WITZENMANN
managing flexibility

Edge welded bellows for mechanical seals

Dynamically sealing edge welded bellows made of special materials, hardened on request

Edge welded bellows are used in mechanical seals. There, the edge welded bellows fulfills two functions: the bellows acts as a spring and a sealing element. A defined preload path results in a defined end force for the fitting length, which guarantees the secure sealing of the sealing surface.
Our standard series of edge welded bellows for mechanical seals is based on the shaft diameter of the units to be sealed; these bellows are manufactured as standard bellows for mechanical seals. A broad portfolio is also available for special seals with large diameters. The preferred materials AM 350 and Inconel 718, also with heat treatment, are used due to their application-specific elastic properties.

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Inner diameter (di)	Outer diameter (Da)	Wall thickness (s)	axial spring rate (c)
[mm]	[mm]	[mm]	[N/mm]
12	20	0,10	200
12	20	0,15	500
25,5	36,5	0,10	105
25,5	36,5	0,15	280
29,5	42,5	0,10	110
29,5	42,5	0,15	265
29,5	42,5	0,20	628
33,5	46,5	0,10	105
33,5	46,5	0,15	247
37	50	0,10	103
37	50	0,15	310
37	50	0,20	735
39,5	52,5	0,10	97
39,5	52,5	0,15	300
42,5	55,5	0,10	92
42,5	55,5	0,15	310
42,5	55,5	0,20	735
44,5	57,5	0,10	100
44,5	57,5	0,15	250
47	60	0,10	100
47	60	0,15	250
47	60	0,20	595
52,5	65,5	0,10	108
52,5	65,5	0,15	286
52,5	65,5	0,20	593
57	70	0,10	102
57	70	0,15	270
57	70	0,20	640
62,5	75,5	0,10	100
62,5	75,5	0,15	260
67	83	0,15	225
67	83	0,20	560
72	88	0,15	190
72	88	0,20	530
77	93	0,15	200
77	93	0,20	540
82	98	0,15	213
82	98	0,20	550
82	98	0,25	1074

Inner diameter (di)	Outer diameter (Da)	Wall thickness (s)	axial spring rate (c)
[mm]	[mm]	[mm]	[N/mm]
87	103	0,15	245
87	103	0,20	710
92	108	0,15	315
92	108	0,20	730
97	113	0,15	320
97	113	0,20	740
102	118	0,15	330
102	118	0,20	750
102	118	0,25	1465
127	143	0,15	350
127	143	0,20	770
127	143	0,25	1504
142	158	0,15	350
142	158	0,20	770
142	158	0,25	1504
147	167	0,15	450
147	167	0,20	850
168	188	0,15	520
168	188	0,20	930
168	188	0,25	1816
176	196	0,25	1530
176	196	0,30	2200
191	211	0,20	1050
191	211	0,25	1650
191	211	0,30	2851
205	225	0,25	1800
205	225	0,30	2900
223	243	0,25	1850
223	243	0,30	2950
240	260	0,25	1900
240	260	0,30	3000
268	292	0,25	1600
268	292	0,30	2500
280	300	0,25	2000
280	300	0,30	3100

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