

## RSP / RSW / RSPR and RSWR Pipe rupture valves

**6.1.3E**  
P 1/3

### 1. General description

- Prevents uncontrolled movement of the cylinder if a pipe or hose burst occurs.
- settable closing flow

### 2. Advantages of Beringer's pipe rupture valves

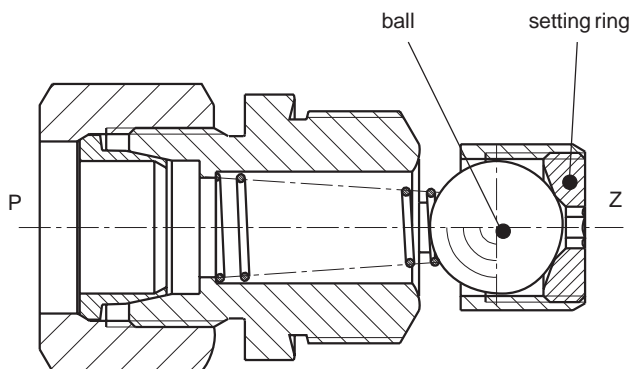
- leakfree closing
- simple laying of pipework
- minimal spatial requirement thanks to compact design

### 3. Application

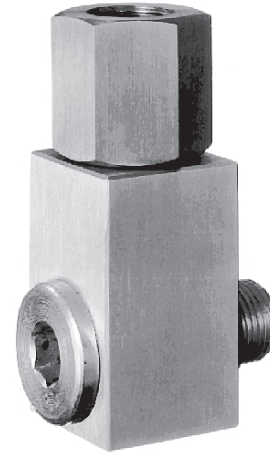
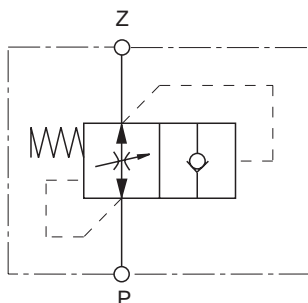
- for protecting hydraulic consumers
- for direct installation in cylinders

### 4. Functional description, sectional view

- 4.1 If, when the oil is flowing from Z to P, the pressure difference in the valve exceeds a value that corresponds to the preloading pressure (approx. 1 bar), the ball is forced against the valve seat and seals the opening passage leakfree.
- 4.2 The pipe rupture valve is opened again automatically when the pressure at port P is higher than that at port Z.



### 5. Symbol



### 6. Characteristics

(Please contact Beringer if machinery is required for use beyond these tolerances)

#### 6.1 General:

- Type: ball-seat valve
- Mounting method: screw-type cartridge
- Ports: P, Z see point 10
- Mounting position: any
- Weight: see point 10

#### 6.2 Hydraulic characteristics:

- Size: 8, 12, 16, 20, 25, 32
- Min. settable closing flow: 5 l/min (NW8)
- Max. settable closing flow: 580 l/min (NW32)
- Max. working pressure: 400 bar
- Hydraulic medium: mineral oil per DIN 51524 and DIN 51525 (HL/HLP), inquire about other media
- Hydraulic medium temperature range: -20°C...+80°C, inquire about other temperatures
- Viscosity range: 2.8 mm<sup>2</sup>/s up to 380 mm<sup>2</sup>/s
- Filtering: NAS 1638 class 9, β10 ≥ 75.

### 7. Safety instructions

- This valve must only be used for the purpose for which it has been designed.
- It must only be adjustment by trained staff.
- The hydraulic system must be depressurized and checked before the valve is disassembled.
- The valve must not be opened without the express permission of the manufacturer.

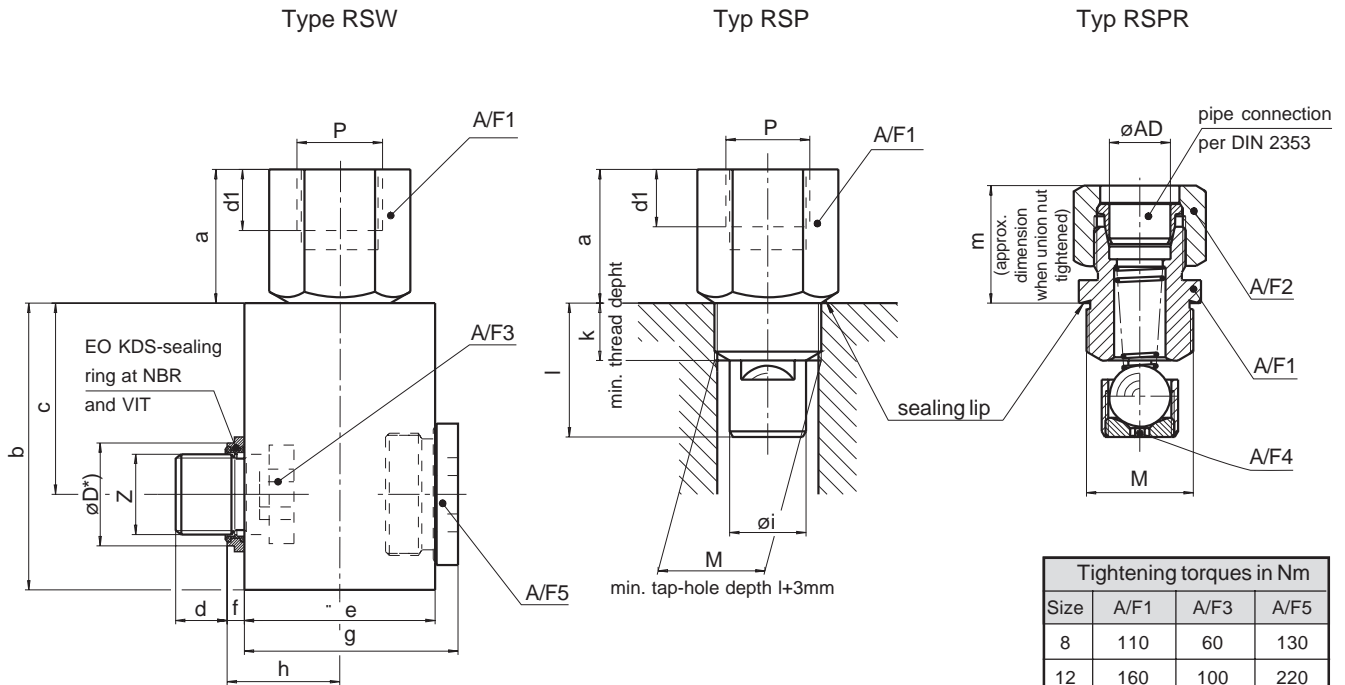
### 8. Assembly instructions

- Observe all port designations.
- Protect seals against becoming damaged.
- Observe the tightening torque (see dimension diagram).
- Bleed the hydraulic system before putting it into operation.
- Fix the pipes in position in such a way that radial forces do not act on port Z.

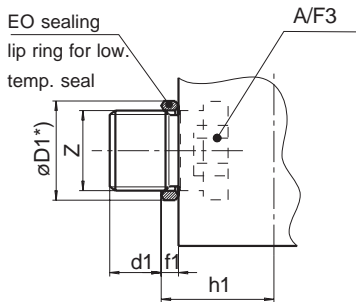
### 9. Adjustment instructions

1. Screw in the setting ring until the ball sits on the seat
2. Set the flow acc. to the setting diagrams (see section 11).

**10. Dimension diagram**



Tightening torques in Nm			
Size	A/F1	A/F3	A/F5
8	110	60	130
12	160	100	220
16	240	170	275
20	275	245	275
25	340	300	340
32	450	350	440



N.B: For minimum diameter of counterbore on cylinder, see table D or D1  
  
Maximum permissible counterbore depth = 1.5 mm

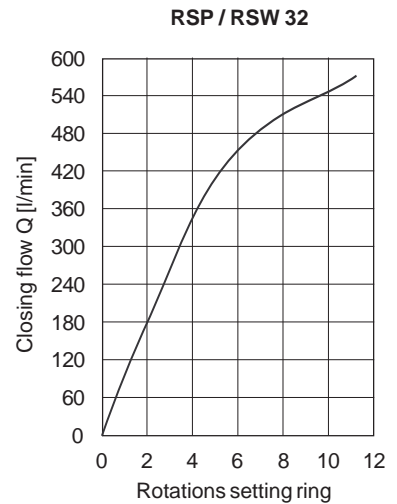
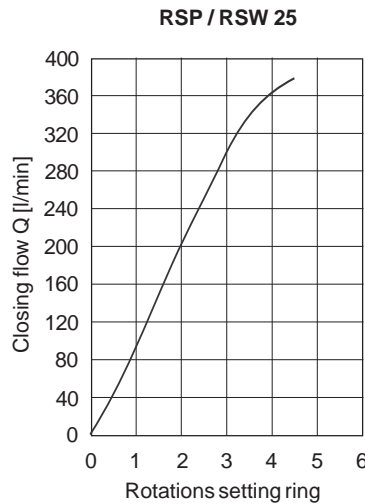
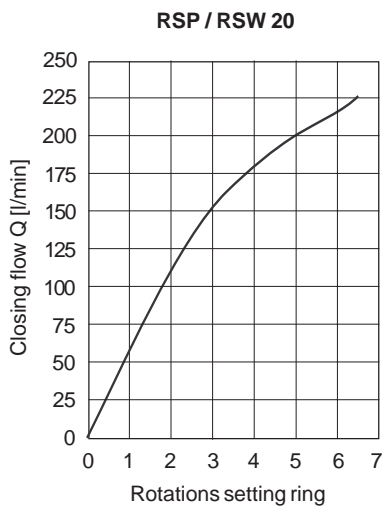
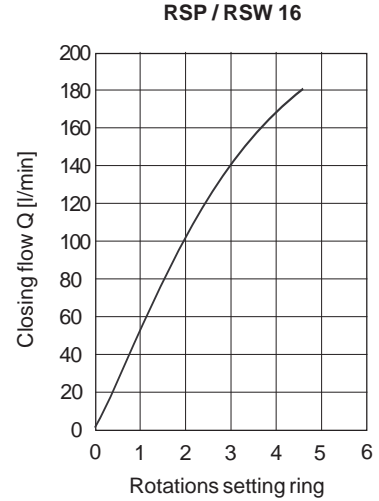
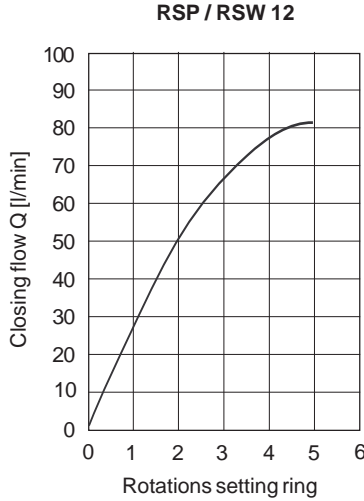
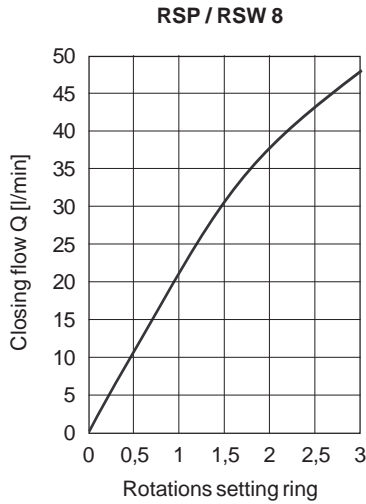
Type	RSP	RSPR	RSW	RSWR
Cylinder port see table	thread "M"	thread "M"	thread "Z"	thread "Z"
Supply see table	thread "P"	pipe AD	thread "P"	pipe AD

NW: 20 / 25 / 32 only against inquiry !

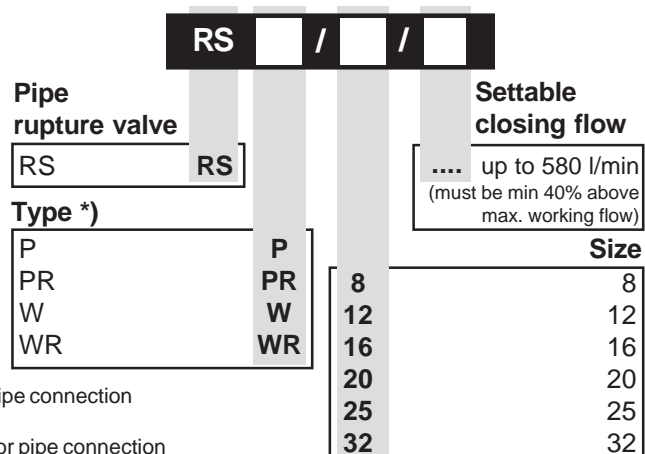
NW	closing flow max [l/min]	ports P+Z	pipe AD	M	A/F1	A/F2	A/F3	A/F4	A/F5	D *)	D1 *)	a	b	c	d	d1	e	f	f1	g	h	h1	i	k	l	m	weight [kg]
8	40	G3/8	12	M22x1.5	27	24	10	4	12	22	22	27	55	35	13.5	12	40	2.5	4	45	22.5	24	16	9	24	27	0.7
12	80	G1/2	16	M28x1.5	32	30	12	5	17	27	26	35	75	50	14.5	14	50	4	4.5	55.5	29	29.5	20	15	35	30	1.4
16	160	G3/4	20	M35x1.5	41	36	17	6	22	33	32	40	95	65	17.5	16	60	3	4.5	67.5	33	34.5	26	20	47	35	2.6
20	230	G1	25	M40x1.5	46	46	22	8	22	40	19	45	105	75	20.5	18	60	3	5.5	67.5	33	35.5	30	23	56	38	-
25	380	G1 1/4	30	M50x1.5	55	50	27	8	27	50	49	45	140	103	22.5	20	70	3	5.5	78.5	38	40.5	39.5	35	78	41	-
32	580	G1 1/2	38	M64x2	70	60	32	10	32	56	55	60	155	114	24.5	22	90	3	5.5	98.5	48	50.5	47	37	88	53	-

**11. Setting diagrams**

measured at 33 mm<sup>2</sup>/s



**12. Type code**



- \*) P = screw-type cartridge  
 PR = screw-type cartridge for pipe connection  
 W = angle pipe rupture valve  
 WR = angle pipe rupture valve for pipe connection