

Check valve and pre-fill valve type F

Check valves and pre-fill valves are a type of non-return valve. Check valves block the oil flow in one direction and open in the other direction. Pre-fill valves are check valves with hydraulic release. They are used, e.g. in top ram presses for draining and emptying the press cylinder on rapid closing and opening.

The check valve and pre-fill valve type F is a spring-loaded disk valve and has zero leakage in the closed state. The valve is attached directly to the cylinder and clamped between the base of the cylinder and the welding-neck flange. Alternatively the valve is installed in the line between the front faces of the welding-neck flanges.

The valve type F is available with hydraulic release. Hydraulic release suppresses relief surges that can occur at high pressure and with a large consumer volume.

Features and benefits:

- Wafer design
- Extremely large flows, up to 7000 l/min

Intended applications:

- Press control systems
- Injection moulding machines



Nomenclature:	Check valve Check valve with hydraulic release (pre-fill valve)
Design:	Intermediate section between pipe flanges
Actuation:	Hydraulic
p_{max}:	400 bar
Q_{max}:	100 ... 7000 lpm

Design and order coding example

F25

Basic type, size Check valve type F, size 25 to 200

F80B-36 V

Additional versions: Without pre-release (-)
With pre-release (V), size 25 to 80

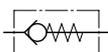
Basic type, size Pre-fill valves type F, size 25 to 200

Additional functions

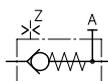
- With holes in the mounting flange (B)

Function

Check valve

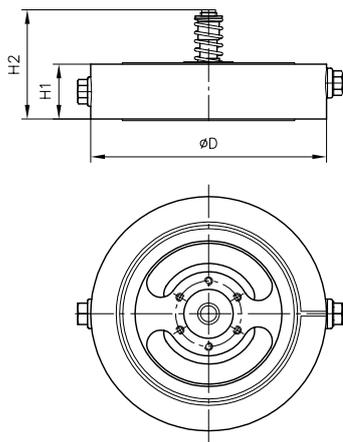


Pre-fill valve

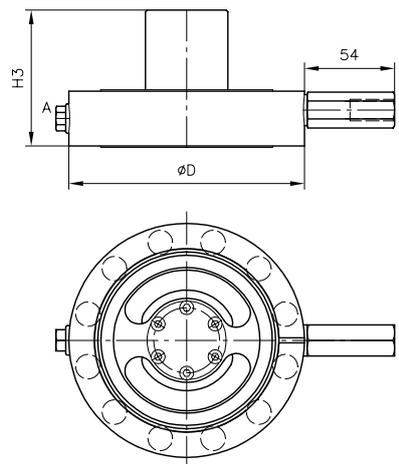


General parameters and dimensions

Check valve



Pre-fill valve



Basic type and size		Q_{\max} [lpm]	p_{\max} [bar]	Release ratio	Dimensions [mm]				m [kg]	
Check valve	Pre-fill valve				p_A / p_Z	D	H1	H2	H3	Check valve
F 25	F 25-12	100	400	4.3	83	26	36	43	1	1.1
F 32	F 32-16	160		3.6	93	27	45	55	1	1.2
F 40	F 40-20	250		3.9	108	28	48.5	60	1.4	1.7
F 50	F 50-25	400		4.2	128	29	59	72	2	2.4
F 63	F 63(B)-30	630		4.2	143	33.5	69	83	2.8	3.4
F 64	F 64-30	760		4,2	143	33,5	69	83	2,8	3,4
F 80	F 80(B)-36	1000		4.5	169	38.5	83	97.5	4.4	5.2
F 81	F 81-36	1200		4,5	169	38,5	83	97,5	4,4	5,2
F 100	F 100(B)-45	1600		4.3	212	44	97	118	9.9	11.7
F 101	F 101-45	1920		4,3	212	44	97	118	9,9	11,7
F 125	F 125(B)-60	2500		4.3	248	51	127	155	15.8	19.6
F 160	F 160-76	4000	4.3	310	70	182	233	43	50	
F 200	F 200-100	7000	320	4.0	420	150	250	300	114	120

Associated technical data sheets:

- Check valve and pre-fill valve type F: D 6960