79.58	52.0	14.33	11.1
2.625	60.3	66.68	89.4	92	62.5	82.75	52.0	14.33	11.1
2.750	63.5	69.85	92.6	96	65.5	85.93	52.0	14.33	11.1
2.875	66.7	73.03	95.8	99	68.5	85.93	52.0	15.93	11.1
3.000	69.9	76.20	97.3	100	72.0	89.10	52.0	15.93	11.1
3.125	73.0	79.38	100.5	104	75.0	95.45	52.0	15.93	11.1
3.250	76.2	82.55	105.3	108	78.5	98.63	52.0	15.93	14.3
3.375	79.4	85.73	108.5	111	81.5	101.80	52.0	19.84	14.3
3.500	82.6	88.90	111.6	115	84.5	104.98	52.0	19.84	14.3
3.625	85.7	92.08	114.8	118	88.0	108.15	52.0	19.84	14.3
3.750	88.9	95.25	118.0	121	91.0	111.33	52.0	19.84	14.3
3.875	92.1	98.43	121.2	124	94.0	114.50	52.0	19.84	14.3
4.000	95.3	101.60	124.3	127	97.5	117.68	52.0	19.84	14.3
4.125	98.4	104.78	127.0	134	100.5	120.85	52.4	19.84	14.3
4.250	101.6	107.95	133.4	137	103.5	124.03	52.4	19.84	14.3
4.375	104.8	111.13	136.5	140	107.0	130.38	52.4	19.84	14.3
4.500	107.9	114.30	139.7	143	110.0	133.55	52.4	19.84	14.3
4.625	111.1	117.48	142.9	146	110.0	133.55	52.4	19.84	15.8
4.750	114.3	120.65	146.1	149	113.5	136.72	52.4	19.84	15.8
4.875	117.4	123.83	149.2	153	116.5	139.90	52.4	19.84	15.8
5.000	120.6	127.00	152.4	156	119.5	143.08	52.4	19.84	15.8
5.125	123.8	130.18	155.6	159	122.5	146.25	52.4	19.84	15.8
5.250	127.0	133.35	165.1	168	126.0	149.43	60.3	19.84	15.8
5.375	130.2	136.53	168.28	171.45	129.0	152.60	60.3	19.84	15.8
5.500	133.3	139.70	171.5	175	132.0	155.77	60.3	19.84	15.8
5.625	136.5	142.88	174.6	178	135.5	158.95	60.3	19.84	15.8
5.750	139.7	146.05	177.8	181	138.5	162.12	60.3	19.84	15.8
5.875	142.9	149.23	181.0	184	141.5	165.30	60.3	19.84	15.8
6.000	146.0	152.40	184.2	188	145.0	168.47	60.3	19.84	15.8

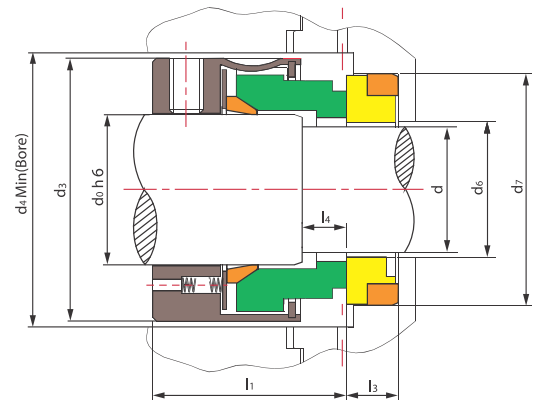
SEAT TYPES	FACE MATERIAL		ELASTOMER / WEDGE MATERIAL		OPERATING LIMITS		
	G, P, R, V	Standard	On request	Standard	TYPE 8B - VITON	Pressure	20 Bar
Refer to data on seats	Rotary	SIC	CAR	On request	TYPE 9B - PTFE	Temperature	-30 to 200°C
	Stationary	SIC	CER	On request	NITRILE, EPDM	Speed	25m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

# MULTIPLE SPRING MECHANICAL SEALS

## TYPE 9B

BALANCED PUSHER SEAL



Seal size (inches)	d	d <sub>0</sub>	d <sub>3</sub>	d <sub>4</sub>	d <sub>6</sub>	d <sub>7</sub>	l <sub>1</sub>	l <sub>3</sub>	l <sub>4</sub>
0.625	12.7	15.88	30.7	34	13.4	25.40	27	7.95	4.8
0.750	15.9	19.05	34.0	37	16.6	31.75	30	10.3	4.8
0.875	19.1	22.23	37.2	40	19.7	34.93	32	10.3	6.4
1.000	22.2	25.40	40.3	43	22.9	38.10	33	10.3	6.4
1.125	25.4	28.58	43.5	46	26.1	41.28	35	11.1	7.9
1.250	28.6	31.75	48.3	51	29.3	44.45	35	11.1	7.9
1.375	28.6	34.93	51.5	54	29.3	44.45	37	11.1	8.7
1.500	31.8	38.10	54.6	58	32.4	47.63	37	11.1	8.7
1.625	34.9	41.28	61.0	64	35.6	50.80	45	11.1	8.7
1.750	38.1	44.45	64.2	67	39.8	53.98	45	11.1	9.5
1.875	41.3	47.63	67.3	70	42.4	60.33	45	12.7	9.5
2.000	44.5	50.80	70.5	73	45.5	63.50	45	12.7	9.5
2.125	47.6	53.98	76.9	80	48.7	66.68	52	12.7	11.1
2.250	50.8	57.15	80.0	83	51.9	69.86	52	12.7	11.1
2.375	54.0	60.33	83.2	86	55.0	76.20	52	14.3	11.1
2.500	57.2	63.50	86.4	89	58.2	79.38	52	14.3	11.1
2.625	60.3	66.68	89.6	92	61.4	82.55	52	14.3	11.1
2.750	63.5	69.85	92.7	96	64.6	85.73	52	14.3	11.1
2.875	66.7	73.03	95.9	99	67.7	85.73	52	14.3	11.1
3.000	69.9	76.20	97.5	100	70.9	88.90	52	15.9	11.1
3.125	73.0	79.38	100.7	104	74.1	95.25	52	15.9	11.1
3.250	76.2	82.55	105.4	108	77.3	98.43	52	15.9	14.3
3.375	79.4	85.73	108.6	111	80.5	101.60	52	19.8	14.3
3.500	82.6	88.90	111.8	115	83.6	104.78	52	19.8	14.3
3.625	85.7	92.08	115.0	118	86.8	107.95	52	19.8	14.3
3.750	88.9	95.25	118.1	121	90.0	111.13	52	19.8	14.3
3.875	92.1	98.43	121.3	124	93.1	114.30	52	19.8	14.3
4.000	95.3	101.60	124.5	127	96.3	117.48	52	19.8	14.3
4.125	98.4	104.78	127.7	131	99.5	120.65	52	19.8	14.3
4.250	101.6	107.95	130.8	134	102.7	123.83	52	19.8	14.3
4.375	104.8	111.13	134.0	137	106.3	130.18	52	19.8	14.3
4.500	108.0	114.30	137.2	140	109.5	133.35	52	19.8	14.3
4.625	108.0	117.48	149.9	153	109.5	133.35	64	19.8	15.9
4.750	111.1	120.65	153.1	156	112.7	136.35	64	19.8	15.9
4.875	114.3	123.83	156.2	159	115.9	139.70	64	19.8	15.9
5.000	117.5	127.00	159.4	165	119.0	142.88	64	19.8	15.9
5.125	120.7	130.18	162.6	168	122.2	146.05	64	19.8	15.9
5.250	123.8	133.35	165.8	172	125.4	149.23	64	19.8	15.9
5.375	127.0	136.53	168.9	175	128.6	152.40	64	19.8	15.9
5.500	130.2	139.70	172.1	178	131.7	155.58	64	19.8	15.9
5.625	133.4	142.88	175.3	181	134.9	158.75	64	19.8	15.9
5.750	136.5	146.05	178.5	184	138.1	161.93	64	19.8	15.9
5.875	139.7	149.23	181.6	187	141.3	165.10	64	19.8	15.9
6.000	142.9	152.40	184.8	191	\	\	64	\	15.9

SEAT TYPES	FACE MATERIAL		ELASTOMER / WEDGE MATERIAL		OPERATING LIMITS		
	G, P, R, V	Standard	On request	Standard	TYPE 8B - VITON	Pressure	20 Bar
Refer to data on seats	Rotary	SIC	CAR	On request	TYPE 9B - PTFE	Temperature	-30 to 200°C
	Stationary	SIC	CER	On request	NITRILE, EPDM	Speed	25m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

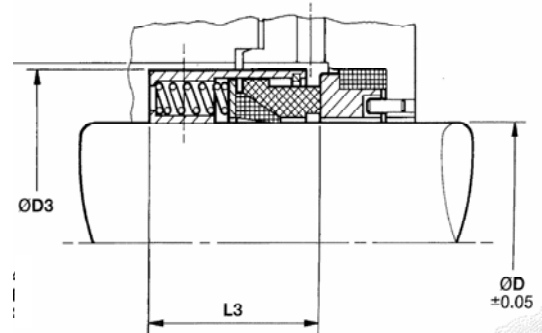
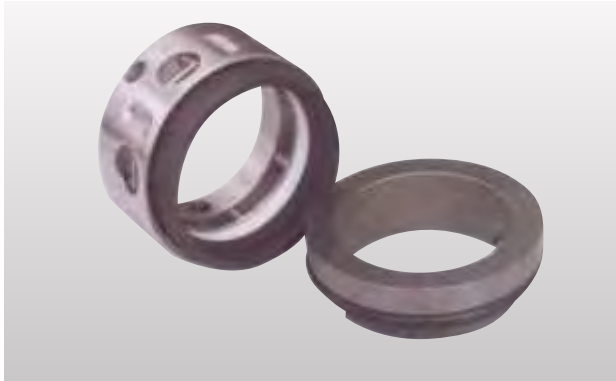
# MULTIPLE SPRING MECHANICAL SEALS

## TYPE 8T & 9T

UNBALANCED PUSHER SEAL

### Design features

- Conforms to ANSI B73-1974 centrifugal pump standards
- Suitable for extremely corrosive fluids such as sulphuric, phosphoric and hydrochloric acids
- Medium pressure sealing capability
- Type 8T is an O-ring pusher seal suitable for most solvents, refrigerants, oils, water and food
- Type 9T is a PTFE wedge pusher seal suitable for use with corrosive fluid and high temperatures



d	d <sub>3</sub>	l <sub>3</sub>
0.750	30.2	23.8
0.875	33.4	23.8
1.000	37.5	24.5
1.125	40.7	25.4
1.250	43.9	25.4
1.375	49.3	34.9
1.500	49.3	28.6
1.625	57.2	29.4
1.750	57.2	34.9
1.875	63.5	34.9
2.000	66.7	34.9
2.125	71.5	42.8
2.250	72.3	34.9
2.375	76.2	42.8
2.500	79.4	34.9
2.625	82.6	42.8
2.750	85.7	42.8
2.875	88.9	42.8
3.000	92.1	42.8
3.125	95.3	42.8
3.250	98.4	42.8
3.375	101.6	42.8
3.500	104.8	42.8
3.750	111.1	42.8
4.000	117.5	42.8

L3 refers to the compressed length when installed

Units: mm

Shown with TYPE R stationary seat

SEAT TYPE	FACE MATERIAL			ELASTOMER / WEDGE MATERIAL		OPERATING LIMITS	
		Standard	On request	Standard			
G, P, R, V					TYPE 8T - VITON	Pressure	14 Bar
Refer to data on seats	Rotary	SIC	CAR		TYPE 9T - PTFE	Temperature	-30 to 200°C
	Stationary	SIC	CER	On request	NITRILE, EPDM	Speed	25m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

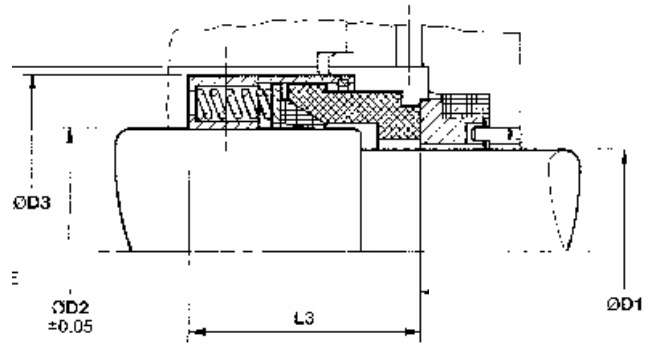
# MULTIPLE SPRING MECHANICAL SEALS

## TYPE 8BT & 9BT

BALANCED PUSHER SEAL

### Design features

- Suitable for extremely corrosive fluids such as sulphuric, phosphoric and hydrochloric acids
- High pressure sealing capability
- Type 8BT is an O-Ring pusher seal suitable for most solvents, refrigerants, oils, water and food
- Type 9BT is a PTFE wedge pusher seal suitable for use with corrosive fluid and high temperatures



SHAFT SIZE - $d_2$	$d_1$	$d_3$	$l_3$
0.750	15.8	30.2	31.7
0.875	19.1	33.4	31.7
1.000	22.2	37.5	33.3
1.125	25.4	40.7	34.9
1.250	28.6	43.9	34.9
1.375	28.6	49.3	42.8
1.500	31.8	49.3	36.4
1.625	34.9	57.2	44.4
1.750	38.0	57.2	44.4
1.875	41.3	63.5	44.4
2.000	44.5	66.7	44.4
2.125	47.6	71.5	52.3
2.250	50.8	72.3	44.4
2.375	54.0	76.2	52.3
2.500	57.2	79.4	44.4
2.625	60.3	82.6	52.3
2.750	63.5	85.7	52.3
2.875	66.7	88.9	52.3
3.000	69.9	92.1	52.3
3.125	73.0	95.3	52.3
3.250	76.2	98.4	52.3
3.375	79.4	101.6	52.3
3.500	82.6	104.8	52.3
3.750	88.9	111.1	52.3
4.000	95.3	117.5	52.3

L3 refers to the compressed length when installed

Units: mm

Shown with TYPE R stationary seat

SEAT TYPE	FACE MATERIAL		ELASTOMER / WEDGE MATERIAL		OPERATING LIMITS	
G, P, R, V	Standard	On request	Standard	8BT - VITON	Pressure	20 Bar
Refer to data on seats	Rotary	SIC	CAR	9BT - PTFE	Temperature	-30 to 200°C
	Stationary	SIC	CER	On request	Speed	25m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.



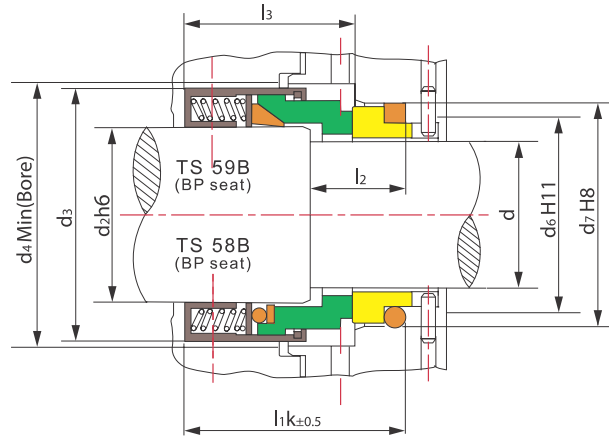
# MULTIPLE SPRING MECHANICAL SEALS

## TYPE 58B & 59B

UNBALANCED PUSHER SEAL

### Design features

- Conforms to ISO 3069 & DIN 24960
- High pressure sealing duty seal for chemical, processing and petrochemical plants
- Type 58B is an O-Ring pusher seal suitable for most solvents, refrigerants, oils, water and food
- Type 59B is a PTFE wedge pusher seal suitable for use with corrosive fluid and high temperatures



Seal size d(mm)	d <sub>2</sub>	d <sub>3</sub>	d <sub>4</sub>	l <sub>1k</sub>	l <sub>2</sub>	l <sub>3</sub>	d <sub>6</sub>	d <sub>7</sub>
14	18	32	34	42.5	18	30.5	21	25
16	20	34	36	42.5	18	30.5	23	27
18	22	36	38	45.0	20	31.5	27	33
20	24	38	40	45.0	20	31.5	29	35
22	26	40	42	45.0	20	31.5	31	37
24	28	42	44	47.5	20	34.2	33	39
25	30	44	46	47.5	20	34.5	34	40
28	33	47	49	50.0	20	37.5	37	43
30	35	49	51	50.0	20	38.0	39	45
32	38	54	58	50.0	20	38.0	42	48
33	38	54	58	50.0	20	38.0	42	48
35	40	56	60	50.0	20	38.0	44	50
38	43	59	63	52.5	23	39.5	49	56
40	45	61	65	52.5	23	39.5	51	58
43	48	64	68	52.5	23	39.5	54	61
45	50	66	70	52.5	23	39.5	56	63
48	53	69	73	52.5	25	39.5	59	66
50	55	71	75	57.5	25	44.0	62	70
53	58	78	83	57.5	25	44.0	65	73
55	60	80	85	57.5	25	44.0	67	75
58	63	83	88	62.5	25	49.0	70	78
60	65	85	90	62.5	25	49.0	72	80
63	68	88	93	62.5	25	49.0	75	83
65	70	90	95	62.5	25	49.0	77	85
70	75	95	104	70.0	28	55.5	83	92
75	80	104	109	70.0	28	55.5	88	97
80	85	109	114	70.0	28	55.0	95	105
85	90	114	119	75.0	28	60.0	100	110
90	95	119	124	75.0	28	60.0	105	115
95	100	124	129	75.0	28	60.0	110	120
100	105	129	134	75.0	28	60.0	115	125

L3 & L1k refers to the compressed lengths when installed  
Units: mm

SEAT TYPE		FACE MATERIAL			ELASTOMER / WEDGE MATERIAL		OPERATING LIMITS	
Standard	P	Rotary	Standard	On request	Standard	TYPE 58B - VITON	Pressure	25 Bar
On request	G		SIC	CAR		TYPE 59B - PTFE	Temperature	-30 to 200°C
Refer to data on seats		Stationary	SIC	CER	On request	NITRILE, EPDM	Speed	25m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

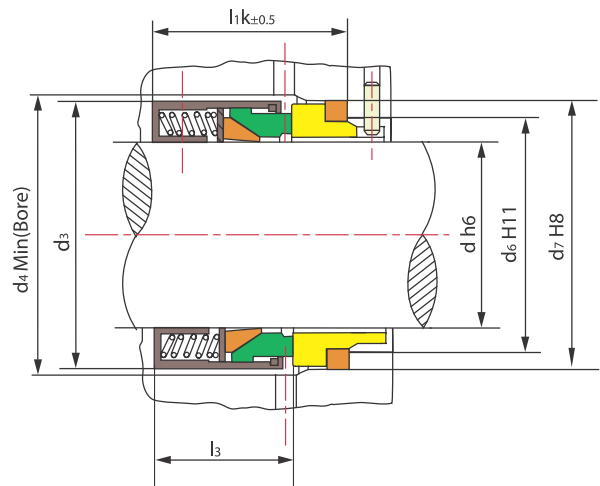
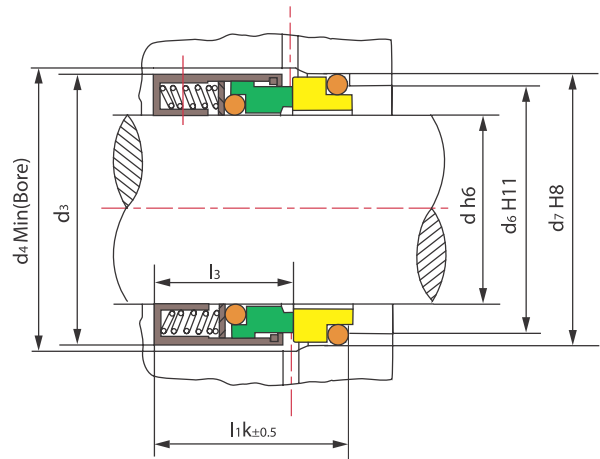
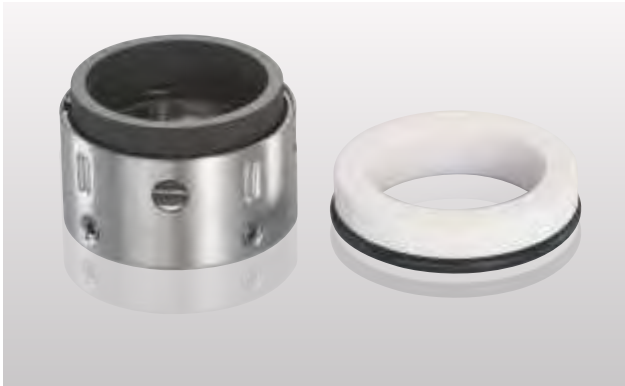
# MULTIPLE SPRING MECHANICAL SEALS

## TYPE 58U & 59U

UNBALANCED PUSHER SEAL

### Design features

- Conforms to ISO 3069 & DIN 24960
- Low to medium pressure sealing duty seal for chemical, processing and petrochemical plants
- Type 58U is an O-Ring pusher seal suitable for most solvents, refrigerants, oils, water and food
- Type 59U is a PTFE wedge pusher seal suitable for use with corrosive fluid and high temperatures



Seal size d(mm)	d <sub>3</sub>	d <sub>4</sub>	l <sub>k</sub>	l <sub>3</sub>	d <sub>6</sub>	d <sub>7</sub>
14	24	26	35.0	23.0	21	25
16	26	28	35.0	23.0	23	27
18	32	34	37.5	24.0	27	33
20	34	36	37.5	24.0	29	35
22	36	38	37.5	24.0	31	37
24	38	40	40.0	26.7	33	39
25	39	41	40.0	27.0	34	40
28	42	44	42.5	30.0	37	43
30	44	46	42.5	30.5	39	45
32	46	48	42.5	30.5	42	48
33	47	49	42.5	30.5	42	48

Seal size d(mm)	d <sub>3</sub>	d <sub>4</sub>	l <sub>k</sub>	l <sub>3</sub>	d <sub>6</sub>	d <sub>7</sub>
35	49	51	42.5	30.5	44	50
38	54	58	45.0	32.0	49	56
40	56	60	45.0	32.0	51	58
43	59	63	45.0	32.0	54	61
45	61	65	45.0	32.0	56	63
48	64	68	45.0	32.0	59	66
50	66	70	47.5	34.0	62	70
53	69	73	47.5	34.0	65	73
55	71	75	47.5	34.0	67	75
58	78	83	52.5	39.0	70	78
60	80	85	52.5	39.0	72	80

Seal size d(mm)	d <sub>3</sub>	d <sub>4</sub>	l <sub>k</sub>	l <sub>3</sub>	d <sub>6</sub>	d <sub>7</sub>
63	83	88	52.5	39.0	75	83
65	85	90	52.5	39.0	77	85
68	88	93	52.5	39.0	81	90
70	90	95	60.0	45.5	83	92
75	95	104	60.0	45.5	88	97
80	104	109	60.0	45.0	95	105
85	109	114	60.0	45.0	100	110
90	114	119	65.0	50.0	105	115
95	119	124	65.0	50.0	110	120
100	124	129	65.0	50.0	115	125

SEAL TYPE	FACE MATERIAL				ELASTOMER / WEDGE MATERIAL		OPERATING LIMITS	
	Standard	P	Standard	On request	Standard	TYPE 58U - VITON	Pressure	14 Bar
On request	G	Rotary	SIC	CAR	Standard	TYPE 59U - PTFE	Temperature	-30 to 200°C
Refer to data on seats		Stationary	SIC	CER	On request	NITRILE, EPDM	Speed	20m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

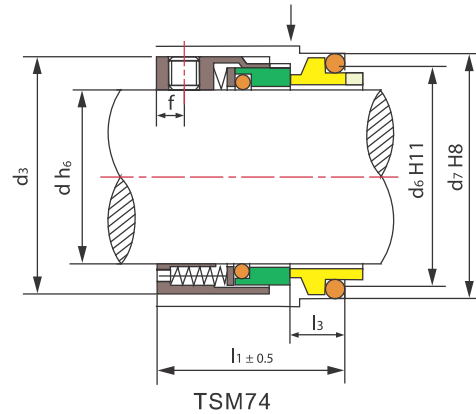
# MULTIPLE SPRING MECHANICAL SEALS

## TYPE 74

UNBALANCED PUSHER SEAL

### Design features

- Conforms to DIN 24960
- Medium pressure sealing duty seal for chemical, processing and petrochemical plants
- O-Ring pusher seal suitable for most solvents, refrigerants, oils, water and food
- Independent on the direction of rotation



d	d <sub>3</sub>	d <sub>6</sub>	d <sub>7</sub>	l <sub>3</sub>	l <sub>1</sub>
25	40	34	40	11.5	40.0
28	43	37	43	11.5	42.5
30	45	39	45	11.5	42.5
32	47	42	48	11.5	42.5
33	48	42	48	11.5	42.5
35	50	44	50	11.5	42.5
38	55	49	56	14.0	45.0
40	57	51	58	14.0	45.0
43	60	54	61	14.0	45.0
45	62	56	63	14.0	45.0
48	65	59	66	14.0	45.0
50	67	62	70	15.0	47.5
53	70	65	73	15.0	47.5
55	72	67	75	15.0	47.5
58	79	70	78	15.0	52.5
60	81	72	80	15.0	52.5
63	84	75	83	15.0	52.5
65	86	77	85	15.0	52.5
70	91	83	92	18.0	60.0
75	99	88	97	18.0	60.0
80	104	95	105	18.2	60.0
85	109	100	110	18.2	60.0
90	114	105	115	18.2	65.0
95	119	110	120	17.2	65.0
100	124	115	125	17.2	65.0

L1 refers to the compressed length when installed  
Units: mm

SEAT TYPE		FACE MATERIAL		ELASTOMER		OPERATING LIMITS	
Standard	Q	Standard	On request	Standard	VITON	Pressure	16 Bar
On request	J, L, M	Rotary	STL	On request	NITRILE, EPDM	Temperature	-30 to 200°C
Refer to data on seats		Stationary	CAR			Speed	20m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

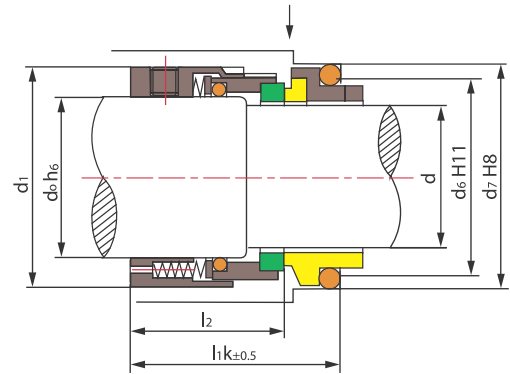
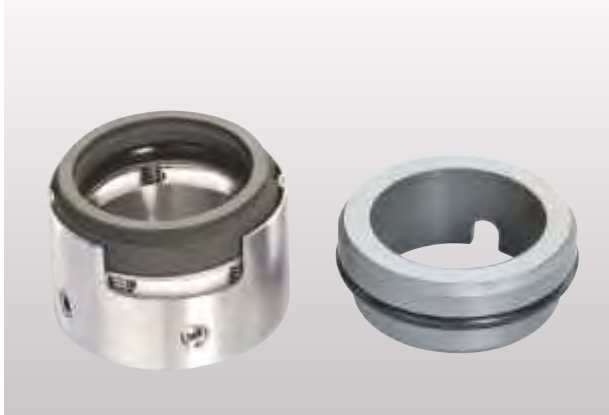
# MULTIPLE SPRING MECHANICAL SEALS

## TYPE 74B

BALANCED PUSHER SEAL

### Design features

- Conforms to DIN 24960
- High pressure sealing duty seal for chemical, processing and petrochemical plants
- O-Ring pusher seal suitable for most solvents, refrigerants, oils, water and food



d	d <sub>0</sub>	d <sub>1</sub>	d <sub>6</sub>	d <sub>7</sub>	l <sub>2</sub>	l <sub>1k</sub>
28	33	48	37	43	38.5	50.0
30	35	50	39	45	38.5	50.0
33	38	55	42	48	38.5	50.0
35	40	57	44	50	38.5	50.0
38	43	60	49	56	38.5	52.5
40	45	62	51	58	38.5	52.5
43	48	65	54	61	38.5	52.5
45	50	67	56	63	38.5	52.5
48	53	70	59	66	38.5	52.5
50	55	72	62	70	42.5	57.5
53	58	79	65	73	42.5	57.5
55	60	81	67	75	42.5	57.5
60	65	86	72	80	47.5	62.5
65	70	91	77	85	47.5	62.5
70	75	99	83	92	42.0	70.0
75	80	104	88	97	42.0	70.0
80	85	109	95	105	51.8	70.0
85	90	114	100	110	56.8	75.0
90	95	119	105	115	56.8	75.0
95	100	124	110	120	57.8	75.0

L1 refers to the compressed length when installed  
Units: mm

SEAT TYPE		FACE MATERIAL		ELASTOMER		OPERATING LIMITS	
Standard	Q	Standard	On request	Standard	VITON	Pressure	25 Bar
		Rotary	SIC, CAR, CER, STL	On request	NITRILE, EPDM	Temperature	-30 to 200°C
		Stationary	SIC, CAR			Speed	20m/s

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

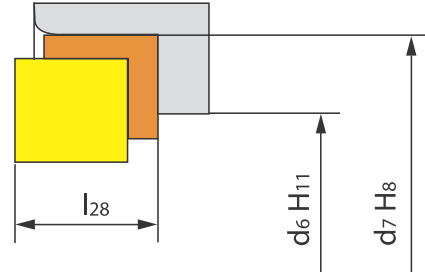
# STATIONARY SEATS

## TYPES A, B, C & D

ELASTOMER BOOT MOUNTED

### Design features

- Push fit, non-contacting
- Most economical design
- L-section elastomer ring relies on friction to prevent rotation



SHAFT SIZE - D		TYPE A		TYPE B		TYPE C		TYPE D		
MM	INCHES	d <sub>7</sub>	l <sub>28</sub>	d <sub>7</sub>	l <sub>28</sub>	d <sub>7</sub>	l <sub>28</sub>	d <sub>7</sub>	l <sub>28</sub>	d <sub>6</sub>
10	3/8"	24.6	8.7	21.0	8.7	21	8.6	21	6.6	17
12	1/2"	27.8	8.7	25.4	8.7	23	8.6	23	6.6	19
13	-	27.8	8.7	25.4	8.7	-	-	-	-	-
14	-	31.0	10.3	31.8	10.3	25	8.6	25	6.6	21
15	-	31.0	10.3	31.8	10.3	-	-	-	-	-
16	5/8"	31.0	10.3	31.8	10.3	27	10.0	27	6.6	23
18	-	34.2	10.3	34.9	10.3	33	10.0	33	7.5	27
19	3/4"	34.2	10.3	34.9	10.3	-	-	-	-	-
20	-	35.7	10.3	38.1	10.3	35	10.0	35	7.5	29
22	7/8"	37.3	10.3	38.1	10.3	37	10.0	37	7.5	31
24	-	40.5	10.3	41.3	10.3	39	10.0	39	7.5	33
25	1"	40.5	10.3	41.3	10.3	40	10.0	40	7.5	34
28	1 1/8"	47.6	12.0	44.5	12.0	43	10.0	43	7.5	37
30	-	50.8	12.0	47.6	12.0	45	10.0	45	7.5	39
32	1 1/4"	50.8	12.0	47.6	12.0	48	10.0	48	7.5	42
33	-	54.0	12.0	50.8	12.0	-	-	48	7.5	42
35	1 3/8"	54.0	12.0	50.8	12.0	50	10.0	50	7.5	44
38	1 1/2"	57.2	12.0	54.0	12.0	56	11.0	56	9.0	49
40	1 5/8"	60.4	12.0	60.4	12.0	58	11.0	58	9.0	51
42	-	63.5	12.0	60.4	12.0	-	-	-	-	-
43	-	63.5	12.0	63.5	12.0	61	11.0	61	9.0	54
44	1 3/4"	63.5	12.0	63.5	12.0	-	-	-	-	-
45	-	63.5	12.0	63.5	12.0	63	11.0	63	9.0	56
48	1 7/8"	66.7	12.0	66.7	12.0	66	11.0	66	9.0	59
50	2"	69.9	12.0	69.9	12.0	70	13.0	70	9.5	62
53	2 1/8"	73.1	13.5	76.2	13.5	73	13.0	73	11.0	65
55	-	76.2	13.5	76.2	13.5	75	13.0	75	11.0	67
57	2 1/4"	76.2	13.5	79.4	13.5	-	-	-	-	-
58	-	79.4	13.5	76.2	13.5	71	13.0	78	11.0	70
60	2 3/8"	79.4	13.5	82.5	13.5	80	13.0	80	11.0	72
63	2 1/2"	82.6	13.5	85.7	13.5	-	-	-	-	-
65	2 5/8"	92.1	15.9	85.7	15.9	85	13.0	85	11.0	77
68	-	-	-	-	-	90	13.0	90	11.3	81
70	2 3/4"	95.5	15.9	88.9	15.9	92	15.3	92	11.3	83
73	2 7/8"	98.5	15.9	85.3	15.9	-	-	-	-	-
75	3"	101.7	15.9	98.4	15.9	97	15.3	97	11.3	88
80	-	-	-	-	-	105	15.3	105	12.0	95
85	-	-	-	-	-	110	15.7	110	14.0	100
90	-	-	-	-	-	115	15.7	115	14.0	105
95	-	-	-	-	-	120	15.7	120	14.0	110
100	-	-	-	-	-	125	15.7	125	14.0	115

FACE MATERIAL		ELASTOMER	
Standard	On request	Standard	On request
CER	SIC, TUN, STL	VITON	NITRILE, EPDM

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

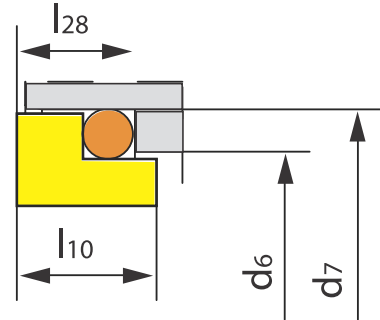
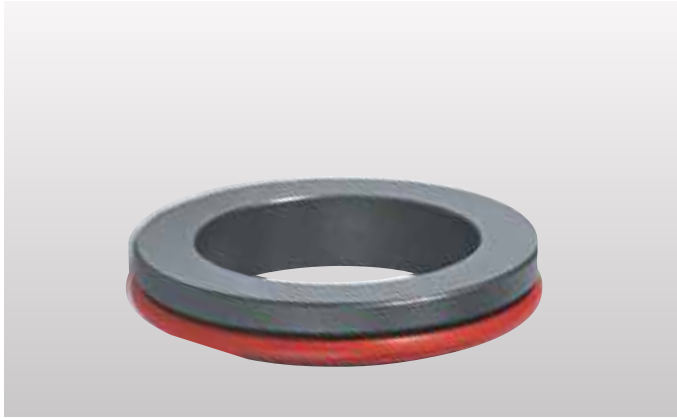
# STATIONARY SEATS

## TYPES F, G, I & J

DIN SHORT L-SECTION O-RING MOUNTED

### Design features

- Push fit, non-contacting conforming to DIN 24960
- Utilises an O-Ring elastomer for locating and sealing



SHAFT SIZE - d MM	d <sub>1</sub>	TYPE F		TYPE G		TYPE I		TYPE J	
		l <sub>28</sub>	l <sub>28</sub>	l <sub>10</sub>	l <sub>28</sub>	l <sub>28</sub>	l <sub>10</sub>		
10	21	7	-	-	8.6	6.6	7.5		
12	23	7	-	-	8.6	6.6	7.5		
14	25	7	12.0	12.8	8.6	6.6	7.5		
15	27	-	-	-	8.6	6.6	7.5		
16	27	7	12.0	12.8	8.6	6.6	7.5		
18	33	10	13.5	14.5	10.0	7.5	8.5		
20	35	10	13.5	14.5	10.0	7.5	8.5		
22	37	10	13.5	14.5	10.0	7.5	8.5		
24	39	10	13.3	14.3	10.0	7.5	8.5		
25	40	10	13.0	14.0	10.0	7.5	8.5		
28	43	10	12.5	13.5	10.0	7.5	8.5		
30	45	10	12.2	13.0	10.0	7.5	8.5		
32	48	10	12.0	13.0	10.0	7.5	8.5		
33	48	10	12.0	13.0	10.0	7.5	8.5		
35	40	10	12.0	13.0	10.0	7.5	8.5		
38	56	13	13.0	14.0	11.0	9.0	10.0		
40	58	13	13.0	14.0	11.0	9.0	10.0		
43	61	13	13.0	14.0	11.0	9.0	10.0		
45	63	13	13.0	14.0	11.0	9.0	10.0		
48	66	13	13.0	14.0	11.0	9.0	10.0		
50	70	14	13.5	14.5	13.0	9.5	10.5		
53	73	14	13.5	14.5	13.0	11.0	12.0		
55	75	14	13.5	14.5	13.0	11.0	12.0		
58	78	14	13.5	14.2	13.0	11.0	12.0		
60	80	14	13.5	14.2	13.0	11.0	12.0		
63	83	14	13.5	14.2	13.0	-	12.0		
65	85	14	13.5	14.2	13.0	11.0	12.0		
68	90	16	13.5	14.2	15.3	11.3	12.5		
70	92	16	14.5	15.2	15.3	11.3	12.5		
75	97	16	14.5	15.2	15.3	11.3	12.5		
80	105	18	15.0	15.7	15.7	12.0	13.0		
85	110	18	15.0	15.7	15.7	14.0	15.0		
90	115	18	15.0	15.7	15.7	14.0	15.0		
95	120	18	15.0	15.7	15.7	14.0	15.0		
100	125	18	15.0	15.7	15.7	14.0	15.0		

FACE MATERIAL			ELASTOMER	
Standard		On request	Standard	On request
TYPE F: CAR	TYPES G, I, J: CER	SIC, TUN, STL	VITON	NITRILE, EPDM

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

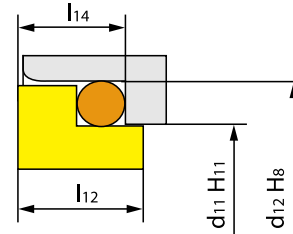
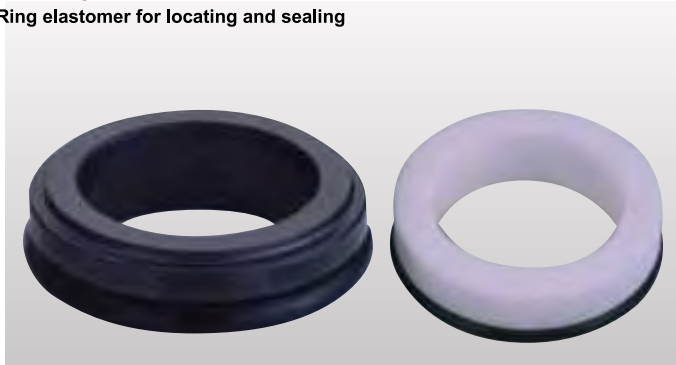
# STATIONARY SEATS

## TYPES K, L, M & N

SHORT L-SECTION O-RING MOUNTED

**Design features**

- Push fit, non-contacting
- Utilises an O-Ring elastomer for locating and sealing



SHAFT SIZE - d		TYPE K		TYPE L				TYPE M				TYPE N	
MM	INCHES	d <sub>12</sub>	l <sub>14</sub>	d <sub>11</sub>	d <sub>12</sub>	l <sub>12</sub>	l <sub>14</sub>	d <sub>11</sub>	d <sub>12</sub>	l <sub>12</sub>	l <sub>14</sub>	d <sub>12</sub>	l <sub>14</sub>
10	3/8"	24.6	7.1	15.5	19.2	7.5	6.6	15.5	19.2	9.0	7.1	18.1	5.5
11	-	-	-	-	-	-	-	-	-	-	-	20.6	5.5
12	1/2"	27.8	7.1	17.5	21.6	6.5	5.6	17.5	21.6	10.0	7.6	20.6	5.5
13	-	-	-	-	-	-	-	-	-	-	-	231	6.0
14	-	-	-	20.5	24.6	6.5	5.6	20.5	24.6	10.0	7.6	23.1	6.0
15	-	-	-	20.5	24.6	7.5	6.6	20.5	24.6	11.0	8.6	26.9	7.0
16	5/8"	31.0	8.7	22.0	28.0	8.5	7.5	22.0	28.0	11.5	9.0	26.9	7.0
17	-	-	-	-	-	-	-	-	-	-	-	26.9	7.0
18	-	-	-	24.0	30.0	9.0	8.0	24.0	30.0	12.5	10.0	30.9	8.0
19	3/4"	34.2	8.7	-	31.0	-	7.5	-	31.0	-	9.0	30.9	8.0
20	-	-	-	29.5	35.0	8.5	7.5	29.5	35.0	12.5	9.5	30.9	8.0
21	-	-	-	-	-	-	-	-	-	-	-	35.4	8.0
22	7/8"	37.3	8.7	29.5	35.0	8.5	7.5	29.5	35.0	12.5	9.5	35.4	8.0
24	-	-	-	32.0	38.0	8.5	7.5	32.0	38.0	12.5	9.5	35.4	8.0
25	1"	40.5	8.7	32.0	38.0	8.5	7.5	32.0	38.0	12.5	9.5	38.2	8.5
26	-	-	-	34.0	40.0	9.0	8.0	34.0	40.0	13.0	10.0	38.2	8.5
28	1 1/8"	47.6	10.3	36.0	42.0	10.0	9.0	36.0	42.0	14.0	11.0	43.3	9.0
30	-	-	-	39.2	45.0	11.5	10.5	39.2	45.0	14.0	11.0	43.3	9.0
32	1 1/4"	50.8	10.3	42.2	48.0	11.5	10.5	42.2	48.0	14.0	11.0	43.3	9.0
33	-	-	-	44.2	-	12.0	-	44.2	50.0	14.5	11.5	53.5	11.5
35	1 3/8"	54.0	10.3	46.2	52.0	12.0	11.0	46.2	52.0	14.5	11.5	53.5	11.5
38	1 1/2"	57.2	10.3	49.2	55.0	11.3	10.3	49.2	55.0	14.5	11.5	60.5	11.5
40	1 5/8"	60.4	10.3	52.2	58.0	11.8	10.8	52.2	58.0	14.5	11.5	60.5	11.5
42	-	-	-	53.3	62.0	13.2	12.0	53.3	62.0	17.0	14.3	60.5	11.5
43	-	-	-	53.3	62.0	13.2	12.0	53.3	62.0	17.0	14.3	60.5	11.5
44	1 3/4"	63.5	10.3	-	-	-	-	-	-	-	-	65.5	11.5
45	-	-	-	55.3	64.0	12.8	11.6	55.3	64.0	17.0	14.3	65.5	11.5
48	1 7/8"	66.7	10.3	59.7	68.4	12.8	11.6	59.7	68.4	17.0	14.3	65.5	11.5
50	2"	69.9	12.0	60.8	69.3	12.8	11.6	60.8	69.3	17.0	14.3	72.5	11.5
53	2 1/8"	73.1	12.0	66.5	-	-	-	66.5	72.3	-	14.3	-	-
55	-	-	-	-	75.4	14.5	13.3	-	75.4	18.0	15.3	72.5	11.5
57	2 1/4"	76.2	12.0	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	78.4	-	13.3	-	78.4	-	15.3	-	-
60	2 3/8"	79.4	12.0	71.5	80.4	14.5	13.3	71.5	80.4	18.0	15.3	79.3	11.5
63	2 1/2"	82.6	12.0	-	-	-	-	-	83.4	-	15.3	-	-
65	2 5/8"	92.1	14.3	76.5	85.4	14.2	13.0	76.5	85.4	18.0	15.3	84.5	11.5
68	-	-	-	-	91.5	-	13.7	-	91.5	-	16.0	-	-
70	2 3/4"	95.5	14.3	83.0	92.0	14.2	13.0	83.0	92.0	18.0	15.3	89.5	11.5
73	2 7/8"	98.5	14.3	-	-	-	-	-	-	-	-	-	-
75	3"	101.7	14.3	90.2	99.0	15.2	14.0	90.2	99.0	18.0	15.3	94.5	11.5
80	3 1/8"	111.2	18.3	95.2	104.0	16.2	15.0	95.2	104.0	19.0	16.3	99.5	11.5
85	3 3/8"	117.5	18.3	100.2	109.0	16.0	14.8	100.2	109.0	19.0	16.3	105.5	13.5
90	3 1/2"	120.6	18.3	105.2	114.0	16.0	14.8	105.2	114.0	19.0	16.3	111.5	13.5
95	3 3/4"	127.0	18.3	111.6	120.3	17.0	15.8	111.6	120.3	20.0	17.3	116.5	13.5
100	4"	133.4	18.3	114.5	123.3	17.0	15.8	114.5	123.3	20.0	17.3	119.5	13.5

FACE MATERIAL		ELASTOMER	
Standard	On request	Standard	On request
TYPES K & L: CER	TYPES M & N: CAR	VITON	NITRILE, EPDM
	SIC, TUN, STL		

All dimensions and limits are for guidance purposes only.  
Shaft dimensions and mediums are critical in the correct operating limits.

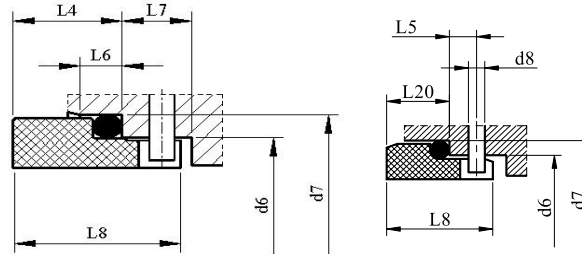
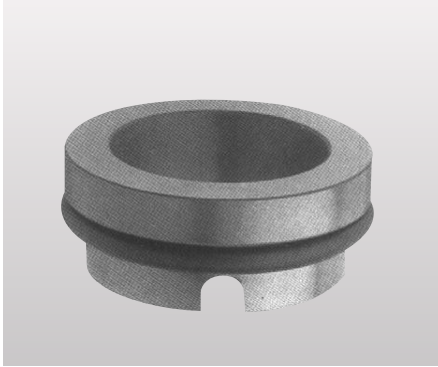
# STATIONARY SEATS

## TYPES O, P & Q

PINNED LONG L-SECTION O-RING MOUNTED

### Design features

- Conforms to DIN 24960
- Push fit, non-contacting
- Anti-rotation pin hole prevents spinning when pumping high viscosity products or at high torque loads



SHAFT SIZE - d	d <sub>6</sub>	d <sub>7</sub>	TYPE O				TYPE P				TYPE Q			
			d <sub>8</sub> (Slot Dia.)	l <sub>5</sub>	l <sub>8</sub>	l <sub>20</sub>	l <sub>4</sub>	l <sub>6</sub>	l <sub>7</sub>	l <sub>8</sub>	d <sub>8</sub> (Pin Dia.)	l <sub>5</sub>	l <sub>8</sub>	l <sub>20</sub>
10	17	21	4	9.2	15	8.6	-	-	-	-	3	5	17.5	10.0
12	19	23	4	9.2	15	8.6	-	-	-	-	3	5	17.5	10.0
14	21	25	4	9.2	15	8.6	12.0	4	8.5	18.5	3	5	17.5	10.0
16	23	27	4	9.2	15	8.6	12.0	4	8.5	18.5	3	5	17.5	10.0
18	27	33	5	9.8	17	10	13.5	5	9.0	20.5	3	5	19.5	11.5
20	29	35	5	9.8	17	10	13.5	5	9.0	20.5	3	5	19.5	11.5
22	31	37	5	9.8	17	10	13.5	5	9.0	20.5	3	5	19.5	11.5
24	33	39	5	9.8	17	10	13.3	5	9.0	20.3	3	5	19.5	11.5
25	34	40	5	9.8	17	10	13.0	5	9.0	20.0	3	5	19.5	11.5
28	37	43	5	9.8	17	10	12.5	5	9.0	19.5	3	5	19.5	11.5
30	39	45	5	9.8	17	10	12.0	5	9.0	19.0	3	5	19.5	11.5
32	42	48	5	9.8	17	10	12.0	5	9.0	19.0	3	5	19.5	11.5
33	42	48	5	9.8	17	10	12.0	5	9.0	19.0	3	5	19.5	11.5
35	44	40	5	9.8	17	10	12.0	5	9.0	19.0	3	5	19.5	11.5
38	49	56	5	9.8	18	11	13.0	6	9.0	20.0	4	5	22.0	14.0
40	51	58	5	9.8	18	11	13.0	6	9.0	20.0	4	5	22.0	14.0
43	54	61	5	9.8	18	11	13.0	6	9.0	20.0	4	5	22.0	14.0
45	56	63	5	9.8	18	11	13.0	6	9.0	20.0	4	5	22.0	14.0
48	59	66	5	9.8	18	11	13.0	6	9.0	20.0	4	5	22.0	14.0
50	62	70	5	7.8	18	13	13.5	6	9.0	20.5	4	5	23.0	15.0
53	65	73	5	9.8	20	13	13.5	6	9.0	20.5	4	5	23.0	15.0
55	67	75	5	9.8	20	13	13.5	6	9.0	20.5	4	5	23.0	15.0
58	70	78	5	9.8	20	13	13.5	6	9.0	20.5	4	5	23.0	15.0
60	72	80	5	9.8	20	13	13.5	6	9.0	20.5	4	5	23.0	15.0
65	77	85	5	9.8	20	13	13.5	6	9.0	20.5	4	5	23.0	15.0
68	81	90	5	9.5	22	15.3	13.5	7	9.0	20.5	4	5	26.0	18.0
70	83	92	5	9.5	22	15.3	14.5	7	9.0	21.5	4	5	26.0	18.0
75	88	97	5	9.5	22	15.3	14.5	7	9.0	21.5	4	5	26.0	18.0
80	95	105	5	10.5	23	15.3	15.0	7	9.0	22.0	4	5	26.2	18.2
85	100	110	5	10.1	23	15.7	15.0	7	9.0	22.0	4	5	26.2	18.2
90	105	115	5	10.1	23	15.7	15.0	7	9.0	22.0	4	5	26.2	18.2
95	110	120	5	10.1	23	15.7	15.0	7	9.0	22.0	4	5	25.2	17.2
100	115	125	5	10.1	23	15.7	15.0	7	9.0	22.0	4	5	25.2	17.2

- Units: mm
- Also available with a PTFE gasket

FACE MATERIAL		ELASTOMER	
Standard	On request	Standard	On request
CER	SIC, TUN, STL	VITON	NITRILE, EPDM, PTFE

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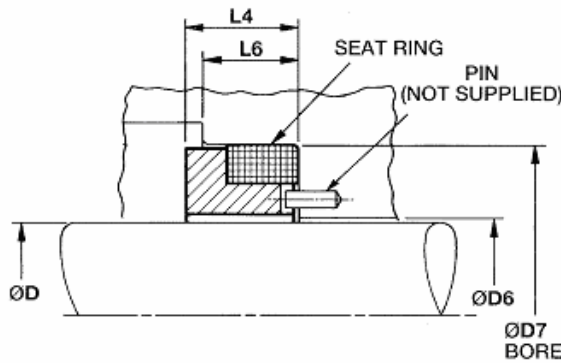
# STATIONARY SEATS

## TYPE R

L-SECTION PINNED

**Design features**

- Push fit, non-contacting
- Anti-rotation pin hole prevents spinning when pumping high viscosity products or at high torque loads
- PTFE sealing member



IMPERIAL	d	d <sub>6</sub>	d <sub>7</sub>	l <sub>6</sub>	l <sub>4</sub>
3/8"	9.5	11.0	22.2	6.4	7.9
1/2"	12.7	13.5	25.4	6.4	7.9
5/8"	15.9	17.0	31.8	8.7	10.3
3/4"	19.1	20.0	34.9	8.7	10.3
7/8"	22.2	23.0	38.1	8.7	10.3
1"	25.4	26.5	41.3	9.5	11.1
1 1/8"	28.6	29.5	44.5	9.5	11.1
1 1/4"	31.8	32.5	47.6	9.5	11.1
1 3/8"	34.9	36.5	50.8	9.5	11.1
1 1/2"	38.1	39.5	54.0	9.5	11.1
1 5/8"	41.3	42.5	60.3	11.1	12.7
1 3/4"	44.5	46.0	63.5	11.1	12.7
1 7/8"	47.6	49.0	66.7	11.1	12.7
2"	50.8	52.0	69.9	11.1	12.7
2 1/8"	54.0	55.5	76.2	12.7	14.3
2 1/4"	57.2	58.5	79.4	12.7	14.3
2 3/8"	60.3	61.5	82.6	12.7	14.3
2 1/2"	63.5	65.0	85.7	12.7	14.3
2 5/8"	66.7	68.0	85.7	14.3	15.9
2 3/4"	69.9	71.0	88.9	14.3	15.9
2 7/8"	73.0	74.5	95.3	14.3	15.9
3"	76.2	77.5	98.4	14.3	15.9
3 1/8"	79.4	80.5	101.6	16.7	19.8
3 1/4"	82.6	84.0	104.8	16.7	19.8
3 3/8"	85.7	87.0	108.0	16.7	19.8
3 1/2"	88.9	90.5	111.1	16.7	19.8
3 5/8"	92.1	93.5	114.3	16.7	19.8
3 3/4"	95.3	96.5	117.5	16.7	19.8
3 7/8"	98.4	100.0	120.7	16.7	19.8
4"	101.6	103.0	123.8	16.7	19.8

- Units: mm

FACE MATERIAL		SEALING GASKET MATERIAL
Standard	SIC	PTFE
On request	CER	

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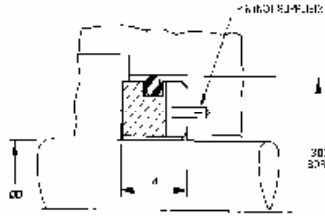
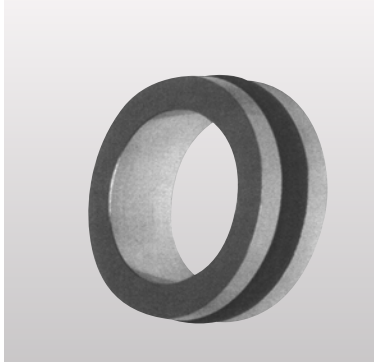
# STATIONARY SEATS

## TYPES S & T

PINNED H-SECTION O-RING MOUNTED

### Design features

- Suits both European and American housing sizes
- Push fit, non-contacting
- Anti-rotation pin hole prevents spinning when pumping high viscosity products or at high torque loads



SHAFT SIZE - d		TYPE S		TYPE T	
MM	INCHES	d <sub>7</sub>	l <sub>8</sub>	d <sub>7</sub>	l <sub>8</sub>
10	3/8"	24.6	8.7	22.2	7.9
12, 13	1/2"	27.8	8.7	25.4	7.9
14, 15, 16	5/8"	31.0	10.3	31.7	10.3
18, 19	3/4"	34.2	10.3	34.9	10.3
20	-	35.7	10.3	38.1	10.3
22	7/8"	37.3	10.3	38.1	10.3
24, 25	1"	40.5	10.3	41.3	11.1
28	1 1/8"	47.6	11.9	44.4	11.1
30, 32	1 1/4"	50.8	11.9	47.6	11.1
33, 35	1 3/8"	54.0	11.9	50.8	11.1
38	1 1/2"	57.2	11.9	54.0	11.1
40	1 5/8"	60.4	11.9	60.4	12.7
42, 43	1 3/4"	63.5	11.9	63.5	12.7
45	-	63.5	11.9	66.7	12.7
43	1 7/8"	66.7	11.9	66.7	12.7
48	-	66.7	11.9	69.9	12.7
50	2"	69.9	13.5	69.9	12.7
53	2 1/8"	73.1	13.5	76.2	14.3
58	2 1/4"	76.2	13.5	79.3	14.3
60	2 3/8"	79.4	13.5	82.6	14.3
63	2 1/2"	82.6	13.5	85.7	14.3
65	2 5/8"	92.1	15.9	85.7	15.9
70	2 3/4"	95.5	15.9	88.9	15.9
73	2 7/8"	98.5	15.9	95.3	15.9
75	3"	101.7	15.9	98.4	15.9
80	3 1/8"	111.1	19.9	101.6	19.9
83	3 1/4"	114.3	19.9	104.8	19.9
85	3 3/8"	117.5	19.9	108.0	19.9
90	3 1/2"	120.7	19.9	111.1	19.9
95	3 3/4"	127.0	19.9	117.5	19.9
100	4"	133.4	19.9	123.8	19.9

- Units: mm

FACE MATERIAL		ELASTOMER	
Standard	On request	Standard	On request
CER	SIC, TUN, STL	VITON	NITRILE, EPDM

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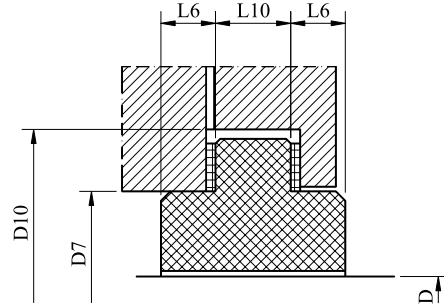
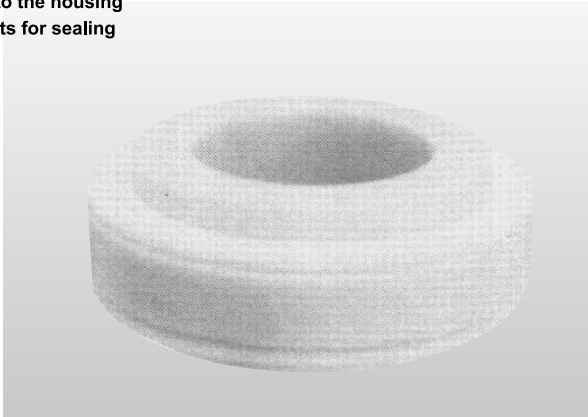
# STATIONARY SEATS

## TYPE V

V-SHAPE PTFE

**Design features**

- Clamped into the housing
- PTFE gaskets for sealing



SHAFT	d <sub>7</sub>	d <sub>10</sub>	l <sub>6</sub>	l <sub>10</sub>
16	36.5	48	4.8	8.0
18	36.5	48	4.8	8.0
20	39.7	51	4.8	8.0
22	39.7	51	4.8	8.0
24	42.9	54	4.8	8.0
25	42.9	54	4.8	8.0
28	50.8	65	8.0	11.0
30	54.0	68	8.0	11.0
32	54.0	68	8.0	11.0
33	57.2	71	8.0	11.0
35	57.2	71	8.0	11.0
38	63.5	78	8.0	11.0
40	66.7	81	8.0	11.0
43	69.9	84	8.0	11.0
45	69.9	84	8.0	11.0
48	79.4	97	9.5	14.3
50	79.4	97	9.5	14.3
53	82.6	100	9.5	14.3
55	85.7	103	9.5	14.3
58	88.9	106	9.5	14.3
60	88.9	106	9.5	14.3
63	92.1	110	9.5	14.3
65	95.3	113	9.5	14.3
68	98.4	116	9.5	14.3
70	98.4	116	9.5	14.3
75	103.2	121	9.5	14.3
80	114.3	132	9.5	14.3
85	120.7	138	9.5	14.3
90	127.0	144	9.5	14.3
95	127.0	144	9.5	14.3
100	133.4	151	9.5	14.3

- Units: mm

FACE MATERIAL		SEALING GASKET MATERIAL
Standard	CER	PTFE
On request	SIC	

FACE MATERIAL		ELASTOMER	
Standard	On request	Standard	On request
CER	SIC, TUN, STL	VITON	NITRILE, EPDM

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