

Electric Drives
and Controls

Hydraulics

Linear Motion and
Assembly Technologies

Pneumatics

Service

Rexroth
Bosch Group

Check valve

RE 21515/02.06
Replaces: 07.93

1/6

Type Z1SRA

Sizes 16 to 52
Component series 1X
Maximum operating pressure 315 bar
Maximum flow 2000 l/min

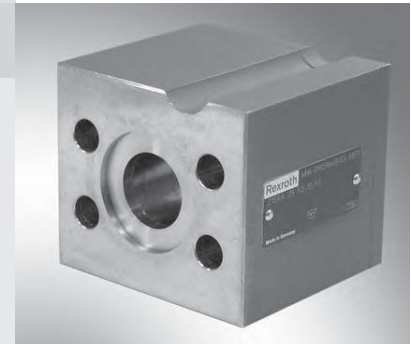


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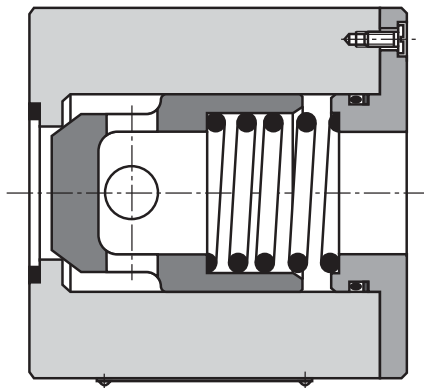
Features

- For SAE flange connections as standard or high-pressure version
- Through valve
- Leak-free checking in one direction
- Various cracking pressures, optional

Ordering code

Z1SRA		-1X/M		*
Check valve				Further details in clear text
Size 16	= 15			M = NBR seals
Size 25	= 25			(other seals on enquiry)
Size 32	= 30			⚠ Caution!
Size 40	= 40			Observe compatibility of seals with hydraulic fluid used!
Size 52	= 52			
SAE flange connection				1X = Component series 10 to 19
Standard pressure series	= F			(10 to 19: unchanged installation and connection dimensions)
High-pressure series	= H			Cracking pressure
				0 = Without spring
				1 = See characteristic curves on page 4
				2 = See characteristic curves on page 4
				3 = See characteristic curves on page 4
				5 = See characteristic curves on page 4 (not for sizes 40 and 52)

Section, symbols



With spring



Without spring

Technical data (for applications outside these parameters, please consult us!)

General

Sizes	Size 16	Size 25	Size 32	Size 40	Size 52	
Weight	kg	2.0	2.6	4.0	7.4	12.6
Installation orientation	Optional					
Ambient temperature range	°C	-30 to +80				

Hydraulic

Maximum operating pressure	bar	315 ¹⁾
Cracking pressure	bar	See characteristic curve on page 4
Maximum flow	l/min	See characteristic curve on page 4
Hydraulic fluid	Mineral oil (HL, HLP) to DIN 51524; fast bio-degradable hydraulic fluids to VDMA 24568 (see also RE 90221); HETG (rape seed oil); other hydraulic fluids on enquiry	
Hydraulic fluid temperature range	°C	-30 to +80
Viscosity range	mm ² /s	2.8 to 500
Max. permissible degree of contamination of the hydraulic fluid; cleanliness class to ISO 4406 (c)	Class 20/18/15 ²⁾	

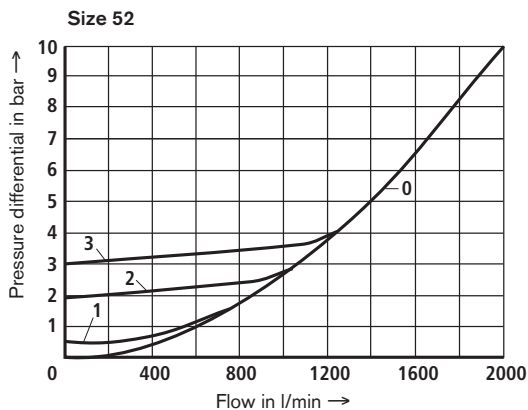
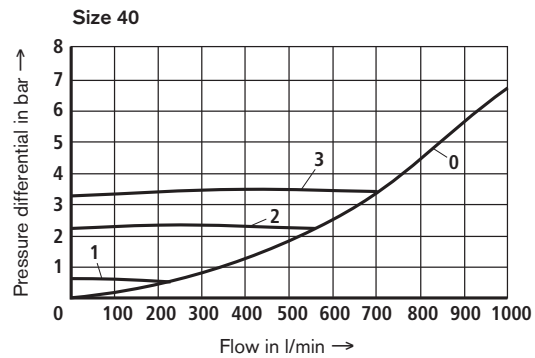
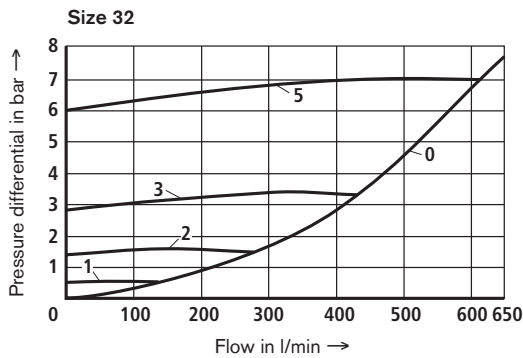
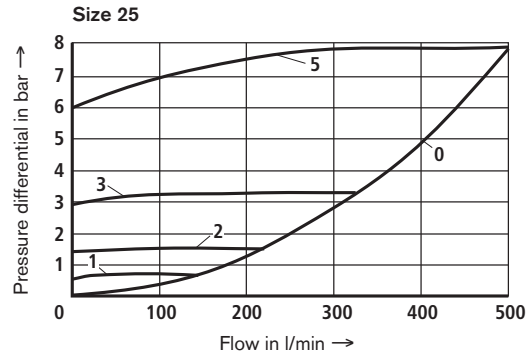
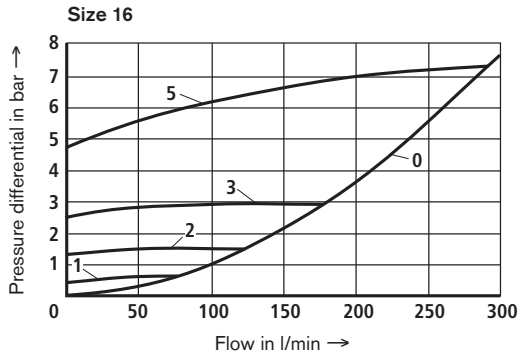
¹⁾ Observe permissible pressures for flange connections (see page 5)!

²⁾ The cleanliness classes specified for components must be adhered to in hydraulic systems. Effective filtration prevents malfunction and, at the same time, prolongs the service life of components.

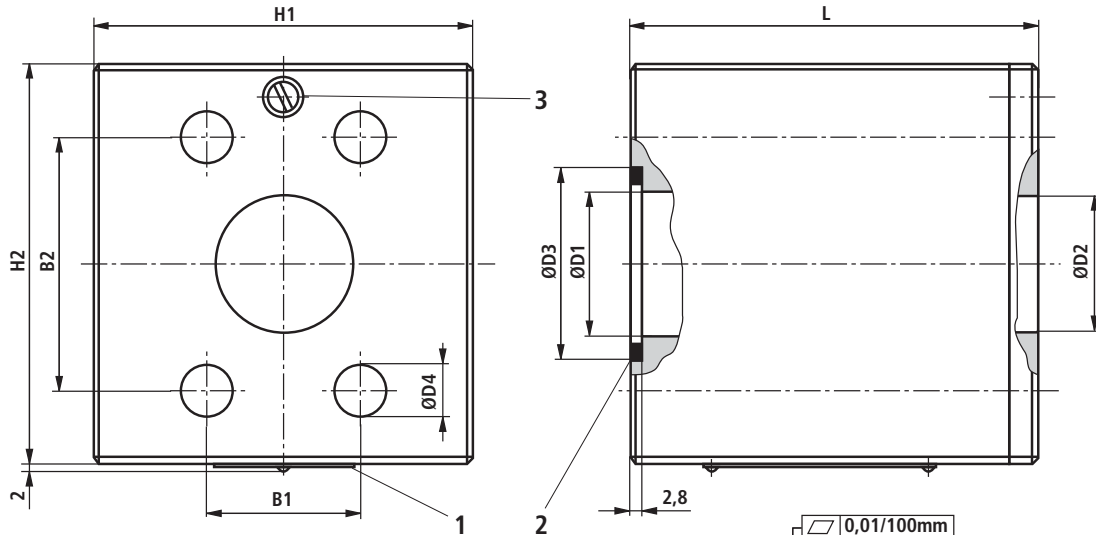
For the selection of filters, see data sheets RE 50070, RE 50076, RE 50081, RE 50086 and RE 50088.

Characteristic curves (measured with HLP46, $\vartheta_{oil} = 40 \text{ }^\circ\text{C} \pm 5 \text{ }^\circ\text{C}$)

Δp - q_v characteristic curves at cracking pressure



Unit dimensions (nominal dimensions in mm)



- 1 Nameplate
- 2 O-ring
- 3 Countersunk screw ISO 1580 - M4 x 10 - 4.8-A2C

Required surface quality of the valve mounting face

Type	Size	B1	B2	H1	H2	L	ØD1	ØD2	ØD3	ØD4	SAE connection
Z1SRA...F...	16	22.2	47.6	60	70	67.5	20	18.5	31.8	11	SAE 3/4"
	25	26.2	52.4	70	80	75	25	21.5	39.7	11	SAE 1"
	32	30.2	58.7	80	95	85	30	26	44.6	11	SAE 1 1/4"
	40	35.8	69.9	95	110	114.5	40	37	54	13	SAE 1 1/2"
	52	42.9	77.8	114	135	129	50	45	63.5	13	SAE 2"
Z1SRA...H...	16	23.8	50.8	60	70	66.5	20	18.5	31.8	11	SAE 3/4"
	25	27.8	57.2	70	80	75	25	21.5	39.7	13	SAE 1"
	32	31.8	66.7	80	95	85	30	26	44.6	15	SAE 1 1/4"
	40	36.6	79.4	95	110	114.5	40	37	54	17	SAE 1 1/2"
	52	44.4	96.8	114	135	129	50	45	63.5	21	SAE 2"

Type	Size	Valve fixing screws (separate order) ¹⁾	Tightening torque M_T in Nm ²⁾	Permissible pressures for flange connections according to	
				ISO 6162/1	ISO 6162/2
Z1SRA...F...	16	M10	70	5000 psi	350 bar
	25	M10	70	4500 psi	315 bar
	32	M10	70	3600 psi	250 bar
	40	M12	130	2900 psi	200 bar
	52	M12	130	2900 psi	200 bar
Z1SRA...H...	16	M10	70	-	6000 psi 400 bar
	25	M12	130		
	32	M14	180		
	40	M16	295		
	52	M20	550		

¹⁾ 4 hexagon socket head cap screws ISO 4762 - 10.9

²⁾ Data in accordance with ISO 6162, with friction coefficient $\mu_{total} = 0.14$ (please adjust in the case of changed surfaces)

Notes

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RE 21515/02.06 | Z1SRA

Hydraulics | Bosch Rexroth AG

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