SHARK MIX-SD

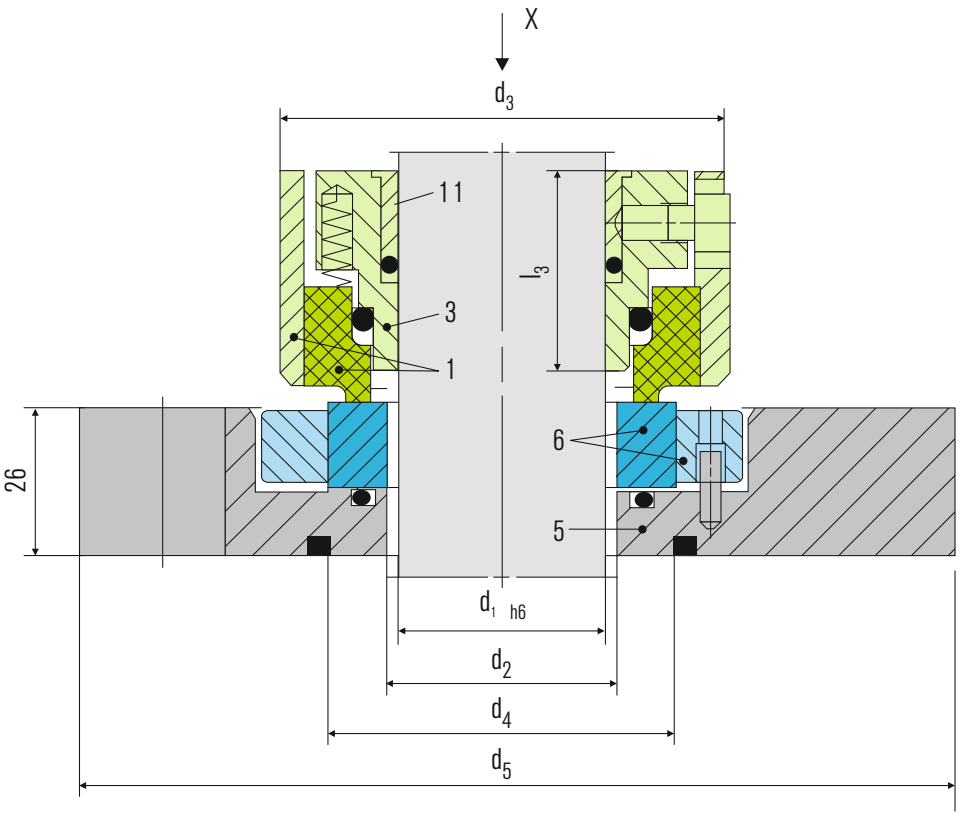
Agitator Seals · Dry Running Seals

Product Description

1. Balanced
2. Dry-running
3. For top entry drives, on request side drive possible
4. Independent of direction of rotation
5. Multiple springs rotating
6. Outboard
7. Single and double seals

Technical Features

1. Available as components or as cartridge units
2. Connections for steel vessels (MIX-S)
3. Glass-lined (MIX-SP) reactors are available to DIN 28138 standards or as required
4. Suitable for pressure reversals



Typical Industrial Applications

Chemical industry
Food and beverage industry
Non-toxic media with single seal
Pharmaceutical industry
Toxic media with double seal
Agitators
Reactors

Standards

FDA
ATEX
DIN 28136 T2 (for steel vessels)
DIN 28141 (flange connection for steel vessels)
DIN 28154 (shaft end for steel vessels)
DIN 28136 T3 (for glass-lined vessels)
DIN 28137 T2 (flange connection for glasslined vessels)
DIN 28159 (shaft end for glass-lined vessels)

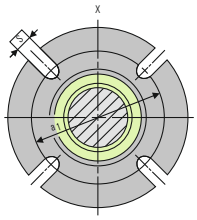
Materials

Rotating seal face: Carbon graphite, FDA compliant
Stationary seal face: Silicon carbide
Secondary seals and metal parts according to application and customer's specifications

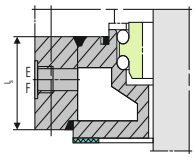
Notes

Seat alternatives available on request.
Options:
Cooling or heating flange
Flush
Polymerization barrier

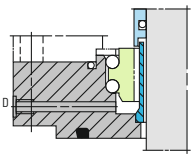
Options



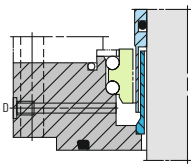
Seal flange



Option
Cooling flange, can be used alternatively as a heating flange (tmax. = 350°C (662 °F).



Option
Leakage drain, can be used alternatively as a flush.



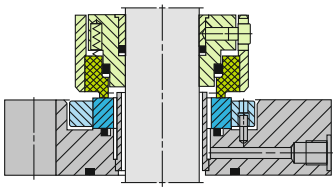
Option
Polymerization barrier, can be used alternatively as a leakage drain or a flush.

Item	Description
1	Seal face with seal face housing
3	Drive collar
5	Flange
6	Seat with seat housing
11	Clamping

Operating Conditions

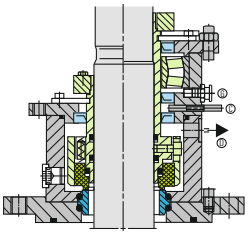
Sizes: d1 = Up to 6.500")
Pressure: p1 = vacuum to 87 PSIG
Temperature: t1 = -4 °F to 302 (482*) °F
Speed = 0 to 6 ft/s
Permissible axial movement: ± 0.060"
Radial movement: ± 0.060"

Design Options



MIX-SD

The MIX-SD shown equipped with an optional purge bushing sleeve for trapping any abrasive particles from the seal face. Contamination of the medium in the container is thus ruled out. The bushing can be cleaned through a flushing bore. Please note: diameters (d2 to d 5) increase to the next possible design size.



Single Seal Variants

MIX-SD

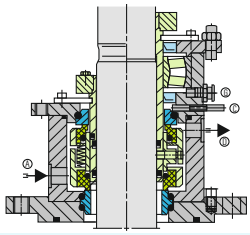
The MIX-SD seal can also be designed in a cartdridge arrangment.

MIX-SD-B

Single seal cartrdige with integrated floating bearing.

MIX-SDP/MIX-SDP-B

For glass-lined vessels such as Pfaudler. See PN25 flange standard dimensions.



Double Seal Variants

MIX-DD

Double seal

MIX-DD-B

Double seal with integrated floating bearing

These seals are designed to be self-closing on the product side, i.e. they will remain closed even with pressure variations or a pressure reversal. Operation is optionally the same as for the single version. In view of the mechanical seal on the atmosphere side it can be used as a buffer pressurized double seal . The barrier pressure should be 7 to 15 PSIG above pressure to be sealed.

Dimensional Data

Dimensions in mm

d_1 (mm)	d_1 (inch)	d_2	d_3	d_4	d_5	l_2	l_3	a_1 (min)	a_1 (max)	s
25	1.000	34	68	-	148	41.5	40.5	100	132	11
28	1.125	34	68	55	148	41.5	40.5	100	132	11
30	-	34	68	55	148	41.5	40.5	100	132	11
32	1.250	39	73	60	153	41.5	40.5	105	137	11
35	1.375	39	73	60	153	41.5	40.5	105	137	11
38	1.500	44	78	65	158	41.5	40.5	110	142	11
40	-	44	78	65	158	41.5	40.5	110	142	11
45	1.625	49	83	68	163	41.5	40.5	115	152	11
-	1.750	49	83	68	163	41.5	40.5	115	152	11
48	1.875	54	88	73	178	41.5	40.5	125	160	14
50	-	54	88	73	178	41.5	40.5	125	160	14
55	2.000	59	93	78	183	41.5	40.5	130	165	14
-	2.125	59	93	78	183	41.5	40.5	130	165	14
60	2.250	64	98	85	188	41.5	40.5	135	170	14
65	2.375	69	103	90	193	44.5	40.5	140	175	14
-	2.500	69	103	90	193	44.5	40.5	140	175	14
70	2.625	74	108	95	198	44.5	43.5	145	180	14
-	2.750	74	108	95	198	44.5	43.5	145	180	14
75	2.875	79	113	100	203	44.5	43.5	150	185	14
80	3.000	84	118	105	208	44.5	43.5	155	190	14
85	3.250	89	123	110	213	44.5	43.5	160	195	14
90	3.500	94	128	115	218	44.5	43.5	165	200	14
95	3.750	99	133	120	223	44.5	43.5	170	205	14
100	-	104	138	125	228	44.5	43.5	175	210	14
105	4.000	109	143	130	233	44.5	43.5	180	215	14
110	4.250	114	148	135	238	44.5	43.5	185	220	14
115	4.500	119	153	140	267	44.5	43.5	196	243	18
125	4.750	129	163	150	277	44.5	43.5	206	253	18
140	5.000	144	178	165	297	44.5	43.5	221	273	18
-	5.250	144	178	165	297	44.5	43.5	221	273	18
-	5.500	144	178	165	297	44.5	43.5	221	273	18
150	5.750	154	188	175	307	44.5	43.5	231	283	18
160	6.000	164	198	185	317	44.5	43.5	241	293	18
-	6.250	164	198	185	317	44.5	43.5	241	293	18

PN25 Flange Standard - Dimensions in mm

d_3 1)	d_7 1)	d_1	n x d_2	d_4	d_0	k	L_1	L_2	L_w 2)	l_1	l_2	A	M_1	M_1	A, B
40	38	175	4x18	110	90	145	87	136	143	15	28	122	M12	M16	G3/8
50	48	240	8x18	176	135	210	89	149	148	17	28	157	M12	M16	G3/8
60	58	240	8x18	176	135	210	93.5	156	158	17	28	168	M12	M16	G3/8
80	78	275	8x22	204	155	240	104.5	189	168	20	34	203	M16	M20	G1/2
100	98	305	8x22	234	190	270	109	190	178	20	34	228	M16	M20	G1/2
125	120	330	8x22	260	215	295	110	205	203	20	40	268	M20	M20	G1/2
140	135	395	12x22	313	250	350	124	222	208	20	40	285	M20	M20	G1/2
160	150	395	12x22	313	265	350	127.5	219.5	213	25	40	297	M20	M20	G1/2
180	170	445	12x22	364	310	400	132.5	230	233	25	45	332	M24	M20	G1/2
200	190	445	12x22	364	310	400	137.5	237.5	243	25	45	352	M24	M20	G1/2
220	210	505	16x22	422	340	460	149.5	249.5	263	25	50	381	M24	M20	G1/2

1) Shaft diameters d and d to DIN 28154
2) Shaft step to DIN 28154
inch size available from size 1.500 to 6.500
Note: Additional technical & dimensional information will be provided on request.