

Three-piece ball valve featuring a unique design for easy and fast maintenance.

These products have been designed, manufactured and tested under the supervision of an ISO 9001-2000 certified Quality Assurance system complying with:

- module H (categories I, II and III) of annex 3 of European Directive 97/23/EC concerning pressure equipment,
- module H (categories 1, 2) of European Directive 1999/36/EC concerning transportable pressure equipment;

and ensuring the products meet the safety and health essential requirements for the design and manufacturing of equipment intended for use in potentially explosive atmospheres according to the ATEX Directive 94/9/EC.

Features

- Forged body and connectors.
- Designed to international and European standards.
- Suitable for ON-OFF and control service.
- ISO 5211 top plate flange allows the mounting of 1/4 turn actuators without removing the valve body.
- Antistatic device to ISO 7121 and BS-5351.
- Guided blow-out proof stem.
- Fully adjustable packing gland.
- Fugitive emission free packing-TA-LUFT certified available upon request.
- Tightness to ISO 5208: Cat. A bubble tight.
- Standard DIN 50049-3.1.B certificate available.
- Modular "V16 SYSTEM" for check valve, strainer, sight-glass.
- A wide range of seating materials available. (PTFE, TFM, PVG, PEEK, etc.).
- Large range of options and special applications (3-way valves, tank bottom valve, cryogenic application, dead volume free design, very high temperature operation, etc.).
- Various agreements and certifications.



Applications

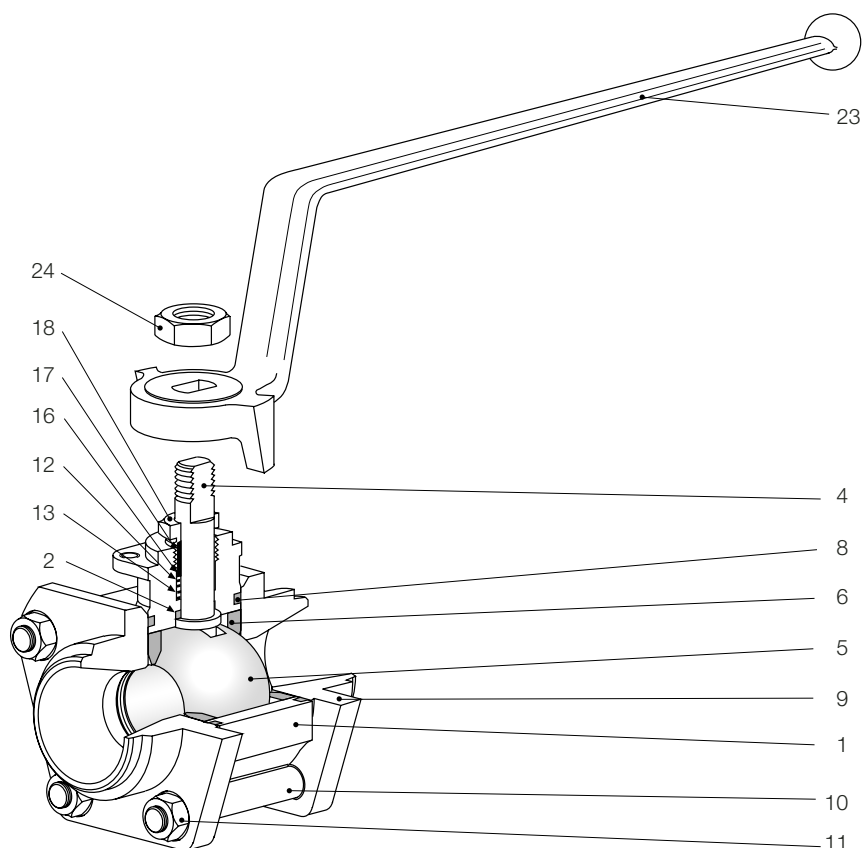
- Perfect valve for heavy duty working conditions in chemical corrosive fluids.
- Liquids, steam, gas and oil for process and utilities.
- Whenever safety and reliability are important issues.

Technical data

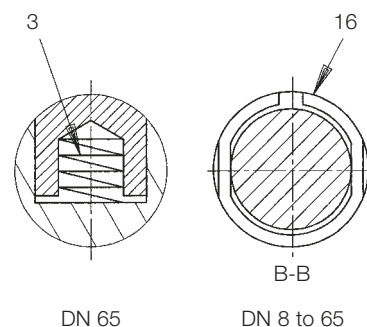
Sizes (mm)	: 8 - 200
Temperature (°C)	: -60 to +225
Pressure (bar)	: PN10 - PN100
Connections	: butt weld ends, socket weld ends, threaded ends BSPP and NPT, screwed on flanges face to face dimension to ISO 5752 series 1 and EN 558-1, special connections on request.

Ball Valve Type V16

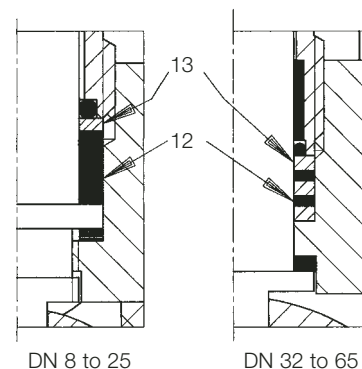
materials reduced bore / DN 8 to DN 65



Antistatic device



Packing and anti blow-out stem



Parts list

Item	Qty	Description	Material	
1	1	Body	ASTM A 182-F 316L (forged)	
2	1	Friction washer	PTFE	
3	1	Antistatic spring DN 65	AISI 316	
4	1	Stem	AISI 316L	
5	1	Ball	AISI 316L	
6	2	Seat DN 08 to DN 50 DN 65	PTFE/Glass PTFE	*1
7	2	Seat support DN 65	AISI 316L	
8	2	Body gasket	PTFE	*1
9	2	Flanged end connector		
9A	2	End connector	ASTM A 182-F 316L (forged)	
9B	2	Flange support	AISI 316L	
10	4	Tie bolt	A 2 - 70 ISO 3506	
11	8	Nut	AISI 304	
12	1/2	Soft gland washer	PTFE	*1 *2
13	1/3	Metallic gland washer	AISI 316L	*2
15	2	Gland stud DN 65	AISI 316L	
16	1	Spring wire	AISI 316	
17	1	Gland ring DN 32 to DN 65	PTFE	
18	1	Gland	AISI 316L	
19	2	Gland nut DN 65	AISI 304	
20	1	Stop screw DN 8 to DN 50	AISI 304	
21	1	Travel stop DN 65	AISI 304	
22	2	Stop screw DN 65	AISI 304	
23	1	Lever	Malleable iron	
24	1	Nut	ANSI 304	
25	2	Flange	AFNOR A 37 (forged)	*1

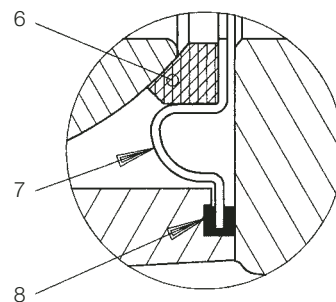
All indicated materials are equivalent standard designations.

* 1) Other materials upon request

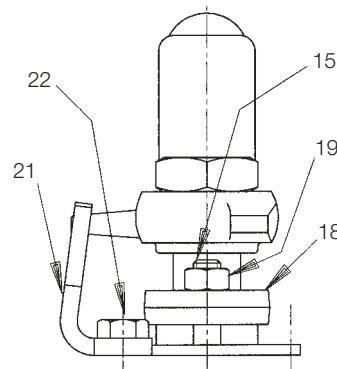
* 2) x/. for DN 08 to DN 25

.y for DN 32 to DN 65

Metal seat support for DN 65

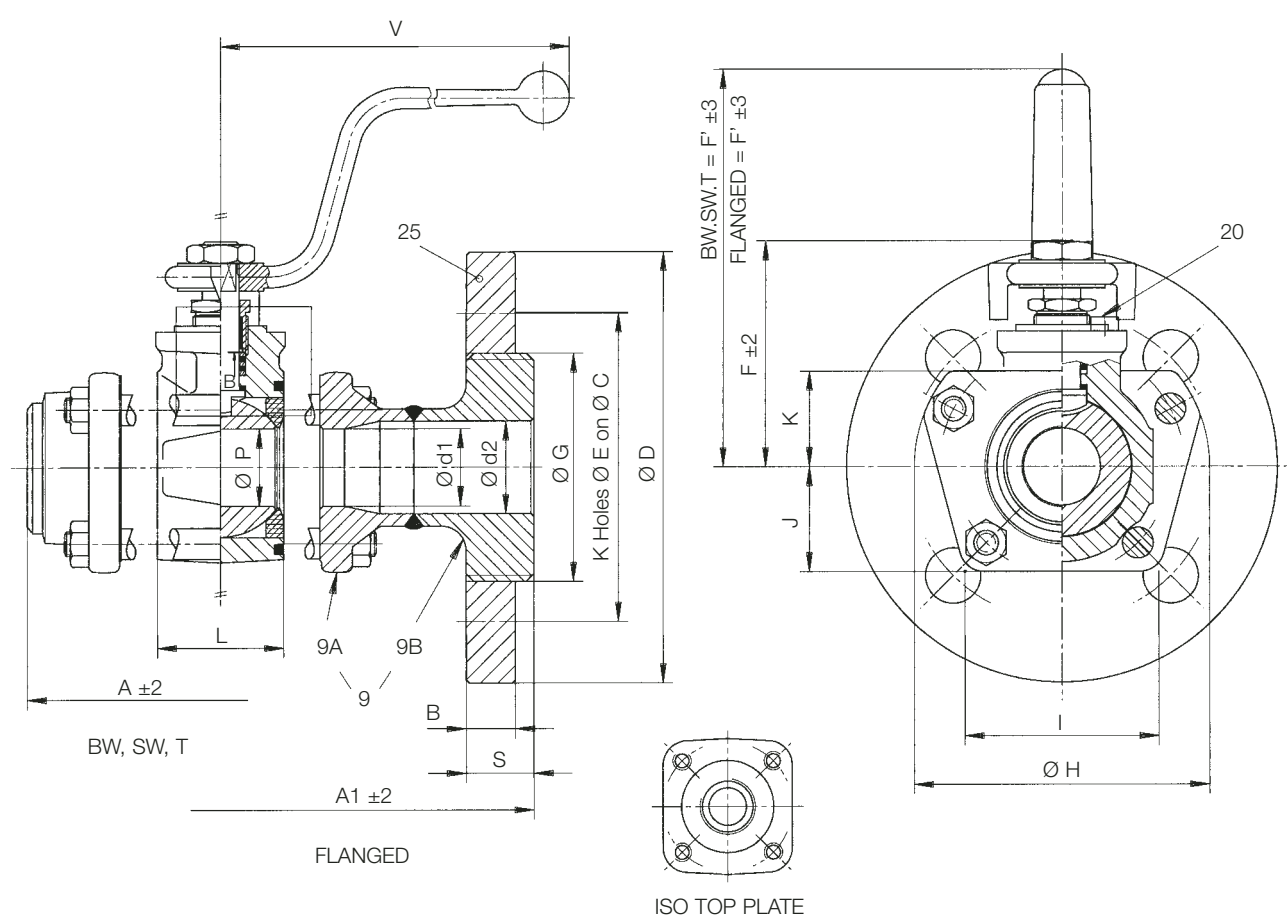


Bolted gland for DN 65



Ball Valve Type V16

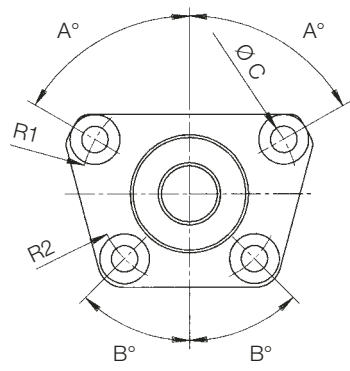
dimensions reduced bore / DN 8 to DN 65



Valve dimensions (mm)

DN	ISO	A	A1	B	C	D	d1	d2	E	F	F'	F''	G	H	I	J	K	L	P	S	V	Weight (Kg)	
																						Flanged	BW
08	F03	65					8			57	77	109		64	38	21.5	18.5	22	11		160		0.7
10/12	F03	65	130	14	60	90	11	11	14	57	77	109	M42x2.5	64	38	21.5	18.5	22	11	18	160	1.8	0.7
15	F03	65	130	14	65	95	11	16	14	57	77	109	M48x2.5	64	38	21.5	18.5	22	11	18	160	2.4	0.7
20	F03	70	150	16	75	105	14	20	14	60	80	112	M58x2.5	73	44	23.5	20.5	25	14	20	160	3.3	0.866
25	F04	85	160	16	85	115	18	25	14	70	123	123	M65x2.5	86	55	30	25.5	31	17	20	210	4.2	1.664
32	F04	100	180	16	100	140	25	30	18	72	127	127	M74x2.5	96	63	34	31	41	25	22	210	6.13	2.2
40	F05	110	200	16	110	150	30	40	18	81	132	132	M85x2.5	111	68	36	34.5	48	30	22	210	7.46	2.93
50	F05	125	230	18	125	165	40	51	18	97	140	140	M95x2.5	131	83	44	42.5	60	40	22	260	8.5	6
65	F07	150	290	18	145	185	50	65	18	119	161	161	M119x2.5	166	102	53	54.5	75	50	22	315	15.2	8.5

Note: Standard carbon steel screwed-on flanges to PN16, Ra 6.3 facing.
 On request: carbon steel screwed-on flanges ANSI 150, ANSI 300, PN 25, PN 40 or stainless steel screwed-on flanges PN 16 to PN 40, ANSI 150 and 300.



V-shaped connectors dimensions

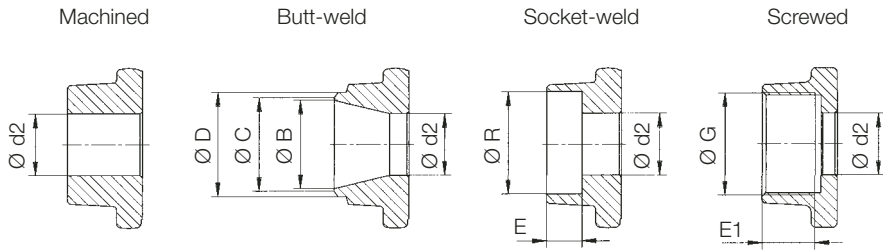
DN	A°	R1	B°	R2	C
8	60	24.7	45	20.2	6.5
10/12	60	24.7	45	20.2	6.5
15	60	24.7	45	20.2	6.5
20	60	27.6	45	23.3	6.5
25	60	35	45	29.5	8.5
32	62	39.9	45	34.9	8.5
40	60	47	45	39	8.5
50	62	54.8	45	47.8	10.5
65	55	71.5	45	58	12.5

The V-shaped connectors feature the easiest and fastest maintenance.

Ball Valve Type V16

end connections and ratings reduced bore / DN 8 to DN 65

End connections SW, T, BW



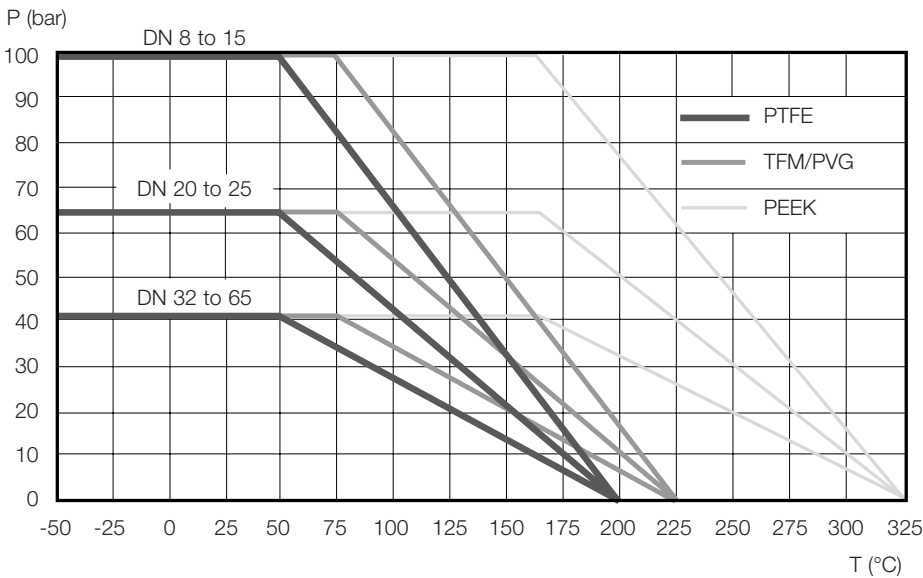
Notes

All the end connections are machined from the basic unmachined forged connectors. This technology allows quick response to the customers demand and a large variety of special connections.

End connections - main dimensions mm

V16 Unmachined		Butt-weld						Socket-Weld						Screwed							
Type	H	U			V			T			W			H		F		BSP		NPT	
DN	d 2	B	C	D	B	C	D	B	C	D	B	C	D	E	R	E	R	G	E 1	G	E 1
8	8							8	10	13.5				9.5	10.2	9.5	13.7	1/4"	11	1/4"	10.5
10	11				10	11	15							9.5	12.2						
12	11				10	11	15	11	13.5	17.2	14	15	18.2	9.5	14.2	9.5	17.5	3/8"	11.5	3/8"	10.5
15	11	14.2	15.2	18.2	15	16	20	16	17	21.3	18.1	19.1	21.3	9.5	18.2	9.5	21.6	1/2"	15	1/2"	13.5
20	14	18.1	19	22.3	20	21	25	21.6	23	26.9	23.7	24.7	26.9	11	23.2	11	27.2	3/4"	16.5	3/4"	14
25	18	23.7	25	28	25	26	30	27.2	30	33.7	30.5	31.5	33.7	12.5	28.2	12.5	34	1"	19	1"	17.5
32	25	30.5	32	35	30	31	35	35.9	39	42.4	39.2	40.2	42.4	14.5	33.4	14.5	42.8	1 1/4"	21.5	1 1/4"	18
40	30	39.2	40.5	43.5	40	41	45	41.8	45	48.3	45.1	46.1	48.3	16	43.5	16	48.8	1 1/2"	21.5	1 1/2"	18.5
50	40	45.1	46.5	49.5	50	51	55	53	56	60.3	57.1	58.1	60.3	17.5	53.5	17.5	60.8	2"	26	2"	19.5
65	50	57.1	58.5	61.5	65	66	70	68.8	72	76.1	72.1	73.1	76.1	19	64.5	19	76.6	2 1/2"	30	2 1/2"	29

Pressure - temperature rating



Standard packing and body gasket

- $T^{\circ} < 200^{\circ}\text{C}$
Packing : PTFE
Gasket : PTFE
- $T^{\circ} \geq 200^{\circ}\text{C}$
Packing : Graphite
Gasket : Stainless steel reinforced PTFE ($\leq 250^{\circ}\text{C}$) or graphite.
- Other packing and gasket materials upon request

Notes

Standards seats:

- 25% glass reinforced PTFE DN 8 to DN 50. PTFE : DN 65.

Optional seats:

- TFM/PVG (carbon reinforced PTFE)
 - PEEK (carbon reinforced)
- Other seat materials (on request):
- PE Cryogenic and nuclear application
 - Expanded graphite - high temperature applications
- Other seat designs (on request):
Pressure relieving seats: TFM and PVG

Flow coefficient Cv/Kv

Welded or screwed ends

DN	8-15	20	25	32	40	50	65
Cv	11	19	25	52	81	166	212
Kv	9	16	22	45	70	143	183

Flanged (to NFE 29-312)

DN	8-15	20	25	32	40	50	65
Cv	10	16	24	61	78	139	228
Kv	8.6	14	21	52	67	120	196

Testing

- All our valves are standard tested according to the Gachot quality assurance manual: 100% for the flanged and threaded valves, 10% for the welded end valves.

Acceptance criteria

NFE-29311 - ISO 5208 - DIN 3230

- Hydrostatic shell test: 1.5 x Pressure rating (ambient temperature).
No visible leakage.
- Air seat test: 6 bar air (air in the valve body).
No bubbles accepted.

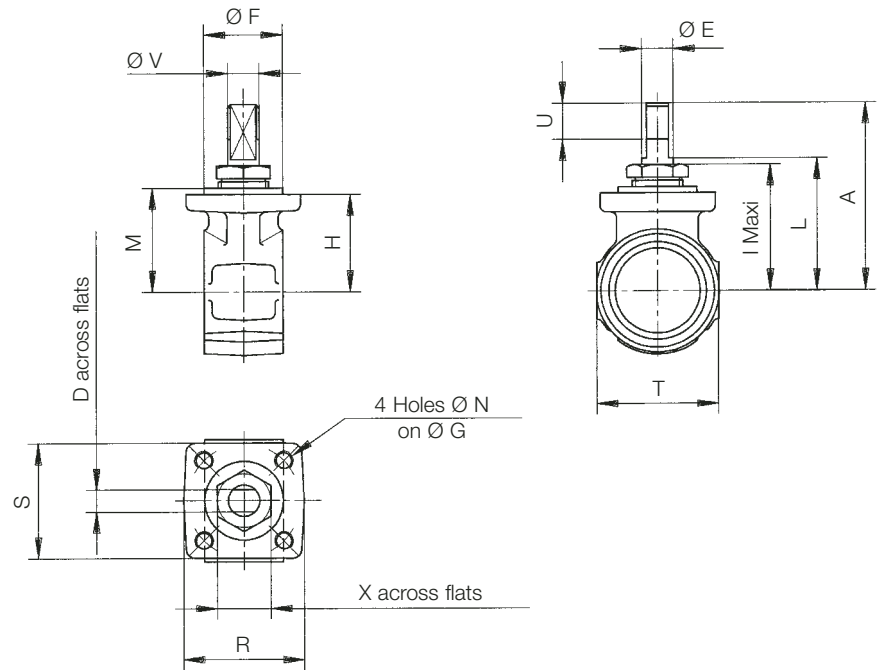
Modular system

Between the same flanges can be mounted:

- V16 check valve
- V16 strainer
- V16 sight glass
- V16 3-way valve (L or T port)

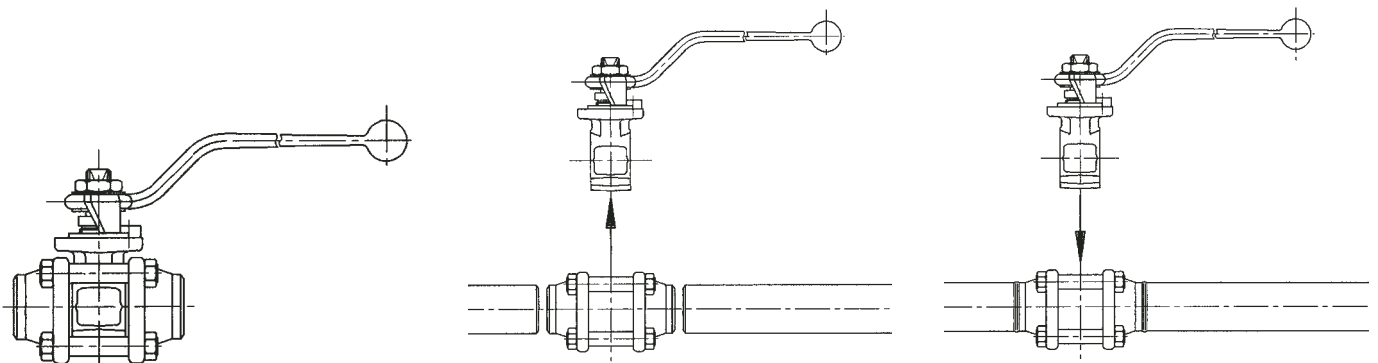
Options

- Heating jacketed V16
- Limit switch kit
- Tank bottom V16 valve
- Cryogenic V16
- Other connections and levers
- Padlocking kit



Dimensions for bracket and coupling

DN	ISO	A	D	E	F	G	H	I	L	M	N	R	S	T	U	V	X
8	F03	57	7	10.1	25	36	28.5	38.5	39.5	30.5	M6	36.5	36.5	32.8	11	M10	17
10/12	F03	57	7	10.1	25	36	28.5	38.5	39.5	30.5	M6	36.5	36.5	32.8	11	M10	17
15	F03	57	7	10.1	25	36	28.5	38.5	39.5	30.5	M6	36.5	36.5	32.8	11	M10	17
20	F03	59.5	7	10.1	25	36	31	41	42	33	M6	36.5	36.5	38.8	11	M10	17
25	F04	69.5	7	12.1	30	42	38.5	48.5	51.5	40.5	M6	42	42	48.6	11	M12	19
32	F04	72	7	12.1	30	42	44	54.5	56	46	M6	42	42	59.2	9	M12	19
40	F05	81	7	13.8	35	50	50.5	62	64	53.5	M6	50	50	69	10	M14	24
50	F05	96.5	7	15.8	35	50	63	75.5	76.5	66	M6	50	50	82.8	12	M16	30
65	F07	118.5	12	19.75	55	70	60.5	81	90.5	63.5	M8	67	71.5	101.5	16	M20	/



Welded connections V16 - Piping installation

- When the ball valve body has been removed (by just loosening the bolt nuts), the flanges set up a rigid cage easy to weld.
- Once the welding is finished, just pull the two flanges apart, insert the body between the flanges and tighten back the nuts.
- The V16 is ready to operate.

Ball Valve Type V16

actuator selection reduced bore / DN 8 to DN 65

Torque values for standard seats/Nm

DN	ΔP	Standard seats			Pressure relieving seats			Stem limiting torque (Nm)
		7	16	25	7	16	25	
08 - 15		8	9	12	8	9	12	45
20		9	10	15	9	10	15	45
25		10	12	16	10	12	16	66
32		14	17	20	14	17	20	66
40		20	25	30	20	25	30	94
50		35	40	45	35	40	45	138
65		40	50	65	35	45	65	309

Torques measured with water 1cPo viscosity at 20°C

Other seats: TFM/Carbon PTFE: +20%; PEEK DN 10 to 40: +40%, DN 50 to 65: +30%

Other packing gland: graphite packing: +10%

Actuation and control

Actuation

- Pneumatic double acting and single acting actuators.
- Electric actuators.
- Electric actuators for special applications.

Control

- Various control devices (spool valves, limit switch box).
- Pneumatic, electro-pneumatic and intelligent positioners.

Selection of pneumatic actuators series 79/D for standard seats

DN	Air supply (bar)	Double Acting Actuator ΔP (bar)				Single Acting Actuator ΔP (bar)			
		7	16	25	50	7	16	25	50
Application I									
10	4	003	003	003	003	006S-2.7	006S-2.7	006S-2.7	012S-2.7
	6	003	003	003	003	003S-5.5	003S-3.4	006S-3.4	006S-5.5
	8	003	003	003	003	003S-5.5	003S-5.5	003S-6.9	006S-5.5
15	4	003	003	003	003	006S-2.7	006S-2.7	006S-2.7	012S-2.7
	6	003	003	003	003	003S-5.5	003S-5.5	006S-3.4	006S-5.5
	8	003	003	003	003	003S-5.5	003S-5.5	003S-6.9	006S-5.5
20	4	003	003	003	006	006S-2.7	006S-2.7	012S-2.7	012S-2.7
	6	003	003	003	003	003S-5.5	003S-5.5	006S-5.5	006S-5.5
	8	003	003	003	003	003S-5.5	003S-5.5	006S-5.5	006S-5.5
25	4	003	003	003	006	006S-2.7	006S-2.7	012S-2.7	012S-3.4
	6	003	003	003	003	003S-5.5	006S-3.4	006S-5.5	012S-3.4
	8	003	003	003	003	003S-5.5	003S-6.9	006S-5.5	006S-6.9
32	4	003	003	006	006	012S-2.7	012S-2.7	012S-3.4	024S-2.7
	6	003	003	003	003	006S-3.4	006S-5.5	006S-5.5	012S-4.1
	8	003	003	003	003	006S-3.4	006S-5.5	006S-5.5	012S-4.1
40	4	006	006	006	012	012S-3.4	012S-2.7	024S-2.7	024S-2.7
	6	003	003	006	006	006S-5.5	012S-2.7	012S-4.1	012S-5.5
	8	003	003	003	006	006S-5.5	006S-6.9	012S-4.1	012S-5.5
50	4	006	012	012	012	024S-2.7	024S-2.7	024S-3.4	036S-3.4
	6	006	006	006	012	012S-5.5	012S-5.5	024S-3.4	024S-4.1
	8	003	006	006	006	012S-5.5	012S-5.5	012S-6.9	024S-4.1
65	4	012	012	012	024	024S-2.7	024S-3.4	036S-3.4	065S-2.7
	6	006	006	012	012	012S-5.5	024S-3.4	024S-4.1	036S-5.5
	8	006	006	006	012	012S-5.5	012S-6.9	024S-4.1	024S-6.9
Application II									
10	4	003	003	003	006	006S-2.7	006S-2.7	012S-2.7	012S-2.7
	6	003	003	003	003	003S-5.5	006S-2.7	006S-5.5	006S-5.5
	8	003	003	003	003	003S-5.5	003S-6.9	006S-5.5	006S-5.5
15	4	003	003	003	006	006S-2.7	006S-2.7	012S-2.7	012S-2.7
	6	003	003	003	003	003S-5.5	006S-2.7	006S-5.5	006S-5.5
	8	003	003	003	003	003S-5.5	003S-6.9	006S-5.5	006S-5.5
20	4	003	003	003	006	006S-2.7	006S-2.7	012S-2.7	012S-2.7
	6	003	003	003	003	006S-2.7	006S-3.4	006S-5.5	012S-2.7
	8	003	003	003	003	003S-6.9	003S-6.9	006S-5.5	006S-6.9
25	4	003	003	003	006	006S-2.7	012S-2.7	012S-2.7	024S-2.7
	6	003	003	003	003	006S-3.4	006S-5.5	006S-5.5	012S-4.1
	8	003	003	003	003	003S-6.9	006S-5.5	006S-5.5	006S-8.2
32	4	003	006	006	006	012S-2.7	012S-3.4	012S-3.4	024S-2.7
	6	003	003	003	006	006S-5.5	006S-5.5	012S-3.4	012S-5.5
	8	003	003	003	003	006S-5.5	006S-5.5	006S-6.9	012S-5.5
40	4	006	006	006	012	012S-3.4	024S-2.7	024S-2.7	024S-3.4
	6	003	006	006	006	012S-3.4	012S-4.1	012S-5.5	024S-3.4
	8	003	003	003	006	006S-6.9	012S-4.1	012S-5.5	012S-6.9
50	4	012	012	012	012	024S-3.4	024S-3.4	036S-3.4	065S-2.7
	6	006	006	006	012	012S-5.5	024S-3.4	024S-4.1	036S-4.2
	8	006	006	006	006	012S-5.5	012S-6.9	012S-6.9	024S-5.5
65	4	012	012	024	024	024S-3.4	036S-3.4	065S-2.7	065S-2.7
	6	006	012	012	024	024S-3.4	024S-4.1	036S-4.2	065S-2.7
	8	006	006	012	012	012S-6.9	024S-4.1	024S-5.5	036S-6.9

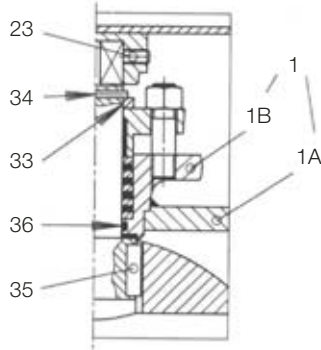
Notes

Application I: Water and low viscosity liquids, temperature 20°C to 120°C standard service. Seat material DN 10 to 50: PTFE + 25% glass, DN 65: PTFE.

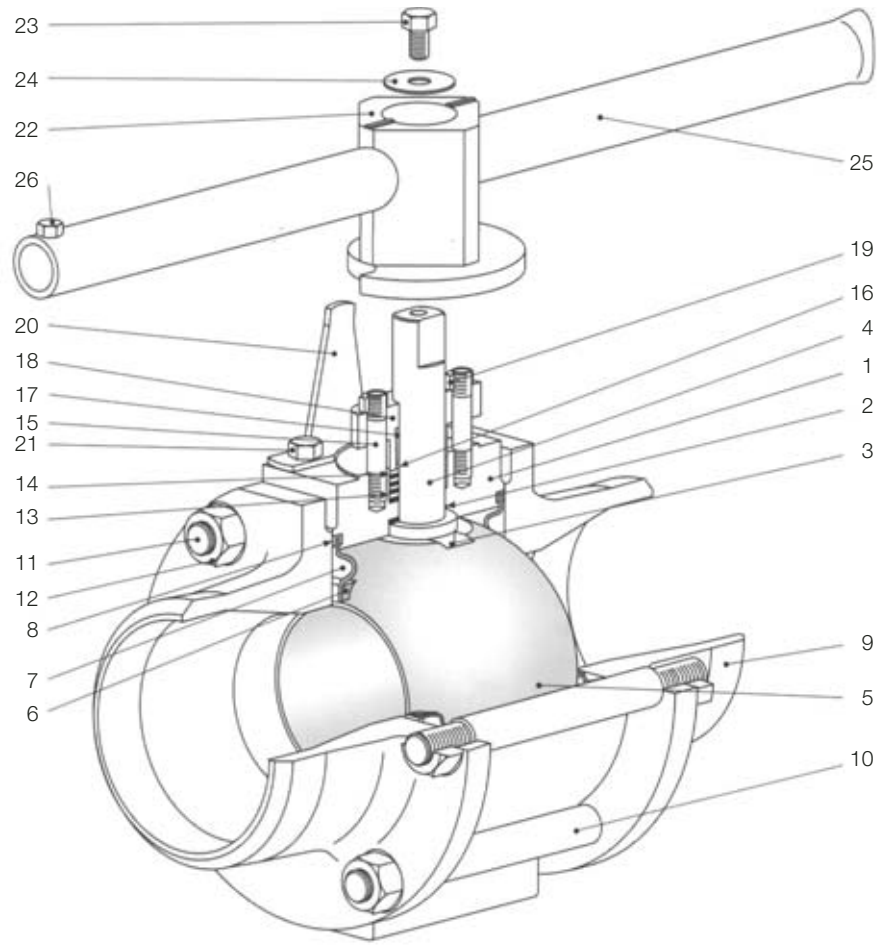
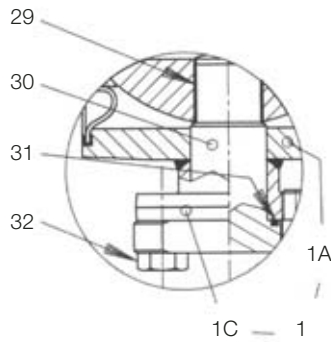
Application II: Dry fluids, high viscosity liquids, steam, oxygen service, heavy duty service, high temperature service > 120°C.

Seat material DN 10 to 50: PTFE + 25% glass, DN 65: PTFE

Stem guide design for DN 200



Lower shaft for DN 200



Parts list

Item Qty	Description	Material
1 1	Body	
1A 1	Body	ASTM A 182-F 316L (forged)
1B 1	Gland support DN 200	AISI 316L
1C 1	Ball guide support DN 200	AISI 316L
2 1	Friction washer	PTFE
3 1	Antistatic spring DN 80 to DN 150	AISI 316
4 1	Stem	AISI 316L
5 1	Ball	AISI 316L (forged)
6 2	Seat	PTFE *1
7 2	Seat support	AISI 316L
8 2	Body gasket	PTFE *1
9 2	Flanged end connector	
9A 2	End connector	ASTM A 182-F316L (forged)
9B 2	Flange support	AISI 316L
10 4	Shouldered tie bolt	A 2-70 ISO 3506
11 2/4	Tie bolt	A 2-70 ISO 3506 *2
12 12/16	Nut	AISI 304 *2
13 3/4	Soft gland washer	PTFE *1 *2
14 4/5	Metallic gland washer	AISI 316L
15 2	Gland stud	AISI 316L
16 1	Spring wire DN 80 to DN 150	AISI 316
17 1	Gland ring	PTFE
18 1	Gland	AISI 316L
19 2	Gland nut	AISI 304
20 1	Travel stop DN 80 to DN150 DN 200	AISI 304 AFNOR E24-2

Item Qty	Description	Material
21 2	Stop screw DN80 to DN 150 DN 200	AISI 304 Steel
22 1	Lever cap	Malleable iron
23 1	Screw lever	Cadmium plated steel
24 1	Washer DN 80 to DN 150	Cadmium plated steel
25 1	Lever	Steel
26 1	Screw DN 80 to DN 150	Cadmium plated steel
27 2	Flange	AfFNOR A 37 (forged)
28 2	Stop washer DN 200	AISI 316L
29 1	Guide ball ring DN 200	PTFE
30 1	Ball guide DN 200	AISI 316L
31 1	Gasket DN 200	PTFE
32 2	Screw DN 200	AISI 304
33 1	Washer DN 200	AISI 316L
34 1	Pin DN 200	AISI 302/304
35 1	Key DN 200	AISI 316L
36 1	Gasket DN 200	Viton

All indicated material are equivalent standard designations.

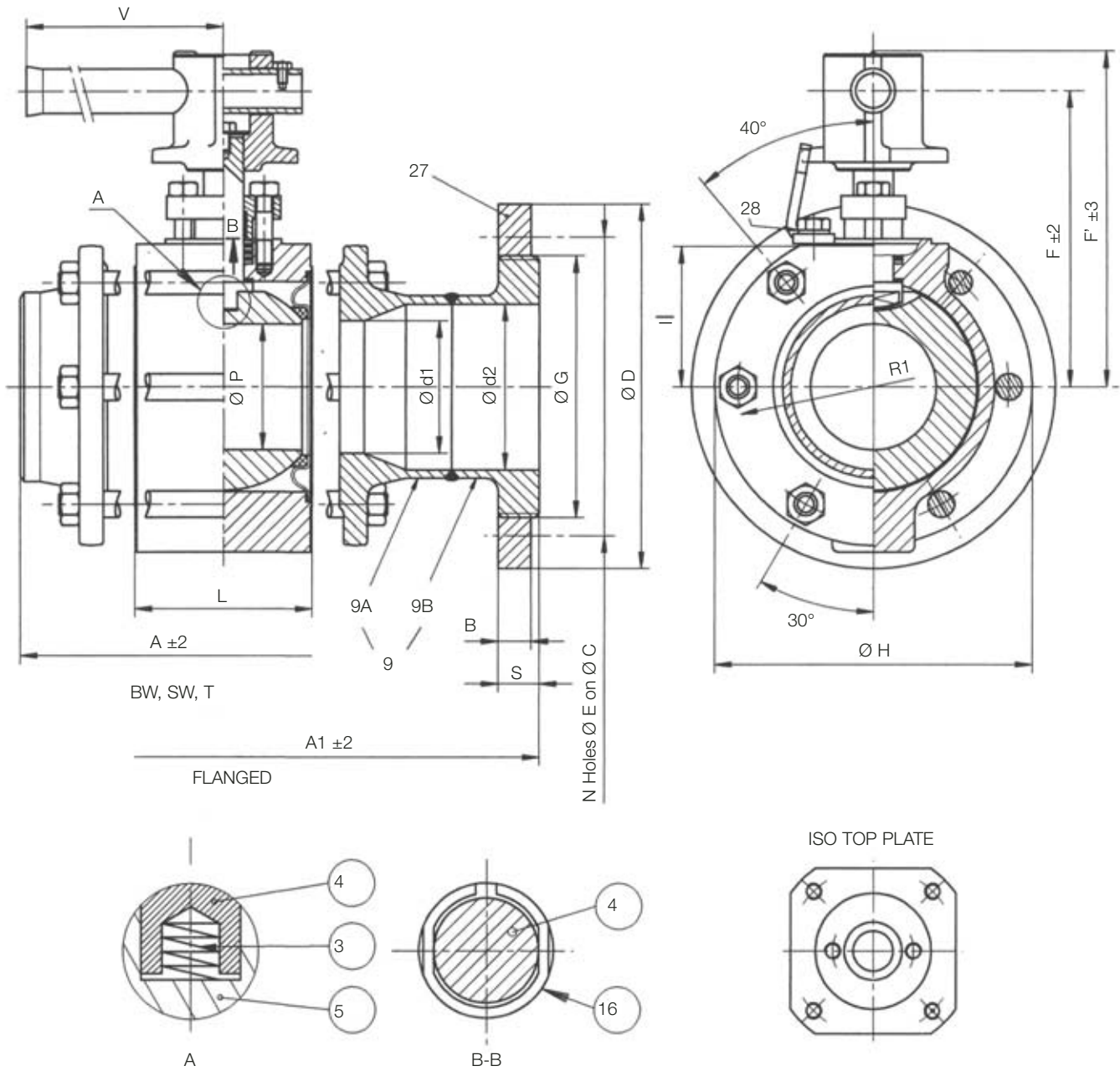
* 1) Other materials upon request

* 2) x/. for DN 80 to DN 150

.y for DN 200

Ball Valve Type V16

dimensions reduced bore / DN 80 to DN 200



Valve dimensions (mm)

DN	ISO	A	A1	B	C	D	d1	d2	E	F	F'	G	H	I	L	N	P	R1	S	V	Weight (Kg)	
																					Flanged	BW
80	F10	180	10	20	160	200	65	80	18	173	197	M130 x 2,5	175	80	100	8	65	75.5	23	500	21.4	16.8
100	F10	210	350	20	180	220	80	100	18	178	202	M158 x 3	192	85	107.5	8	76	82	25	500	28.1	21.4
125	F10	244	400	22	210	250	100	125	18	199	223	M185 x 3	246	/	134.5	8	101	107.5	25	500	51	41
150	F10	244	480	22	240	285	100	150	22	199	223	M212 x 3	246	/	134.5	8	101	107.5	25	500	54	41
200	F12	419	600	24	295	340	150	200	22	253	287	M268 x 3	340	/	193	12	150	150	26	1170	88	88

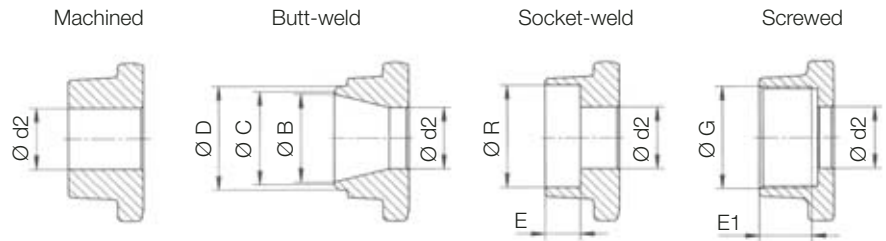
Note: standard carbon steel screwed-on flanges to PN16, Ra 6.3 facing.

On request: carbon steel screwed-on flanges ANSI 150, ANSI 300, PN 25 PN 40 or stainless steel screwed-on flanges PN 16 to PN 40, ANSI 150 and 300.

Notes

All the end connections are machined from the basic unmachined forged connectors. This technology allows quick response to the customers demand and a large variety of special connections.

End connections SW, T, BW



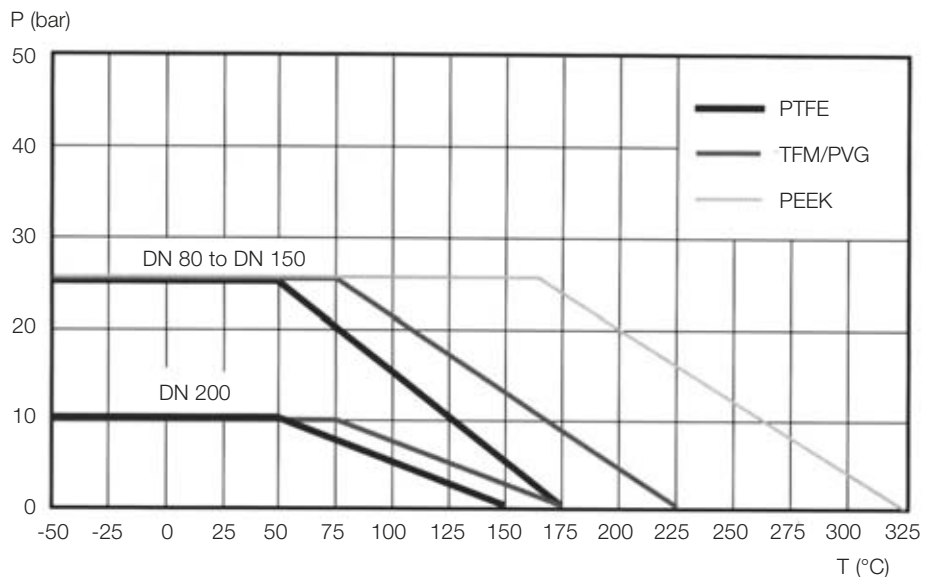
End connections - main dimensions mm

Type	H	Unmachined						Butt-weld						Socket-Weld				Screwed															
		DN	d 2	B	C	D	V	B	C	D	T	B	C	D	W	B	C	D	H	F	E	R	E	R	BSP	E 1	NPT	G	E 1	G	E 1		
80	65		72.1	73.1	76.61	80	81	85	82.5	84.5	88.9	84.9	86	88.9	20.5	84.5	20.5	89.5	3"	33.5	3"	30.5											
100	80		84.9	85.9	88.9	100	101	105	105.3	107.5	114.3	110.3	111.3	114.3	20.5	104.5	20.5	114.9	4"	39.5	4"	33											
125	100					125	126	130	131.7	134	139.7	134.5	135.5	139.7	20.5	129.5	20.5	140.3															
150	100	110.3	111.3	114.3	150	151	155	159.3	161.5	168.3	163.1	164.1	168.3	20.5	154.5	20.5	168.9																
200	150							207.2	209.5	219.1																							

Standard packing and body gasket

- T° < 200°C
Packing : PTFE
Gasket : PTFE
- T° ≥ 200°C
Packing : Graphite
Gasket : Stainless steel reinforced PTFE (≤ 250°C) or graphite.
- Other packing and gasket materials upon request

Pressure - temperature rating



Flow coefficient Cv/Kv

Welded or screwed ends

DN	80	100	150
Cv	545	665	1317
Kv	470	573	1135

Flanged (to NFE 29-312)

DN	80	100	150
Cv	615	810	1412
Kv	530	698	1217

Notes

Standards seats:

- PTFE

Optional seats:

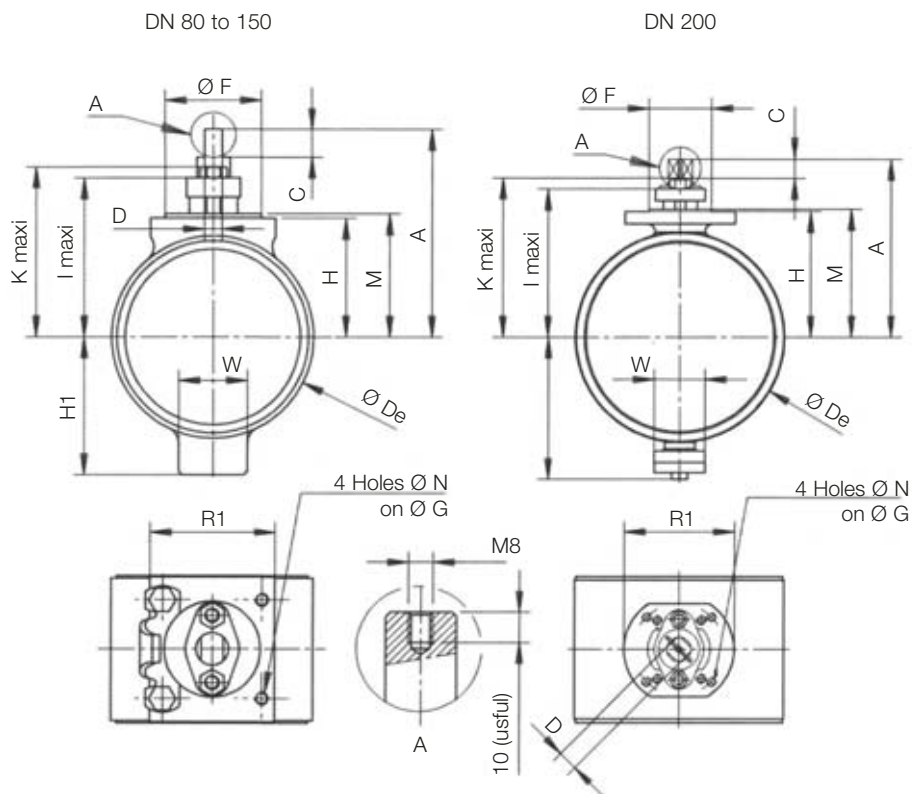
- TFM/PVG (carbon reinforced PTFE)
- PEEK (carbon reinforced)
- Other seat materials (on request):
- PE Cryogenic and nuclear application
- Expanded graphite - high temperature applications

Other seat designs (on request):

Pressure relieving seats: TFM and PVG

Ball Valve Type V16

brackets and coupling reduced bore / DN 80 to DN 200



Dimensions for bracket and coupling

DN	ISO	A	C	D	De	F	G	H	H1	I	K	M	N	R1	W
80	F10	145	20	16	135.5	70	102	82.5	90	112	121	85.5	M10	99	50
100	F10	150	20	16	146.5	70	102	86	100	116	125	89	M10	106.5	50
125/150	F10	170.5	20	16	190.5	70	102	108	115	137	146	111	M10	133.5	75
200	F12	233	25	26	275	85	125	165	186	194	208	168	M12	150	65

Testing

- All our valves are standard tested according to the Gachot quality assurance manual: 100% for the flanged and threaded valves, 10% for the welded end valves.

Acceptance criteria

- According to:
NFE-29311 - ISO 5208 - DIN 3230
- Hydrostatic shell test: 1.5 x Pressure rating (ambient temperature). No visible leakage.
 - Air seat test: 6 bar air (air in the valve body). No bubbles accepted.

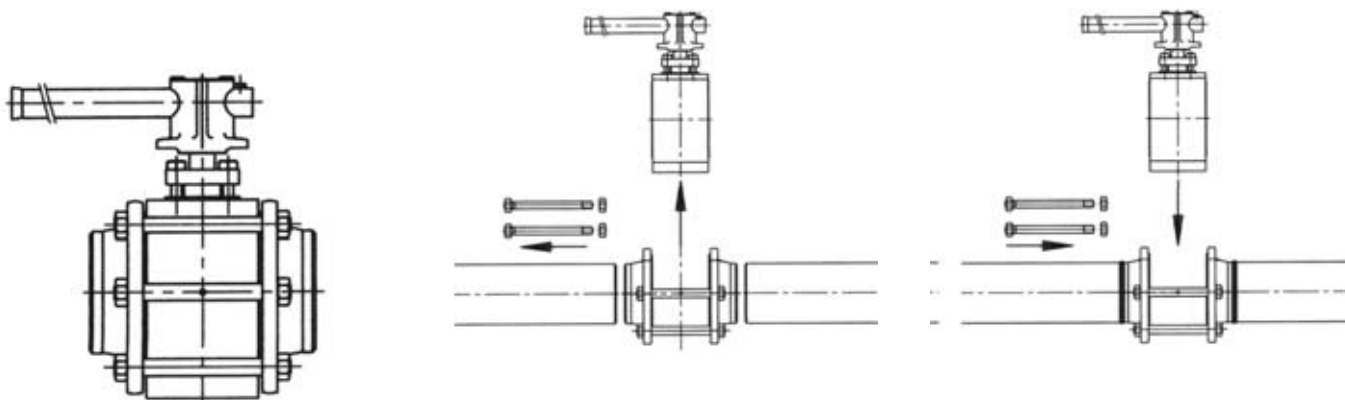
Modular system

Between the same flanges can be mounted:

- V16 check valve
- V16 strainer
- V16 sight glass
- V16 3-way valve (L or T port)

Options

- Heating jacketed V16
- Limit switch kit
- Tank bottom V16 valve
- Cryogenic V16
- Other connections and levers
- Padlocking kit



Welded connections V16 - Piping installation

- When the ball valve body has been removed (by just loosening the bolt nuts and removing the two upper stud bolts or the four upper stud bolts for DN 150), the flanges set up a rigid cage easy to weld.
- Once the welding is finished, just pull the two flanges apart, insert the body between the flanges, refit the upper stud bolts and tighten back the nuts.
- The V16 is ready to operate.

Torque values for standard seats/Nm

DN	ΔP	Standard seats			Pressure relieving seats			Stem limiting torque (Nm)
		7	16	25	7	16	25	
80		90	105	130	78	105	130	615
100		105	130	160	95	130	160	615
150		140	190	230	120	190	230	615
200		-	-	-	-	-	-	-

Torques measured with water 1cPo viscosity at 20°C

Other seats: TFM/Carbon PTFE: +20%; PEEK +30%

Other packing gland: graphite packing: +10%

Actuation and control

Actuation

- Pneumatic double acting and single acting actuators.
- Electric actuators. Double acting and single acting spring return.
- Electric actuators for special applications.

Control

- Various control devices (spool valves, limit switch box).
- Pneumatic, electro-pneumatic and intelligent positioners.

Selection of pneumatic actuators series 79/D for standard seats

DN	Air supply (bar)	Double Acting Actuator ΔP (bar)			Single Acting Actuator ΔP (bar)		
		7	16	25	7	16	25
Application I							
80	4	024	024	024	065S-2.7	065S-2.7	065S-2.7
	6	012	012	024	036S-5.5	036S-5.5	065S-2.7
	8	012	012	012	024S-5.5	024S-6.9	036S-6.9
100	4	024	024	036	065S-2.7	065S-2.7	090S-3.4
	6	012	024	024	036S-5.5	065S-2.7	065S-5.5
	8	012	012	024	024S-6.9	036S-6.9	065S-5.5
150	4	024	036	065	090S-3.4	090S-3.4	090S-4.1
	6	024	024	036	065S-4.1	090S-3.4	090S-5.5
	8	012	024	024	036S-6.9	065S-5.5	065S-6.9
Application II							
80	4	024	024	036	065S-2.7	065S-2.7	090S-3.4
	6	012	024	024	036S-5.5	065S-2.7	065S-4.1
	8	012	012	024	036S-5.5	036S-6.9	065S-4.1
100	4	024	036	036	065S-2.7	090S-3.4	090S-4.1
	6	024	024	024	065S-2.7	065S-4.1	090S-3.4
	8	012	024	024	036S-6.9	065S-4.1	065S-5.5
150	4	036	065	065	090S-3.4	090S-4.1	*****
	6	024	036	036	090S-3.4	090S-5.5	*****
	8	024	024	024	065S-5.5	065S-6.9	090S-3.4

Notes

Application I: Water and waterlike fluids, temperature 20°C to 120°C standard service.

Application II: Dry fluids, high viscosity liquids, steam, oxygen service, heavy duty service, high temperature service > 120°C.