

B V 4
S M A R T

Split body ball valve


belven[®]



**S
M
A
R
T**

SMART DESIGN

MAXIMUM CERTIFIED

AUTOMATION READY

REDUCED WEIGHT

TRACEABILITY

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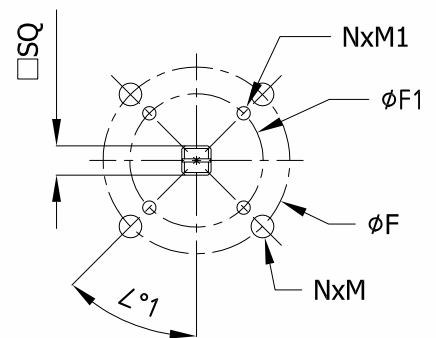
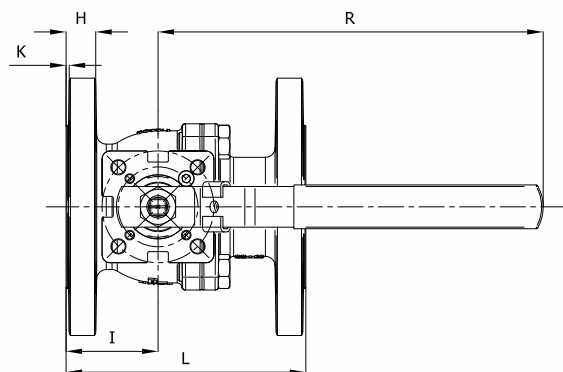
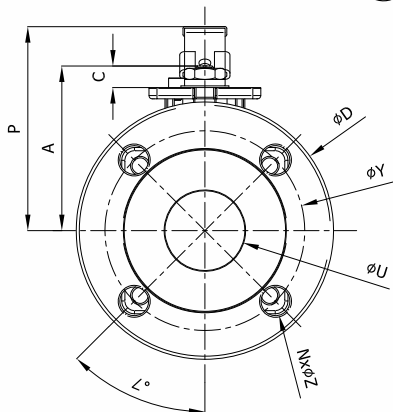
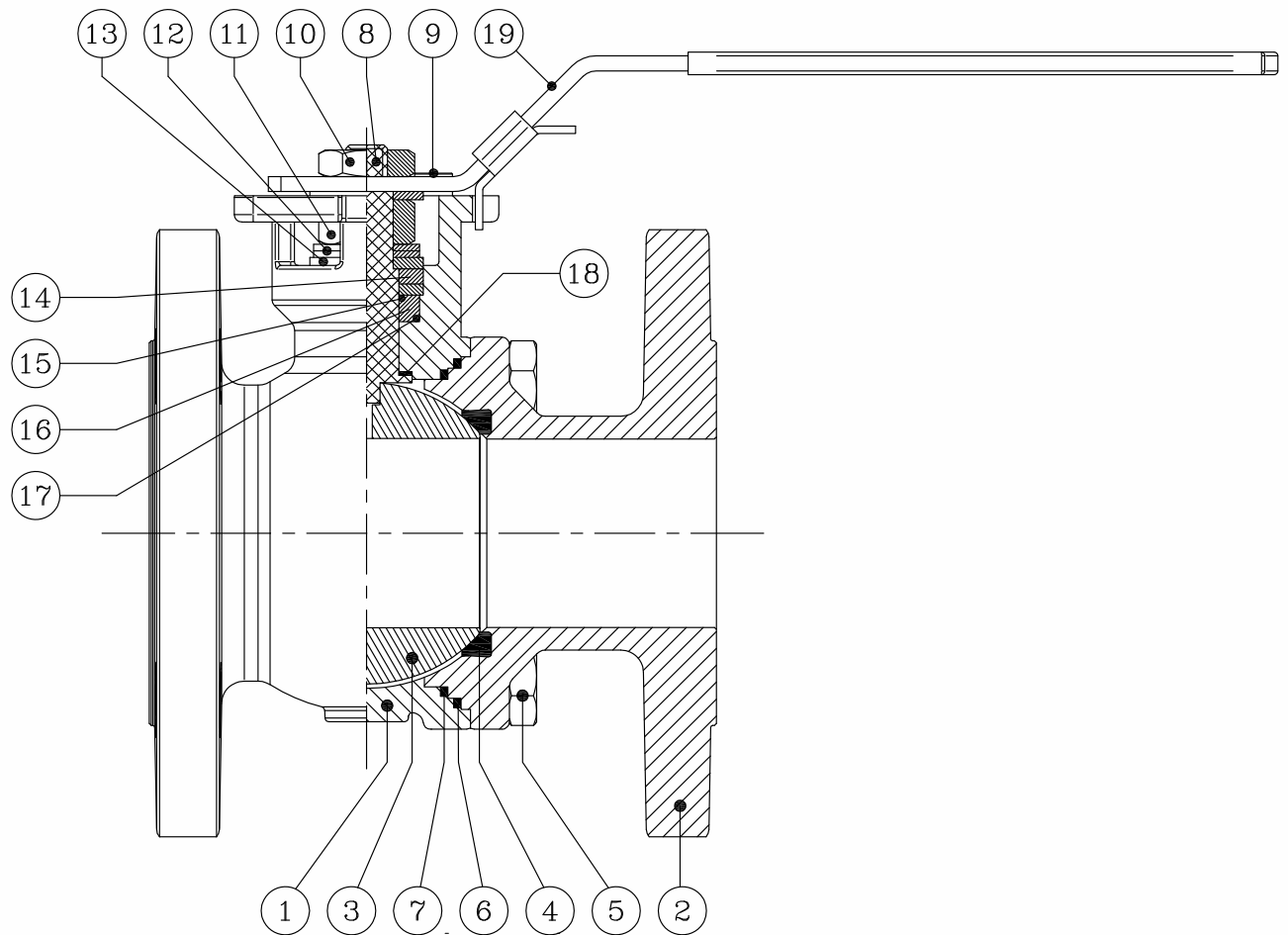


Benefits

- ❶ Split-body ball valve with solid ball
- ❷ Quarterturn on/off ensures easy operation and maintenance
- ❸ Direct ISO mounting pad with square stem for quick and easy automation
- ❹ Full bore allows low pressure drop
- ❺ Direct ISO mounting pad assures lower mechanical tolerance
- ❻ Corrosion retardant body ensures long life of the product
- ❼ Anti-static device
- ❽ ATEX - Fire Safe - PED certified valve
- ❾ Standard delivery with lockable and stainless steel lever
- ❿ CE-labeled product with European origin

BV4 SMART

DIN F4 - ANSI 150 LBS



DIN

ANSI

ITEM	PART NAME	BV4S-4466T/FS	BV4S-6666T/FS	BV4S-4466T/FS	BV4S-6666T/FS
1	BODY	1.0619	1.4408	A216-WCB	A351-CF8M
2	END CONNECTION	1.0619	1.4408	A216-WCB	A351-CF8M
3	BALL	1.4401/1.4408	1.4401/1.4408	A182-F304/F351-CF8	A182-F316/F351-CF8M
4	BALL SEATS	PTFE	PTFE	PTFE	PTFE
5	SCREW	CARBON STEEL	STAINLESS STEEL	CARBON STEEL	STAINLESS STEEL
6	BODY SEAT	GRAPHOIL	GRAPHOIL	GRAPHOIL	GRAPHOIL
7	BODY SEAT	PTFE	PTFE	PTFE	PTFE
8	STEM	1.4401	1.4401	A182-F304	A182-F316
9	SCREW	CARBON STEEL	STAINLESS STEEL	CARBON STEEL	STAINLESS STEEL
10	NUT	CARBON STEEL	STAINLESS STEEL	CARBON STEEL	STAINLESS STEEL
11	NUT	CARBON STEEL	STAINLESS STEEL	CARBON STEEL	STAINLESS STEEL
12	SPRING WASHER	CARBON STEEL	STAINLESS STEEL	CARBON STEEL	STAINLESS STEEL
13	BUSH	1.4401	1.4401	A182-F316	A182-F316
14	STEM SEAT	GRAPHOIL	GRAPHOIL	GRAPHOIL	GRAPHOIL
15	O-RING	FKM	FKM	FKM	FKM
16	STEM SEAT	PTFE	PTFE	PTFE	PTFE
17	O-RING	FKM	FKM	FKM	FKM
18	TRUST WASHER	PTFE	PTFE	PTFE	PTFE
19	LEVER	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL

DIN

DN	PN	ØU	L	ØD	ØY	n-ØZ	∠°	I	A	R	C	P	H	K
25	16/40	Ø25	125	Ø111	Ø85	4-Ø14	45,0°	53,0	69,0	161	11,0	94	17	2
32		Ø32	130	Ø136	Ø100	4-Ø18	45,0°	55,0	82,0	161	11,0	107	17	2
40		Ø40	140	Ø146	Ø110	4-Ø18	45,0°	52,0	94,0	241	14,0	119	17	2
50		Ø50	150	Ø161	Ø125	4-Ø18	45,0°	57,5	103,0	241	13,5	128	19	2
65	10/16	Ø65	170	Ø181	Ø145	4-Ø18	45,0°	63,0	128,4	321	17,4	154	17	2
80		Ø80	180	Ø196	Ø160	8-Ø18	22,5°	75,5	137,4	321	17,4	163	19	2
100		Ø100	190	Ø216	Ø180	8-Ø18	22,5°	80,0	153,6	381	19,0	178	19	2

DN	PN	NxM	□SQ	ØF	ØF1	NxM1	∠°1
25	16/40	4xØ7	□ 9	F05-Ø50	-	-	45°
32		4xØ7	□ 9	F05-Ø50	-	-	45°
40		4xØ8,5	□11	F07-Ø70	F05-Ø50	4xM6	45°
50		4xØ8,5	□11	F07-Ø70	F05-Ø50	4xM6	45°
65	10/16	4xØ8,5	□14	F07-Ø70	-	-	45°
80		4xØ11	□14	F10-Ø102	F07-Ø70	4xM10	45°
100		4xØ11	□17	F10-Ø102	F07-Ø70	4xM10	45°

ANSI

SIZE	ØU	L	ØD	ØY	n-ØZ	∠°	I	A	R	C	P	H	K
NPS 1	Ø25	127	Ø110	Ø79,5	4-Ø16	45,0°	54,0	69,0	161	11,0	93	14,5	2
NPS 1 1/2	Ø40	165	Ø125	Ø98,5	4-Ø16	45,0°	77,0	94,0	241	14,0	118	17,5	2
NPS 2	Ø50	178	Ø150	Ø120,5	4-Ø19	45,0°	84,5	103,0	241	13,5	127	19,5	2
NPS 3	Ø80	203	Ø188	Ø152,5	4-Ø19	45,0°	93,0	137,4	321	17,4	163	23,0	2
NPS 4	Ø100	229	Ø228	Ø190,5	8-Ø19	22,5°	99,5	153,5	381	19,0	178	23,0	2

SIZE	NxM	□SQ	ØF	ØF1	NxM1	∠°1
25	4xØ7	□ 9	F05-Ø50	-	-	45°
40	4xØ8,5	□11	F07-Ø70	F05-Ø50	4xM6	45°
50	4xØ8,5	□11	F07-Ø70	F05-Ø50	4xM6	45°
80	4xØ11	□14	F10-Ø102	F07-Ø70	4xM10	45°
100	4xØ11	□17	F10-Ø102	F07-Ø70	4xM10	45°

ANSI

ANSI	B 16.5	Pipe flanges & flange fittings
ANSI	B 16.10	Face-to-face and end-to-end dimensions of valves

API

API	607	Fire test for soft-seated quarter turn valves
API	6FA	Specification for fire test for Valves
API	6D	Specification for pipeline valves

BS

BS	5351	Steel ball valves for the petroleum, petrochemicals and allied industries
BS	5159	Specification for cast iron and carbon steel ball valves for general purposes
BS	5146	Part 1 : Specification for steel valves for the petroleum, petrochemical and allied industries Part 2 : Specification for pressure testing requirements for general purpose valves
BS	6755/2	Part 2 : Specification for fire type testing requirements

DIN

DIN	2505	Design of flanges according to DIN 2505 (partially replaced by 1591)
DIN	3202	Part 1 : Face-to-face and centre-to-face dimensions - Flanged valves
DIN	3840	Valve bodies, strength calculation in respect of internal pressure
DIN	2501	Flanges - connecting dimensions
DIN	7121	Flanged steel ball valves
DIN	3337	Part-turn valve actuator attachment - flange dimensions
DIN	2526	Flanges : Joint face shape
DIN	3357	Part 1 : Ball valves - general data on ball valves made of metallic materials Part 2 : Full bore steel ball valves Part 3 : Reduced bore steel ball valves Part 6 : Full bore cast iron ball valves Part 7 : Reduced bore cast iron ball valves

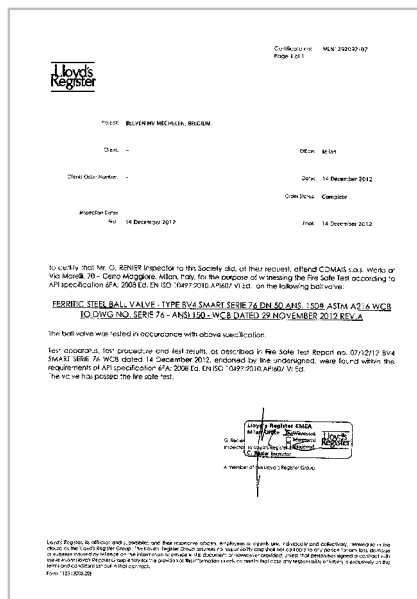
ISO

ISO	5208	Industrial valves - pressure testing for valves
ISO	5211	Part-turn valve actuator attachment - flange dimensions
ISO	7121	Flanged steel ball valves
ISO	5752	Metal valves for use in flanged pipe systems. Face-to face and centre-to-face dimensions
ISO	10497	Testing of valves, fire type testing requirements
ISO	7268	Pipe components, definition of nominal pressure

EN

EN	12516	Part 2 : Valves, shell design strength. Calculation method for steel valve shells Part 3 : Shell design strength. Experimental method
EN	1759	Flanges and their joint. Circular flanges for pipes, valves, fittings and accessories
EN	1983	Industrial valves - steel ball valves (draft document)
EN	19	Industrial valves - Marking of metallic valves
EN	558	Industrial valves - Face-to-face and centre-to dimensions of metal valves for use in flanged pipe systems
EN	10204 (DIN 50.049-3.18)	Metallic products - Types of inspection documents
EN	1092	Flanges and their joint. Circular flanges for pipes, valves, fittings and accessories
EN	736	Part 1 : Definition of types of valves Part 2 : Definition of components of valves Part 3 : Definition of terms
EN	12570	Industrial valves - Method for sizing the operating element
EN	1503	Materials for bodies, bonnets and covers
EN	6708	Pipework components - definition and selection of DN (nominal size)

BV4 SMART Product Certificates



TA Luft approved

- (TÜV Süd Deutschland)
- Technische Anleitung zur Reinhaltung der Luft
- According to TA Luft (27.02.86) punkt 3.1.8.4

Fire Safe approved

- (Lloyd's Register)
- According to BS 6755/2 - API 6FA - ISO 10497



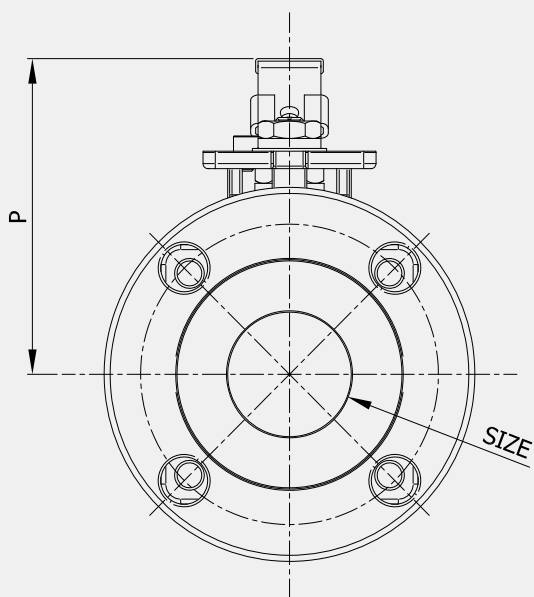
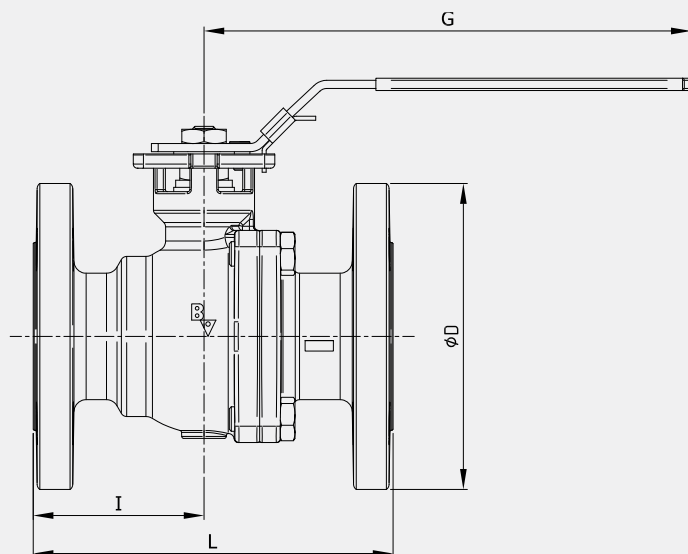
ATEX approved

- (TÜV Süd Product Service)
- Equipment for use in potentially explosive atmospheres
- According to Council
- Directive 94/9/EC, article 8(1)(b)ii)
- Non-electric devices and components group II

PED approved

- PED 97/23/EC (TÜV Süd Industrie Service - CE0036), Pressure Equipment Directive, According to Module H (full quality assurance)

BV4 SMART with Lever



DIN - F4



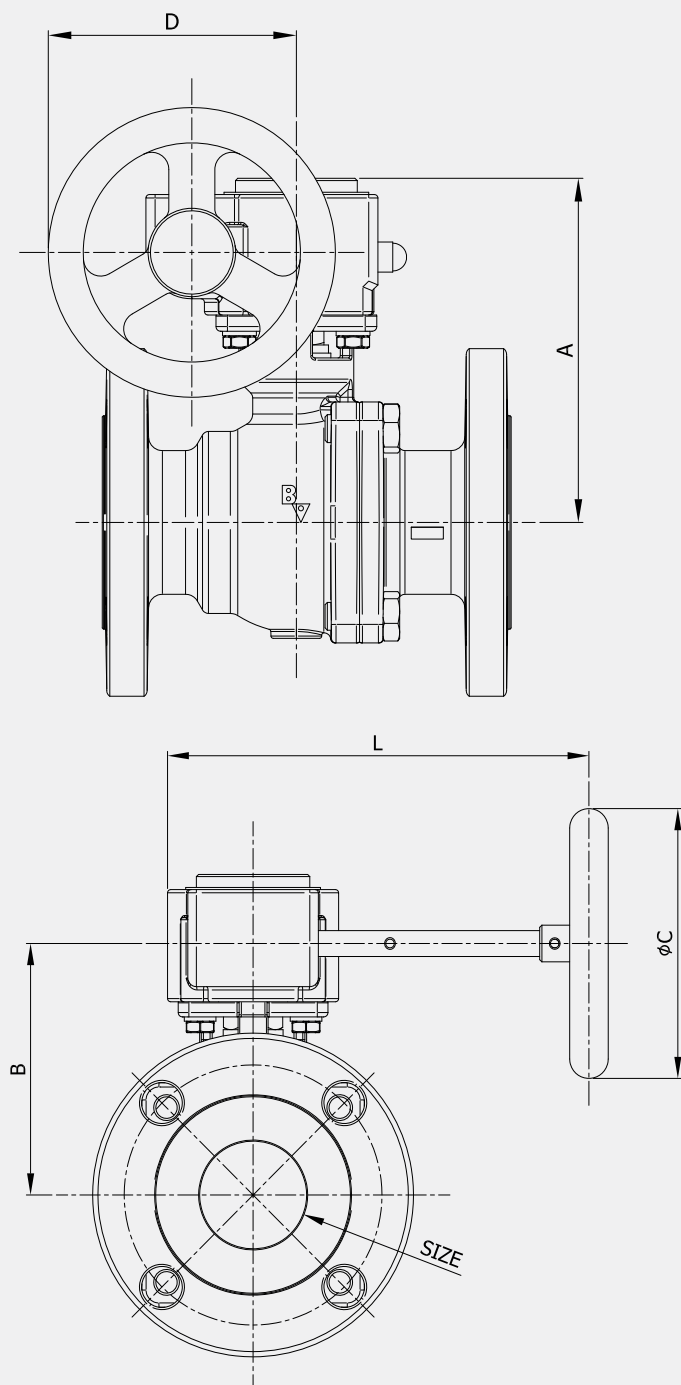
ANSI - A150



SIZE	D	L	I	G	P
DN 25	111	125	53,00	161	94
DN 32	136	130	55,00	161	107
DN 40	146	140	52,00	241	119
DN 50	161	150	57,50	241	128
DN 65	181	170	63,00	321	154
DN 80	196	180	75,50	321	163
DN 100	216	190	80,00	381	178

SIZE	D	L	I	G	P
NPS 1"	110	127	54,00	161	93
NPS 1 1/2"	125	165	77,00	241	118
NPS 2"	150	178	84,50	241	127
NPS 3"	188	203	93,00	321	163
NPS 4"	228	229	99,50	381	178

BV4 SMART with Gearbox



DIN - F4

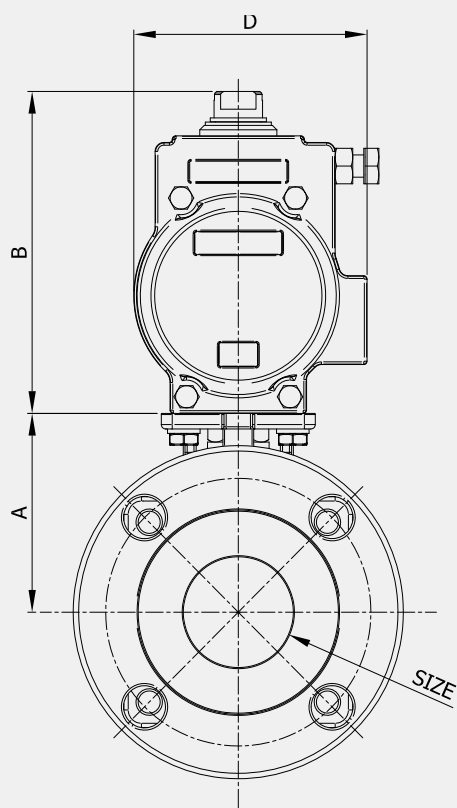
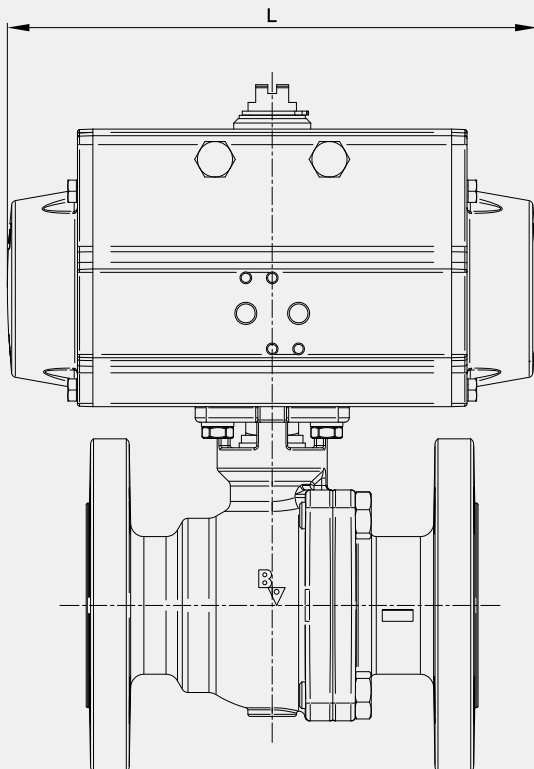


ANSI - A150

SIZE	A	D	B	C	L
DN 50	148,50	108,00	116,50	125	201
DN 65	170,00	108,00	138,00	125	221
DN 80	186,50	164,00	148,00	224	246
DN 100	201,00	164,00	162,50	224	266

SIZE	A	D	B	C	L
NPS 2"	148,50	108,00	116,50	125	190
NPS 3"	216,50	164,00	148,00	224	238
NPS 4"	201,00	164,00	163,00	224	278

BV4 SMART with Pneumatic Actuator



DIN - F4



ANSI - A150



DOUBLE ACTING					SINGLE ACTING			
SIZE	A	B	D	L	A	B	D	L
DN 25	58,00	94,00	72,00	147	58,00	110,00	83,00	168
DN 32	71,50	94,50	72,00	147	71,50	109,50	83,00	168
DN 40	80,00	110,00	83,00	168	80,00	110,00	83,00	168
DN 50	89,50	121,50	95,00	184	89,50	140,50	104,50	262
DN 65	111,00	131,00	103,00	204	111,00	141,00	104,50	262
DN 80	120,00	141,00	108,50	262	120,00	157,00	121,00	250
DN 100	134,50	140,50	108,50	262	134,50	180,50	142,00	301

DOUBLE ACTING					SINGLE ACTING			
SIZE	A	B	D	L	A	B	D	L
DN 25	58,00	94,00	72,00	147	58,00	110,00	83,00	168
DN 32	71,50	94,50	72,00	147	71,50	109,50	83,00	168
DN 40	80,00	110,00	83,00	168	80,00	110,00	83,00	168
DN 50	89,50	121,50	95,00	184	89,50	140,50	104,50	262
DN 65	111,00	131,00	103,00	204	111,00	141,00	104,50	262

Other operating options also possible :

- ❶ Manual : fail safe lever, lockable gearbox, chainwheel
- ❷ Pneumatic : scotch & yoke
- ❸ Electric : all tensions, all protection classes
- ❹ Hydraulic : all oil pressures
- ❺ Accessories : stem extensions, visual indicators, solenoid valves, limit switches, positioners, manual override

The valve has been founded and assembled with the aim of providing a cost-efficient valve solution.

Without leaving out the benefits of a good split-body ball valve, the BV4-SMART assures good performance with the certified technical requirements.

Each valve can be furnished with a 3.1 certificate indicating the required tolerances for pressure, chemical resistance and performance.

By producing a lighter version of a split-body valve Belven gives the solution not only to save on mounting costs but also on logistics side.

BV4-SMART, the cost-efficient split-body ball valve !

Our product traceability

How do you recognize a BELVEN

- Our BV brand name is casted in the valve



How do you know that the trace

- CE-marking in the casting



y is the key to protect our BELVEN brand.

product ?

- Indication of BELVEN corporate name on all operated valves: either on lever
- Indication of BELVEN corporate name on all operated valves: either on actuator or gearbox



ability of this Belven product is guaranteed ?

- A production batch nr. is indicated on the valve-flange of the body
- Material is indicated on the body and the cap of the valve
- The heatnumbers or identification numbers of the material are stamped in the body and cap of the valve





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