

Primary characteristics

Globe check valve for horizontal installation. These valves are available in carbon steel and alloy steel. The main characteristics of this valve type include:

- Direct welded sealing surfaces
- Stem made of stainless steel
- Packing of graphite

Design

The valve has external threaded rising stem and hand wheel. This valve type has bolted connection between body and bonnet. The disc is stemguided and spring-loaded. The seats are direct welded and are available in Cr or Stellite®.

Applications

The valves in this data sheet are suitable for clean media like air, steam, condensate or other media which do not damage the included parts.

CE-marked: according to Pressure Equipment Directive PED 97/23/EG category III.



Capacity (Table 1)

DN	Resistance factor, Z	Kv value
15	3,7	4,5
20	6,0	6
25	9,0	7
32	6,5	15
40	5,0	27
50	6,5	38

The specified resistance factors are applicable when the valves are fully opened. The Kv-values are specified in m³/h at a pressure drop of 1 bar over the valve. The relation between Kv and Cv is as follows:
Kv=0,86 x Cv Cv=1,16 x Kv

Technical specification	
Range of sizes:	DN15 - DN50
Material:	Carbon steel, Alloy steel
Pressure ratings:	PN25 - PN160
Temperature range:	-10 - 530°C see table 2
Connections:	Flanges according to EN1092-1 ¹⁾ Welded ends according to EN12627
Face-to-face:	Flanges according to EN558-1 Welded ends according to EN12982
Test pressure:	According to EN12266 1,5 x PN open valve 1,1 x PN closed valve

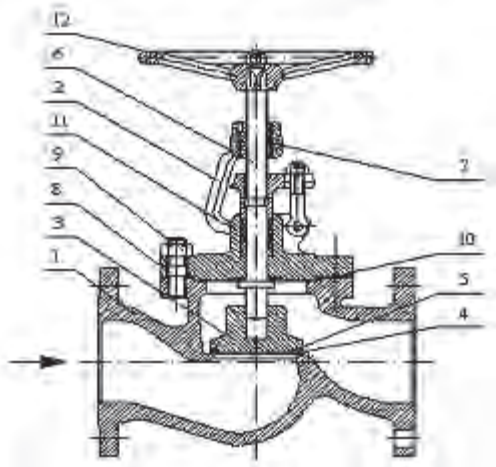
¹⁾ PN160 according to DIN2501, DIN2638, DIN2548

Working pressure and temperatures (Table 2) for material group 3E0 and 5E0 according to EN1092-1.

Body material	Pressure (bar) / temperature (°C)													
	PN	RT	50	100	150	200	250	300	350	400	450	500	520	530
Carbon steel 3E0	25/40	40,0	39,0	37,3	34,7	30,2	28,4	25,8	24,0	23,1				
Alloy steel 5E0		40,0	40,0	40,0	40,0	40,0	39,1	36,4	33,8	32,0	30,2	24,4	16,7	13,5
Carbon steel 3E0	63	63,0	61,4	58,8	54,6	47,6	44,8	40,6	37,8	36,4				
Alloy steel 5E0		63,0	63,0	63,0	63,0	63,0	61,6	57,4	53,2	50,4	47,6	38,4	26,3	21,8
Carbon steel 3E0	100	100,0	97,5	93,3	86,7	75,6	71,1	64,4	60,0	57,8				
Alloy steel 5E0		100,0	100,0	100,0	100,0	100,0	97,8	91,1	84,4	80,0	75,5	60,9	41,8	34,7
Carbon steel 3E0	160*	156,0	148,8	136,4	126,7	113,7	104,0	94,2	87,7	84,4				
Alloy steel 5E0		163,3	163,3	162,7	158,5	149,4	143,0	133,2	123,4	115,5	106,7	89,1	67,8	56,3

* Calculated according to EN 12516-1, annex F

Figure 1



Material specification (Table 3)

Item No.	Part	Dim	Carbon steel acc. 3E0	Alloy steel acc. 5E0
			-10°C to 400°C**	-10°C to 530°C
1	Body	DN15-25	1.0460 (3E0)	1.7335 (5E0)
		DN32-50	1.0619 (3E0)	1.7357 (5E0)
2	Bonnet	DN15-25	1.0460 (3E0)	1.7335 (5E0)
		DN32-50	1.0619 (3E0)	1.7357 (5E0)
3	Disc	DN15-50	1.4021	1.7335
4	Sealing surface		13%Cr / Stellite®	Stellite®
5	Sealing surface disc	DN15-50	1.4021 tempered / Stellite®	Stellite®
6	Stem		min 13% Cr	
7	Stem nut		2.0940 (or 1.1191)	
8	Screw		1.7225	1.7709
9	Nut		1.1191	1.7709
10*	Bonnet gasket		reinforced graphite	
11*	Packing		graphite	
12	Hand wheel		0.6025	

*Recommended sparepart

**over 350°C is Stellite® recommended

Figure 2

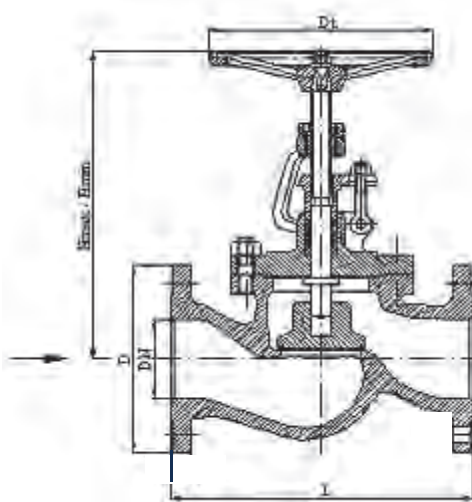


Figure 3

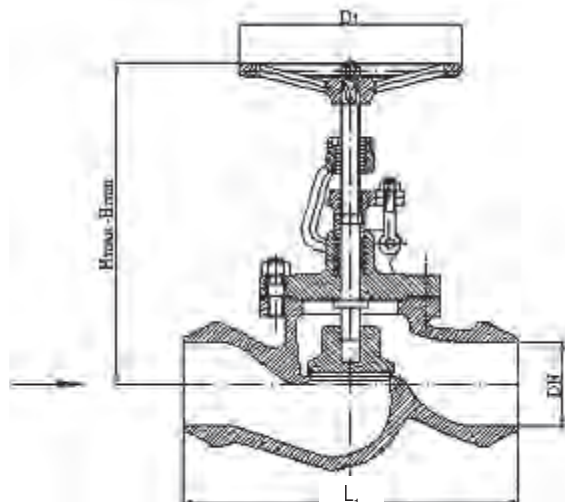
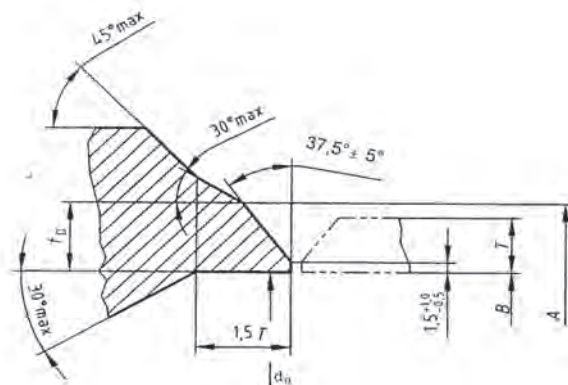


Figure 4



$t_b \leq T \times 1,5$ according to EN12627:1999

PN25/40 (Table 4)

DN	Flanged			Welded ends				H min	H max	Dt
	D mm	L mm	Mass kg	L ₁ mm	Mass kg	A mm	d ₀ mm			
15	95	130	4	130	2,3	22	16	235	220	120
20	105	150	4,5	130	2,5	28	21,1	235	220	120
25	115	160	5,5	130	3	35	27,2	235	220	120
32	140	180	8,5	160	5	44	36,2	315	295	160
40	150	200	11,5	180	7,5	50	42,2	315	295	160
50	165	230	14,5	210	9,5	62	53,3	324	295	160

PN63 (Table 5)

DN	Flanged			Welded ends				H min	H max	Dt
	D mm	L mm	Mass kg	L ₁ mm	Mass kg	A mm	d ₀ mm			
15-25	See PN160							220	235	160
32	155	260	17	180	11,2	44	30	295	315	200
40	170	260	17,5	210	12	50	41,3	295	315	200
50	180	300	32	250	20	62	53,3	334	370	250

PN100 (Table 6)

DN	Flanged			Welded ends				H min	H max	Dt
	D mm	L mm	Mass kg	L ₁ mm	Mass kg	A mm	d ₀ mm			
15-25	See PN160							220	235	160
32	155	260	17	See PN160				295	315	200
40	170	260	17,5	See PN160				295	315	200
50	180	300	32,5	See PN160				334	370	250

PN160 (Table 7)

DN	Flanged			Welded ends				H min	H max	Dt
	D mm	L mm	Mass kg	L ₁ mm	Mass kg	A mm	D ₀ mm			
15	105	210	6,8	150	4,4	22	16	220	235	160
20	130	230	8,5	150	4,6	28	20,2	220	235	160
25	140	230	10	160	4,8	35	26,3	220	235	160
32	155	260	17	180	11,2	44	30	295	315	200
40	170	260	18	210	12	50	39,2	295	315	250
50	195	300	33,6	250	20	62	50	334	370	250

Product code

Example

Code 83 7 6 9 0 - 0015
 1 2 3 4 5 6

1. Valve type

83 Globe stop check valve

2. Material

6 Body in carbon steel * (DN32-50)
 7 Forged steel ** (DN15-25)

3. Pressure class

6 PN25/40
 7 PN63 Flanged and welded ends
 DN15-25 choose PN160,
 8 PN100 Flanged DN15-25 choose
 PN160
 Welded DN15-50 choose
 PN160
 9 PN160

4. Generation

9 Generation No.

5. Version

		Seat mtr.	Body mtr.
0=	Flanged	13Cr	3E0
1=	Welded ends	13Cr	3E0
4=	Flanged	Stellite□	3E0
5=	Welded ends	Stellite□	3E0
8=	Flanged	Stellite□	5E0
9=	Welded ends	Stellite□	5E0

6. Dimension

Dimension	DN
0015	15
0020	20
0025	25
0032	32
0040	40
0050	50

* 3E0= EN 1.0619 (carbon steel)
 5E0= EN 1.7357 (alloy steel)

** 3E0= EN 1.0460 (carbon steel)
 5E0= EN 1.7335 (alloy steel)

