

Stainless Steel Ball Valve

Pfeiffer Type BR 26



Application

Tight-closing ball valve for process engineering and plants with industrial requirements, especially suitable for corrosive media

Nominal size DN 15 to DN 150

Nominal pressure PN 16 to PN 40

Temperatures -10 to 200 °C

Ball valve made of corrosion-resistant materials equipped with

- Pneumatic actuator or
- Manual actuator

Body material

- Cast stainless steel

Ball material

- Stainless steel

Further features

- Face-to-face dimensions according to DIN EN 558-1 Series 1 or Series 27
- Exchangeable PTFE seat rings
- Blow-out proof ball shaft with spring-loaded PTFE V-ring packing
- TA-Luft (German clean air act) equivalent certification
- Flange for attachment of actuators in accordance with DIN ISO 5211

The ball valves with pneumatic actuators can be equipped with positioners, limit switches and solenoid valves.

Versions

Standard version · Pfeiffer Type BR 26 Ball Valve, DN 15 to DN 150, PN 16 to 40 available in the following versions:

- **Type BR 26** · Ball valve with Pfeiffer Type BR 31a Pneumatic Actuator, optionally available with or without spring return mechanism
- **Type BR 26** · Ball valve with lever, or for nominal size DN 150 with hand-operated actuator

Other versions

- Body, ball and ball shaft made from nickel, titanium or other corrosion-resistant materials
- Ball shaft seal consisting of two PTFE V-ring packings and test connection
- Ball valves for higher temperatures
- Fire-safe versions with test certificate according to British Standard B.S. 6755 Part 2
- Body with heating jacket
- Grooved flanges according to DIN 2512
- Control ball valve using a calibrated sealing ring · On request



Fig. 1 · Type BR 26/BR 31a Stainless Steel Ball Valve



Fig. 2 · Type BR 26 Ball Valve with lever



Fig. 3 · Type BR 26 with lever and extension

Principle of operation

The process medium can flow through the full bore of the ball valve in either direction. The ball (3) with its cylindrical bore (ball channel) rotates around the center axis. The rotary angle of the ball determines the flow rate across the free area between the body (1) and the ball channel. The ball shaft, which is guided to the valve exit, can be optionally connected to a pneumatic actuator or equipped with a manually operated lever or manual actuator.

The ball is sealed by means of exchangeable seat rings (4). The ball shaft is sealed with a maintenance-free, spring-loaded PTFE V-ring packing (9). The packing is loaded by Belleville spring washers (10) which are positioned above the packing.

Fail-safe position

Depending on the rotary actuator version, the ball valve has two fail-safe positions which become effective when the pressure is reduced or when the supply air fails:

Control valve CLOSED without supply air

The ball valve closes when the supply air fails.

Control valve OPEN without supply air

The ball valve opens when the supply air fails.

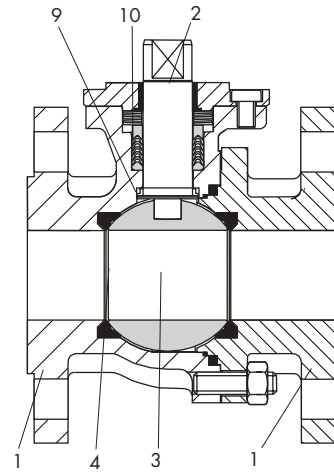
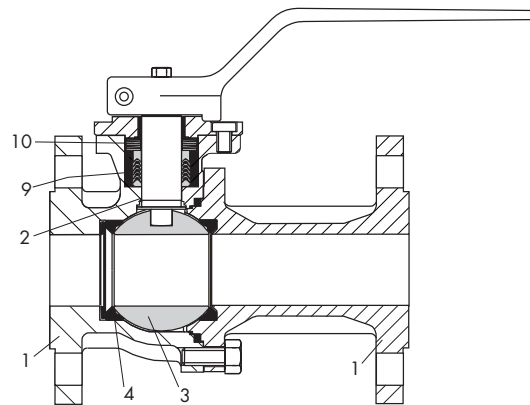


Fig. 4 · Pfeiffer Type BR 26 Ball Valve, wafer-style body



Legend

- | | |
|-----------------|------------------------------|
| 1 Body segments | 4 Seat ring |
| 2 Ball shaft | 9 V-ring packing |
| 3 Ball | 10 Belleville spring washers |

Fig. 5 · Pfeiffer Type BR 26 Stainless Steel Ball Valve, flanged body

Table 1 · Technical data · Pfeiffer Type BR 26

Nominal size	DN	15 to 150
Nominal pressure	PN	16 · 25 · 40
Flanges		DIN 2633 · DIN 2635
Ball sealing		White PTFE
Packing		Self-adjusting PTFE V-ring packing
Temperature range		See Pressure-temperature diagram
Leakage rate DIN EN 12266-1		Test P12, leakage rate "A"

Table 2 · Materials

Body and flanges	Cast stainless steel 1.4408 · 1.4571
Ball	1.4408
Shaft	1.4462 · 1.4571
Seat rings	TFM (PTFE modified)
Seat spring	1.8159 · Delta Tone
Packing	PTFE V-ring packing
Bottom bearing bushing	PTFE with 25 % glass
Top bearing bushing	PTFE with 25 % carbon
Body gasket	PTFE

Table 3 · Max. permissible torque M_{dmax} , required torque M_d and initial breakaway torque M_{dl} in Nm

The listed breakaway torques are average values which were measured at the corresponding differential pressures using air at a temperature of 20 °C. Operating temperature, process medium as well as longer operating times may affect breakaway torque as well as permissible torque considerably.

BR 26 Nominal size	Permissible torque M_{dmax}	Differential pressure Δp in bar	
		10	40
		Initial breakaway torque M_{dl}	
15	80	8	11
25	290	14	28
40	517	26	52
50	517	36	73
80	825	72	144
100	825	120	251
150	On request	On request	On request

Table 4 · Dimensions in mm and weights

Type BR 26 Ball Valve									
Nominal size DN	15	25	40	50	80	100		150 ¹⁾	
Nominal pressure PN	40					16	40	16	40
L - DIN EN 558-1 S1	130	160	200	230	310	350		480	
L - DIN EN 558-1 S27	115	125	140	150	180	190		350	
A	50	56	62.5	65.5	72.5	82.5	81	165	
H	46.5	58	83	91	130.5	143.5	155	209	
H1	59.5	77	105	113	156	169	192.5	246	
Width across flats (SW)	9	14	17	17	19	19	19	30	
Connection for actuator acc. to DIN/ISO 5211	F05	F05	F07	F07	F10	F10	F10	F14	
Weight DIN EN 558-1 S1	2.6	5	9	12	28	On request			
Weight DIN EN 558-1 S27	On request				24.5	33	34	On request	

¹⁾ Dimensions for version with manual actuator on request

For data regarding the Pfeiffer Type 31a Actuator, refer to Data Sheet T 9929 EN.

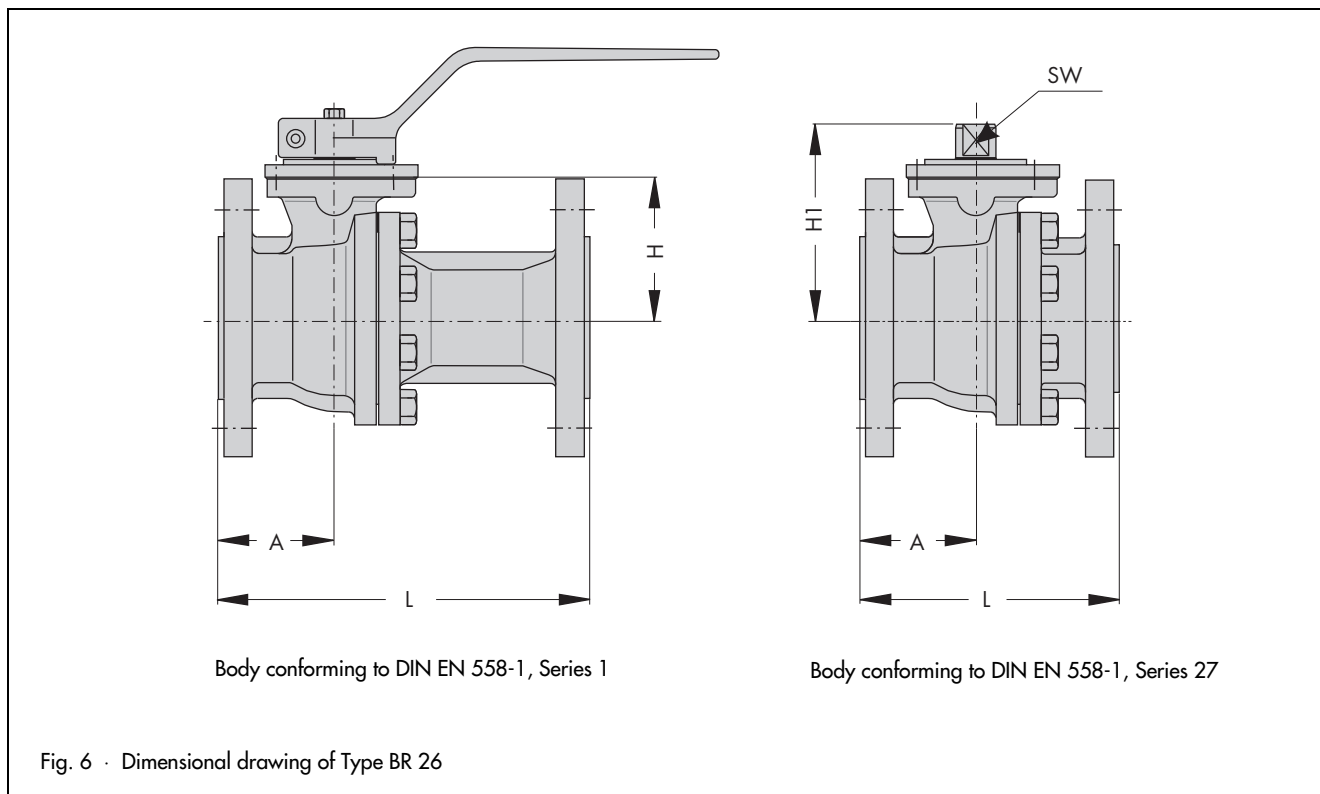


Fig. 6 · Dimensional drawing of Type BR 26

Selecting and sizing the ball valve

1. Calculate the required nominal size.
2. Select the appropriate actuator according to Table 3 or 4.
3. Select valve according to materials, pressure and temperature stated in Tables 1 and 2 and refer to the pressure-temperature diagram.
4. Select accessories

Ordering text

Ball valve	Pfeiffer Type BR 26
Nominal size	DN ...
Nominal pressure	PN ...
On option, special version	
Actuator	Type ...
Signal pressure	... bar
Manual lever	
Accessories	Positioner and/or limit switches, solenoid valve
Operating pressure	... bar
Medium temperature	... °C

Specifications subject to change without notice.

