

Compact seal type EZM

Type EZM is a five piece double acting compact seal which consists of one elastomeric nitrile rubber sealing element , two polyester elastomer back-up rings on both sides to prevent extrusion into the sealing gap and two special profiled guide rings produced from thermoplastic to absorb transverse forces.



Characteristics

Type: EZM

Principle of operation: Double acting

Max. operating pressure: 400 bar

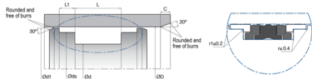
Maximum speed: 0.5 m/s

Application

- Construction machinery , fork-lift trucks , injection moulding machines , agricultural machinery , cranes and standard cylinders.

Technical Information

- Superior sealing performance
- Economic sealing and guiding solution
- Simple groove design , one-piece piston possible
- Long service life
- Simple snap installation



Operating Principle

- Easily assembled into one-piece piston because the back-up rings and guide rings are been produced in split forms. It is very important that the assembly tools must be of soft material and have no sharp edges. Before installation the sealing element must be oiled with system oil.

Options

- For special applications that require high temperatures , piston seal is manufactured in FKM and PTFE material.

OPERATING CONDITIONS			
MEDIA	Mineral oils (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	from -30°C till +105°C	from +5°C till +60°C	from -30°C till +60°C
PRESSURE	max. 400 Bar	max. 400 Bar	max. 400 Bar
SPEED	max. 0.5 m/s	max. 0.5 m/s	max. 0.5 m/s
Note: The above data are maximum values and cannot be used at the same time.			

SURFACE ROUGHNESS	Ra	Rmax
Sliding Surface	max. 0.4 µm	max. 4.0 µm
Groove Base	max. 1.6 µm	max. 6.3 µm
Groove Flanks	max. 3.2 µm	max. 16 µm
Note: It is recommended to have 50% to 90% of the working surface material contact area value.		

Bore diameter	Groove diameter	Groove width	Material seal	Material back-up ring	Material guide ring	Temperature range	Article
mm	mm	mm				°C	Max. 200 articles in the table
20	11	13.5	NBR	TPE	POM	-30 / 100	14194074
22	13	13.5	NBR	TPE	POM	-30 / 100	14194075
25	15	12	NBR	TPE	POM	-30 / 100	14194076
25	15	12.5	NBR	TPE	POM	-30 / 100	11158913
25	15	16.4	NBR	TPE	POM	-30 / 100	11160931

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Bore diameter	Groove diameter	Groove width	Material seal	Material back-up ring	Material guide ring	Temperature range	Article
mm	mm	mm				°C	Max. 200 articles in the table
25	16	13.5	NBR	TPE	POM	-30 / 100	14194077
25	17	10	NBR	TPE	POM	-30 / 100	14194079
25	17	13.5	NBR	TPE	POM	-30 / 100	14194078
28	19	13.5	NBR	TPE	POM	-30 / 100	14194080
30	17	15.4	NBR	TPE	POM	-30 / 100	11935346
30	21	13.5	NBR	TPE	POM	-30 / 100	11607929
30	22	13.5	NBR	TPE	POM	-30 / 100	14194081
32	19	15.4	NBR	TPE	POM	-30 / 100	14194082
32	22	12.5	NBR	TPE	POM	-30 / 100	11188219
32	22	15.5	NBR	TPE	POM	-30 / 100	11859052
32	22	16.4	NBR	TPE	POM	-30 / 100	11147819
32	24	10	NBR	TPE	POM	-30 / 100	12702290
32	24	15.5	NBR	TPE	POM	-30 / 100	11444081
35	25	16.4	NBR	TPE	POM	-30 / 100	10018971
35	27	15.5	NBR	TPE	POM	-30 / 100	11204727
38.1	25.4	15.87	NBR	TPE	POM	-30 / 100	14194083
40	24	18.4	NBR	TPE	POM	-30 / 100	10018996
40	26	15.5	NBR	TPE	POM	-30 / 100	11116350
40	30	12.4	NBR	TPE	POM	-30 / 100	14194084
40	30	12.5	NBR	TPE	POM	-30 / 100	11158892
40	30	16.4	NBR	TPE	POM	-30 / 100	10018997
40	32	10	NBR	TPE	POM	-30 / 100	12182434
40	32	15.5	NBR	TPE	POM	-30 / 100	12352398
42	28	15.5	NBR	TPE	POM	-30 / 100	14194085
44.45	28.57	19.05	NBR	TPE	POM	-30 / 100	12961744
45	29	18.4	NBR	TPE	POM	-30 / 100	10018998
45	31	15.5	NBR	TPE	POM	-30 / 100	11158910
45	35	16.4	NBR	TPE	POM	-30 / 100	11055240
45	37	15.5	NBR	TPE	POM	-30 / 100	14194086
50	34	18.4	NBR	TPE	POM	-30 / 100	10018999
50	34	20.5	NBR	TPE	POM	-30 / 100	12507687
50	35	20	NBR	TPE	POM	-30 / 100	11228343
50	38	20.5	NBR	TPE	POM	-30 / 100	11116352
50	40	12.5	NBR	TPE	POM	-30 / 100	11116396
50.8	34.92	19.05	NBR	TPE	POM	-30 / 100	13024029
50.8	41.27	11.1	NBR	TPE	POM	-30 / 100	14194087
55	39	18.4	NBR	TPE	POM	-30 / 100	10019000
55	39	20.5	NBR	TPE	POM	-30 / 100	14194088
55	45	12.5	NBR	TPE	POM	-30 / 100	11204719
56	40	20.5	NBR	TPE	POM	-30 / 100	14194089
57.15	41.27	19.05	NBR	TPE	POM	-30 / 100	13035674
60	44	18.4	NBR	TPE	POM	-30 / 100	10019001
60	44	20.5	NBR	TPE	POM	-30 / 100	11136178
60	48	20.5	NBR	TPE	POM	-30 / 100	11204730
60.32	44.45	19.05	NBR	TPE	POM	-30 / 100	14194090
63	47	18.4	NBR	TPE	POM	-30 / 100	10019002
63	47	19.4	NBR	TPE	POM	-30 / 100	10018986
63	47	20.5	NBR	TPE	POM	-30 / 100	11136173
63	48	20	NBR	TPE	POM	-30 / 100	11217473
63	51	20.5	NBR	TPE	POM	-30 / 100	11145996
63	53	12.5	NBR	TPE	POM	-30 / 100	11472931
63.5	47.62	19.05	NBR	TPE	POM	-30 / 100	11204750

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Bore diameter	Groove diameter	Groove width	Material seal	Material back-up ring	Material guide ring	Temperature range	Article
mm	mm	mm				°C	Max. 200 articles in the table
63.5	53.97	11.1	NBR	TPE	POM	-30 / 100	14194092
63.5	53.97	11.1	NBR	TPE	POM	-30 / 100	14194091
65	49	20.5	NBR	TPE	POM	-30 / 100	14194093
65	50	18.4	NBR	TPE	POM	-30 / 100	10019003
66.67	50.8	19.05	NBR	TPE	POM	-30 / 100	14194094
67	51	18.4	NBR	TPE	POM	-30 / 100	14194095
69.85	50.8	23.79	NBR	TPE	POM	-30 / 100	14194096
70	50	22.4	NBR	TPE	POM	-30 / 100	10019004
70	54	20.5	NBR	TPE	POM	-30 / 100	11930289
70	55	20	NBR	TPE	POM	-30 / 100	11204720
70	58	20.5	NBR	TPE	POM	-30 / 100	11116393
75	55	22.4	NBR	TPE	POM	-30 / 100	10019005
75	59	20.5	NBR	TPE	POM	-30 / 100	12961745
76.2	57.15	24.21	NBR	TPE	POM	-30 / 100	11204752
76.2	60.32	19.05	NBR	TPE	POM	-30 / 100	14194097
76.2	66.67	11.1	NBR	TPE	POM	-30 / 100	14194098
80	60	22.4	NBR	TPE	POM	-30 / 100	10019006
80	60	25	NBR	TPE	POM	-30 / 100	11344682
80	60	35	NBR	TPE	POM	-30 / 100	14194099
80	62	22.5	NBR	TPE	POM	-30 / 100	14194100
80	65	20	NBR	TPE	POM	-30 / 100	11546701
80	66	22.4	NBR	TPE	POM	-30 / 100	11096936
82.55	63.5	24.21	NBR	TPE	POM	-30 / 100	14194101
85	65	21.4	NBR	TPE	POM	-30 / 100	14194102
85	65	22.4	NBR	TPE	POM	-30 / 100	10019007
85	75	20	NBR	TPE	POM	-30 / 100	14194103
88.9	69.85	24.21	NBR	TPE	POM	-30 / 100	14194104
88.9	69.85	30.15	NBR	TPE	POM	-30 / 100	14194105
88.9	76.2	14.27	NBR	TPE	POM	-30 / 100	14194106
90	70	22.4	NBR	TPE	POM	-30 / 100	10019008
90	72	22.5	NBR	TPE	POM	-30 / 100	12507690
90	72	22.5	NBR	TPE	POM	-30 / 100	14194107
90	75	20	NBR	TPE	POM	-30 / 100	12961746
90	76	22.4	NBR	TPE	POM	-30 / 100	11096938
95	75	22.4	NBR	TPE	POM	-30 / 100	11096939
95	81	22.4	NBR	TPE	POM	-30 / 100	14194108
100	75	22.4	NBR	TPE	POM	-30 / 100	10019049
100	80	25	NBR	TPE	POM	-30 / 100	14194110
100	80	25.4	NBR	TPE	POM	-30 / 100	11158907
100	80	35	NBR	TPE	POM	-30 / 100	14194109
100	82	22.5	NBR	TPE	POM	-30 / 100	11276384
100	85	20	NBR	TPE	POM	-30 / 100	11096933
100	86	22.4	NBR	TPE	POM	-30 / 100	14194111
101.6	82.55	23.81	NBR	TPE	POM	-30 / 100	14194112
105	80	22.4	NBR	TPE	POM	-30 / 100	14194113
105	80	22.4	NBR	TPE	POM	-30 / 100	10019050
107.95	88.9	23.81	NBR	TPE	POM	-30 / 100	14194114
110	85	22.4	NBR	TPE	POM	-30 / 100	10019051
110	85	25.4	NBR	TPE	POM	-30 / 100	14194115
110	90	25.3	NBR	TPE	POM	-30 / 100	11204723
110	90	35	NBR	TPE	POM	-30 / 100	14194116
110	92	22.5	NBR	TPE	POM	-30 / 100	12961742

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mm	mm	mm				°C	Max. 200 articles in the table
110	95	20	NBR	TPE	POM	-30 / 100	11204724
110	96	22.4	NBR	TPE	POM	-30 / 100	11152648
114.3	88.9	31.75	NBR	TPE	POM	-30 / 100	14194117
115	90	22.4	NBR	TPE	POM	-30 / 100	10019052
115	97	22.4	NBR	TPE	POM	-30 / 100	14194118
115	97	22.5	NBR	TPE	POM	-30 / 100	14194119
115	101	22.4	NBR	TPE	POM	-30 / 100	14194120
120	95	22.4	NBR	TPE	POM	-30 / 100	10019053
120	100	35	NBR	TPE	POM	-30 / 100	14194121
120	106	22.4	NBR	TPE	POM	-30 / 100	14194122
125	100	25.4	NBR	TPE	POM	-30 / 100	10019112
125	100	45	NBR	TPE	POM	-30 / 100	14194123
125	103	26.5	NBR	TPE	POM	-30 / 100	12507704
125	105	25	NBR	TPE	POM	-30 / 100	11250022
125	105	25.4	NBR	TPE	POM	-30 / 100	11066964
125	108	26.5	NBR	TPE	POM	-30 / 100	11343671
127	101.6	32.15	NBR	TPE	POM	-30 / 100	14194124
130	105	25.4	NBR	TPE	POM	-30 / 100	14194125
130	105	25.4	NBR	TPE	POM	-30 / 100	14194126
130	105	25.4	NBR	TPE	POM	-30 / 100	10019113
133.35	107.95	31.75	NBR	TPE	POM	-30 / 100	14194127
135	110	25.4	NBR	TPE	POM	-30 / 100	14194128
135	110	25.4	NBR	TPE	POM	-30 / 100	10019114
139.7	114.3	31.75	NBR	TPE	POM	-30 / 100	14194130
139.7	114.3	31.75	NBR	TPE	POM	-30 / 100	14194129
140	115	25.4	NBR	TPE	POM	-30 / 100	14194132
140	115	25.4	NBR	TPE	POM	-30 / 100	14194131
140	115	25.4	NBR	TPE	POM	-30 / 100	10019115
140	115	32	NBR	TPE	POM	-30 / 100	14194134
140	115	45	NBR	TPE	POM	-30 / 100	14194133
140	118	26.5	NBR	TPE	POM	-30 / 100	12947734
140	120	25	NBR	TPE	POM	-30 / 100	11654138
140	123	26.5	NBR	TPE	POM	-30 / 100	11230621
145	120	25.4	NBR	TPE	POM	-30 / 100	11082757
150	125	25.4	NBR	TPE	POM	-30 / 100	10019116
150	125	25.4	NBR	TPE	POM	-30 / 100	14194135
150	128	26.5	NBR	TPE	POM	-30 / 100	12979250
150	130	25.4	NBR	TPE	POM	-30 / 100	14194136
150	133	26.5	NBR	TPE	POM	-30 / 100	11237741
152.4	127	31.75	NBR	TPE	POM	-30 / 100	14194137
152.4	127	38.1	NBR	TPE	POM	-30 / 100	14194138
155	130	25.4	NBR	TPE	POM	-30 / 100	14194139
155	130	25.4	NBR	TPE	POM	-30 / 100	14194140
160	130	25.4	NBR	TPE	POM	-30 / 100	14194142
160	130	25.4	NBR	TPE	POM	-30 / 100	14194141
160	130	25.4	NBR	TPE	POM	-30 / 100	10019301
160	135	25.4	NBR	TPE	POM	-30 / 100	10019117
160	135	32	NBR	TPE	POM	-30 / 100	14194144
160	135	45	NBR	TPE	POM	-30 / 100	14194143
160	138	26.5	NBR	TPE	POM	-30 / 100	12979251
160	140	25	NBR	TPE	POM	-30 / 100	11472991
160	143	26.5	NBR	TPE	POM	-30 / 100	14194145

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Bore diameter	Groove diameter	Groove width	Material seal	Material back-up ring	Material guide ring	Temperature range	Article
mm	mm	mm				°C	Max. 200 articles in the table
165	140	25.4	NBR	TPE	POM	-30 / 100	10019118
165	143	26.5	NBR	TPE	POM	-30 / 100	14194148
165.1	139.62	32.5	NBR	TPE	POM	-30 / 100	14194146
165.1	139.7	31.9	NBR	TPE	POM	-30 / 100	14194147
170	140	25.4	NBR	TPE	POM	-30 / 100	14194149
170	145	25.4	NBR	TPE	POM	-30 / 100	10019119
170	148	26.5	NBR	TPE	POM	-30 / 100	14194150
175	150	25.4	NBR	TPE	POM	-30 / 100	11550764
177.8	152.4	31.75	NBR	TPE	POM	-30 / 100	14194152
177.8	152.4	31.75	NBR	TPE	POM	-30 / 100	14194151
180	150	35.4	NBR	TPE	POM	-30 / 100	10019120
180	150	36	NBR	TPE	POM	-30 / 100	12448156
180	155	25.4	NBR	TPE	POM	-30 / 100	10019121
180	158	26.5	NBR	TPE	POM	-30 / 100	14194153
180	163	26.5	NBR	TPE	POM	-30 / 100	11237740
185	160	25.4	NBR	TPE	POM	-30 / 100	14194154
190	165	25.4	NBR	TPE	POM	-30 / 100	11158911
195	170	25.4	NBR	TPE	POM	-30 / 100	14194155
200	170	35.4	NBR	TPE	POM	-30 / 100	11252769
200	170	36	NBR	TPE	POM	-30 / 100	14194156
200	175	25.4	NBR	TPE	POM	-30 / 100	10019122
200	175	31.5	NBR	TPE	POM	-30 / 100	12344655
200	180	31.5	NBR	TPE	POM	-30 / 100	11237742
203.2	171.45	38.1	NBR	TPE	POM	-30 / 100	14194157
203.2	177.8	31.75	NBR	TPE	POM	-30 / 100	14194159
203.2	177.8	31.75	NBR	TPE	POM	-30 / 100	14194158
210	185	25.4	NBR	TPE	POM	-30 / 100	11225429
220	190	35.4	NBR	TPE	POM	-30 / 100	14194161
220	190	35.4	NBR	TPE	POM	-30 / 100	14194160
220	195	25.4	NBR	TPE	POM	-30 / 100	10019124
220	200	31.5	NBR	TPE	POM	-30 / 100	14194162
225	195	35.5	NBR	TPE	POM	-30 / 100	14194163
230	205	25.4	NBR	TPE	POM	-30 / 100	11158904
240	215	25.4	NBR	TPE	POM	-30 / 100	11383504
250	220	35.4	NBR	TPE	POM	-30 / 100	12042193
250	225	25.4	NBR	TPE	POM	-30 / 100	10019125
280	250	35.4	NBR	TPE	POM	-30 / 100	12248254
280	250	36.4	NBR	TPE	POM	-30 / 100	12971909

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