

Compact seal type 0820

Type 0820 is a two piece double acting piston seal which consists of one special mixture PTFE profile ring and an o-ring as energizing element.

Characteristics

Type: 0820

Principle of operation: Double acting

Max. operating pressure: 400 bar

Maximum speed: 15 m/s

Application

- Injection moulding machines , fork-lift trucks , loading platforms , cranes , agricultural machinery and valves for hydraulic and pneumatic systems.

Technical Information

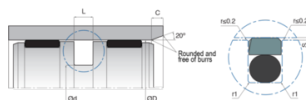
- Low friction , free of stick-slip
- Simple groove design and low axial housing heights
- Long service life
- High sliding speed
- Wide range of temperature and chemicals depending on the o-ring material
- Minimum static and dynamic friction coefficient for a minimum energy loss and operating temperature
- Wide range of dimensions

Operating Principle

- We recommend using special assembly tool (See section; Hydraulic Sealing Elements General Installation Information) and to have open groove design for dimensions that are smaller than Ø 40 mm. 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

- It is recommended to use with minimum two piston guide rings in long stroke cylinders , minimum one guide ring in short stroke and under low radial loads. For special applications that require high temperatures or resistance to chemicals , piston seal is being manufactured with special mixture PTFE and FKM material. The permissible sealing gap values of 0820 piston seal is given in the below table.



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. 5.0 m/s	max. 5.0 m/s	max. 5.0 m/s
Note: The above data are maximum values and cannot be used at the same time.			

SURFACE ROUGHNESS	Ra	Rmax
Sliding Surface	max. 0.2 µm	2.0 µm
Groove Base	max. 1.6 µm	6.3 µm
Groove Flanks	max. 3.2 µm	15 µm
Note: It is recommended to have 50% to 90% of the working surface material contact area value.		

PERMISSIBLE SEALING GAP			
B (mm)	Smax (mm)		
x	150 Bar	250 Bar	400 Bar
2.2	0.25	0.20	0.15
3.2	0.4	0.25	0.15

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PERMISSIBLE SEALING GAP			
B (mm)	Smax (mm)		
4.2	0.4	0.25	0.20
6.3	0.5	0.30	0.20
8.1	0.6	0.35	0.25
9.5	0.7	0.50	0.30
Note: The largest sealing gap value occurring on the non-pressurized side of the seal does have a vital importance for the function of the seal and in this respect it is quite important to use the S value lower than the above indicated numbers.			

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4.2	0.4	0.25	0.20
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8.1	0.6	0.35	0.25
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Bore diameter	Groove diameter	Groove width	Material seal	Compound	Material energizer	Temperature range	Article
mm	mm	mm				°C	
30	22.5	3.2	PTFE	ER39	NBR	-30 / 105	11047253
60	49	4.2	PTFE	ER39	NBR	-30 / 105	10020225
100	84.5	6.3	PTFE	ER39	NBR	-30 / 105	11075124
105	89.5	6.3	PTFE	ER39	NBR	-30 / 105	10020177
130	114.5	6.3	PTFE	ER39	NBR	-30 / 105	10020186
170	149	8.1	PTFE	ER39	NBR	-30 / 105	10020200
							10020221
							11216967
							11216765
							11216646
							11216850
							11216648
							11216750
							11216726
							11216849
							11237502
							11216886
							11216700
							11216724
							11216697
							11216845
							10020224
							11216887
							11216719
							11216746
							11216699
							11216889
							11216649
							11216645
							10020215
							11216647
							11216747
							10020240
							11216890
							11216730
							11216766
							10020174
							10020198
							10020181
							10020126
							10020167
							10020148
							10020117
							10020202
							10020139
							10020153
							10020150
							10020248
							10020223
							11216745
							11216721
							11216748

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Bore diameter mm	Groove diameter mm	Groove width mm	Material seal	Compound	Material energizer	Temperature range °C	Article
							11216844
							11216715
							10020183
							10020195
							10020214
							10020142
							10020173
							10020149
							10020209
							10020145
							10020130
							10020180
							10020218
							10020179
							10020219
							10020192
							11216770
							11216883
							10020197
							11216725
							10020187
							10020133
							10020210
							10020151
							10020131
							10020123
							10020217
							11216684
							11216731
							11216650
							10020205
							11216771
							10020120
							11216696
							11216751
							11216651
							10020242
							11216852
							10020155
							10020213
							11216749
							11216717
							11216769
							11216846
							11216701
							11216727
							11216732
							11216767
							10020250
							11216843
							10068559
							10020207

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Bore diameter	Groove diameter	Groove width	Material seal	Compound	Material energizer	Temperature range	Article
mm	mm	mm				°C	
							10020172
							10020141
							10020121
							10020152
							10020132
							10020220

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