

BR 26e · Stainless Steel Ball Valve

With trunnion-mounted ball · DIN- and ANSI-Version



Application

Tight-closing Ball valve made of stainless steel for corrosive media, especially to meet high process requirements in chemical plants:

- **Nominal sizes DN 15 to 200 and NPS½ to 8**
- **Nominal pressure PN 10 to PN 325 as well as cl150 and cl1500**
- **Temperatures -196 °C to +550 °C (-320 °F to +1022 °F)**

The control valve consists of a stainless steel ball valve and a pneumatic quarter-turn actuator, a manual gear or a lever. The valves are designed according to the modular-assembly principle have the following features:

- Body, ball and stem made of high-alloyed steel, nickel, titanium or other corrosion-resistant material
- Sealing rings live-loaded on both sides
- Exchangeable bore seal in M-PTFE
- Stem sealing by means of live-loaded V-ring packing
- On/off service with particularly low leakage rate, bubble-tight version
- Blowout-proof stem
- Mounting flange for actuators acc. to DIN ISO 5211
- Face-to-face dimensions DIN EN 558, Series 1

Versions

Ball valve BR 26e available in the following versions:

- Ball valve with lever
- Ball valve with manual gear
- Ball valve with pneumatic quarter-turn actuator (see associated data sheet for details)

Special versions

- Body or components made of special materials (Carbon steel Monel, Hastelloy, etc.)
- Seat rings not live-loaded
- Double packing with test connection
- Fire-safe design
- Heating jacket made of steel or high-alloyed steel with various adaptations
- Grooved flange acc. to DIN EN 1092
- Ball valve for throttling service over a seat ring with flow characteristic
- Metal sealing in bore passage
- Other face-to-face dimensions and nominal sizes (also ANSI sizes) are available on request



Fig. 1: Two-piece ball valve BR 26e with quarter-turn actuator BR 31a



Fig. 2: Three-piece ball valve BR 26e with quarter-turn actuator BR 31a

Principle of operation

The process medium can flow through the Series 26e Ball Valve in both directions when the valve is completely open. The ball (3) with its cylindrical passage rotates around the middle axis.

Over the trunnion (15) which is located underneath the ball (3), the ball is double-guided.

The rotary angle of the ball determines the flow rate over the free area between the body (1) and the ball channel. When the valve is fully open, the entire cross-section is released.

The ball (3) is sealed with exchangeable seat rings (8).

The stem is sealed by a PTFE V-ring packing (11) which is loaded over Belleville spring washers (10) located on top of the packing.

The top end of the stem is fitted with a lever. It can optionally fitted with a pneumatic rotary actuator or manual gear.

i Info

The ball valve can also be used for throttling service. Please refer to the Data Sheet ► DB 20a-kd for further instructions in this case.

i Info

Before using the ball valve in hazardous areas, check whether this is possible acc. to ATEX 2014/34/EU. See Operating Instructions ► EB 26e!

Fail-safe position

Depending on how the pneumatic actuator is mounted to the valve, the ball valve has two fail-safe positions which become effective when the air pressure in the actuator is relieved or when the supply air fails:

- **Ball valve with actuator "Spring closes":**
Upon air failure, the ball valve is closed.
The valve opens when the signal pressure increases, acting against the force of the springs.
- **Ball valve with actuator "Spring opens":**
Upon air failure, the ball valve is opened.
The valve closes when the signal pressure increases, acting against the force of the springs.

Optional material combinations

- Stem and ball in special materials
- Seat rings in PTFE compounds, special plastics
- Metal sealing system
- Graphite body gasket

Additional equipment and mounting parts

The following accessories are available for the valve separately or in combinations:

- Stem extension (e.g. 100 mm)
- Pneumatic and electric rotary actuators
- Exchangeable pneumatic actuator which can be equipped with limit switches and solenoid valves
- Positioner (for option ball valve for throttling services)
- Limit switches
- Solenoid valves
- Supply air pressure regulator/filter

Other accessories possible on request.

Benefits of sealing systems loaded by spring washers

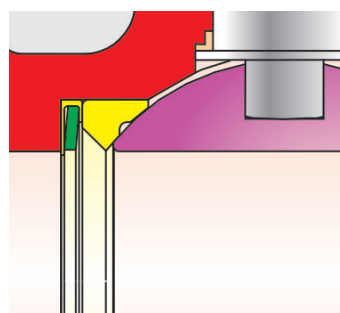


Fig. 3: Sealing ring loaded by spring washers

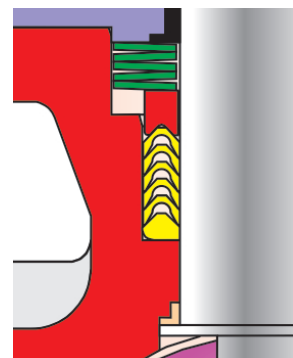


Fig. 4: V-ring packing loaded by Belleville spring washers

- Maintenance-free and self-adjusting
- Two active seat rings
- Highest level of sealing effectiveness, even when pressure and temperature deviate extremely
- Longer service life
- Low torque increase with increasing temperature. Due to this, smaller actuators are required for automation
- Lower torque at higher differential pressures
- **All in all:**
extremely economical!

Table 1: General technical data

	DIN	ANSI
Nominal size	DN 15 ... 200	NPS½ ... 8
Nominal pressure	PN 10 ... 40 and PN 63 ... 325	cl150 ... 300 and cl600 ... 1500
Design	Flansch EN 1092 Two-piece PN 10 ... 160 Three-piece PN 63 ... 325	ANSI B16.5 / API 6D Two-piece cl150 ... 900 Three-piece cl600 ... 1500
Temperature range	According to pressure-temperature tables	
Seat tightness	Soft sealing: Test P12 – EN 12266-1 Leakage rate A Class VI – ANSI/FCI 70-2-1991 Metallic sealing: Test P12 – EN 12266-1 Leakage rate B (optional A) Class V – ANSI/FCI 70-2-1991 (optional Class VI)	
Face-to face	EN 558 Series 1 ASME B16.10 or API 6D – regular pattern High pressure from PN 63 or cl600: EN 558 Series 1 - EN 558 Series 2 or ASME B16.10 or API 6D – regular pattern or special lengths	
Flange	EN 1092-1 Form B1 to PN 40 - EN 1092-1 Form B2 to PN 63 ASME B16.5 RF smooth finish	
Perm. operating pressure	According to pressure-temperature tables	

Table 2: Materials

	DIN	ANSI
Body	1.0460 / 1.0566 / 1.4571 Optional special materials for the body	P250GH - A105N / P355NL1 - A350 LF2 / A182 F316Ti
Ball	1.4408 / 1.4571 Optional metal seal kit	A351 CF8M / A182 F316Ti Optional metal seal kit
Shaft	1.4462 / optional 1.4980	A182 F51 / optional AISI 660
Sealing ring	M-PTFE, PTFE Compounds, PEEK, Special plastics Optional metal seal kit	
Spring seat ring	1.4310 / 1.4401 / 2.4668	
Packing	PTFE V-ring packing Optional Inconel wire reinforced graphite fiber yarn packing	
Bearing bush	PTFE-Compound, optional PEEK Optional metallic stainless steel bushes, hard-coated	
Sealing	PTFE / Graphite, optional Graphite / Graphite	
Surface	Carbon steel with manganese phosphating as standard	

Table 3: kvs-values and Cv-values

Nominal size		kvs	Cv
DN	NPS		
25	1	49	57
40	1½	116	135
50	2	178	207
65	2½	291	338
80	3	422	491
100	4	610	709
125	5	954	1108
150	6	1575	1830
200	8	2810	3260

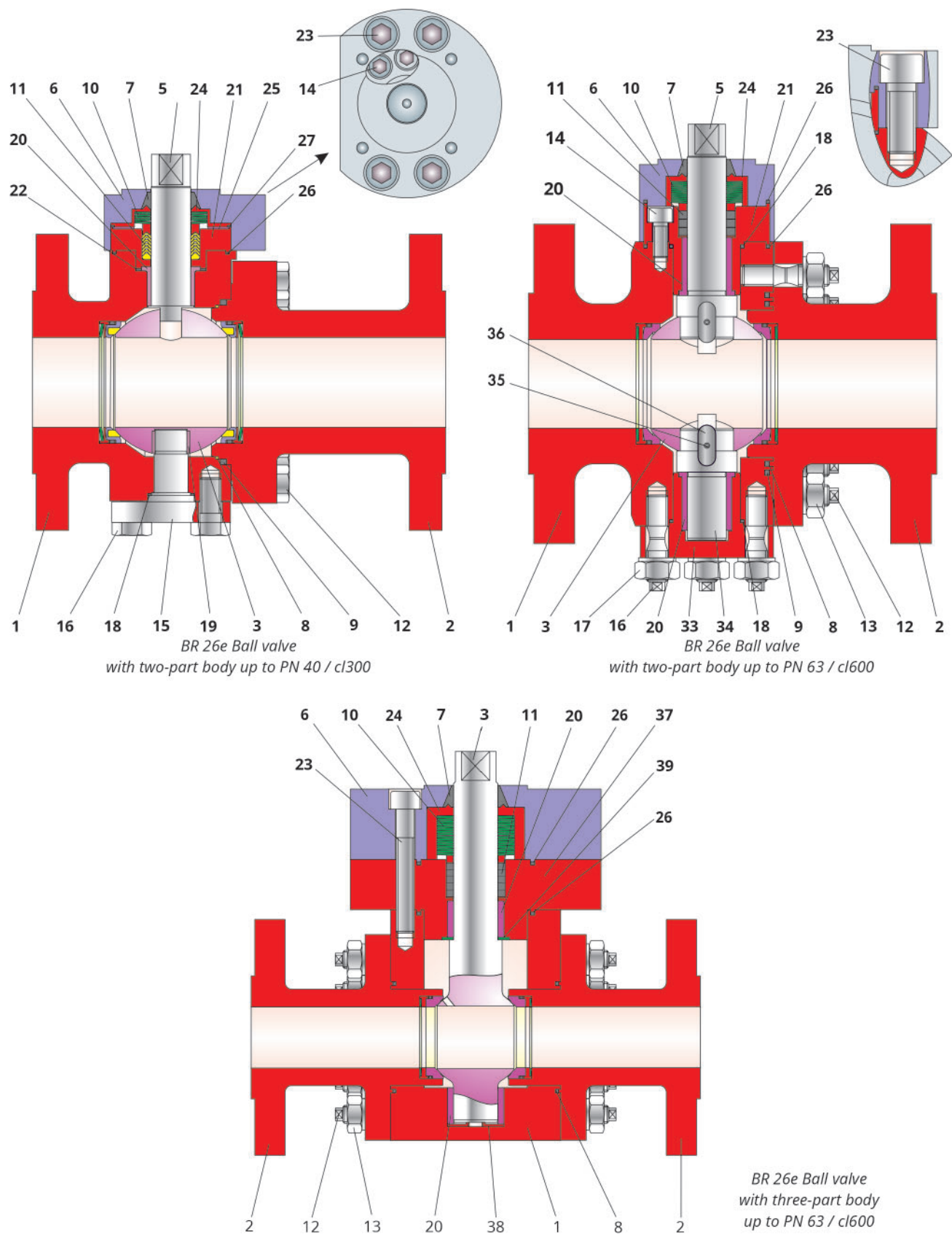


Fig. 5: BR 26e ball valve

Further details and explanations can be found in the installation and operating instructions, see ► EB 26e.

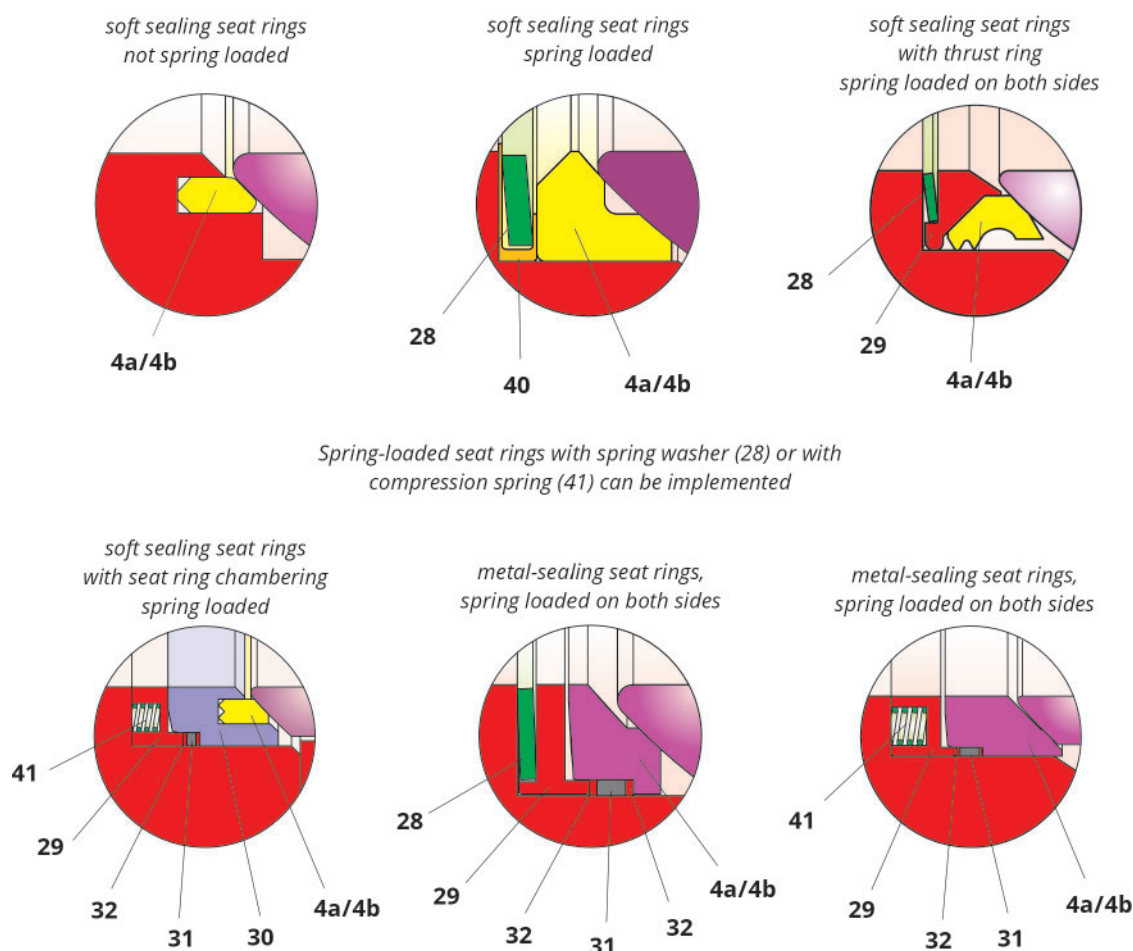


Fig. 6: Sealing situations for ball valve BR 26e

Table 4: Parts list

Item	Description
1	Main body
2	Side body
3	Ball
4	Seat ring
5	Control shaft
6	Stuffing box flange
7	Ring
8	Sealing
9	Sealing
10	Disc spring set
11	Packing
12 ¹⁾	Screw / Stud bolt
13 ¹⁾	Nut
14	Screw

Item	Description
15	Trunnion
16 ¹⁾	Screw / Stud bolt
17 ¹⁾	Nut
18	Ring
19	Bearing bush
20	Bearing bush
21	Packing bush
22	Ring
23	Screw
24	Bush
25	Disc
26	Ring
27	Ring
28	Disc spring

Item	Description
29	Thrust ring
30	Chamber
31	Ring
32	Thrust ring
33	Bearing cartridge
34	Bearing bolt
35	Feather key
36	Screw
37	Bonnet flange
38	Disc
39	Sealing
40	Disc spring jacket
41	Compression spring

¹⁾ Depending on the nominal size, stud bolts with nuts or screws can be used.

Pressure-temperature table for 2-piece low-pressure ball valves up to PN40 / cl300

The area of application is determined by the pressure-temperature table.
Process data and the process medium can affect the values in the table.

Body material: 1.4571 (DIN EN 1092-1) / A182 F316Ti (ASME B16.34 / ASME B16.5)

Nominal size: DN25 - DN200 / NPS1 - NPS8

Table 5: Pressure-temperature values PN16

Seat ring	Temperature in °C																
	-60	-10	0	20	40	60	80	100	120	140	160	180	200	250	300	350	400
M-PTFE	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	15.9	15.7	15.5	15.2	14.9	-	-	-	-
PTFE-50%VA	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	15.9	15.7	15.5	15.2	14.9	-	-	-	-
PTFE-25%coal	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	15.9	15.7	15.5	15.2	14.9	-	-	-	-
PEEK	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	15.9	15.7	15.5	15.2	14.9	14.1	-	-	-
metallic	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	15.9	15.7	15.5	15.2	14.9	14.1	13.3	12.8	12.4

Pres-
sure
in bar

Table 6: Pressure-temperature values PN40

Seat ring	Temperature in °C																
	-60	-10	0	20	40	60	80	100	120	140	160	180	200	250	300	350	400
M-PTFE	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	39.7	35.2	30.4	25.6	20.8	-	-	-	-
PTFE-50%VA	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	39.7	38.0	33.4	28.9	24.3	-	-	-	-
PTFE-25%coal	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	39.7	39.4	35.2	30.4	25.6	-	-	-	-
PEEK	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	39.7	39.4	37.2	33.6	30.0	15.0	-	-	-
metallic	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	39.7	39.4	38.8	38.0	37.3	35.4	33.3	32.1	31.2

Pres-
sure
in bar

Table 7: Pressure-temperature values cl150

Seat ring	Temperature in °C																
	-60	-10	0	20	40	60	80	100	120	140	160	180	200	250	300	350	400
M-PTFE	19.0	19.0	19.0	19.0	19.0	17.9	17.0	16.2	15.6	15.0	14.6	14.2	13.7	-	-	-	-
PTFE-50%VA	19.0	19.0	19.0	19.0	19.0	17.9	17.0	16.2	15.6	15.0	14.6	14.2	13.7	-	-	-	-
PTFE-25%coal	19.0	19.0	19.0	19.0	19.0	17.9	17.0	16.2	15.6	15.0	14.6	14.2	13.7	-	-	-	-
PEEK	19.0	19.0	19.0	19.0	19.0	18.0	17.0	16.2	15.6	15.0	14.6	14.2	13.7	12.1	-	-	-
metallic	19.0	19.0	19.0	19.0	19.0	18.0	17.0	16.2	15.6	15.0	14.6	14.2	13.7	12.1	10.2	9.3	6.5

Pres-
sure
in bar

Table 8: Pressure-temperature values cl300

Seat ring	Temperature in °C																
	-60	-10	0	20	40	60	80	100	120	140	160	180	200	250	300	350	400
M-PTFE	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	35.2	30.4	25.6	20.8	-	-	-	-
PTFE-50%VA	49.6	49.6	49.6	49.6	49.6	46.9	44.5	42.2	40.7	38.0	33.4	28.9	24.3	-	-	-	-
PTFE-25%coal	49.6	49.6	49.6	49.6	49.6	46.9	44.5	42.2	40.7	39.2	35.2	30.4	25.6	-	-	-	-
PEEK	49.6	49.6	49.6	49.6	49.6	46.9	44.5	42.2	40.7	39.2	37.2	33.6	30.0	15.0	-	-	-
metallic	49.6	49.6	49.6	49.6	49.6	46.9	44.5	42.2	40.7	39.2	37.9	36.8	35.7	33.4	31.6	30.3	29.4

Pres-
sure
in bar

Pressure-temperature table for 2-piece high-pressure ball valves PN63-PN160 / cl600-cl900

The area of application is determined by the pressure-temperature table.
Process data and the process medium can affect the values in the table.

Body material: 1.4571 (DIN EN 1092-1) / A182 F316Ti (ASME B16.34 / ASME B16.5)

Nominal size: DN40 - DN150 / NPS1 1/2 - NPS6

Table 9: Pressure-temperature values PN63

	Temperature in °C																	
Seat ring	-60	-10	0	20	40	60	80	100	120	140	160	180	200	250	300	350	400	
M-PTFE	46.0	46.0	46.0	46.0	45.5	45.0	45.0	45.0	45.0	39.6	34.2	28.8	23.4	-	-	-	-	Pres- sure in bar
PTFE-50%VA	63.0	63.0	63.0	63.0	63.0	63.0	58.1	53.0	47.9	42.8	37.6	32.5	27.4	-	-	-	-	
PTFE-25%coal	63.0	63.0	63.0	63.0	63.0	63.0	61.2	55.8	50.4	45.0	39.6	34.2	28.8	-	-	-	-	
PEEK	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	62.5	57.6	52.2	46.8	43.8	20.0	-	-	-	
metallic	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	62.5	62.0	61.2	60.0	58.8	55.8	52.5	50.7	49.2	

Pres-
sure
in bar

Table 10: Pressure-temperature values PN100*

	Temperature in °C																	
Seat ring	-60	-10	0	20	40	60	80	100	120	140	160	180	200	250	300	350	400	
M-PTFE	46.0	46.0	46.0	46.0	45.5	45.0	45.0	45.0	45.0	39.6	34.2	28.8	23.4	-	-	-	-	Pres- sure in bar
PTFE-50%VA	78.7	78.7	78.7	73.5	68.4	63.3	58.1	53.0	47.9	42.8	37.6	32.5	27.4	-	-	-	-	
PTFE-25%coal	80.0	80.0	80.0	77.4	72.0	66.6	61.2	55.8	50.4	45.0	39.6	34.2	28.8	-	-	-	-	
PEEK	80.0	80.0	80.0	80.0	75.0	70.0	65.0	60.0	55.0	50.0	45.0	40.0	35.0	20.0	-	-	-	
metallic	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	79.5	74.2	71.4	68.5	

Pres-
sure
in bar

* The valve can be used at 20°C and in the open position up to 100 bar.

Table 11: Pressure-temperature values PN160*

	Temperature in °C																	
Seat ring	-60	-10	0	20	40	60	80	100	120	140	160	180	200	250	300	350	400	
M-PTFE	46.0	46.0	46.0	46.0	45.5	45.0	45.0	45.0	45.0	39.6	34.2	28.8	23.4	-	-	-	-	Pres- sure in bar
PTFE-50%VA	78.7	78.7	78.7	73.5	68.4	63.3	58.1	53.0	47.9	42.8	37.6	32.5	27.4	-	-	-	-	
PTFE-25%coal	80.0	80.0	80.0	77.4	72.0	66.6	61.2	55.8	50.4	45.0	39.6	34.2	28.8	-	-	-	-	
PEEK	80.0	80.0	80.0	80.0	75.0	70.0	65.0	60.0	55.0	50.0	45.0	40.0	35.0	20.0	-	-	-	
metallic	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	

Pres-
sure
in bar

* The valve can be used at 20°C and in the open position up to 160 bar.

Table 12: Pressure-temperature values cl600*

	Temperature in °C																	
Seat ring	-60	-10	0	20	40	60	80	100	120	140	160	180	200	250	300	350	400	
M-PTFE	46.0	46.0	46.0	46.0	45.5	45.0	45.0	45.0	45.0	39.6	34.2	28.8	23.4	-	-	-	-	Pres- sure in bar
PTFE-50%VA	78.7	78.7	78.7	73.5	68.4	63.3	58.1	53.0	47.9	42.8	37.6	32.5	27.4	-	-	-	-	
PTFE-25%coal	80.0	80.0	80.0	77.4	72.0	66.6	61.2	55.8	50.4	45.0	39.6	34.2	28.8	-	-	-	-	
PEEK	80.0	80.0	80.0	80.0	75.0	70.0	65.0	60.0	55.0	50.0	45.0	40.0	35.0	20.0	-	-	-	
metallic	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	78.4	75.9	73.6	71.3	66.8	63.2	60.7	58.9	

Pres-
sure
in bar

* The valve can be used at 20°C and in the open position up to 99.3 bar.

Table 13: *Pressure-temperature values cI900**

Seat ring	Temperature in °C																
	-60	-10	0	20	40	60	80	100	120	140	160	180	200	250	300	350	400
M-PTFE	46.0	46.0	46.0	46.0	45.5	45.0	45.0	45.0	45.0	39.6	34.2	28.8	23.4	-	-	-	-
PTFE-50%VA	78.7	78.7	78.7	73.5	68.4	63.3	58.1	53.0	47.9	42.8	37.6	32.5	27.4	-	-	-	-
PTFE-25%coal	80.0	80.0	80.0	77.4	72.0	66.6	61.2	55.8	50.4	45.0	39.6	34.2	28.8	-	-	-	-
PEEK	80.0	80.0	80.0	80.0	75.0	70.0	65.0	60.0	55.0	50.0	45.0	40.0	35.0	20.0	-	-	-
metallic	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0

**Pressure
in bar**

* The valve can be used at 20°C and in the open position up to 148.9 bar.

Pressure-temperature table for 3-piece high-pressure ball valves PN63-PN320

The area of application is determined by the pressure-temperature table.
Process data and the process medium can affect the values in the table.

Body material: 1.4571 (DIN EN 1092-1)

Nominal size: DN15 - DN100

Table 14: *Pressure-temperature values PN63*

Seat ring	Temperature in °C																
	-60	-10	0	20	40	60	80	100	120	140	160	180	200	250	300	350	400
PTFE-50%VA	63.0	63.0	63.0	63.0	63.0	63.0	63.0	58.9	53.2	47.5	41.8	36.1	30.4	-	-	-	-
PTFE-25%coal	63.0	63.0	63.0	63.0	63.0	63.0	63.0	62.0	56.0	50.0	44.0	38.0	32.0	-	-	-	-
PEEK	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	62.5	62.0	58.0	52.0	46.0	30.0	-	-	-
metallic	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	62.5	62.0	61.2	60.0	58.8	55.8	52.5	50.7	49.2

**Pressure
in bar****Table 15:** *Pressure-temperature values PN100*

Seat ring	Temperature in °C																
	-60	-10	0	20	40	60	80	100	120	140	160	180	200	250	300	350	400
PTFE-50%VA	87.4	87.4	87.4	81.7	76.0	70.3	64.6	58.9	53.2	47.5	41.8	36.1	30.4	-	-	-	-
PTFE-25%coal	92.0	92.0	92.0	86.0	80.0	74.0	68.0	62.0	56.0	50.0	44.0	38.0	32.0	-	-	-	-
PEEK	100.0	100.0	100.0	100.0	94.0	88.0	82.0	76.0	70.0	64.0	58.0	52.0	46.0	30.0	-	-	-
metallic	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.4	92.7	89.5	85.5	84.2	79.5	74.2	71.4	68.5

**Pressure
in bar**

Table 16: *Pressure-temperature values PN160*

	Temperature in °C																
Seat ring	-60	-10	0	20	40	60	80	100	120	140	160	180	200	250	300	350	400
PTFE-50%VA	87.4	87.4	87.4	81.7	76.0	70.3	64.6	58.9	53.2	47.5	41.8	36.1	30.4	-	-	-	-
PTFE-25%coal	92.0	92.0	92.0	86.0	80.0	74.0	68.0	62.0	56.0	50.0	44.0	38.0	32.0	-	-	-	-
PEEK	100.0	100.0	100.0	100.0	94.0	88.0	82.0	76.0	70.0	64.0	58.0	52.0	46.0	30.0	-	-	-
metallic	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	161.2	162.5	155.4	152.3	149.3	141.7	133.3	128.7	124.9
Pressure in bar																	

Pres-
sure
in bar

Table 17: *Pressure-temperature values PN250*

	Temperature in °C																
Seat ring	-60	-10	0	20	40	60	80	100	120	140	160	180	200	250	300	350	400
PTFE-50%VA	87.4	87.4	87.4	81.7	76.0	70.3	64.6	58.9	53.2	47.5	41.8	36.1	30.4	-	-	-	-
PTFE-25%coal	92.0	92.0	92.0	86.0	80.0	74.0	68.0	62.0	56.0	50.0	44.0	38.0	32.0	-	-	-	-
PEEK	100.0	100.0	100.0	100.0	94.0	88.0	82.0	76.0	70.0	64.0	58.0	52.0	46.0	30.0	-	-	-
metallic	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0	248.1	246.2	242.8	238.0	233.3	221.4	208.3	201.1	195.2

Pres-
sure
in bar

Table 18: *Pressure-temperature values PN320*

	Temperature in °C																
Seat ring	-60	-10	0	20	40	60	80	100	120	140	160	180	200	250	300	350	400
PTFE-50%VA	87.4	87.4	87.4	81.7	76.0	70.3	64.6	58.9	53.2	47.5	41.8	36.1	30.4	-	-	-	-
PTFE-25%coal	92.0	92.0	92.0	86.0	80.0	74.0	68.0	62.0	53.2	50.0	44.0	38.0	32.0	-	-	-	-
PEEK	100.0	100.0	100.0	100.0	94.0	88.0	82.0	76.0	70.0	64.0	58.0	52.0	46.0	30.0	-	-	-
metallic	320.0	320.0	320.0	320.0	320.0	320.0	320.0	320.0	317.6	315.1	310.8	304.7	298.6	283.4	266.6	257.5	249.9

Pres-
sure
in bar

Pressure-temperature table for 3-piece high-pressure ball valves cl600-cl1500

The area of application is determined by the pressure-temperature table.
Process data and the process medium can affect the values in the table.

Body material: A182 F316Ti (ASME B16.34 / ASME B16.5)

Nominal size: NPS1/2 - NPS4

Table 19: Pressure-temperature values cl600

	Temperature in °C																	Pres- sure in bar
Seat ring	-60	-10	0	20	40	60	80	100	120	140	160	180	200	250	300	350	400	
PTFE-50%VA	87.4	87.4	87.4	81.7	76.0	70.3	64.6	58.9	53.2	47.5	41.8	36.1	30.4	-	-	-	-	
PTFE-25%coal	92.0	92.0	92.0	86.0	80.0	74.0	68.0	62.0	53.2	50.0	44.0	38.0	32.0	-	-	-	-	
PEEK	99.3	99.3	99.3	99.3	94.0	88.0	82.0	76.0	70.0	64.0	58.0	52.0	46.0	30.0	-	-	-	
metallic	99.3	99.3	99.3	99.3	98.5	93.8	89.1	84.4	81.4	78.5	75.9	73.6	71.3	66.8	63.2	60.7	58.9	

Table 20: Pressure-temperature values cl900

	Temperature in °C																	Pres- sure in bar
Seat ring	-60	-10	0	20	40	60	80	100	120	140	160	180	200	250	300	350	400	
PTFE-50%VA	87.4	87.4	87.4	81.7	76.0	70.3	64.6	58.9	53.2	47.5	41.8	36.1	30.4	-	-	-	-	
PTFE-25%coal	92.0	92.0	92.0	86.0	80.0	74.0	68.0	62.0	53.2	50.0	44.0	38.0	32.0	-	-	-	-	
PEEK	100.0	100.0	100.0	100.0	94.0	88.0	82.0	76.0	70.0	64.0	58.0	52.0	46.0	30.0	-	-	-	
metallic	148.9	148.9	148.9	148.9	147.6	140.8	133.7	126.6	122.2	117.7	113.8	110.4	107.0	100.1	94.9	91.0	88.3	

Table 21: Pressure-temperature values cl1500

	Temperature in °C																	Pres- sure in bar
Seat ring	-60	-10	0	20	40	60	80	100	120	140	160	180	200	250	300	350	400	
PTFE-50%VA	87.4	87.4	87.4	81.7	76.0	70.3	64.6	58.9	53.2	47.5	41.8	36.1	30.4	-	-	-	-	
PTFE-25%coal	92.0	92.0	92.0	86.0	80.0	74.0	68.0	62.0	53.2	50.0	44.0	38.0	32.0	-	-	-	-	
PEEK	100.0	100.0	100.0	100.0	94.0	88.0	82.0	76.0	70.0	64.0	58.0	52.0	46.0	30.0	-	-	-	
metallic	248.2	248.2	248.2	248.2	246.9	234.7	222.8	211.0	203.6	196.2	189.7	184.0	178.3	166.9	158.1	151.6	147.2	

Info

- The pressure temperature gradations of the pressure-bearing body parts comply with DIN EN 12516-1 and ASME B16.34 standards. If the values specified there are exceeded, the individual pressure limits can be requested.
- The specified pressure-temperature tables refer to the specified sealing systems and always depend on the ball valve configuration.
- Further information on the application limits for sealing systems made from other plastics or sealing systems that are suitable for specific application conditions can be requested.

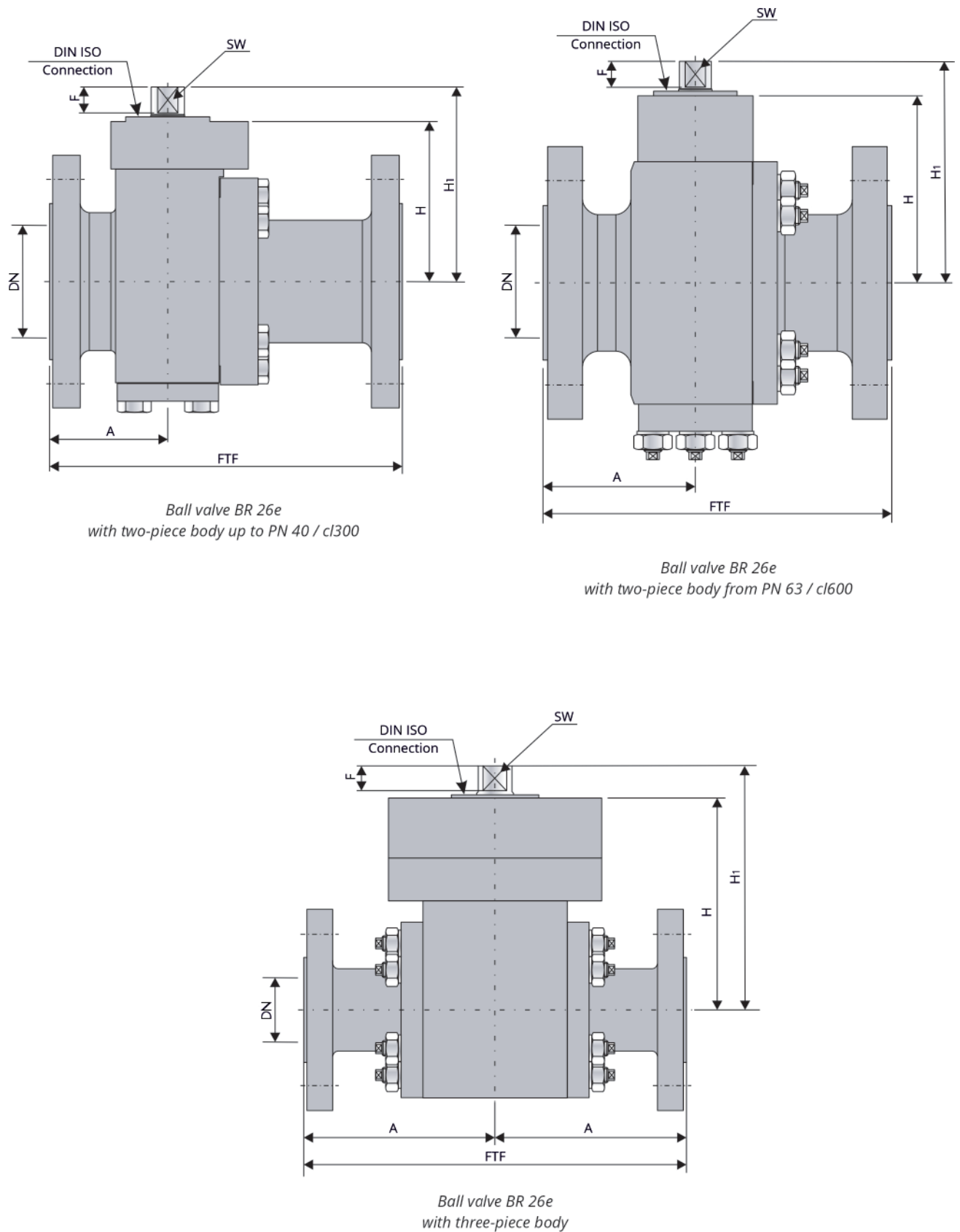


Fig. 7: Dimensional drawing

Table 22: Dimensions in mm and weights in kg of the BR 26e ball valve with two-piece body up to PN 40 / cl300

Nominal size	DN 25	DN 50	DN 80	DN 100	DN 125	DN 150	DN 200
	NPS1	NPS2	NPS3	NPS4	NPS5	NPS6	NPS8
FTF R1	160	230	310	350	400	480	600
FTF R27/15	-	150	180	190	325	350	400
FTF cl150	165	216	283	305	356	394	457
FTF cl300	165	216	283	305	381	403	502
A	70	77	126	135	128	165	170
H	70	105	130	144	171	212	251
H ₁	89	127	154	170	202	246	289
F	14	17	19	19	24	30	30
SW	14	17	19	19	24	30	30
DIN ISO	F05	F07	F10	F10	F12	F14	F14
Weight R1	8,8	23	50	70	106	139	190
Weight R27/15	-	24	39	57	99	130	158
Weight cl150	9,1	21	51	71	102	132	159
Weight cl300	9,2	24	53	75	113	146	198

Table 23: Dimensions in mm and weights in kg of the BR 26e ball valve with two-piece body from PN 63 / cl600

Nominal size	DN 40	DN 50	DN 80	DN 100	DN 150
	NPS1½	NPS2	NPS3	NPS4	NPS6
FTF R1	-	230	310	350	450 (R28)
FTF R2	260	300	380	430	-
FTF cl600	241	292	356	432	559
FTF cl900	305	368	381	457	-
A	115	101	133	135	189
H	124	124	162	144	249
H ₁	146	146	187	169	287
F	17	17	19	19	30
SW	17	17	19	19	30
DIN ISO	F07	F07	F10	F10	F14
Weight R1 / R28	-	36	70	120	208
Weight R2	33	39	75	-	-
Weight cl600	30	36	67	123	237
Weight cl900	37	45	78	-	-

Table 24: Dimensions in mm and weights in kg of the BR 26e ball valve with three-piece body

Nominal size	DN 15	DN 25		DN 40	DN 50	DN 80	DN 100
	NPS½	NPS1		NPS1½	NPS2	NPS3	NPS4
FTF PN 63 / PN 100	210	230	-	260	370	450	550
FTF PN 160	210	230	-	260	400	450	550
FTF PN 250	260	-	260	300	400	450	600
FTF cl600 RF	216	254	-	305	451	470	546
FTF cl900 RF	261	308	-	305	451	470	546
FTF cl1500 RF	261	-	308	305	451	470	546
A	FTF / 2	FTF / 2	FTF / 2	FTF / 2	FTF / 2	FTF / 2	FTF / 2
H	103	106	114	131	205	241	241
H ₁	126	128	138	154	236	284	284
F	17	17	19	19	24	36	36
SW	17	17	19	19	24	36	36
DIN ISO	F07	F07	F10	F10	F12	F16	F16
Weight PN 63 / 100	16	22	-	38	84	162	243
Weight PN 160	16	22	-	38	85	163	243
Weight PN 250	17	-	21	42	89	174	264
Weight cl600	16	21	-	40	95	165	246
Weight cl900	17	25	-	41	97	170	254
Weight cl1500	17	-	24	41	98	181	267

Table 25: Max. permissible torque, required torques, and breakaway torques for M-PTFE/PTFE-sealed two-piece ball valves PN40

Differential pressure Δp in bar		0	10	16	25	40	
Nominal size		Mdmax.in Nm	MdI in Nm				
DN	NPS						
25	1	325	10	15	17	21	28
50	2	654	45	53	58	65	77
80	3	800	80	99	110	127	155
100	4	800	140	172	191	220	268
125	5	2310	280	344	382	440	536
150	6	3174	330	423	479	563	702
200	8	4093	460	665	788	973	1280

The specified breakaway torques are average values measured at the corresponding differential pressures with air at 20 °C. Operating temperature, medium, and prolonged use can change the breakaway torque and torque. The design and use of other sealing systems also influence the torque.

Torque specifications for other ball valve models are available on request.

Selection and design of the ball valve

1. Determination of the required nominal size
2. Select the fitting in accordance with Table 2, Table 3, and the pressure-temperature diagram.
3. Selection of the rotary actuator using Table 4
4. Selection of additional equipment

Order text

- Ball valve type BR26e
- for temperature....
- for pressure....
- Medium....
- Intended switching frequency....
- Optional: Ball bearing
- DIN or ANSI design
- DN / NPS..... - PN / CL.....
- Type of connection to the pipeline
- Body material
- Sealing material
- Optional special equipment
- Actuator make:
- Actuator mounting position
- Set pressure... bar
- Safety position
- Limit signal transmitter make
- Solenoid valve make
- Optional position transmitter make
- Other



Order-related details and designs that deviate from this technical description can be found in the corresponding order confirmation, if necessary.

Related documents

Related installation and operating instructions ► EB 26e
Related safety manual ► SH 26
For pneumatic rotary actuators ► TB 31a