

Built-In Elements

piston and threaded bushing, complete with seals for block cylinder, double acting, max. operating pressure 500 bar



Application

Built-in elements are directly integrated in the fixture body. Such created cylinders can be used as push or pull cylinders.

Built-in elements are used on fixtures with narrow spaces, and for applications where mounted standard clamping elements limit the machining space or impede swarf flow.

Description

The built-in elements consist of piston and threaded bushing. The piston is inserted into the location hole of the fixture. Then the built-in bushing is screwed into the fixture body. The bushing is let-in flush to the housing. Tightening of the threaded bushing is made with a pin-type face spanner.

Sealing with minimum leakage at the piston rod is obtained by two independent sealing steps. In addition, a wiper protects against contamination. Sealing in the fit hole is made by an O-ring/back-up ring combination.

Range of force:

2 kN at piston Ø 16 mm and 100 bar up to 156 kN at piston Ø 63 mm and 500 bar. 3 standard stroke lengths are available.

Special versions are available on request. Please contact us.

Advantages

- Space-saving installation of cylinders
- More compact fixtures
- More workpieces per fixture
- More machining space
- Less sensitive to swarf
- Sealing with very little leakage
- Individual adaptation possibilities

Important notes

After tightening the threaded bushing it has to be secured against torsion, e.g. by means of a small threaded pin.

The tolerances for dimensions and surface roughness must not be exceeded.

Operating conditions, tolerances and other data see data sheet A 0.100.

Contact bolts see data sheet G 3.800.

Material

Piston: case-hardening steel, hardened Built-in bushing: free-cutting steel

Seals

 Max. cylinder temperature

 NBR
 −25...+100 °C

 FKM
 −20...+200 °C

Alternatively, NBR or FKM sealings can be delivered. FKM seals are required for cylinder temperatures over 100°C and (or) fire-resistant liquids of type HFD.

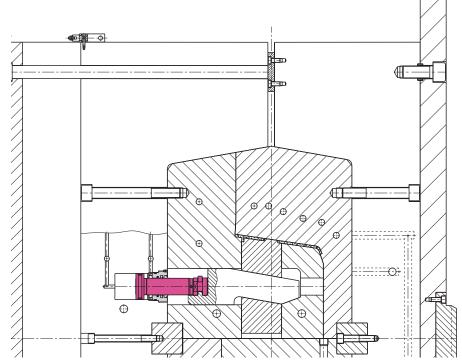
Technical data and installation dimensions on request

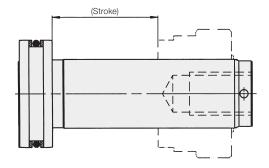
Application example

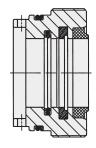
The following example shows an injection mould with one built-in element. The built-in cylinder and wedge operate the profile slide to eject the break-outs and to clear the angle ribs.

Advantage

Using built-in elements in the interior of the mould, direct control of motion cycles is possible without additional force deflection. Piping is not necessary, thus there will be very little chance of leakage.







Technical data and installation dimensions on request

Piston and rod Ø Stroke			Piston, complete		Threaded bushing, complete		Seal kit	
			NBR	FKM	NBR	FKM	NBR	FKM
16/10	16	Part no.	0350110	0350112	0154110	0154111	0131 151	0131440
	50	Part no.	0350111	0350113				
25/16	20	Part no.	0350114	0350117	0154310	0154311	0131 154	0131 441
	50	Part no.	0350115	0350118				
	100	Part no.	0350116	0350119				
32/20	25	Part no.	0350120	0350123	0154410	0154411	0131 156	0131442
	50	Part no.	0350121	0350 005				
	100	Part no.	0350122	0350006				
40/25	25	Part no.	0350124	0350127	0154510	0154511	0131 158	0131443
	50	Part no.	0350125	0350128				
	100	Part no.	0350126	0350129				
50/32	25	Part no.	0350130	0350133	0154610	0154611	0131 160	0131444
	50	Part no.	0350131	0350134				
	100	Part no.	0350132	0350135				
63/40	30	Part no.	0350136	0350139	0154710	0154711	0131 166	0131445
	63	Part no.	0350137	0350140				
	100	Part no.	0350138	0350141				
80/50	32	Part no.	0350142	0350145	0154810	0154811	0131 167	0131446
	80	Part no.	0350143	0350146				
	100	Part no.	0350144	0350147				
100/63	40	Part no.	0350148	0350150	0154910	0154911	0131 168	0131447
	100	Part no.	0350149	0350151				