

MAFFS SEALS PVT. LTD.

We seal everything including your confidence



MECHANICAL SEAL & SEAL SUPPORT SYSTEM





OUR FOCUS

About us

In continuation to our legacy journey as a customer-centric company "Expert Engineering" which started in 2001, we are now delighted to expand our business portfolio to Mechanical Seal and Seal Support System under the name of "Maffs Seals Private Limited".

Maffs Seals Pvt. Ltd. is an Indian-based Seal Manufacturing & Service company for the process, power, and energy industries across the globe.

We have state of an art manufacturing facility to produce a high-quality Seal and Seal Support System to meet the specific needs of the customers. This modern facility is supported by a specialized team of highly skilled staff who ensures the quality and customer needs are met by complying with International standards.

We are involved in the Design, Manufacturing, Testing, Servicing, and Supply of Mechanical Seal and Seal Support systems. We work with the highest consideration for the health & safety of our people and minimize the environmental risk.

Maffs Seals is accredited and complies with the Quality Management System ISO 9001:2015.

Commitment

Quality

Safety

Customer
Delight



VALUES MISSION VISION

VALUES

Integrity | Commitment
| Customer Focus Building Relationships
| Teamwork.

MISSION

Our mission is to provide specialized products & services to our clients with delivery commitments to achieve customer delight.

VISION

Be a global leader in providing specialized products and services in flow control business with commitment in providing the best possible quality, cost & delivery.

CODE OF CONDUCT

The Code of Conduct outlines Maffs commitments and requirements \ regarding business practices and personal conduct.

QUALITY POLICY

Our policy is to continuously improve customer satisfaction by supplying high quality products as committed in compliance with the requirements of our Quality Management System.

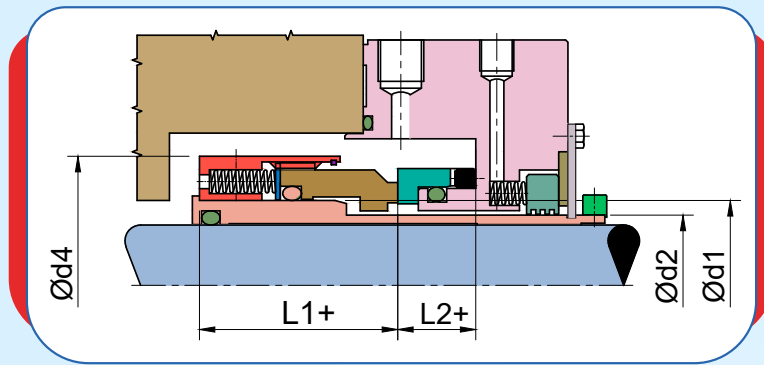
Our objectives are :

- Improve customer satisfaction
- Improve on-time delivery
- Successful completion of audits
- Reduce customer complaints
- Improve delivery lead times

API SEALS-TYPE A

ARRANGEMENT-1

MSMCA



DETAILS:

- Single acting
- Balanced
- Inside mounted
- Independent of direction of rotation

APPLICATIONS:

- Petroleum refinery
- Chemical industry
- Oil applications
- Petrochemicals
- Light hydrocarbons

OPERATING RANGE:

- Shaft diameter: d: 1.000....4.000"
- Pressure: p: 40 bar(max)
- Temperature: -40°C....+260°C
- Speed : upto 4500rpm/23 m/s

FACE MATERIALS:

- Carbon v/s Silicon Carbide,
(Tungsten Carbide Optional)

METAL PARTS:

- SS 316

ELASTOMERS:

- FKM (Optional FFKM, BUNA, EPR)

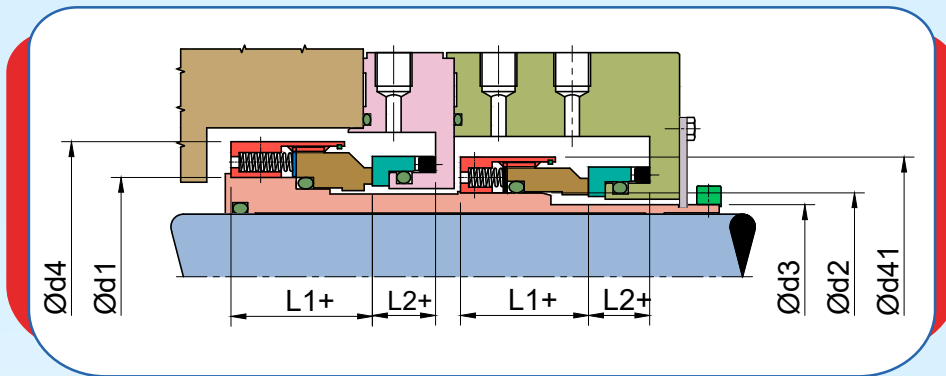
SIZE	Ød1	Ød2	Ød4	L1+	L2+
1.000	25.40	22.20	39.7	35.0	15.5
1.125	28.58	25.40	42.8	35.0	15.5
1.250	31.75	28.58	47.6	35.0	15.5
1.375	34.92	28.58	50.8	36.5	15.5
1.500	38.10	31.75	54.0	36.5	15.5
1.625	41.28	34.92	60.3	41.0	15.5
1.750	44.45	38.10	63.5	41.0	15.5
1.875	47.62	41.28	66.7	41.0	15.5
2.000	50.80	44.45	70.0	50.0	15.5
2.125	53.98	47.62	76.2	50.0	16.5
2.250	57.15	50.80	79.4	50.0	16.5
2.375	60.32	53.98	82.6	50.0	16.5
2.500	63.50	57.15	85.7	50.0	16.5
2.625	66.68	60.32	88.9	50.0	16.5
2.750	69.85	63.50	92.1	50.0	16.5
2.875	73.02	66.68	95.3	50.0	16.5
3.000	76.20	69.85	96.8	50.0	16.5
3.125	79.38	73.02	100.0	50.0	16.5
3.250	82.55	76.20	104.8	50.0	16.5
3.375	85.72	79.38	108.0	50.0	16.5
3.500	88.90	82.55	111.1	50.0	16.5
3.625	92.08	85.72	114.3	50.0	16.5
3.750	95.25	88.90	117.5	50.0	16.5
3.875	98.42	92.08	120.7	50.0	16.5
4.000	101.60	95.25	123.8	50.0	16.5

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

API SEALS-TYPE A

ARRANGEMENT-2

MSMCAEE



DETAILS:

- Double acting
- Balanced
- Inside mounted
- Independent of direction of rotation

APPLICATIONS:

- Petroleum refinery
- Chemical industry
- Oil applications
- Petrochemicals
- Light hydrocarbons

OPERATING RANGE:

- Shaft diameter: d: 1.000....4.000"
- Pressure: p: 40 bar(max)
- Temperature: -40°C....+260°C
- Speed : upto 4500rpm/23 m/s

FACE MATERIALS:

- Carbon v/s Silicon Carbide,
(Tungsten Carbide Optional)

METAL PARTS:

- SS 316

ELASTOMERS:

- FKM (Optional FFKM, BUNA, EPR)

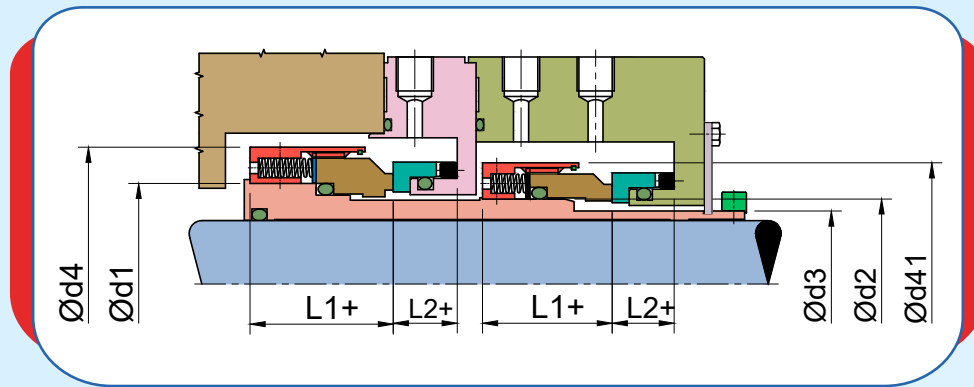
SIZE	Ød1	Ød2	Ød3	Ød4	Ød41	L1+	L2+
1.000	25.40	22.20	19.05	39.7	39.7	35.0	15.5
1.125	28.58	25.40	22.20	42.8	42.8	35.0	15.5
1.250	31.75	28.58	25.4	47.6	47.6	35.0	15.5
1.375	34.92	28.58	28.58	50.8	50.8	36.5	15.5
1.500	38.10	31.75	28.58	54.0	54.0	36.5	15.5
1.625	41.28	34.92	31.75	60.3	60.3	41.0	15.5
1.750	44.45	38.10	34.92	63.5	63.5	41.0	15.5
1.875	47.62	41.28	38.10	66.7	66.7	41.0	15.5
2.000	50.80	44.45	41.28	70.0	70.0	50.0	15.5
2.125	53.98	47.62	44.45	76.2	76.2	50.0	16.5
2.250	57.15	50.80	47.62	79.4	79.4	50.0	16.5
2.375	60.32	53.98	50.80	82.6	82.6	50.0	16.5
2.500	63.50	57.15	53.98	85.7	85.7	50.0	16.5
2.625	66.68	60.32	57.15	88.9	88.9	50.0	16.5
2.750	69.85	63.50	60.32	92.1	92.1	50.0	16.5
2.875	73.02	66.68	63.50	95.3	95.3	50.0	16.5
3.000	76.20	69.85	66.68	96.8	96.8	50.0	16.5
3.125	79.38	73.02	69.85	100.0	100.0	50.0	16.5
3.250	82.55	76.20	73.02	104.8	104.8	50.0	16.5
3.375	85.72	79.38	76.20	108.0	108.0	50.0	16.5
3.500	88.90	82.55	79.38	111.1	111.1	50.0	16.5
3.625	92.08	85.72	82.55	114.3	114.3	50.0	16.5
3.750	95.25	88.90	85.72	117.5	117.5	50.0	16.5
3.875	98.42	92.08	88.90	120.7	120.7	50.0	16.5
4.000	101.60	95.25	92.08	123.8	122.8	50.0	16.5

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

API SEALS-TYPE A

ARRANGEMENT-3

MSMCA



DETAILS:

- Double acting
- Reverse Balanced
- Inside mounted
- Independent of direction of rotation

APPLICATIONS:

- Petroleum refinery
- Chemical industry
- Oil applications
- Petrochemicals
- Light hydrocarbons

OPERATING RANGE:

- Shaft diameter: d: 1.000....4.000"
- Pressure: p: 40 bar(max)
- Temperature: -40°C....+260°C
- Speed : upto 4500rpm/23 m/s

FACE MATERIALS:

- Carbon v/s Silicon Carbide,
(Tungsten Carbide Optional)

METAL PARTS:

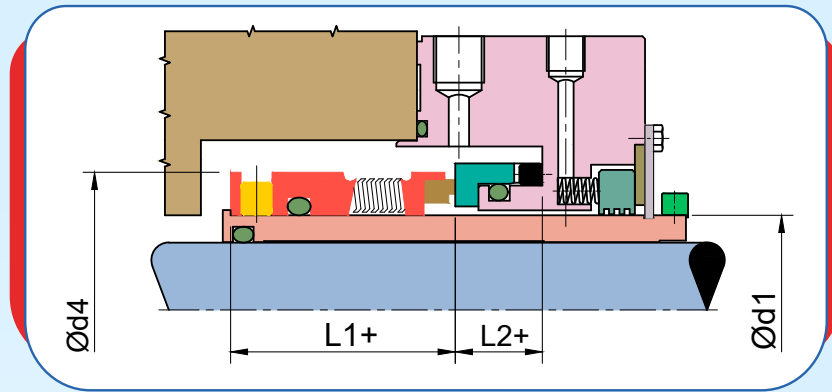
- SS 316,

ELASTOMERS:

- FKM (Optional FFKM, BUNA, EPR)

SIZE	Ød1	Ød2	Ød3	Ød4	Ød41	L1+	L2+
1.000	25.40	22.20	19.05	39.7	36.5	35.0	15.5
1.125	28.58	25.40	22.20	42.8	39.7	35.0	15.5
1.250	31.75	28.58	25.4	47.6	44.45	35.0	15.5
1.375	34.92	28.58	28.58	50.8	44.45	36.5	15.5
1.500	38.10	31.75	28.58	54.0	47.70	36.5	15.5
1.625	41.28	34.92	31.75	60.3	53.98	41.0	15.5
1.750	44.45	38.10	34.92	63.5	57.15	41.0	15.5
1.875	47.62	41.28	38.10	66.7	60.32	41.0	15.5
2.000	50.80	44.45	41.28	70.0	63.50	50.0	15.5
2.125	53.98	47.62	44.45	76.2	69.85	50.0	16.5
2.250	57.15	50.80	47.62	79.4	73.02	50.0	16.5
2.375	60.32	53.98	50.80	82.6	76.20	50.0	16.5
2.500	63.50	57.15	53.98	85.7	79.38	50.0	16.5
2.625	66.68	60.32	57.15	88.9	82.55	50.0	16.5
2.750	69.85	63.50	60.32	92.1	85.72	50.0	16.5
2.875	73.02	66.68	63.50	95.3	89.00	50.0	16.5
3.000	76.20	69.85	66.68	96.8	92.10	50.0	16.5
3.125	79.38	73.02	69.85	100.0	95.30	50.0	16.5
3.250	82.55	76.20	73.02	104.8	98.50	50.0	16.5
3.375	85.72	79.38	76.20	108.0	101.6	50.0	16.5
3.500	88.90	82.55	79.38	111.1	104.8	50.0	16.5
3.625	92.08	85.72	82.55	114.3	108.0	50.0	16.5
3.750	95.25	88.90	85.72	117.5	111.1	50.0	16.5
3.875	98.42	92.08	88.90	120.7	114.3	50.0	16.5
4.000	101.60	95.25	92.08	123.8	117.5	50.0	16.5

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.



DETAILS:

- Single acting
- Balanced
- Inside mounted
- Independent of direction of rotation

APPLICATIONS:

- Low-temperature refinery services
- Acids
- Caustics
- Amines
- Products with H₂S, such as sour water and sour hydrocarbons.

OPERATING RANGE:

- Shaft diameter: d1: 18.0....100.0
- Pressure: upto 2MPa/20 bar (g) max.
- Temperature: -40°C....+176°C
- Speed : upto 4500rpm/23 m/s

FACE MATERIALS:

- Carbon v/s Silicon Carbide, (Tungsten Carbide Optional)

METAL PARTS:

- Alloy-C-276, Alloy-C 276

ELASTOMERS:

- FKM (Optional FFKM, PTFE)

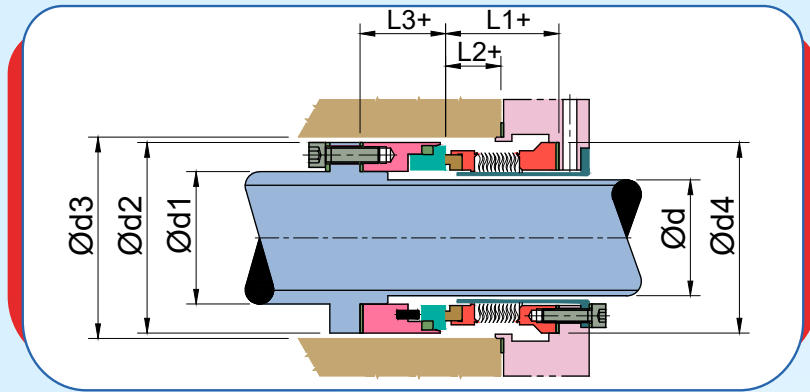
Ød1	Ød4	L1+	L2+
18.0	32.0	27.5	15.5
20.0	33.4	27.5	15.5
22.0	36.0	27.5	15.5
24.0	38.1	30.0	15.5
25.0	39.0	30.0	15.5
28.0	42.0	32.5	15.5
30.0	44.0	32.5	15.5
32.0	46.0	32.5	15.5
33.0	47.0	32.5	15.5
35.0	49.2	32.5	16.5
38.0	52.4	34.0	16.5
40.0	55.6	34.0	16.5
43.0	58.7	34.0	16.5
45.0	58.7	34.0	16.5
48.0	61.9	34.0	16.5
50.0	65.1	34.5	16.5
53.0	68.3	34.5	16.5
55.0	71.0	34.5	16.5
60.0	74.6	39.5	16.5
65.0	84.1	39.5	16.5
70.0	87.3	45.0	16.5
75.0	95.3	45.0	16.5
80.0	98.4	44.5	16.5
85.0	104.8	44.5	16.5
90.0	108.0	49.5	16.5
95.0	114.3	49.5	16.5
100.0	120.7	49.5	16.5

Dimensions for higher sizes available against specific requirement. All dimensions in mm.

API SEALS-TYPE C

ARRANGEMENT-1

MSSMBG



DETAILS:

- Single acting
- Balanced
- Inside mounted
- Independent of direction of rotation

APPLICATIONS:

- Refinery Applications for low as well high temperature
- Oil and Gas Industry
- Petrochemical Industry
- Chemical Industry
- Power Plant

OPERATING RANGE:

- Shaft diameter : 20.0....110.0
- Pressure: upto 2MPa/20 bar (g) max.
- Temperature: -40°C....+400°C
- Speed : upto 9800rpm/50 m/s

FACE MATERIALS:

- Carbon v/s Silicon Carbide,

METAL PARTS:

- Inconel, SS 316

ELASTOMERS:

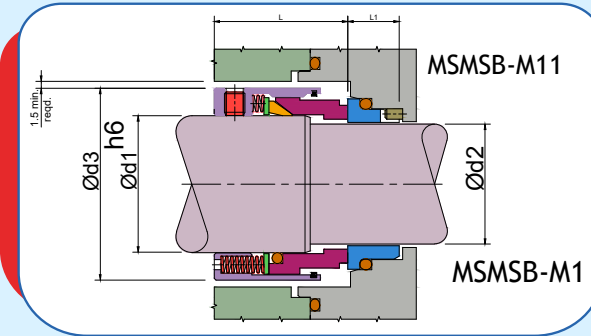
- Flexible Graphite

Ød	Ød1	Ød2	Ød3	Ød4	L1+	L2+	L3+
20.0	25.0	47.0	51.0	48.0	38.0	17.0	31.0
24.0	29.0	50.0	54.0	51.0	38.0	17.0	31.0
28.0	32.0	53.0	57.0	54.0	38.0	17.0	31.0
31.0	36.0	57.0	61.0	58.0	38.0	17.0	31.0
33.0	39.0	60.0	65.0	61.0	41.0	20.0	31.0
35.0	42.0	63.0	68.0	64.0	41.0	20.0	31.0
39.0	45.0	68.0	71.0	67.0	41.0	20.0	31.0
42.0	48.0	69.0	74.0	70.0	41.0	20.0	31.0
45.0	51.0	72.0	77.0	73.0	41.0	20.0	31.0
47.0	54.0	75.0	81.0	77.0	43.0	22.0	31.0
50.0	58.0	79.0	84.0	80.0	43.0	22.0	31.0
53.0	61.0	82.0	87.0	83.0	43.0	22.0	31.0
55.0	64.0	85.0	90.0	86.0	51.0	30.0	31.0
59.0	67.0	89.0	93.0	89.0	51.0	30.0	31.0
63.0	71.0	92.0	97.0	93.0	51.0	30.0	31.0
64.0	74.0	96.0	100.0	96.0	55.0	34.0	31.0
67.0	77.0	99.0	103.0	99.0	55.0	34.0	31.0
70.0	81.0	102.0	106.0	102.0	55.0	34.0	31.0
73.0	84.0	105.0	109.0	105.0	55.0	34.0	31.0
76.0	87.0	109.0	112.0	108.0	55.0	34.0	31.0
79.0	90.0	113.0	117.0	112.0	58.0	37.0	31.0
82.0	93.0	116.0	121.0	115.0	58.0	37.0	31.0
85.0	96.0	119.0	123.0	118.0	58.0	37.0	31.0
88.0	99.0	122.0	126.0	121.0	58.0	37.0	31.0
91.0	103.0	125.0	129.0	124.0	58.0	37.0	31.0
100.0	111.0	138.0	143.0	135.0	60.0	41.0	41.0
110.0	116.0	147.0	153.0	146.0	60.0	41.0	41.0

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

MULTI SPRING SEALS-BALANCED

MSMSB-M11/MSMSB-M1



DETAILS:

- Single acting Seal
- Balanced design
- Inside mounted
- Independent of direction of rotation
- For stepped shaft

APPLICATIONS:

- Refinery Applications
- Oil and Gas Industry
- Petrochemical Industry
- Chemical Industry
- Power Plant

OPERATING RANGE:

- Shaft diameter : 20.0....100.0 mm
- Pressure: 40 bar
- Temperature: 260°C
- Speed : Up to 23 m/s

FACE MATERIALS:

- Carbon v/s Silicon Carbide, Tungsten Carbide, Ceramic

METAL PARTS:

- SS 316, SS 304, ALLOY 20

ELASTOMERS:

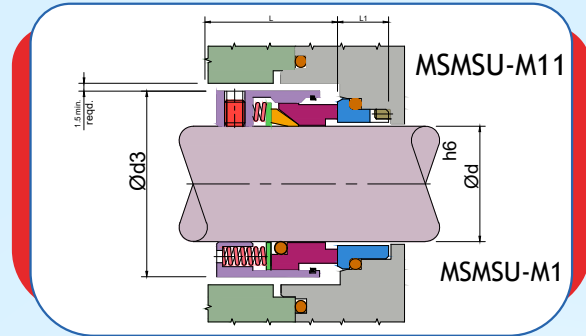
- Viton, Nitrile, EPR, PTFE, Kalrez

SEAL SIZE mm	Ød1	Ød2	Ød3	L	L1
24.0	24.0	20.0	38.5	32.0	15.0
28.0	28.0	24.0	42.5	35.0	15.0
30.0	30.0	25.0	44.5	35.0	15.0
33.0	33.0	28.0	47.5	38.0	15.0
35.0	35.0	30.0	49.5	38.5	15.0
38.0	38.0	32.0	54.5	38.5	15.0
38.0	38.0	33.0	54.5	38.5	15.0
40.0	40.0	35.0	56.5	38.5	15.0
43.0	43.0	38.0	59.5	40.0	16.0
45.0	45.0	40.0	61.5	40.0	16.0
48.0	48.0	43.0	64.5	40.0	16.0
50.0	50.0	45.0	66.5	40.0	16.0
53.0	53.0	48.0	69.5	40.0	16.0
55.0	55.0	50.0	71.5	44.5	17.0
58.0	58.0	53.0	78.5	44.5	17.0
60.0	60.0	55.0	80.5	44.5	17.0
63.0	63.0	58.0	83.5	49.5	18.0
65.0	65.0	60.0	85.5	49.5	18.0
68.0	68.0	63.0	88.5	49.5	18.0
70.0	70.0	65.0	90.5	49.5	18.0
75.0	75.0	70.0	95.5	56.5	19.0
80.0	80.0	75.0	104.5	56.5	19.0
85.0	85.0	80.0	109.5	55.5	19.0
90.0	90.0	85.0	114.5	60.5	19.0
95.0	95.0	90.0	119.5	60.5	20.5
100.0	100.0	95.0	124.5	60.5	20.5
105.0	105.0	100.0	129.5	60.5	20.5

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

MULTI SPRING SEAL-UNBALANCED

MSMSU-M11/MSMSU-M1



DETAILS:

- Single acting Seal
- Inside mounted
- Unbalanced design
- Independent of direction of rotation

APPLICATIONS: (Typical Industrial)

- Oil Solvents, Refregants,
- Petroleum refinery
- Petrochemicals
- General chemicals
- Light hydrocarbon

OPERATING CONDITIONS :

- Shaft diameter : 20.....100 mm
- Pressure : 20 bar
- Temperature : 260°C
- Velocity : 23 m/s

FACE MATERIALS: (Combination)

- Carbon v/s Silicon Carbide, Tungsten Carbide, Ceramic

METAL PARTS:

- SS 316, SS 304, ALLOY 20

SECONDARY SEAL:

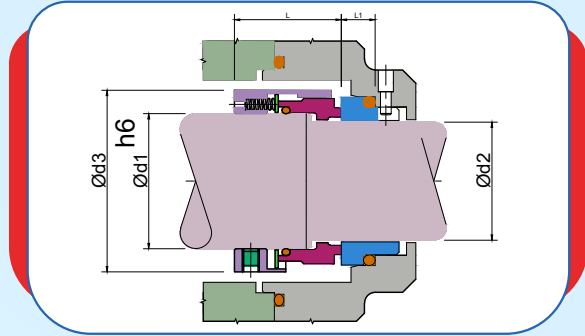
- VITON, NITRILE, EPR PTFE, Kalrez

SEAL SIZE mm	Ød	Ød3	L	L1
020	20.0	34.5	27.5	15.0
025	25.0	39.5	31.0	15.0
028	28.0	42.5	31.0	15.0
030	30.0	44.5	31.0	15.0
032	32.0	46.5	31.0	15.0
033	33.0	47.5	31.0	15.0
035	35.0	49.5	31.0	15.0
038	38.0	54.5	32.0	16.0
040	40.0	56.5	33.0	16.0
043	43.0	59.5	33.0	16.0
045	45.0	61.5	34.0	16.0
048	48.0	64.5	34.0	16.0
050	50.0	66.5	35.0	17.0
053	53.0	69.5	35.0	17.0
055	55.0	71.5	35.0	17.0
058	58.0	78.5	40.5	18.0
060	60.0	80.5	40.5	18.0
063	63.0	83.5	40.5	18.0
065	65.0	85.5	40.5	18.0
068	68.0	88.5	40.5	18.5
070	70.0	90.5	46.0	19.0
075	75.0	95.5	46.0	19.0
080	80.0	104.5	47.0	19.0
085	85.0	109.5	47.0	19.0
090	90.0	114.5	50.0	20.5
095	95.0	119.5	50.0	20.5
100	100.0	124.5	50.0	20.5

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

MULTI SPRING SEALS-BALANCED

MS500



DETAILS:

- Single acting Seal
- Balanced design
- Inside mounted
- Independent of direction of rotation
- For stepped shaft

APPLICATIONS: (Typical Industrial)

- Refinery Applications
- Oil and Gas Industry
- Petrochemical Industry
- Chemical Industry
- Power Plant

OPERATING CONDITIONS :

- Shaft diameter : 20.0....100.0 mm
- Pressure: 40 bar
- Temperature: 260°C
- Speed : 23 m/s

FACE MATERIALS: (Combination)

- Carbon v/s Silicon Carbide, Tungsten Carbide, Ceramic

METAL PARTS:

- SS 316, SS 304, ALLOY 20

ELASTOMERS:

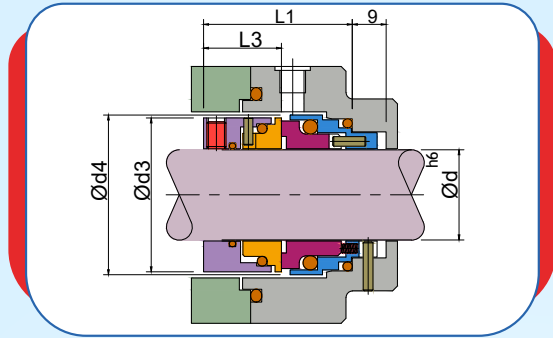
- Viton, Nitrile, EPR, PTFE, Kalrez

SEAL SIZE mm	Ød1	Ød2	Ød3	L	L1
25.0	25.0	20.0	39.5	34.0	10.0
28.0	28.0	24.0	42.5	34.0	10.0
30.0	30.0	25.0	44.5	34.0	10.0
32.0	32.0	27.0	46.5	34.0	10.0
33.0	33.0	28.0	47.5	34.0	10.0
35.0	35.0	30.0	49.5	34.0	10.0
38.0	38.0	33.0	55.5	38.0	10.0
40.0	40.0	35.0	57.5	38.0	10.0
42.0	42.0	37.0	60.5	37.0	11.0
43.0	43.0	38.0	60.5	37.0	11.0
45.0	45.0	40.0	62.5	37.0	11.0
48.0	48.0	43.0	65.5	37.0	11.0
50.0	50.0	45.0	67.5	37.0	11.0
53.0	53.0	48.0	70.5	37.0	11.0
55.0	55.0	50.0	72.5	37.0	13.0
60.0	60.0	55.0	77.5	37.0	13.0
63.0	63.0	58.0	80.5	37.0	13.0
65.0	65.0	60.0	82.5	37.0	13.0
70.0	70.0	65.0	87.5	37.0	13.0
75.0	75.0	70.0	92.5	38.0	15.0
80.0	80.0	75.0	97.5	38.0	15.0
85.0	85.0	80.0	102.5	37.5	15.5
90.0	90.0	85.0	107.5	37.5	15.5
95.0	95.0	90.0	112.5	37.5	15.5
100.0	100.0	95.0	117.5	37.5	15.5
105.0	105.0	100.0	122.5	37.5	15.5
110.0	110.0	105.0	127.5	37.5	15.5

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

SPRING OUT OF PRODUCT SEAL

MSSRN



DETAILS:

- Single acting Seal
- Balanced design
- Inside mounted
- Independent of direction of rotation
- Stationary springs

APPLICATIONS: (Typical Industrial)

- Sewage Pumps
- Water and waste water technology
- Sticky and Stringy media
- Chemical Industry
- Pulp and Paper Industry

OPERATING CONDITIONS :

- Shaft diameter : 18.0....100.0 mm
- Pressure: 25 bar
- Temperature: -40°C... +260°C
- Speed : 20 m/s

FACE MATERIALS: (Combination)

- Carbon v/s Silicon Carbide
- Tungsten Carbide v/s Tungsten Carbide
- Silicon Carbide v/s Silicon Carbide

METAL PARTS:

- SS 316, SS 304

ELASTOMERS:

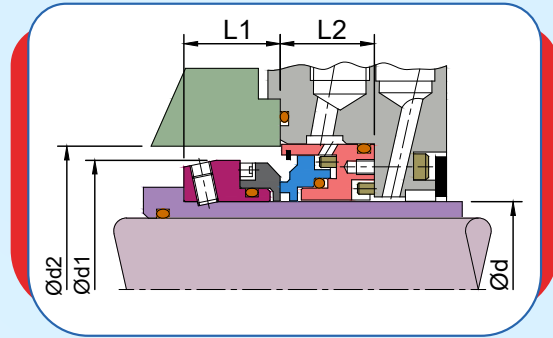
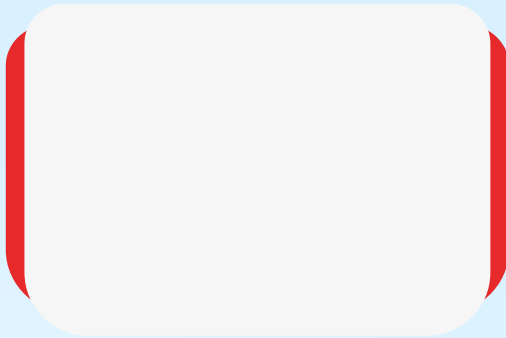
- Viton, Nitrile, PTFE, Kalrez

Ød	Ød3	Ød4	L1	L3
18	33.5	34.7	37.5	19.5
20	35.5	36.7	37.5	19.5
22	37.5	38.7	37.5	19.5
24	39.5	40.7	40	20.5
25	40.5	41.7	40	20.5
28	43.5	44.7	42.5	21.5
30	45.5	46.7	42.5	21.5
32	48.5	49.7	42.5	21.5
33	48.5	49.7	42.5	21.5
35	50.5	51.7	42.5	21.5
38	56.5	57.7	45	24
40	58.5	59.7	45	24
43	61.5	62.7	45	24
45	63.5	64.7	45	24
48	66.5	67.7	45	24
50	70.5	71.7	47.5	25
53	73.5	74.7	47.5	25
55	75.5	76.7	47.5	25
58	78.5	80.5	52.5	28
60	80.5	82.5	52.5	28
63	83.5	85.5	52.5	28
65	85.5	87.5	52.5	28
68	90.5	92.5	52.5	28
70	92.5	94.5	60	34
75	97.5	100.5	60	34
80	105.5	108.5	60	34
85	110.5	113.5	60	34
90	115.5	118.5	65	39
95	120.5	123.5	65	39
100	125.5	128.5	65	39

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

STATIONARY HIGH PRESSURE SEALS

MSS77



DETAILS:

- Single Seal
- Balanced
- Independent of direction of rotation
- Stationary Type Seal

APPLICATIONS: (Typical Industrial)

- Refining Industry
- Power plant
- Chemical Industry
- Special rotating equipment
- High pressure service
- Low temperature ethylene

OPERATING CONDITIONS :

- Shaft diameter : 20....110mm
- Pressure: Vacuum: 6 MPa
- Temperature: -40....+180°C
- Speed : Upto 50 m/s

FACE MATERIALS: (Combination)

- Silicon Carbide v/s Silicon Carbide

METAL PARTS:

- SS 316, SS 304

ELASTOMERS:

- FKM, EPDM

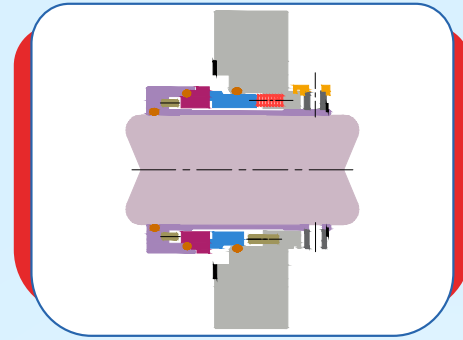
SIZE	Ød	Ød1	Ød2	L1	L2
020	20	40	46	27	29
025	25	46	52	27	29
030	30	51	57	27	29
035	35	56	62	27	29
040	40	63	69	31	31
045	45	68	74	31	31
050	50	76	82	33	33
055	55	82	88	33	33
060	60	90	96	33	33
065	65	93	99	33	33
070	70	99	105	33	33
075	75	104	110	33	33
080	80	111	117	35	33
085	85	117	123	35	33
090	90	120	126	35	33
095	95	129	135	35	33
100	100	132	138	35	33
105	105	137	143	35	33
110	110	144	150	35	33

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

SPLIT SEALS



MSCRT



PRODUCT FEATURES

- Split components
- Balanced
- Easy to install

APPLICATIONS: (Typical Industrial)

- Utility Pumps
- Transfer Pumps
- Agitator & Vessels

OPERATING CONDITIONS :

- Shaft diameter : 25....100mm
- Pressure: Vacuum: 12 bar (max)
- Temperature: -40....+260°C
- Speed : 10 m/s

FACE MATERIALS: (Combination)

- Silicon Carbide/ Silicon Carbide

METAL PARTS:

- SS 304, SS 316, Hast - C

ELASTOMERS:

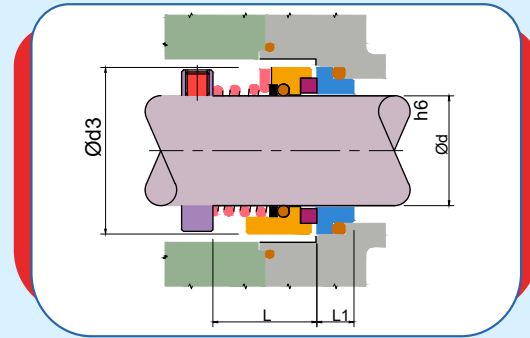
- EPDM, Viton, FFKM

Ød	Ød2	Ød3	Ød3	L	L1
25	43.0	44.0	51.5	24.6	42.4
28	46.0	47.0	52.0	24.6	42.4
30	78.0	49.0	56.0	24.6	42.4
32	49.8	51.0	57.0	24.6	42.4
33	49.8	51.0	57.0	24.6	42.4
35	53.0	54.0	61.5	24.6	42.4
38	56.0	57.0	66.0	24.6	42.4
40	58.0	59.0	68.0	24.6	42.4
42	60.5	61.5	69.5	24.6	42.4
43	60.5	61.5	70.5	24.6	42.4
45	62.5	64.0	73.0	24.6	42.4
48	65.6	67.0	75.0	24.6	42.4
50	68.0	69.0	78.0	24.6	42.4
53	72.0	73.0	87.0	24.6	42.4
55	73.0	74.0	83.0	24.6	42.4
60	78.0	79.0	91.0	24.6	42.4
65	84.8	85.7	98.5	24.6	42.4
70	93.0	95.0	108.0	24.6	42.4
75	100.0	101.6	118.0	26.6	57.4
80	106.4	108.0	124.0	26.6	57.4
85	109.5	111.1	128.0	26.6	57.4
90	115.9	117.5	135.0	26.6	57.4
95	119.1	120.7	138.0	26.6	57.4
100	125.4	127.0	144.0	26.6	57.4

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

CONICAL SPRING SEALS

MSCS-M3



PRODUCT FEATURES

- For plain shaft
- Unbalanced
- Single seal
- Dependent of direction of rotation
- Rotating conical spring

APPLICATIONS: (Typical Industrial)

- Water & Waste Water
- Food & Beverage Industry
- Sugar Industry
- Chemical Industry
- Cooling water pumps
- Paper & Pulp Industry

OPERATING CONDITIONS :

- Shaft diameter : 10.0....80.0mm
- Pressure: 10 bar (max)
- Temperature: -20°C....+260°C
- Speed : 15 m/s

FACE MATERIALS: (Combination)

- Carbon, Silicon Carbide, Ceramic, Tungsten Carbide

METAL PARTS:

- SS 304, SS 316

ELASTOMERS:

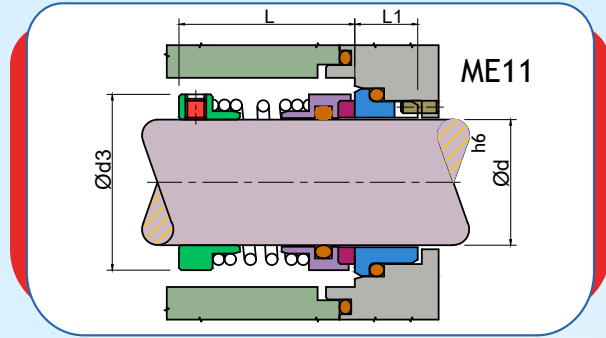
- NBR, Viton, EPDM, FFKM

SIZE	Ød	Ød3	L	L1
0010	10.0	20.0	17.0	7.5
0012	12.0	22.0	17.5	7.5
0014	14.0	24.0	17.5	7.5
0015	15.0	25.0	19.5	-
0016	16.0	26.0	20.0	7.5
0018	18.0	31.5	22.0	8.5
0020	20.0	34.5	24.0	8.5
0022	22.0	36.5	25.0	8.5
0024	24.0	38.5	27.0	8.5
0025	25.0	39.5	27.0	8.5
0028	28.0	42.5	27.0	8.5
0030	30.0	44.5	28.0	8.5
0033	33.0	47.5	28.0	8.5
0035	35.0	49.5	33.0	8.5
0038	38.0	54.5	35.0	10.0
0040	40.0	56.5	37.5	10.0
0043	43.0	59.5	37.5	10.0
0045	45.0	61.5	39.0	10.0
0048	48.0	64.5	45.0	10.0
0050	50.0	66.5	46.0	10.5
0053	53.0	69.5	48.0	12.0
0055	55.0	71.5	49.0	12.0
0058	58.0	78.5	52.0	12.0
0060	60.0	79.5	55.0	12.0
0063	63.0	84.0	55.0	12.0
0065	65.0	86.0	55.0	12.0
0068	68.0	89.0	55.0	12.5
0070	70.0	91.0	56.0	12.5
0075	75.0	99.0	56.0	12.5
0080	80.0	104.0	60.0	13.0

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

SINGLE SPRING - UNBALANCED

MSRU-M3



PRODUCT FEATURES

- Single acting
- Unbalanced
- Inside mounted
- Independent of direction of rotation

APPLICATIONS:

- Refinery Applications
- Oil and Gas Industry
- Petrochemical Industry
- Chemical Industry
- Power Plant

OPERATING RANGE :

- Shaft diameter : 20.0....100.0 mm
- Pressure: 10 bar max.
- Temperature: -40°C....+180°C
- Speed : 20 m/sec.

FACE MATERIALS: (Combination)

- Carbon v/s Silicon Carbide,
Tungsten Carbide

METAL PARTS:

- SS 316 , SS 304

ELASTOMERS:

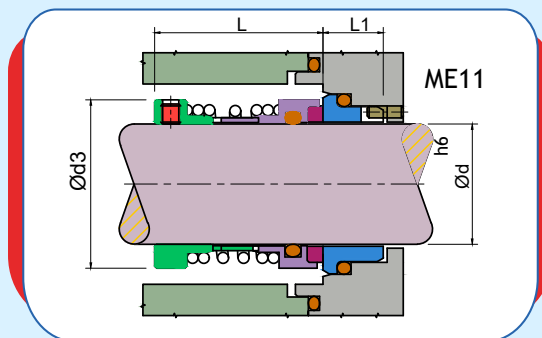
- Viton,EPDM, Aflas, NBR

SIZE mm	Ød	Ød3	L	L1
0020	20.0	35.0	39.0	15.0
0025	25.0	38.5	39.0	15.0
0028	28.0	42.5	41.0	15.0
0030	30.0	44.5	41.0	15.0
0032	32.0	48.0	41.0	15.0
0033	33.0	49.0	41.0	15.0
0035	35.0	50.0	41.0	15.0
0038	38.0	53.0	41.0	16.0
0040	40.0	55.0	41.0	16.0
0043	43.0	56.0	51.0	16.0
0045	45.0	60.0	51.0	16.0
0048	48.0	62.0	56.0	16.0
0050	50.0	66.0	56.0	17.0
0055	55.0	71.0	59.0	17.0
0058	58.0	74.0	59.0	18.0
0060	60.0	78.0	61.0	18.0
0063	63.0	80.0	61.0	18.0
0065	65.0	82.0	67.0	18.0
0068	68.0	83.0	67.0	18.5
0070	70.0	87.0	67.0	19.0
0075	75.0	91.0	72.0	19.0
0080	80.0	100.0	72.0	19.0
0085	85.0	106.0	72.0	19.0
0090	90.0	111.0	72.0	20.5
0095	95.0	116.0	80.0	20.5
0100	100.0	121.0	80.0	20.5

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

SINGLE SPRING SEALS - UNBALANCED WITH LUG

MSRUL-M3



DETAILS

- Single acting
- Unbalanced
- Inside mounted
- Independent of direction of rotation

APPLICATIONS:

- Refinery Applications
- Oil and Gas Industry
- Petrochemical Industry
- Chemical Industry
- Power Plant

OPERATING RANGE :

- Shaft diameter : 20.0....100.0
- Pressure: 12 bar (g) max.
- Temperature: -40°C....+180°C
- Speed : 20 m/s

FACE MATERIALS: (Combination)

- Carbon v/s Silicon Carbide, Tungsten Carbide

METAL PARTS:

- SS 316 , SS 304

ELASTOMERS:

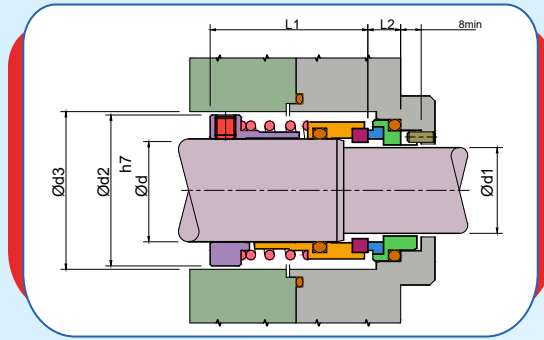
- Viton, EPDM, Aflas, NBR

SIZE mm	Ød	Ød3	L	L1
0020	20.0	35.0	46.0	15.0
0025	25.0	38.5	48.0	15.0
0028	28.0	42.5	48.0	15.0
0030	30.0	44.5	52.0	15.0
0032	32.0	48.0	52.0	15.0
0033	33.0	49.0	52.0	15.0
0035	35.0	50.0	55.0	15.0
0038	38.0	53.0	55.0	16.0
0040	40.0	55.0	55.0	16.0
0043	43.0	56.0	55.0	16.0
0045	45.0	60.0	55.0	16.0
0048	48.0	62.0	58.0	16.0
0050	50.0	66.0	62.0	17.0
0055	55.0	71.0	72.0	17.0
0058	58.0	74.0	72.0	18.0
0060	60.0	78.0	76.0	18.0
0063	63.0	80.0	76.0	18.0
0065	65.0	82.0	76.0	18.0
0068	68.0	83.0	76.0	18.5
0070	70.0	87.0	80.0	19.0
0075	75.0	91.0	80.0	19.0
0080	80.0	100.0	80.0	19.0
0085	85.0	106.0	80.0	19.0
0090	90.0	111.0	80.0	20.5
0095	95.0	116.0	80.0	20.5
0100	100.0	121.0	80.0	20.5

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

SINGLE SPRING SEALS - BALANCED

MS3B-M4



PRODUCT FEATURES

- Single acting
- Balanced
- Single seal
- Independent of direction of rotation

APPLICATIONS: (Typical Industrial)

- Process Industry
- Oil & Gas Industry
- High viscous media
- Process Pumps

OPERATING CONDITIONS:

- Shaft diameter : 24.0....105.0mm
- Pressure: Vacuum: 12 bar (max)
- Temperature: -20°C....+180°C
- Speed : 20 m/s

FACE MATERIALS:

- Silicon Carbide, Tungsten Carbide

METAL PARTS:

- SS 304, SS 316, Hast-C

ELASTOMERS:

- EPDM, Viton

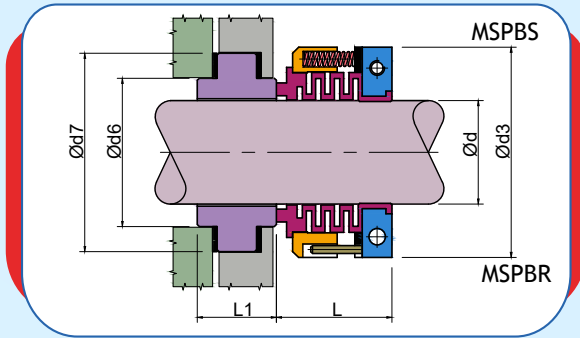
Ød	Ød1	Ød2	Ød3	L1	L2
24	20	38	40	49	13
26	22	40	42	49	13
28	24	42	44	51	13
30	25	44	46	51	13
33	28	47	49	51	13
35	30	49	51	55	13
38	33	54	58	58	13
40	35	56	60	60	13
43	38	59	63	61	15
45	40	61	65	61	15
48	43	64	68	61	15
50	45	66	70	65	15
53	48	69	73	65	15
55	50	71	75	65	17
58	53	76	83	68	16
60	55	78	85	68	16
63	58	81	88	68	16
65	60	84	90	72	16
68	63	87	93	72	16
70	65	90	95	73	16
75	70	95	104	75	19
80	75	100	109	75	19
85	80	107	114	81	19
90	85	112	119	82	18
95	90	119	124	87	18
100	95	124	129	87	18
105	100	129	134	87	18

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

PTFE BELLOW SEALS



MSPBS/MSPBR



PRODUCT FEATURES

- For plain shaft
- Balanced
- Outside mounted
- Independent on direction of rotation
- No metal comes in contact with media

APPLICATIONS: (Typical Industrial)

- Low solid content media
- Chemically active compound
- Extremely corrosive chemicals
- Lube oils
- Multi-stage, Screw & Gear pump
- Acids, Salts, Strong oxidizing agents

OPERATING CONDITIONS:

- Shaft diameter : 0.750....4.000"
- Pressure: 10 bar (max)
- Temperature: -40°C....+200°C
- Speed : 20 m/s

FACE MATERIALS: (Combination)

- GFT, Silicon Carbide, Ceramic, Carbon

METAL PARTS:

- SS 304, SS 316, Hast-C

ELASTOMERS:

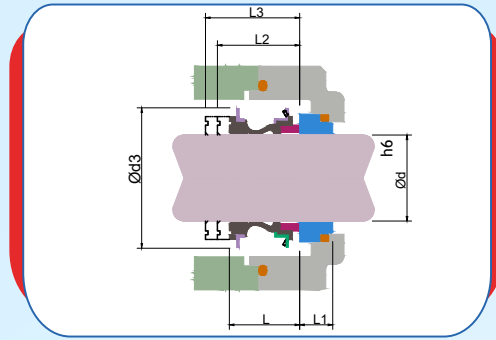
- PTFE, GFT

SIZE	Ød	Ød3	Ød6	Ød7	L	L1
0.750	19.05	52.0	33.5	43.0	25.0	20.0
0.875	22.22	55.0	36.5	46.0	25.0	20.0
1.000	25.40	57.0	39.5	49.0	28.0	20.0
1.125	25.58	60.0	43.0	54.0	30.0	20.0
1.250	31.75	66.0	46.0	56.0	30.0	20.0
1.375	34.92	70.0	49.0	63.0	32.0	22.0
1.500	38.10	73.0	52.5	65.0	32.0	22.0
1.625	41.28	76.0	60.0	73.0	38.0	22.0
1.750	44.45	79.0	61.0	76.0	38.0	22.0
1.875	47.62	85.0	66.5	79.0	38.0	22.0
2.000	50.80	90.0	70.0	86.0	38.0	22.0
2.125	53.98	92.0	75.0	91.0	45.0	25.0
2.250	57.15	95.0	75.0	91.0	45.0	25.0
2.375	60.32	98.0	79.5	95.0	45.0	25.0
2.500	63.50	101.0	83.0	98.0	45.0	25.0
2.625	66.68	105.0	85.5	102.0	45.0	25.0
2.750	69.85	108.0	89.0	105.0	45.0	25.0
2.875	73.02	111.0	92.0	108.0	45.0	25.0
3.000	76.20	114.0	95.5	111.0	45.0	25.0
3.125	79.38	123.0	98.5	114.0	45.0	25.0
3.250	82.55	126.0	101.5	118.0	45.0	25.0
3.375	85.72	130.0	105.0	121.0	45.0	25.0
3.500	88.90	132.0	108.0	124.0	45.0	25.0
3.625	92.08	135.0	111.0	127.0	45.0	25.0
3.750	95.25	138.0	114.5	130.0	45.0	25.0
3.875	98.42	140.0	117.5	133.0	45.0	25.0
4.000	101.60	145.0	120.5	137.0	45.0	25.0

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

RUBBER BELLOW SEALS

MSG1, MSG12, MSG13



PRODUCT FEATURES

- For plain shaft
- Unbalanced
- Inside mounted
- Independent of direction of rotation

APPLICATIONS: (Typical Industrial)

- Water & Waste Water
- Oil Industry
- Sulphide slurries
- Chemical Industry
- Dairies & Beverages
- Paper & Pulp Industry

OPERATING CONDITIONS:

- Shaft diameter : 10.0....100.0mm
- Pressure:16 bar (max)
- Temperature: -20°C....+180°C
- Speed :10 m/s

FACE MATERIALS: (Combination)

- Carbon v/s Silicon Carbide, Ceramic

METAL PARTS:

- SS 304, SS 316

ELASTOMERS:

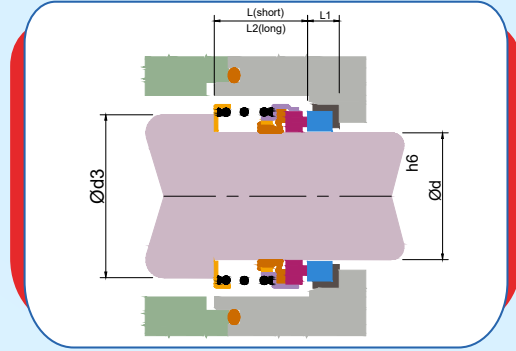
- NBR, Viton, EPDM

SIZE	Ød	Ød3	L	L2	L3	L1
0010	10.0	22.5	14.5	26.5	25.0	7.5
0012	12.0	25.0	15.0	26.0	25.0	7.5
0014	14.0	28.5	17.0	28.5	25.0	7.5
0015	15.0	28.5	17.0	28.5	25.0	-
0016	16.0	28.5	17.0	28.5	25.0	7.5
0018	18.0	32.0	19.5	30.0	25.0	8.5
0019	19.0	37.0	21.5	30.0	25.0	-
0020	20.0	37.0	21.5	30.0	25.0	8.5
0022	22.0	37.0	21.5	30.0	25.0	8.5
0024	24.0	42.5	22.5	32.5	25.0	8.5
0025	25.0	42.5	23.0	32.5	25.0	8.5
0028	28.0	49.0	26.5	35.0	33.0	8.5
0030	30.0	49.0	26.5	35.0	33.0	8.5
0032	32.0	53.5	27.5	35.0	33.0	8.5
0033	33.0	53.5	27.5	35.0	33.0	8.5
0035	35.0	57.0	28.5	35.0	33.0	8.5
0038	38.0	59.0	30.0	36.0	33.0	10.0
0040	40.0	62.5	30.0	36.0	33.0	10.0
0042	42.0	65.5	30.0	36.0	41.0	-
0043	43.0	65.5	30.0	36.0	41.0	10.0
0045	45.0	68.0	30.0	36.0	41.0	10.0
0048	48.0	70.5	30.5	36.0	41.0	10.0
0050	50.0	74.0	30.5	38.0	41.0	10.5
0053	53.0	78.5	33.0	36.5	41.0	12.0
0055	55.0	81.0	35.0	36.5	41.0	12.0
0058	58.0	85.5	37.0	41.5	41.0	12.0
0060	60.0	88.5	38.0	41.5	41.0	12.0
0065	65.0	93.5	40.0	41.5	49.0	12.0
0068	68.0	96.5	40.0	41.5	49.0	12.5
0070	70.0	99.5	40.0	48.7	49.0	12.5
0075	75.0	107.0	40.0	48.7	52.0	12.5
0080	80.0	117.0	40.0	48.0	56.0	13.0
0085	85.0	120.0	41.0	46.0	56.0	15.0
0090	90.0	127.0	45.0	51.0	59.0	15.0
0095	95.0	132.0	46.0	51.0	59.0	15.0
0100	100.0	137.0	47.0	51.0	62.0	15.0

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

RUBBER BELLOW SEALS

MSR60



PRODUCT FEATURES

- Single acting
- Unbalanced
- No wear on shaft
- Loosely inserted seal face do self adjustment

APPLICATIONS: (Typical Industrial)

- Water and Waste Water
- Oil Industry
- Pharmaceutical Industry
- Chemical Industry
- Food Industry
- Paper & Pulp Industry

OPERATING CONDITIONS:

- Shaft diameter : 10.0....75.0mm
- Pressure:16 bar (max)
- Temperature: -20°C....+180°C
- Speed :10 m/s

FACE MATERIALS: (Combination)

- Carbon v/s Silicon Carbide, Ceramic

METAL PARTS:

- SS 304, SS 316

ELASTOMERS:

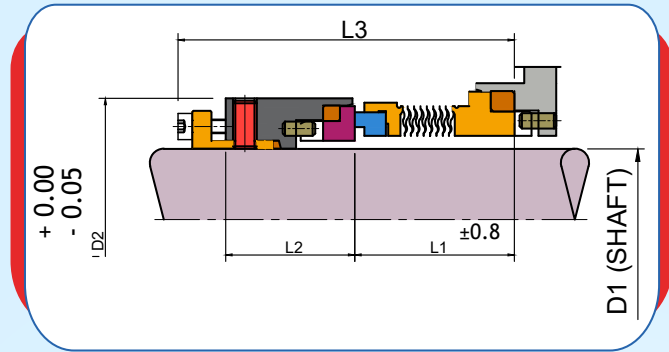
- NBR, Viton, EPDM, Neoprene

SIZE	Ød	Ød3	L	L2	L1
0010	10.0	20.0	25.0	44.0	6.6
0012	12.0	21.7	25.0	44.0	6.6
0013	13.0	23.8	25.0	44.0	6.6
0014	14.0	24.5	25.0	44.0	6.6
0016	16.0	26.6	25.0	44.0	6.6
0018	18.0	30.3	25.0	44.0	7.5
0020	20.0	31.8	25.0	44.0	7.5
0022	22.0	33.5	25.0	44.0	7.5
0024	24.0	38.3	25.0	44.0	7.5
0025	25.0	38.3	25.0	44.0	7.5
0028	28.0	42.2	33.0	60.0	7.5
0030	30.0	43.9	33.0	60.0	7.5
0032	32.0	45.7	33.0	60.0	7.5
0033	33.0	49.1	33.0	60.0	7.5
0035	35.0	49.1	33.0	60.0	7.5
0038	38.0	52.4	33.0	60.0	9.0
0040	40.0	55.7	33.0	60.0	9.0
0042	42.0	61.2	40.0	70.0	9.0
0043	43.0	61.2	40.0	70.0	9.0
0045	45.0	61.2	40.0	70.0	9.0
0048	48.0	64.3	40.0	70.0	9.0
0050	50.0	67.3	41.0	71.0	9.0
0053	53.0	70.6	41.0	71.0	11.0
0055	55.0	71.6	41.0	71.0	11.0
0058	58.0	78.4	41.0	71.0	11.0
0060	60.0	78.4	41.0	71.0	11.0
0063	63.0	81.1	41.0	71.0	11.0
0065	65.0	84.3	49.0	71.0	11.0
0068	68.0	89.6	49.0	71.0	11.3
0070	70.0	89.6	49.0	71.0	11.3
0075	75.0	96.8	52.0	73.0	11.3

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

STATIONARY METAL BELLOW

MS14



PRODUCT FEATURES

- Stationary bellows seal
- Balanced
- Uniform seal face load
- Independent of direction of rotation
- Self cleaning bellows design

APPLICATIONS: (Typical Industrial)

- Oil & gas industry
- Refining technology
- Chemical industry
- Pharmaceutical industry
- Power plant technology

OPERATING CONDITIONS:

- Shaft diameter : 25....100mm
- Pressure: Vacuum: 20 bar (max)
- Temperature: -240....+425°C
- Speed : 50 m/s

FACE MATERIALS: (Combination)

- Carbon/ Silicon Carbide/
Tungsten Carbide

METAL PARTS:

- SS 316,

BELLOWS:

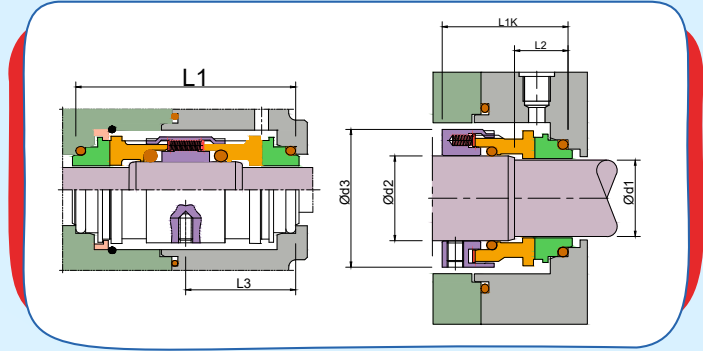
- AM350

Ød1	Ød2	L1	L2	L3
22.23	46.5	28.85	42.85	87.6
25.4	49.5	28.85	42.85	87.6
28.58	52.5	28.85	42.85	87.6
31.75	55.50	28.85	42.85	87.6
34.93	59.0	28.85	42.85	87.6
38.1	65.5	30.2	42.85	88.9
41.28	65.5	31.0	42.85	89.7
44.45	68.5	31.8	42.85	90.5
47.63	71.5	31.8	42.85	90.5
50.8	75.0	32.5	42.85	91.3
53.98	81.5	33.4	46.0	95.3
57.15	84.5	34.18	46.0	99.3
60.33	87.5	34.98	46.0	100.0
63.5	90.5	35.76	46.0	100.9
66.68	94.0	36.6	47.63	103.3
69.85	100.5	40.8	48.41	108.3
73.03	103.5	40.8	48.41	108.3
76.2	106.5	40.8	48.41	108.3
79.38	109.5	40.8	48.41	108.3
82.55	113.0	40.8	48.41	108.3
85.73	116.0	40.8	48.41	108.3
88.9	119.0	41.86	50.8	111.7
92.08	122.5	41.86	50.8	111.7
95.25	125.5	41.86	50.8	111.7
98.43	128.5	41.86	50.8	111.7

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

GAS-LUBRICATED SEALS

MSCGS



PRODUCT FEATURES

- For stepped shafts
- Balanced
- Gas-lubricated
- Rotating spring
- Standard version with U-grooves, V-grooves opt.

APPLICATIONS: (Typical Industrial)

- Gases (single seals only gas)
- Refining technology
- Chemical industry
- Small steam turbines
- Roots compressor

OPERATING CONDITIONS:

- Shaft diameter : 28....125mm
- Pressure: Vacuum: 25 bar (max)
- Temperature: -20....+170°C
- Speed : 25 m/s

FACE MATERIALS: (Combination)

- Carbon/ Silicon Carbide/Tungsten Carbide, Metallic Carbon

METAL PARTS:

- SS 316, SS 304

ELASTOMERS:

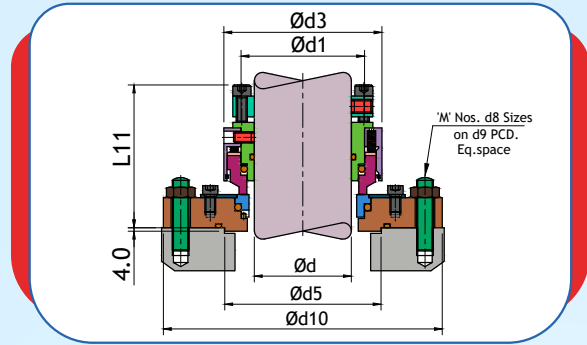
- VITON, EPDM, FFKM

Ød1	Ød2	Ød3	L1K	L2	L3	L4
28.0	33.0	53.5	50.0	20.0	44.5	89.5
30.0	35.0	55.5	50.0	20.0	44.5	89.5
32.0	38.0	60.5	50.0	20.0	44.5	89.5
33.0	38.0	60.5	50.0	20.0	44.5	89.5
35.0	40.0	62.5	50.0	20.0	44.5	89.5
38.0	43.0	65.5	52.5	23.0	47.5	95.5
40.0	45.0	67.5	52.5	23.0	47.5	95.5
43.0	48.0	70.5	52.5	23.0	47.5	95.5
45.0	50.0	72.5	52.5	23.0	47.5	95.5
48.0	53.0	75.5	52.5	23.0	47.5	95.5
50.0	55.0	77.5	57.5	25.0	52.0	104.5
53.0	58.0	84.5	57.5	25.0	52.0	104.5
55.0	60.0	86.5	57.5	25.0	53.0	106.5
58.0	63.0	89.5	62.5	25.0	56.0	112.5
60.0	65.0	91.5	62.5	25.0	56.0	112.5
63.0	68.0	94.5	62.5	25.0	56.0	112.5
65.0	70.0	97.5	62.5	25.0	56.0	112.5
70.0	75.0	104.5	70.0	28.0	63.0	126.5
75.0	80.0	109.5	70.0	28.0	63.0	126.5
80.0	85.0	114.5	70.0	28.0	63.0	126.5
85	90.0	119.5	75.0	28.0	63.0	126.5
90	95.0	124.5	75.0	28.0	63.0	126.5
95	100.0	129.5	75.0	28.0	63.0	126.5
100.0	105.0	132.5	75.0	28.0	63.0	126.5
105.0	115.0	153.5	73.0	32.0	68.0	136.5
110.0	120.0	158.5	73.0	32.0	68.0	136.5
115.0	125.0	163.5	73.0	32.0	68.0	136.5
120.0	130.0	168.5	73.0	32.0	68.0	136.5
125.0	135.0	173.5	73.0	32.0	68.0	136.5

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

DRY RUNNING SEAL

MSDRS



PRODUCT FEATURES

- Single acting
- Balanced
- Outside Mounted
- Dry Running
- Independent of direction of rotation

APPLICATIONS: (Typical Industrial)

- Food Product
- Multimills
- Pharmaceutical Products

OPERATING CONDITIONS :

- Shaft diameter d : 15.....120 mm
- Pressure : p : Vacuum....8 Bar(max.)
- Temperature : t :+120°C
- Speed : 120 rpm

FACE MATERIALS: (Combination)

- Silicon Carbide, Carbon

METAL PARTS:

- SS 316, SS 304, Hast-C

SECONDARY SEAL

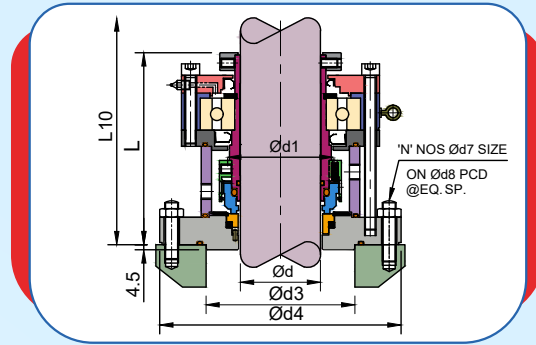
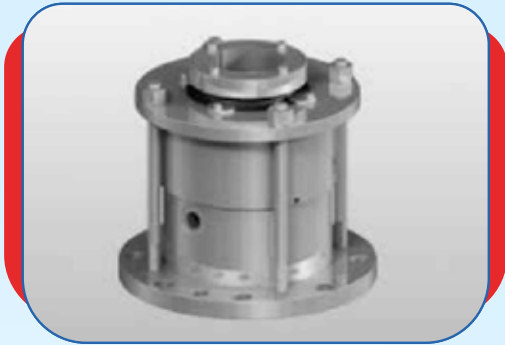
- Viton, PTFE

Shaft d	$\varnothing d1$	$\varnothing d3$	$\varnothing d5$	M, d8	$\varnothing d9$	$\varnothing d10$	L11
0015	25.4	48.5	45.0	4 x M8	95.0	110.0	62.0
0020	28.58	52.0	50.0	4 x M8	100.0	115.0	62.0
0025	31.75	60.0	55.0	4 x M8	110.0	125.0	67.0
0028	34.92	60.0	65.0	4 x M10	120.0	140.0	67.0
0030	34.92	63.0	65.0	4 x M10	120.0	140.0	82.0
0035	41.62	74.0	65.0	4 x M10	125.0	145.0	82.0
0040	44.45	79.0	75.0	4 x M10	135.0	155.0	82.0
0045	47.62	83.0	80.0	4 x M10	135.0	155.0	82.0
0050	50.80	89.0	85.0	4 x M10	145.0	165.0	82.0
0055	53.98	92.0	90.0	4 x M10	150.0	165.0	82.0
0060	57.15	99.0	95.0	4 x M10	155.0	170.0	82.0
0065	60.33	105.0	105.0	6 x M10	165.0	185.0	82.0
0070	63.50	108.0	110.0	6 x M10	170.0	190.0	82.0
0075	66.68	113.5	115.0	6 x M10	175.0	195.0	82.0
0080	69.85	118.0	125.0	6 x M12	180.0	205.0	82.0
0085	73.03	124.0	135.0	6 x M12	190.0	215.0	82.0
0090	76.20	130.5	145.0	8 x M12	190.0	215.0	82.0
0095	79.34	134.0	150.0	8 x M12	200.0	225.0	87.0
0100	82.55	143.0	150.0	8 x M12	205.0	230.0	87.0
0105	85.73	146.0	155.0	8 x M12	215.0	240.0	87.0
0110	88.90	154.0	165.0	8 x M12	225.0	250.0	87.0
0115	92.08	162.0	170.0	8 x M12	230.0	255.0	87.0
0120	95.25	164.0	175.0	8 x M12	235.0	260.0	87.0

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

SINGLE AGITATOR SEALS

MSWSB



PRODUCT FEATURES

- Single acting
- Reverse Balanced
- Outside mounted
- With Bearing
- Independent of direction of rotation

APPLICATIONS: (Typical Industrial)

- Corrosive application
- General light chemicals
- Food products
- Pharmaceutical products

OPERATING CONDITIONS :

- Shaft diameter : 25....150mm
- Pressure: Vacuum: 8 bar (max)
- Temperature: Ambient....+250°C
- Speed : 320 rpm

FACE MATERIALS: (Combination)

- Carbon, Silicon Carbide, Ceramic, Tungsten Carbide

METAL PARTS:

- SS 304, SS 316, Hast - C, Alloy 20

ELASTOMERS:

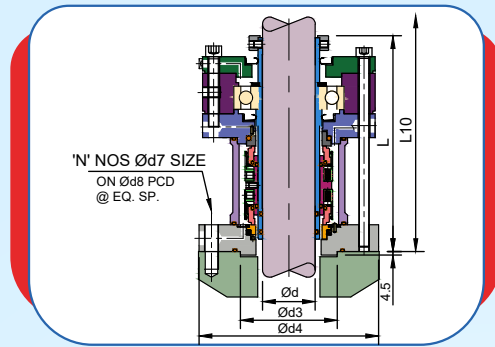
- EPDM, Viton, NBR, FFKM

SHAFT Ød	SEAL SIZE ØD1		Ød3	Ød4	NxØd7	Ød8	L	L10
	inch	mm						
25.0	1.375	34.92	75.0	152.0	4 x M10	132.0	195.0	235.0
30.0	1.625	41.28	80.0	158.0	4 x M10	136.0	195.0	235.0
35.0	1.750	44.45	85.0	163.0	4 x M10	140.0	205.0	245.0
40.0	2.000	50.80	90.0	168.0	4 x M10	147.0	205.0	245.0
45.0	2.125	53.98	95.0	177.0	4 x M10	158.0	210.0	250.0
50.0	2.375	60.32	100.0	177.0	4 x M10	158.0	210.0	250.0
55.0	2.625	66.68	105.0	200.0	6 x M12	178.0	215.0	255.0
60.0	2.750	69.85	110.0	205.0	6 x M12	182.0	215.0	255.0
65.0	3.000	76.00	115.0	212.0	6 x M12	187.0	215.0	255.0
70.0	3.250	82.55	120.0	217.0	6 x M12	192.0	215.0	255.0
75.0	3.375	85.72	125.0	222.0	6 x M12	197.0	220.0	260.0
80.0	3.625	92.07	130.0	227.0	6 x M12	202.0	220.0	260.0
85.0	3.750	95.25	135.0	250.0	8 x M16	222.0	235.0	265.0
90.0	4.000	101.60	140.0	258.0	8 x M16	227.0	235.0	275.0
95.0	4.125	104.78	145.0	275.0	8 x M16	247.0	245.0	285.0
100.0	4.375	111.12	160.0	282.0	8 x M16	250.0	245.0	285.0
105.0	4.500	114.30	165.0	287.0	8 x M16	253.0	250.0	290.0
110.0	4.750	120.65	170.0	292.0	8 x M16	262.0	250.0	290.0
115.0	5.000	127.00	175.0	300.0	8 x M16	265.0	250.0	290.0
120.0	5.125	130.12	180.0	300.0	8 x M16	272.0	250.0	290.0
125.0	5.375	136.52	195.0	322.0	8 x M16	278.0	250.0	290.0
130.0	5.500	139.70	200.0	322.0	8 x M16	282.0	250.0	290.0
140.0	6.000	152.40	210.0	345.0	8 x M16	294.0	260.0	300.0
150.0	6.375	161.92	220.0	365.0	8 x M16	300.0	260.0	300.0

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

DOUBLE AGITATOR SEALS

MSWDB



PRODUCT FEATURES

- Single acting
- Reverse Balanced
- Outside mounted
- With Bearing
- Independent of direction of rotation

APPLICATIONS: (Typical Industrial)

- Petrochemicals & its vapours
- General chemicals & its vapours
- Light hydrocarbons & its vapours

OPERATING CONDITIONS :

- Shaft diameter : 25....150mm
- Pressure: Vacuum: 35 bar (max)
- Temperature: Ambient....+250°C
- Speed : 600 rpm

FACE MATERIALS: (Combination)

- Carbon, Silicon Carbide, Ceramic, Tungsten Carbide

METAL PARTS:

- SS 304, SS 316, Hast - C, Alloy 20

ELASTOMERS:

- EPDM, Viton, NBR, FFKM

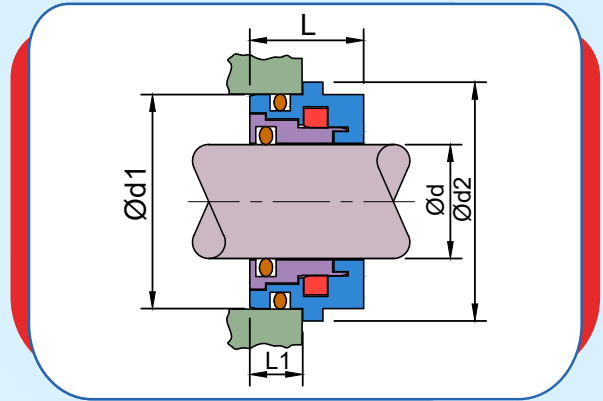
SHAFT Ød	SEAL SIZE Ød1 inch	Ød3	Ød4	NxØd7	Ød8	L	L10
25.0	1.625	75.0	152.0	4 x M10	132.0	240.0	280.0
30.0	1.875	80.0	158.0	4 x M10	136.0	240.0	280.0
35.0	2.000	85.0	163.0	4 x M10	140.0	240.0	280.0
40.0	2.250	90.0	168.0	4 x M10	147.0	250.0	290.0
45.0	2.500	95.0	177.0	4 x M10	158.0	250.0	290.0
50.0	2.625	100.0	177.0	4 x M10	158.0	250.0	290.0
55.0	2.875	105.0	200.0	6 x M12	178.0	282.0	322.0
60.0	3.125	110.0	205.0	6 x M12	182.0	282.0	322.0
65.0	3.375	115.0	212.0	6 x M12	187.0	282.0	322.0
70.0	3.500	120.0	217.0	6 x M12	192.0	288.0	328.0
75.0	3.750	125.0	222.0	6 x M12	197.0	288.0	328.0
80.0	3.875	130.0	227.0	6 x M12	202.0	288.0	328.0
85.0	4.250	135.0	250.0	8 x M16	222.0	292.0	332.0
90.0	4.500	140.0	258.0	8 x M16	227.0	308.0	348.0
95.0	4.875	145.0	275.0	8 x M16	247.0	353.0	393.0
100.0	5.000	160.0	282.0	8 x M16	250.0	353.0	393.0
105.0	5.250	165.0	287.0	8 x M16	253.0	353.0	393.0
110.0	5.375	170.0	292.0	8 x M16	262.0	358.0	393.0
115.0	5.625	175.0	300.0	8 x M16	265.0	358.0	393.0
120.0	5.750	180.0	300.0	8 x M16	272.0	358.0	393.0
125.0	6.000	195.0	322.0	8 x M16	278.0	358.0	393.0
130.0	6.250	200.0	322.0	8 x M16	282.0	425.0	465.0
140.0	6.625	210.0	345.0	8 x M16	294.0	425.0	465.0
150.0	7.000	220.0	365.0	8 x M16	300.0	425.0	465.0

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

BEARING ISOLATOR



MSBI



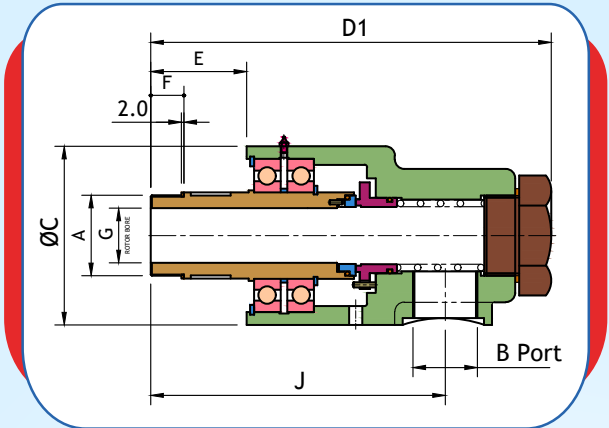
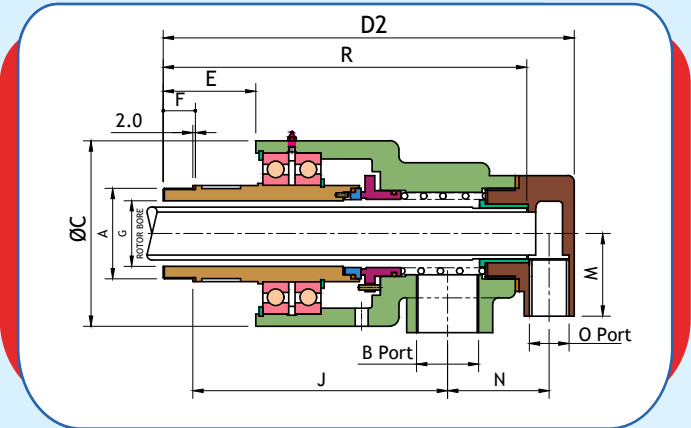
Part No.	Description	Material
1.	Rotor	Bronze
2.	'O' Ring	Viton
3.	Retaining ring	Bronze
4.	Stator	Poly-propylene
5.	'O' Ring	Viton

Ød	Ød1	Ød2	L	L1
18.0	30.0	33.0	12.5	6.0
20.0	32.0	35.0	12.5	6.5
22.0	32.0	35.0	12.5	6.5
25.0	35.0	38.0	12.5	6.5
28.0	40.0	43.0	12.5	6.5
30.0	40.0	43.0	12.5	6.5
32.0	47.0	45.0	12.5	6.5
35.0	47.0	50.0	12.5	6.5
40.0	52.0	55.0	12.5	6.5
45.0	60.0	63.0	15.5	8.0
50.0	65.0	68.0	15.5	8.0

Dimensions for higher sizes available against specific requirement.
All dimensions in mm.

ROTARY JOINT

MSRJ



STANDARD TYPE

FACE MATERIALS

Carbon / Silicon Carbide

METAL PARTS

SS 304, Aluminium, Brass

SECONDARY SEAL

Elastomers

APPLICATIONS

Oil, Water, Steam, Air, Coolant

OPERATING LIMITS

Pressure : p : 10 bar

Temperature : t : 120°C

Size Range : 3/8" to 2.0"

SPEED UPTO

750 rpm : for straight threads 2.0" Size

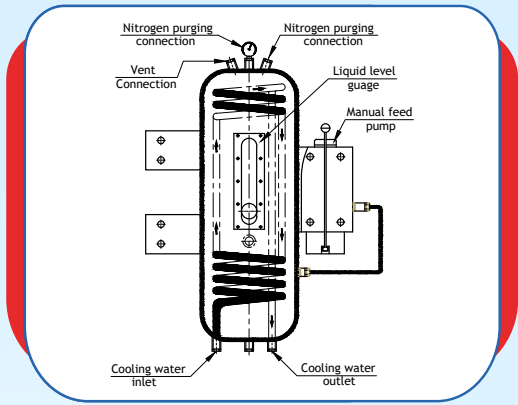
2500 rpm : for straight threads 1.0" Size

3000 rpm : for straight threads 1 1/2" & 1 1/4" Size

3500 rpm : for straight threads 3/4" Size & below

A ROTOR THREADS	B PORT	C	D1	E	F	NOM. SIZE G ROTOR BORE	J	DUALFLOW											
								D2	K	M	N	O Port	FIXED SUPPLY PIPE			ROTATING SUPPLY PIPE			
													Threads	Pipe OD.	R	Pipe size	Pipe Dia.	S	R
3/8" BSP	3/8" BSP	56	135	26	16	10.0	86.5	146	3/8" BSP	18	35	1/4" BSP	--	--	--	6.35	<u>6.0</u> 5.95	18	125
1/2" BSP	1/2" BSP	56	150	34	19	13.0	92	169	1/2" BSP	18	46.5	3/8" BSP	1/8" BSP	10.3	138	1/8" NB	<u>9.42</u> 9.40	25	145
3/4" BSP	3/4" BSP	67	157	34	19	18.0	98.5	183	3/4" BSP	26	53	1/2" BSP	1/4" BSP	13.7	143	1/4" NB	<u>12.6</u> 12.50	30	157
1" BSP	1" BSP	81	185	42	21.5	24.0	115	211	1" BSP	27	62	1/2" BSP	3/8" BSP	17.1	168	3/8" NB	<u>15.8</u> 15.75	35	185
1 1/4" BSP	1 1/4" BSP	103	222	54	27	30.0	137	252	1 1/4" BSP	35	72	3/4" BSP	1/2" BSP	21.3	201	1/2" NB	<u>19.9</u> 19.85	38	220
1 1/2" BSP	1 1/2" BSP	109	242	61	28.6	36.0	150.5	273	1 1/2" BSP	38	78	3/4" BSP	3/4" BSP	26.7	221	3/4" NB	<u>25.4</u> 25.35	45	239
1 3/4" BSP	1 3/4" BSP	115	247	63	28.6	42.0	154.5	286	1 3/4" BSP	38	87	3/4" BSP	3/4" BSP	26.7	231	3/4" NB	<u>25.4</u> 25.35	44	251
2" BSP	2" BSP	125	260	65	28.6	47.0	165.0	296	2" BSP	38	87	1" BSP	3/4" BSP	26.7	242	3/4" NB	<u>25.4</u> 25.35	44	261

THERMOSYPHON POT



MSTS



STANDARD TYPE

METAL PARTS

- Thermosyphon shell : Carbon steel, SS 316 L,
- Cooling coil : SS 316 L , SS 304
- Secondary seal : Elastomers

OPERATING LIMITS

- Capacity : 7.5, 10, 12, 20 ltrs
- Design pressure : 40 bar
- Hydraulic test pressure : 60 bar
- Working temperature (max.) : 180 °C
- Heat transfer area of cooling coil : 0.226m²
- Cooling water flow rate recommended : 10 ltrs/min

CONNECTION SPECIFICATIONS

- Cooling water inlet1/2" NPT(F)
- Cooling water outlet.....1/2" NPT(F)
- Barrier fluid inlet.....1/2" NPT (F)
- Barrier fluid outlet.....1/2" NPT (F)
- Pressure gauge connection...3/8" NPT (F)
- Filling connection.....1/2" NPT (F)
- Nitrogen purging connection..1/2" NPT (F)
- Feed pump connection.....1/4" NPT (F)
- Drain.....1/2" NPT (F)

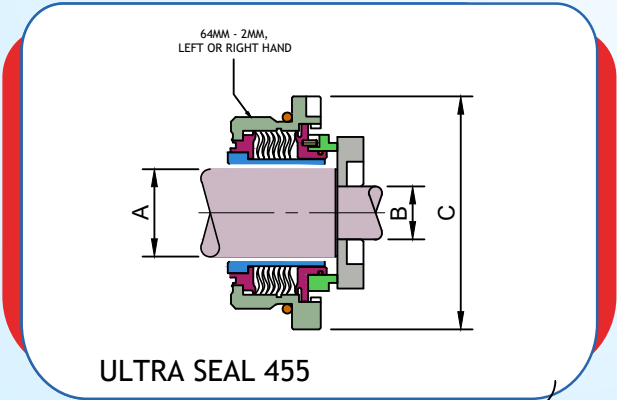
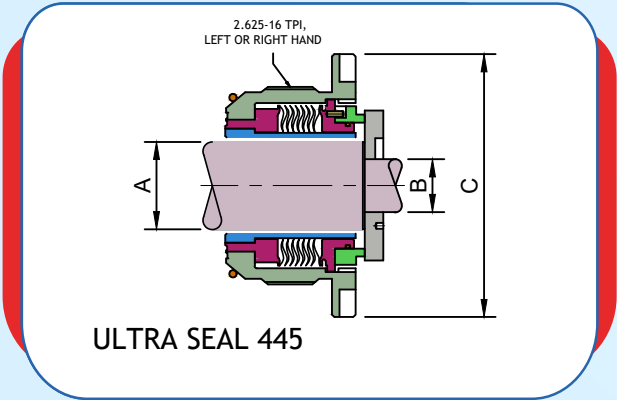
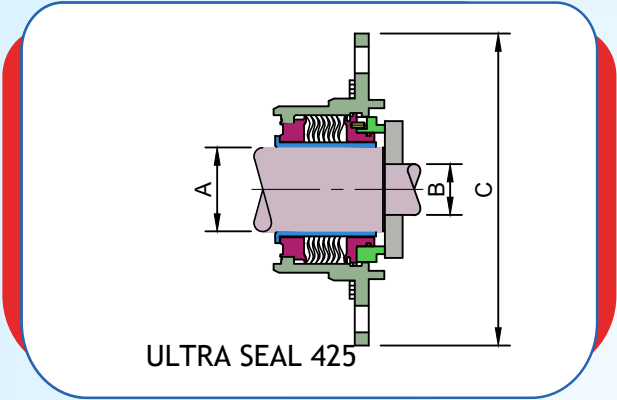
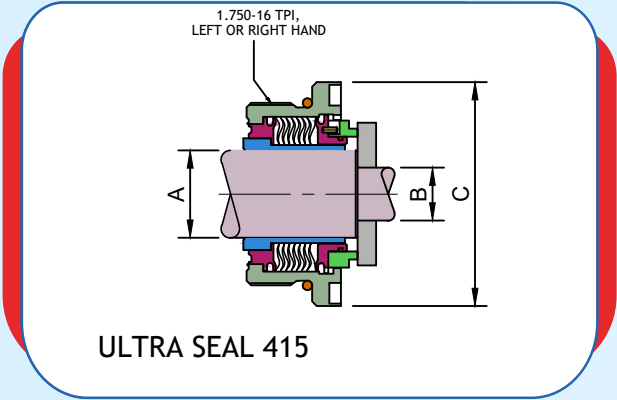
ACCESSORIES

- Pressure gauge : 0-10, 0-25, 0-40 bar
- Level gauge : To indicate barrier fluid
- Manual feed pump : 2 ltrs (optional)

This is used for double mechanical seals in tandem or back to back arrangement to provide necessary lubrication and cooling to the seal faces to achieve recommended seal life and comes equipped with cooling coil inside the shell to bring down the temperature of barrier fluid coming from seal to thermosyphon.

CRYOGENIC SEALS

MSCG



FACE MATERIALS: (Combination)

- Tungsten Carbide/Proprietary Polymer

METAL PARTS:

- AM350, SS 316, BRONZE

MODEL	A	B	C
415	1.000	0.625	2.24
425	1.085	0.812	3.49
445	1.375	1.0005	3.00
455	1.375 (35MM)	1.181	2.95

COMPRESSOR SEAL

MSCO

AIR COMPRESSOR

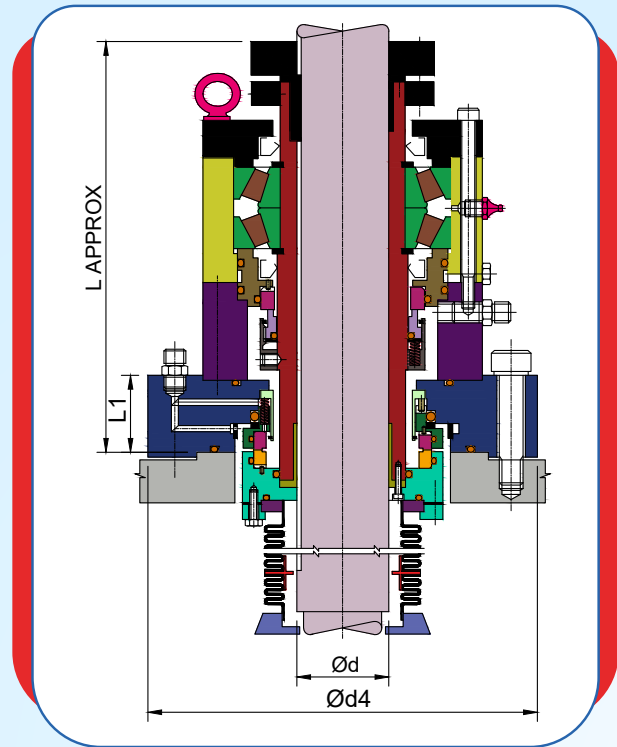
GAS COMPRESSOR

**REFRIGERATION
COMPRESSOR**

WE CAN MAKE EQUIVALENT TO
ALFA LAVAL/ BITZER/ BOCK/ CARRIER / VOLTAS / COPELAND,
COPELAND / DWM COPELAND / DAIKIN / INGERSOLD RAND,
ATLAS COPCO / TANABE / GRAM / GRASSO / KIRLOSKAR ,
MCQUAY / MYCOM / SABROE / STAL / THERMO-KING ,
TRANE / VILTOR / YORK / HOLMAN /

DOUBLE MECHANICAL SEALS FOR ANFD

MSANFD



PRODUCT FEATURES

- Dual Balanced
- Solid antifriction linear bearings integral with the sleeve
- Heavy duty sturdy design with two taper roller bearings
- Special grade hard faces, Free from particle shredding
- Bellow assembly with long fatigue life

APPLICATIONS: (Typical Industrial)

- Agitated Nutsche Filters & Dryers
- Rotary vacuum paddle dryers
- Horizontal Reactors with Expanding shafts

OPERATING CONDITIONS :

- Shaft diameter : 60....150mm
- Pressure: Vacuum: 7 bar (max)
- Temperature: -80....+200°C
- Speed : 1 m/s

FACE MATERIALS: (Combination)

- SIC/SIC, CARBON/SIC

METAL PARTS:

- SS 316/ HAST-C-22, HAST-C-276

ELASTOMERS:

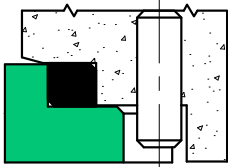
- VITON/ PTFE/ STV/ FFKM/ AFLAS/ EPR

SEAL SIZE	Ød	Ød4	L	L1
0952/0825 (0600)	60.0	222.0	265.0	50.0
1238/1016 (0800)	80.0	247.0	295.0	50.0
1397/1270 (1000)	100.0	282.0	325.0	51.5
1524/1333 (1100)	110.0	302.0	330.0	52.0
1587/1460 (1200)	120.0	312.0	335.0	53.0
1714/1524 (1300)	130.0	332.0	355.0	52.0
1778/1651 (1400)	140.0	352.0	345.0	52.0
1905/1778 (1500)	150.0	372.0	365.0	52.0

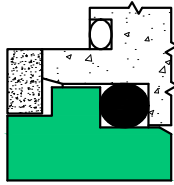
MATING RING

MSMR

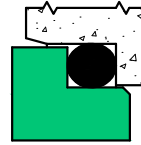
DIN CAVITY



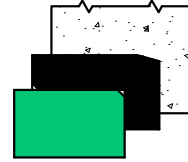
MSW-VAD



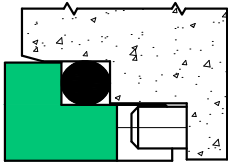
MSW-CD



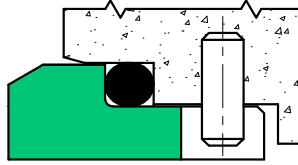
MSW-NAD



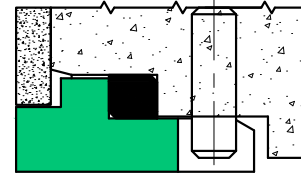
MSW-CPD



MSW-HAD

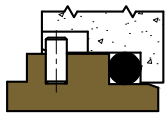


MSW-VALD

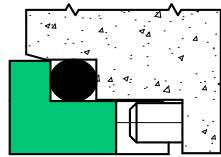


MSW-CLD

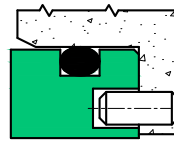
NON DIN CAVITY



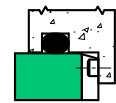
INSERT-ND



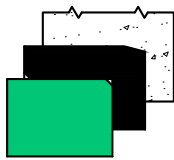
MSW-HAND



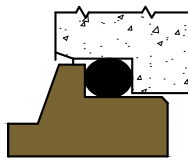
MSW-H'ND



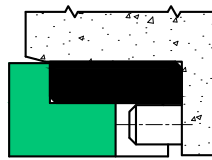
MSW-'D'ND



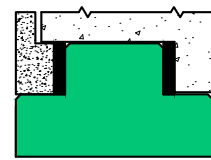
MSW-CPND



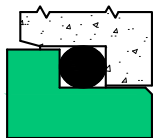
MSW-ND



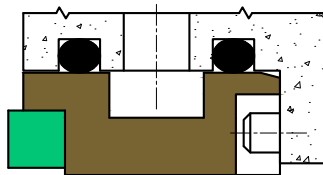
MSW-LPND



'T' TYPE



MSW-ND1



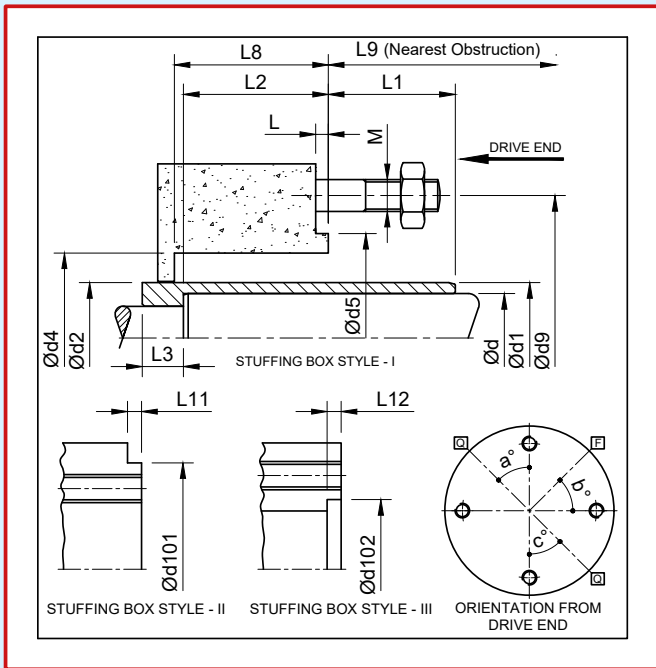
WET SEAT

STAND FOR : 1) MSW = Multi Spring/Single Spring/Wave Spring.
 2) VA = Vertical Anti-Rotation
 3) C = Clamp
 4) VAL = Vertical Anti-Rotation Long
 5) NA = No Anti-Rotation

6) HA = Horizontal Anti-Rotation
 7) ND = Non Din Cavity
 8) 'D' = DA Type
 9) 'H' = H Type
 10) CP = Cup Type

11) LP = Long Packing
 12) D = Din

Pump Information Data



- d - Shaft OD.
- d1 - Sleeve OD.
- d2 - Stuffing Box ID.
- d4 - Stuffing Box Bore
- d5 - Spigot dia.d101.....d102.....
- d9 - Bolt Circle
- M - No. of BoltsSize.....
- L - Raised CollarL11.....L12.....
- L1 - Sleeve Extension
- L2 - Shaft Hub
- L3 - Impeller Sleeve Length
- L8 - Stuffing Box depth
- L9 - Nearest obstruction
- a - b - c -
- Stud holeson axis/off axis
- Stuffing Box coverjacketed/non jacketed

Client : _____

Address : _____

Pump Data

Make : _____ Bearing Bracket _____
 Model : _____ Item/Tag No. _____
 Material of Construction : _____ Existing Seal _____

Operating Parameters

Total Head : _____ Suction Pressure _____ Discharge Pressure _____ Box Pressure _____
 Speed : _____ Direction of rotation(Viewed from Drive End)CW/CCW

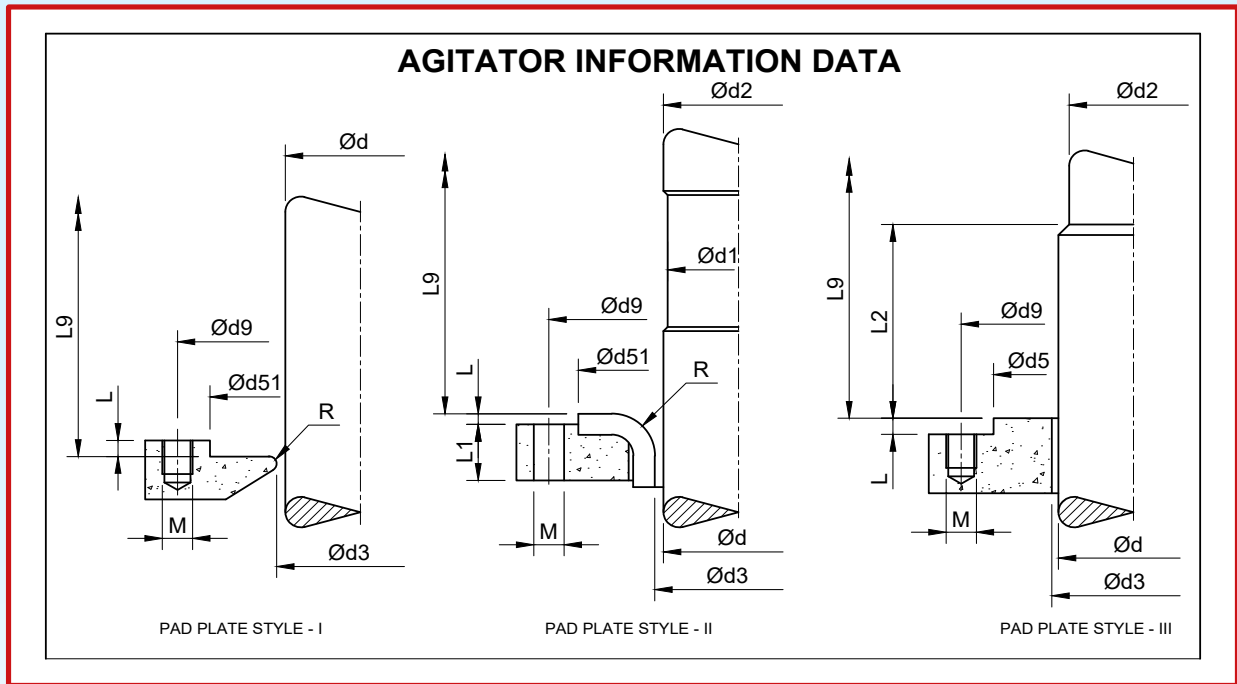
Fluid Details

Fluid : _____
 Pumping temperature : _____ Maximum temperature _____
 Specific Gravity : _____ Viscosity _____
 Boiling Point : _____ Freezing Point _____
 Fluid Description : _____ a. CLEAN b. DIRTY c. ABRASIVE d. SLURRY e. TOXIC
 Percentage Of solids : _____ Grain Size _____

API Plans

- a) Whether seal flushing by external fluid acceptable ? if yes,
 What Fluid _____
- b) Recommended buffer fluid for double seal _____ Temperature _____
- c) Recommended API Plan # Plan 52 (Non Pressurised thermosyphon) # Plan 53 (Pressurised Thermosyphon)
 # Plan 54 (Buffer Fluid Circulation by external pump/source) #* Plan 32 (Fluid Injection by external pump/source)
 #*Plan 02 (Dead ended with no circulation of buffer fluid & with cooling jacket)

Remarks _____



- | | | |
|------------------------|--------------------------------|-------------------------------------|
| d - Shaft OD | d9- Bolt Circle | L3- Distance Between two steps..... |
| d1 - Shaft OD | M - No. of Bolts.....Size..... | L9- Nearest obstruction..... |
| d2 - Shaft OD | L - Raised collar | R- Radius..... |
| d3 - Pad plate ID..... | L1 - Thickness..... | |
| d5 - Spigot | d51..... | L2 - Shaft step from Pad..... |

Client : _____
 Address : _____

Agitator Data

Make : _____ Model _____
 Item /Tag No. _____ Matl of Construction _____
 Existing seal arrangement Gland Packing/Mechanical Seal
 If mechanical seal, seal make & type _____
 Existing mechanical seal working satisfactory Yes/No _____
 If No,give details of seal failure in brief in remarks column. _____

Operating Parameters

Vessel Pressure: _____ Speed _____
 Direction of rotation from drive end _____ CW/CCW

Fluid Details

Fluid _____
 Temperature _____ Specific Gravity _____ Velocity _____
 Fluid Description _____ a. CLEAN b. DIRTY c. ABRASIVE d. SLURRY e. TOXIC
 Percentage Of solids _____ Grain Size _____

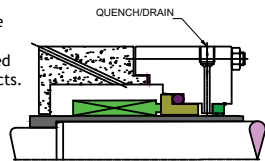
API Plans

A) Recommended buffer fluid _____ Temperature _____
 B) Recommended API Plan # Plan 52 (Non Pressurised Thermosyphon), #Plan 53 (Pressurised Thermosyphon),
 # Plan 54 (Buffer Fluid Circulation by External Pump/Source)

Remarks _____

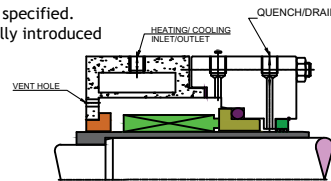
FLUSHING PLANS AS PER API - 682

Plan 01 is a recirculation from pump discharge area of the pump into the seal chamber. Recommended for clean pumpage only. This flush plan should only be used for clean products as dirty products.



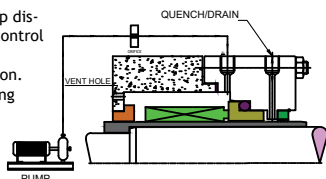
PLAN 01

Plan 02 is a non recirculating flush. Jacketed stuffing box and throat bushing required when specified. Solids are not continually introduced into the seal chamber.



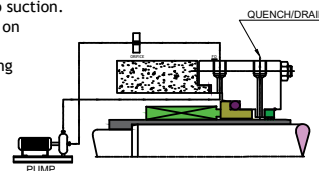
PLAN 02

Plan 11 is the most common flush plan in use today. Recirculation from pump discharge through a flow control orifice to the seal. No product contamination. Connection FI for flushing inlet.



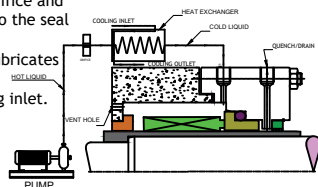
PLAN 11

Recirculation from pump seal chamber through a flow control orifice and back to pump suction. Typically plan 13 is used on vertical pump. Connection FO for flushing outlet.



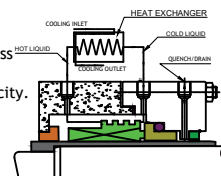
PLAN 13

Recirculation from pump discharge through a flow control orifice and heat exchanger, then into the seal chamber. Process fluid cools and lubricates the seal. Connection FI for flushing inlet.



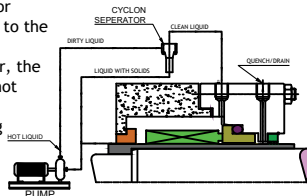
PLAN 21

Recirculation from pumping ring in the seal chamber through a heat exchanger and back into the seal chamber. More efficient than a plan 21 and less chance of heat exchanger fouling. Reduce temperature improves lubricity. Connection FI for flushing inlet.

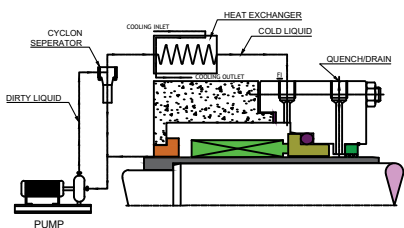


PLAN 23

Recirculation from pump discharge through a cyclon separator delivering the clean fluid to the seal chamber. Unlike a strainer or filter, the abrasive separator does not require cleaning. Connection FI for flushing inlet.



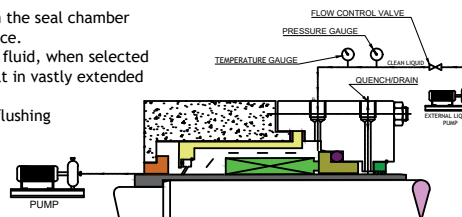
PLAN 31



Recirculation from pump discharge through a cyclon separator delivering the clean fluid to a heat exchanger cooler and then to the seal chamber. Solids are removed and product temperature is reduced to enhance the seal's environment. Connection FI for flushing inlet.

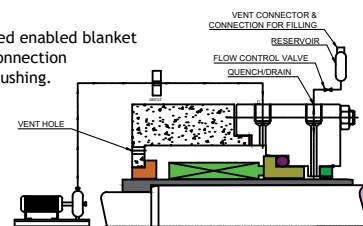
PLAN 41

Flush is injected in the seal chamber from external source. The external flush fluid, when selected properly, can result in vastly extended seal life. Connection FI for flushing inlet.



PLAN 32

External reservoir providing a ded enabled blanket for the fluid to quench of the connection of the gland connection FI for flushing.

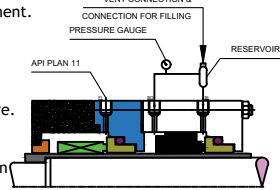


PLAN 51



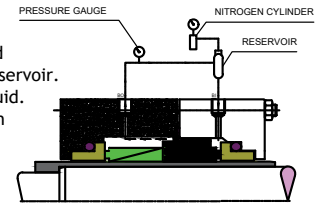
FLUSHING PLANS AS PER API - 682

This plan uses an external reservoir to provide buffer fluid for the outer seal of an unpressurized dual seal arrangement. In comparison to single seals, dual unpressurized seals can provide reduced net leakage rates as well as redundancy in the event of a primary seal failure. Cooling coils in the reservoir are available for removing heat from the buffer fluid. This plan is often used where process fluid contamination can not be tolerated.



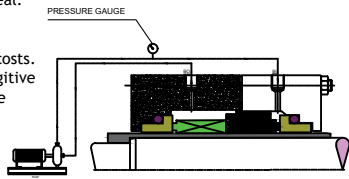
PLAN 52

Clean & pressurized external fluid provided to seal chamber from reservoir. Pumping ring circulate internal fluid. Barrier fluid pressure is more than stifing box pressure.



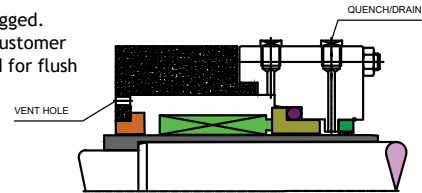
PLAN 53

Plan 54 utilizes an external source to provide a clean pressurized barrier fluid to a dual seal. Can provide pressurized flow to multiple seal installations to reduce costs. Positively eliminates fugitive emissions to atmosphere. Plan 54 systems can be custom. Engineered to suit application or specific plant requirements.



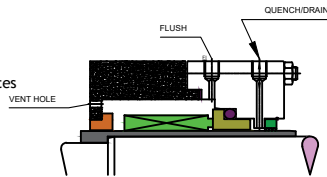
PLAN 54

All connection are plugged. This plan used when customer not providing any fluid for flush & quench



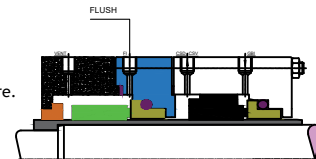
PLAN 61

This plan is a common plan to improve the environment on the atmospheric side of single seals by quenching with steam, nitrogen or water. This plan is a low cost alternative to tandem seals. The quench prevents or retards product crystallization or coking. Quenches can also provide some cooling. Typical applications include; steam quenches on hot services to retard coking; nitrogen quenches on cold or cryogenic service to prevent icing.



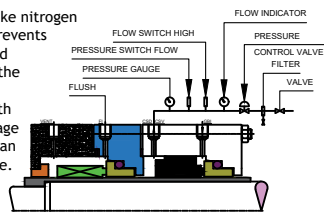
PLAN 62

Connections are trapped. Customer may use in future.



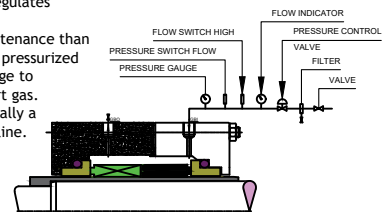
PLAN 71

This plan for secondary containment uses an external low pressure buffer gas, usually nitrogen, regulated by a control panel that injects it into the outer seal cavity. Introduction of a buffer gas like nitrogen reduces fugitive emissions, prevents icing on cold applications, and provides for some cooling to the outboard seal. This plan is normally used with Plan 75 for primary seal leakage that is condensing, or with Plan 76 for non-condensing leakage.



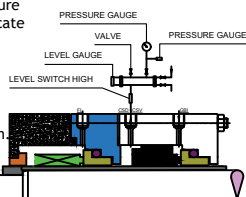
PLAN 72

This plan provides a pressurized gas, typically nitrogen, to dual gas seals through the use of a control panel that removes moisture, filters the gas, and regulates the barrier pressure. Lower costs and maintenance than systems used on dual pressurized liquid systems. Leakage to atmosphere is an inert gas. The barrier gas is usually a pressurized nitrogen line.



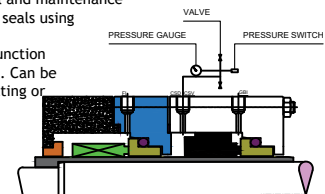
PLAN 74

This plan is a collection system used with secondary containment seals for process fluid that will condense at lower temperatures or is always in a liquid state. The collection reservoir contains a pressure gauge and a high pressure switch to indicate a build up in pressure from excessive primary seal leakage or failure. This plan can be used in conjunction with a gas purge from Plan 72. Typically dry-running, contacting secondary containment seals are used with this plan

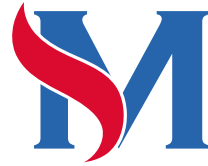
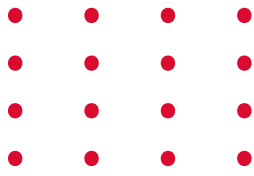


PLAN 75

This plan is a system to divert non-condensing primary seal leakage to a flare or vapor recovery system. Lower initial and maintenance costs than dual unpressurized seals using a Plan 52. This plan can be used in conjunction with a gas purge from Plan 72. Can be used with dry-running, contacting or non-contacting secondary containment seals.



PLAN 76



MAFFS SEALS PVT. LTD.

We seal everything including your confidence



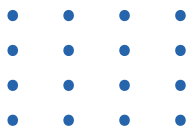
For more details contact at:

+919820568022

sales@maffsseals.com

www.maffsseals.com

Follow us at:



Factory Address:

Gala No. 72, Shorab Compound, R. M. Road,
Oshiwara, Jogeshwari (W), Mumbai - 400102

Regd Office:

303, Badhra Apartment, Western Park, Misquita Wadi,
Western Express Highway No. 8, Mira Road (East) Dist. Thane 401107, India.