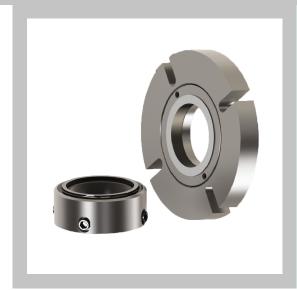
Agitator Seals – Dry Running

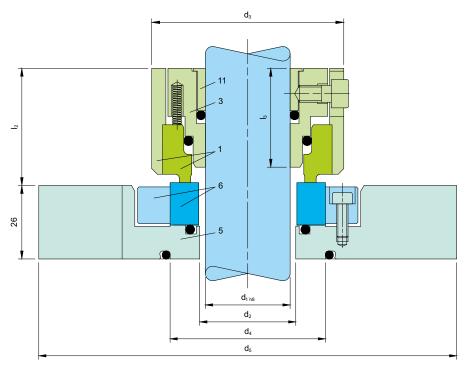


Product Description

- 1. Single and Dual seal configuration
- 2. Balanced design
- 3. Independent of direction of rotation
- 4. Cartridge construction
- 5. Designed for dry running applications
- 6. Designed for top entry vessels, side entry can be provided upon request
- 7. Rotary unit with multiple springs

Technical Features

- 1. Over all connecting dimensions are tailor made to customer's specifications
- 2. Can accommodate reverse pressure
- The seal design is unique as it closes due to the hydraulic product pressure as well as overlaying barrier pressure
- 4. Rugged design to ensure long term reliability and operating life
- 5. Seals are assembled in cartridge construction for easy fitment and are also available in component design as per customer specification



Note: The item numbers as depicted above are based on our technical experience and knowledge and are placed in the chronological order of their assembly procedure

Typical Industrial Applications											
Agitators	Pharmaceutical										
Chemical	Reactors										
Food & beverage	Toxic media										
Non-toxic media											

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								
Seal face	Carbon graphite, FDA conform							
Seat	Silicon carbide (Q1)							

Secondary seals and metal parts according to application and customer's specifications

Notes

Seat Alternatives available on request

Options:

Cooling or heating flange

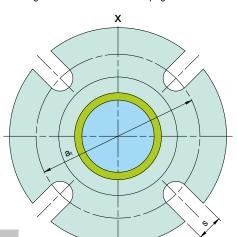
Flush

Polymerization barrier

Installation, Details, Options

NOTE:

Refer "Agitator Seals Accessories" page no. 83



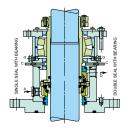
Radial movement:								
± 1.5 mm								
Permissible axial movement:								
± 1.5 mm								

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

Performance Capabilities								
Sizes	d₁ = Upto 160 mm (Upto 6.500")							
Pressure	p ₁ = vacuum 6 bar (87 PSI)							
Temperature	t ₁ = -20 °C +150 (250*) °C (-4 °F 302 (482*) °F							
Speed	0 2 m/s (0 6 ft/s)							



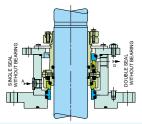
Design Variations



MXS-110

The MXS-110 is equipped in addition with a sleeve for trapping any abrasive particles from the seal face. Contamination of the medium in the container is thus ruled out. The sleeve can be cleaned through a flushing bore.

Please note: diameters (d_2 to d_5) increase to the next possible design size.



Single Seal Variants

MXS184

Single seal

MXS184L

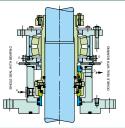
Single seal with integrated floating bearing.

MXS154

All types of the MXS184 range available for unsteped shafts (all diameters). Seal identification: MXS154... Customized design or e.g. different drives (torque transmissions) are available.

MXS164/194

For glass-lined vessels. Dimensions as U164



Double Seal Variants

MXS184-D

Double seal

MXS184L-D

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 Barrier pressurized double seal. The barrier pressure should be 0.5 ... 1.0 bar (7.25 ... 15 PSI) above pressure to be sealed.

	pressure to be sealed.														
						Di	mensio	nal Da	ta						
Dimensions in millimeter															
d₁(mm	1)	d ₁ (inch)	d_2		d_3	d ₄	4 d ₅		l ₂	l ₂ l ₃		a ₁ (min)			s
25		1.000	34		68	-	•	148	41.5	40.5		100	1:	32	11
28		1.125	34		68	55	•	148		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		1′
38		1.500	44		78	65	•	158	41.5	4	0.5	110	142		1′
40		-	44		78	65	•	158	41.5	4	0.5	110	14	42	1
45		1.625	49		83	68		163	41.5	4	40.5			52	1
-		1.750	49		83	68		163	41.5		0.5	115 115		52	1′
48		1.875	54		88	73		178	41.5		0.5	125	10	60	14
50			54		88	75		178	41.5		0.5	125		60	14
55		2.000	59		93	78		183	41.5		0.5	130	165		14
-		2.125	59		93	78		183	41.5		0.5	130	165		14
60		2.250	64		98	85		183	41.5	40.5		135	170		14
65		2.375	69		103	90		193		40.5		140		75	14
-		2.500	69		103	90	193		44.5 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		43.5		150	185		14
80		3.000	84		118	105		208	44.5 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	200		1.
100		0.700	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			1
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					18
170		5.250	144		178	165		297	44.5	43.5		221			18
_		5.500	144		178	165			44.5	43.5		221	273		18
150		5.750	154		188	175	297 307		44.5	43.5 43.5		231	283		18
160		6.000	164				44.5 43.5		241	293		18			
100						44.5 43.5			293		18				
											10				
MXS164 - Dimensions in millimeter															
•	d ₇ ¹⁾	d ₁	nxd ₂	d ₄	d ₀	k	L ₁	L ₂	L _w ²⁾	I ₁	12	Α	M ₁	M ₁	Α,
40 50	38 48	175 240	4x18 8x18	110 176	90 135	145 210	87 89	136 149	143 148	15 17	28 28	122 157	M12 M12	M16 M16	G3 G3

MXS164 - Dimensions in millimeter															
$d_3^{1)}$	$d_7^{1)}$	d_1	nxd ₂	d ₄	d_0	k	L ₁	L_2	$L_w^{2)}$	I ₁	I ₂	Α	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_3 and d_7 to DIN 28154

inch size available from size 1.500 to 6.500

Note: Additional technical & dimensional information will be provided on request.

²⁾ Shaft step to DIN 28154