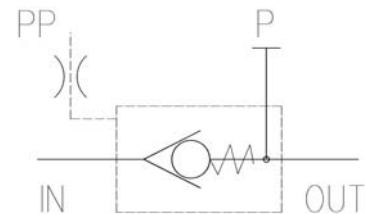




## Filling valves characteristics

TYPE	Size	Max. Flow	Max. Press.	Opening ratio	Decompr. ratio	Max pilot pressure	Opening pressure	Weight (Kg)		
R-114	DN-32	160 l/min.	400 bar	3.6:1	1:5	100 bar	0.12 bar	1.2		
R-112	DN-40	250 l/min.		3.9:1				1.7		
R-200	DN-50	400 l/min.		4.2:1				2.5		
R-212	DN-63	600 l/min.		4.5:1			0.13 bar	3.5		
R-300	DN-80	1000 l/min.		4.3:1				5.2		
R-400	DN-100	1600 l/min.		350 bar			4.0:1		0.15 bar	12
R-500	DN-125	2500 l/min.								20
R-600	DN-160	4000 l/min.	42							
R-800	DN-200	7000 l/min.					116			

**Description** These valves allow the quick pre-filling and discharging of cylinders in compression presses. They are available with or without pre-opening device. The conical seat of the obturator allows the perfect sealing.

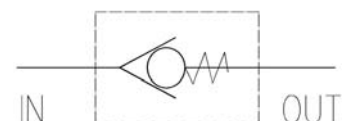


**PP** Pilot port  
**P** Auxiliary pressure port  
**IN** Tank side  
**OUT** Cylinder side

## Check valves characteristics

TYPE	Size	Max. flow	Max. Pressure	Opening pressure	Weight (Kg)
RR-114	DN-32	160 l/min.	400 bar	0.12 bar	1
RR-112	DN-40	250 l/min.			1.5
RR-200	DN-50	400 l/min.			2
RR-212	DN-63	600 l/min.		0.13 bar	3
RR-300	DN-80	1000 l/min.			4.5
RR-400	DN-100	1600 l/min.		0.15 bar	10
RR-500	DN-125	2500 l/min.			16
RR-600	DN-160	4000 l/min.	33.5		
RR-800	DN-200	7000 l/min.	350 bar		

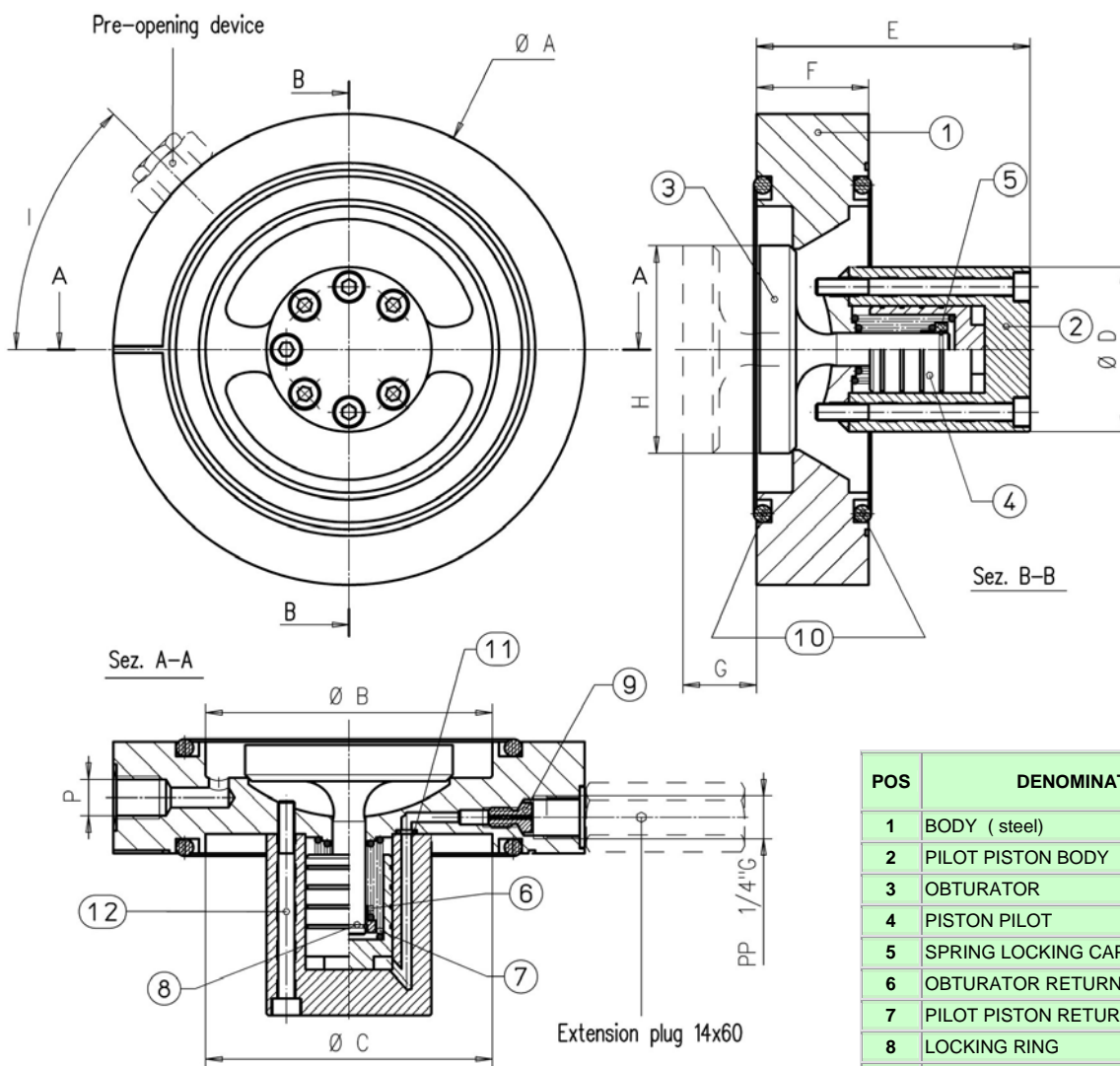
**Description** The check valves allow the flow in one direction and prevent it in the opposite one. The mounting is in line by means of suitable flanges according to DIN norms.



**IN** Tank side  
**OUT** Cylinder side



## FILLING VALVES

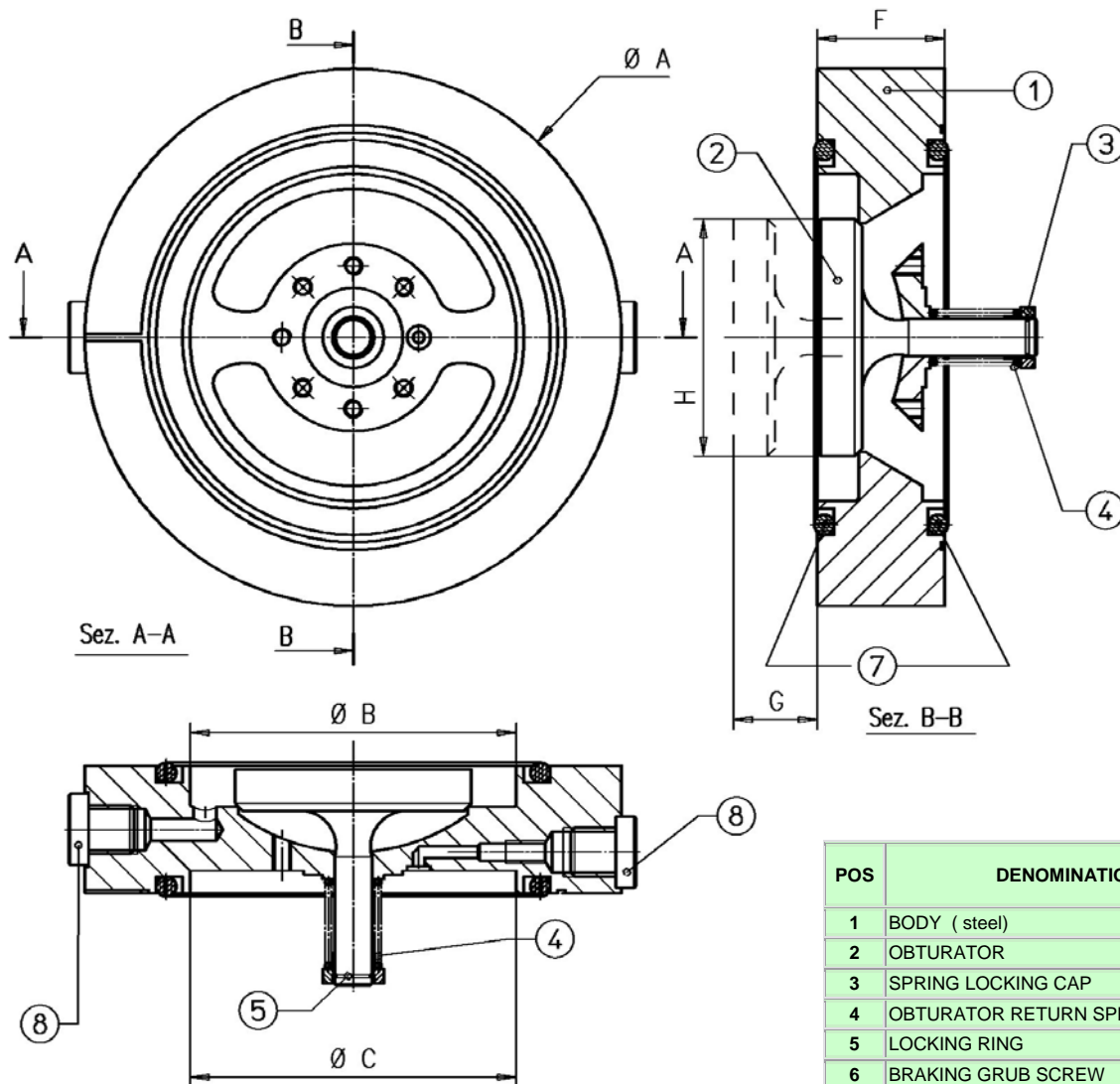


POS	DENOMINATION
1	BODY ( steel)
2	PILOT PISTON BODY
3	OBTURATOR
4	PISTON PILOT
5	SPRING LOCKING CAP
6	OBTURATOR RETURN SPRING
7	PILOT PISTON RETURN SPRING
8	LOCKING RING
9	BRAKING GRUB SCREW
10	SEAL (see table)
11	SEAL
12	SCREWS

TYPE	A	B	C	D	E	F	G	H	I	P (Bsp)
R-114	93	43	43	32	55	27	8	32	60°	1/4
R-112	108	58	58	39	60	28	10	41.5	45°	1/4
R-200	128	73	73	45	72	29	12	53	45°	1/4
R-212	143	87	87	50	83	34	14	63	45°	1/4
R-300	169	107	107	56	98	38.5	17	80	45°	1/4
R-400	212	130	130	70	118	44	22	100	45°	3/8
R-500	248	168	151	88	154	51	30	127	-	3/8
R-600	310	215	215	108	220	70	41	160	-	-
R-800	420	310	260	140	300	120	25	200	-	-



## CHECK VALVE



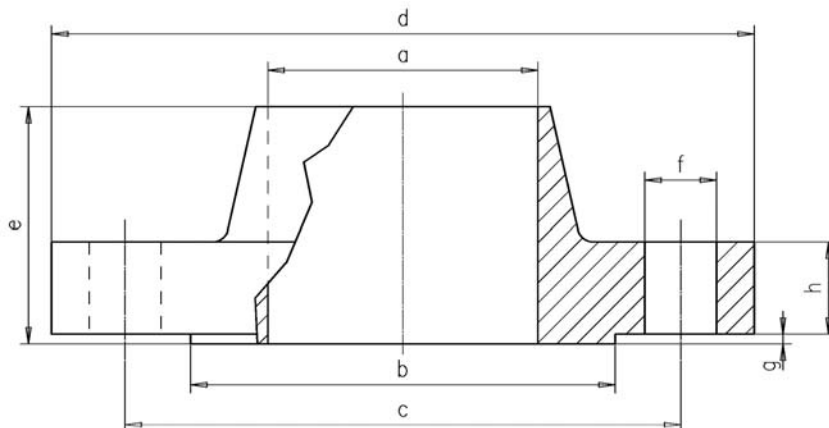
POS	DENOMINATION
1	BODY ( steel)
2	OBTURATOR
3	SPRING LOCKING CAP
4	OBTURATOR RETURN SPRING
5	LOCKING RING
6	BRAKING GRUB SCREW
7	SEAL (see table)
8	¼ " BSP PLUG

TYPE	A	B	C	F	G	H
RR-114	93	43	43	27	8	32
RR-112	108	58	58	28	10	41.5
RR-200	128	73	73	29	12	53
RR-212	143	87	87	34	14	63
RR-300	169	107	107	38.5	17	88
RR-400	212	130	130	44	22	100
RR-500	248	168	151	51	30	127
RR-600	310	215	215	70	41	160
RR-800	420	310	260	120	-	200

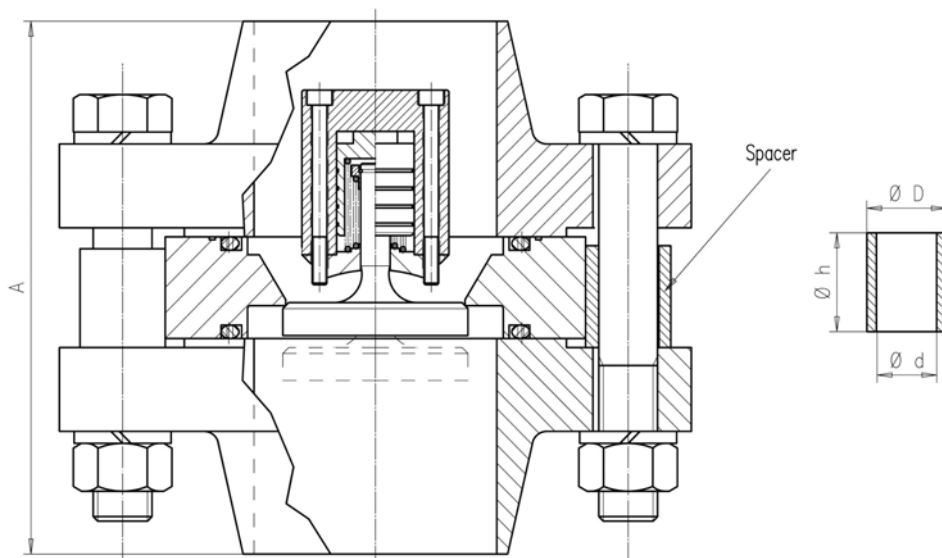
# FILLING AND CHECK VALVE



## Flanges dimensions



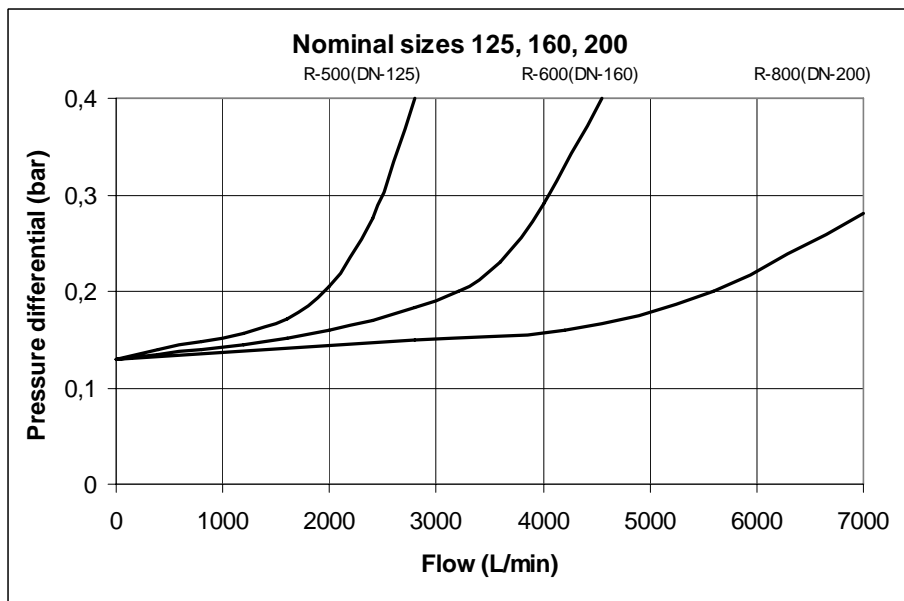
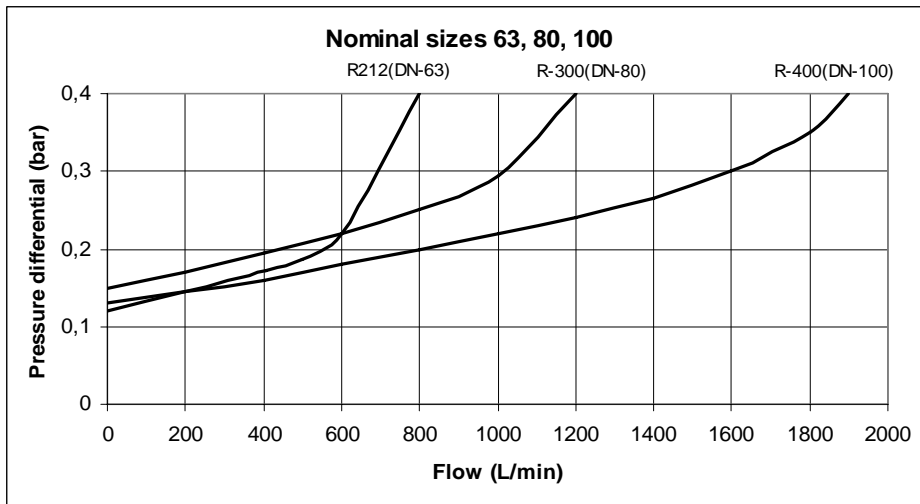
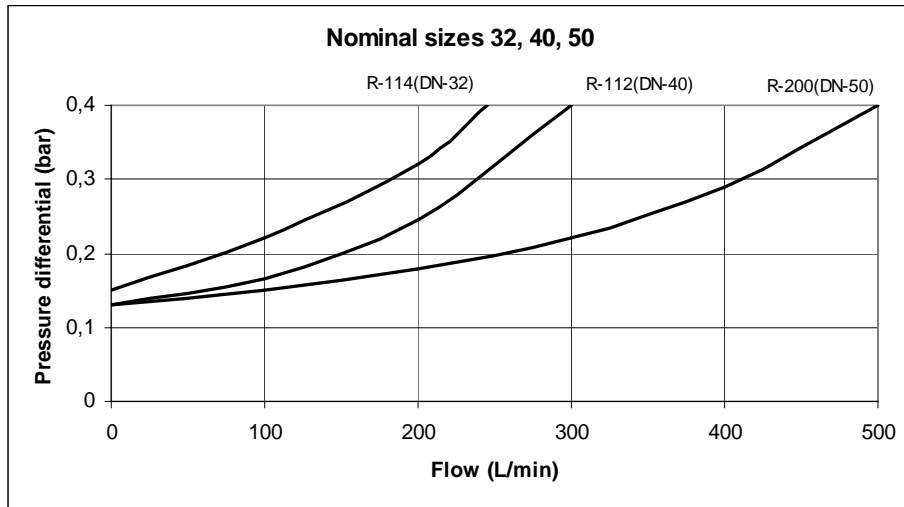
TYPE	UNI	DIN	DN	a	b	c	d	e	f	g	h
FL-R114	2284	2635	40	43.5	88	110	150	43	18	2.5	15
FL-R112	2285	2636	50	54.5	95	135	180	62	22	2.5	23
FL-R200	2285	2636	65	70	120	160	205	68	22	2.5	23
FL-R212	2285	2636	80	83	130	170	215	72	22	2.5	25
FL-R300	2285	2636	100	107.5	160	200	250	78	25	2.5	27
FL-R400	2286	2637	125	127.4	185	250	315	105	33	2.5	37
FL-R500	2286	2637	150	147	215	290	355	115	33	3	41
FL-R600	2286	2637	200	201.4	270	360	430	130	33	3	49
FL-R800	2286	2637	300	299	375	500	585	170	42	4	64



TYPE	A	Screw	N°of screws	$\varnothing d$	$\varnothing D$	h	LOCKING TORQUE (kgm)
R-114/FL	117	M16 x 80	4	-	-	-	21
R-112/FL	152	M20 x 110			27	27.5	30
R-200/FL	165	M20 x 110	8	20.5	34	28.5	38
R-212/FL	178	M20 x 120			29	34	41
R-300/FL	195	M24x 130	12	24.5	32	38	70
R-400/FL	254	M30 x 160			38	43.5	110
R-500/FL	281	M30 x 160	12	30.5	41.5	56	130
R-600/FL	330	M33x 240					
R-800/FL	460	M39x 320	16				



## Differential pressure in suction and filling in relation to the flow





## Seal

SEAL x R***			
Model	(copper-made )	O-Rings (90Shore)	Square Ring SR- 400
R-114	R52x45x2		
R-112	R68x60x2		
R-200	R85x75,5x2		
R-212		OR-6375 (2-343)	
R-300		OR-6450 (2-349)	
R-400		OR-8550 (2-433)	
R-500			7-442
R-600			7-447
R-800			7-455

## Installation rules

- For sizes up to 212, the assembly can be made either vertical or horizontal. For bigger sizes the horizontal assembly is compulsory.
- Fluid to be used: hydraulic oil in compliance with DIN 51524 rules, viscosity between 30 and 100 mm<sup>2</sup>/s (cSt) at 40°C
- Recommended filtration of 25µ.
- Hydraulic fluid temperature: from -20° to +75°C

## Ordering code

**\*\*** - **\*\*\*** / **PA** - **FL**  
 \_\_\_\_\_  
 \_\_\_\_\_ Equipped with 2 flanges (on request)  
 \_\_\_\_\_ Equipped with pre-opening device (on request, only for sizes from 114 to 400)  
 \_\_\_\_\_ Size 114 + 800  
**R** = Quick filling and discharging valve    **RR** = Check valve