

Stainless steel Series 26d Ball Valve ANSI - Type

Application:

Tight-closing ball valve of stainless steel for aggressive media, especially with high process demand in chemical plants:

- nominal sizes 1/2" to 3",
- nominal pressures ANSI 150 and 300 lbs,
- temperatures 14°F to 392°F (-10°C to 200°C).

The ball valve is also available in DN 15 up to DN 150 acc. to DIN. Details on request.

The control valve consists of a stainless steel ball valve and either a pneumatic quarter-turn actuator or hand-operated actuator.

The valve is designed according to the modular-assembly principle and can be combined with various options and has the following features:

- Seating with flowing ball.
- "Open-Close" - operation with particularly low leak rate "bubble-tight version".
- Exchangeable bore seal in TFM.
- Stem sealed by a spring-loaded PTFE V-ring packing.
- Blowout-proof stem.
- Fire-safe version with test certificate according to British Standard B.S. 6755 Part 2.
- Face to face dimensions acc. to ASME B16.10-2000
- Connecting flange for actuators acc. to DIN ISO 5211.

Versions:

Ball valve Series 26d alternatively in the following designs:

- Ball valve with hand-lever.
- Ball valve with hand-operated actuator.
- Ball valve with pneumatic quarter-turn actuator.
(for details see respective data sheet).

Special designs:

- Seating live-loaded at one side.
- Safety stem seal.
- Flange versions acc. to DIN EN 1092.
- Control ball valve due to characteristic seating



Fig. 1 - Series 26d Ball Valve with Series 31a pneumatic quarter-turn actuator

ANSI - Ball Valve Series 26d

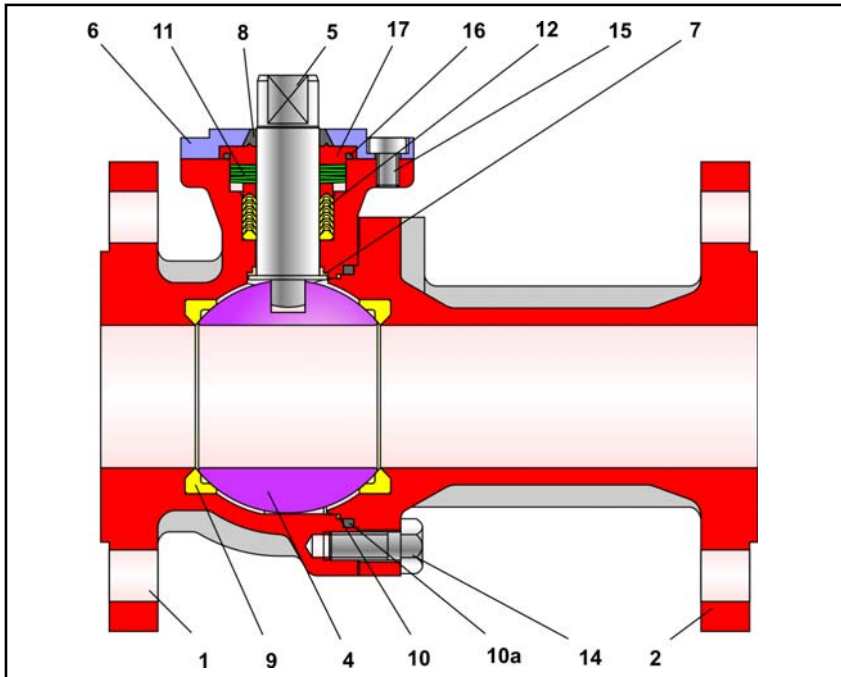


Fig. 2 - Sectional diagram of Series 26d Ball Valve

Pos.	Description	Pos.	Description
1	Main body	10	Body sealing
2	Side body	10a	Graphite - ring
4	Ball	11	Set of Belleville washers
5	Shaft	12	V-ring packing
6	Packing flange	14	Screw
7	Bearing bushing	15	Screw
8	Ring	16	Ring
9	Set of seat rings	17	Bushing

Table 1 - List of parts

Additional equipment and add-on pieces:

For the control valves, the following accessories are available either individually or in combination:

- Extension to stem (100mm, standard).
- Pneumatic and electric quarter-turn actuators.
- Positioner (with optional control ball valve).
- Limit switches.
- Solenoid valves.
- Filter regulator.

Further accessories are available on request for customer specifications.

Technical data:

Nominal size	1/2" to 3"
Nominal pressure	ANSI 150 lbs / 300 lbs
Temperature range	14°F to 392°F (-10°C to 200°C)
Ball sealing	TFM (PTFE)
Leakage rate	Class VI acc. to ANSI / FCI 70-2-1976 (Leakage rate A acc. to DIN EN 12266-1, P12)
Flanges	ASME B16.34 and B16.5
Packing	Live-loaded PTFE - V-ring packing

Table 2 - Technical data

Advantages of the cup spring live-loaded sealing system:

- **at flowing Ball and live-loaded sailing system**
 - maintenance-free and self-adjustable,
 - highest level of tightness, even under extreme pressure and temperature fluctuations,
 - longer service life,
- **at live-loaded sailing system**
 - two active seatrings,
 - reduced increase in torque at increasing temperatures, therefore requiring smaller actuators for automation,
- **all in all:
extremely economic!**

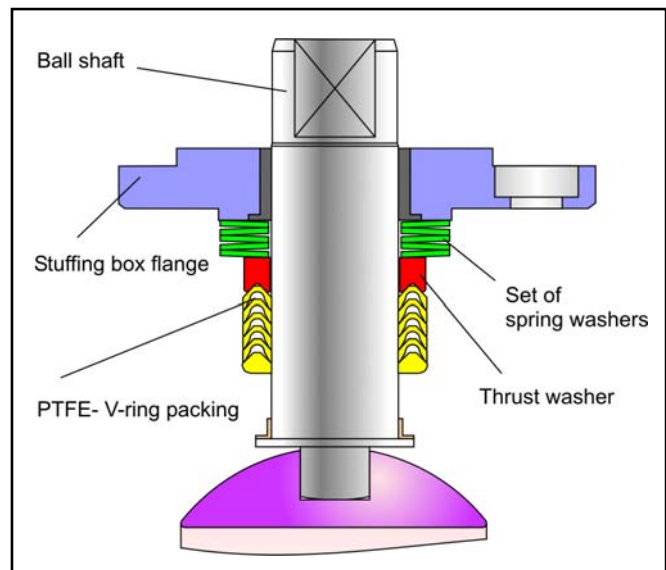


Fig. 3 - Cup spring live-loaded packing

Materials:

Main body	A351 CF8M
Side body	A351 CF8M
Ball	1.4408
Shaft	1.4462
Seat rings	TFM (PTFE)
V-ring packing	PTFE - V-ring-packing loaded by Belleville washers (1.8159)
upper Bearing bushing	PTFE / glas
lower Bearing bushing	PTFE / carbon
Body sealing	PTFE / graphite

Table 3 - Materials

Principle of operation:

The ball valves of the series 26d permit full flow through the valve in either direction.

The ball (4) with its cylindrical passage rotates around the middle axis.
The opening angle of the ball determines the flow through the free area between the body (1) and passage.

The stem is externally equipped with a hand-lever (18).
Optionally, a pneumatic actuator or gear operator can be fitted.

The sealing of the ball (4) is provided by exchangeable seat rings (9).

The ball stem is sealed by a PTFE V-ring-packing (12).
The live-loading is carried out by cup springs positioned above the packing.



Note:

The ball valve series 26d also can be used for controlling applications. Please pay attention to the technical data sheet <DB 20a-kd>.



Note:

Please, pay attention to the useability acc. to the ATEX 94/9/EG in corresponsance to the maintenance sheet before using the ball valve in hazardous area!



Failure position:

In dependance of mounting position of the actuator there are two failure positions, wich take place by pressure relieving or on failure of air supply:

- **Ball valve with actuator “ on failure closing “**

on failure of air supply the ball valve closes. The opening of the ball valve accures on rising of air supply against the force of the springs.

- **Ball valve with actuator “ on failure opening “**

on failure of air supply the ball valve opens. The closing of the ball valve accures on rising of air supply against the force of the springs.

Pressure-Temperature diagram:

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

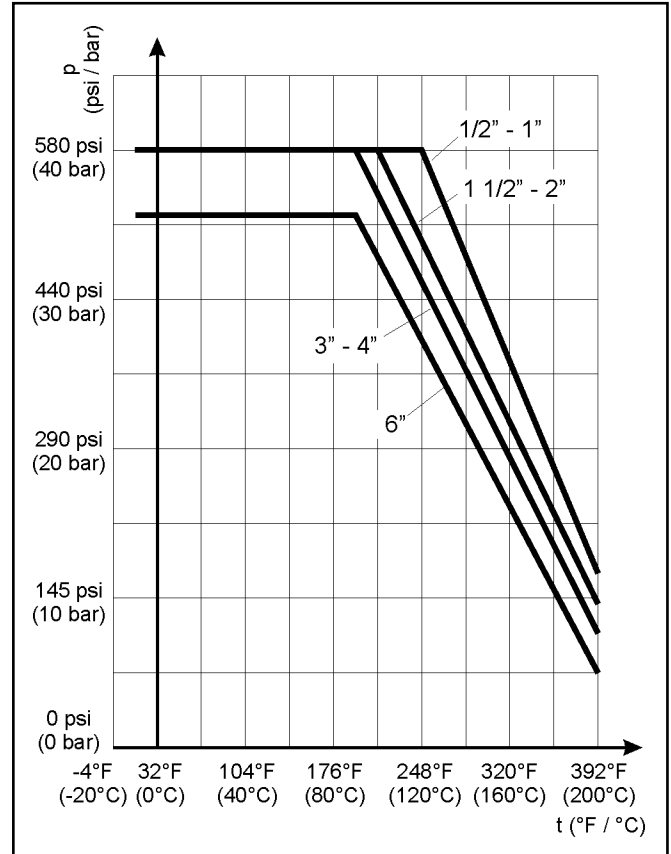


Fig. 4 - Pressure-temperature diagram

Torque and breakaway torques:

		Differential pressure						
		Δp in psi	0	44	87	145	230	580
		Δp in bar	0	3	6	10	16	40
DN	Mdmax. in Nm	Md in Nm	Mdl in Nm					
1/2"	60	3	5	5	5	8	9	11
1"	240	5	10	10	10	14	18	28
1 1/2"	450	10	20	20	20	26	35	52
2"	450	15	30	30	33	36	42	73
3"	750	25	60	60	66	72	86	144

Table 4 - max. permissible torque, required torque and breakaway torque

The breakaway torques specified are average values which were measured with air at 20°C with the corresponding differential pressures.

Operating temperature, process medium and long operating times may affect the permissible torques and breakaway torques considerably.

The listed max. permissible operating torques are valid for the standard materials in table 3.

Dimensions and weights:

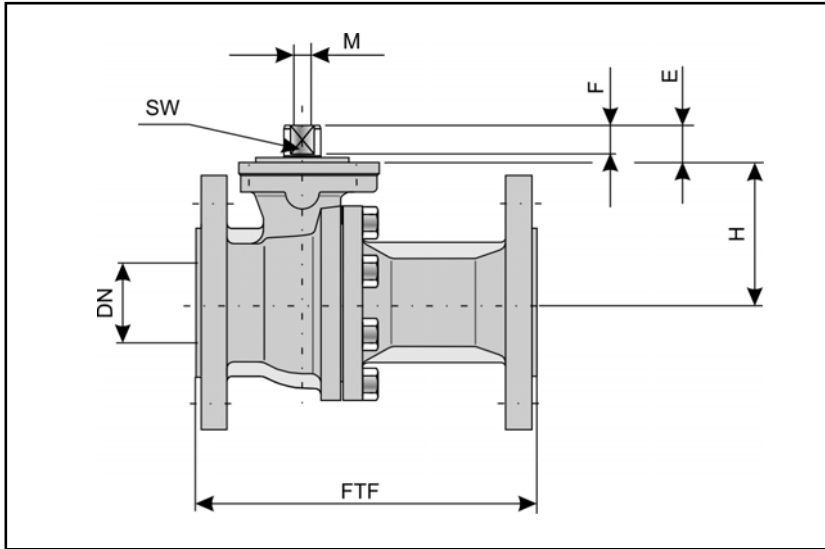


Fig. - 5 Dimensional drawing

DN	1/2"		1"		1 1/2"		2"		3"	
ANSI Class	150	300	150	300	150	300	150	300	150	300
FTF	108	140	127	165	165	190	178	216	203	283
E	13		19		22		22		26	
F	8		14		17		17		19	
H	70		83		108		116		180	
M	M5		M6		M6		M6		M8	
SW	9		14		17		17		19	
DIN / ISO Connection	F03		F05		F07		F07		F10	
Weight in kg	2.5	3	4	5	8	9	9	11	20	25

Table 5 - Dimensions in mm and weights in kg

Selection and sizing of the ball valve:

1. Calculation of the required nominal diameter.
2. Selection of the valve in acc. with table 2, table 3 and the Pressure-Temperature-diagram.
3. Selection of the appropriate actuator with the assistance of table 4.
4. Additional equipment.

Ordering text:

Ball valve in stainless steel Series 26d,
DN / PN ,
live-loaded sealing system or
with floating ball,
optional special version

Actuator (brand name):

Supply pressure: bar,

fail-safe position:

Limit switch (brand name):

Solenoid valve (brand name): . .

Positioner:

Others:



Note: All relevant details regarding the version ordered, which deviate from the specified version in this technical description data, can be taken if required, from the corresponding order confirm.

Please contact our technical sales team for your special requirements

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Specifications subject to change without notice.