

## Ball Valves SBV Series full-port

Ideally suited for positive shut-off, flow control and throttling of corrosive, abrasive or even toxic process media in either liquid or gaseous state.

### Modular Design

Ball Valves SBV Series are available as DIN- or ANSI-valves, with handlever for manual quarter turn operation as per standard or with bare shaft for easy installation of actuator units.

The sturdy design bodies are made of cast steel 1.0619 (WCB A216), RAL 5005 signal-blue epoxy-coated or compl. of SS316 casting 1.4408 (CF-8M), with resistant linings such as PFA or PFA-AS (conductive).



**CE** Conformity according to European Pressure Equipment Directive 97/23/EC (PED)

### Main Features

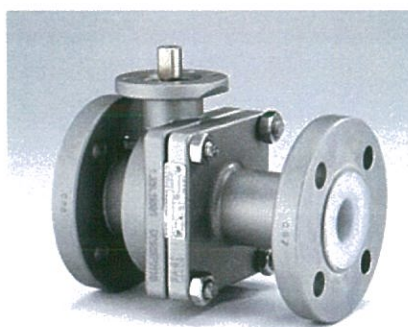
- Heavy-duty, robust construction, maintenance-free
- Body halves friction-locked (metal-to-metal)
- Bubble-tight shut-off throughout the full pressure and temperature range
- One-piece ball/shaft, PFA-encapsulated
- Zero stem leakage provided by an innovative stem sealing mechanism
- Consistent low operating torque
- Maximum flow rates at lowest pressure drops
- Integrated ISO top flange for standard actuators
- Flanges acc. to DIN PN10/16 resp. ANSI 150lbs for installation into existing piping systems

### Actuator Options



#### Automated

Body 1.0619 (WCB A216)/PFA-lined, pneumatic quarter turn actuator, DA or FC



#### Stainless Steel

Body 1.4408 (CF-8M)/PFA-lined, bare shaft



#### Padlock

Handlever on ISO top flange, with safety lock

**Operating Conditions**

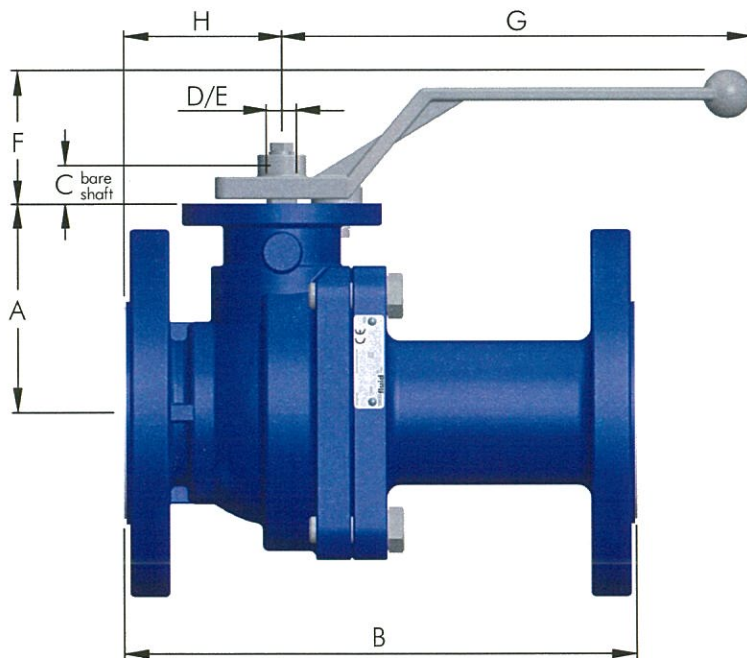
- Temperature range from -40°C (-40°F) up to +200°C (+392°F) (dep. on body lining resp. ball encapsulation)
- Pressure range from 1 mbar up to 16 bar (232 psi)

**Testing / Marking**

- Pressure- and tightness testing acc. to EN 12266-1, leakage rate A, and spark testing at 35 kV to assure lining integrity. Marking of valves on body and name plate acc. to EN 19.
- Material- resp. test certificate acc. to EN 10204-3.1

**Manual Valve**

Standard version with handlever



**Dimensions** in mm (lbs = kg x 2.2)

DN Nom. Size	A	B DIN	B ANSI	C shaft end	D dia.	E DD	F	G	H	ISO	kg* bare shaft	kg lever only
15/1/2"	64	130	130	19	14	11	58	161	50	F05	3.8	0.32
20/3/4"	66	150	150	19	14	11	58	161	50	F05	4.5	0.32
25/1"	70	160	127	19	14	11	58	161	50	F05	5.1	0.32
32/1 1/4"	75	180	180	19	14	11	58	161	60	F05	6.5	0.32
40/1 1/2"	87	200	165	19	14	11	58	211	64	F07	9.7	0.36
50/2"	94	230	178	19	14	11	58	211	71	F07	11.7	0.36
65/2 1/2"	106	290	190	23	18	14	58	251	77	F07	17.2	0.41
80/3"	115	310	203	23	18	14	62	251	81	F07	20.7	0.41
100/4"	130	350	229	23	24	17	62	315	92	F10	32.0	0.90
6" red.	130	-	267	23	24	17	62	315	112	F10	45.0	0.90
150/6"	189	480	267	30	30	22	-	-	131	F12	70.0	-

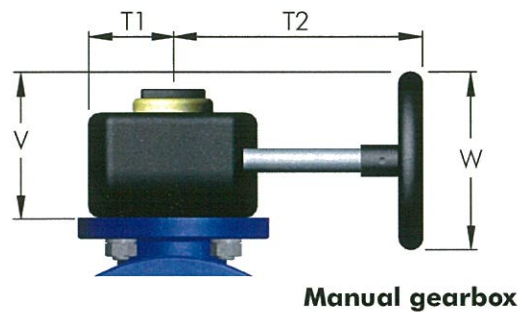
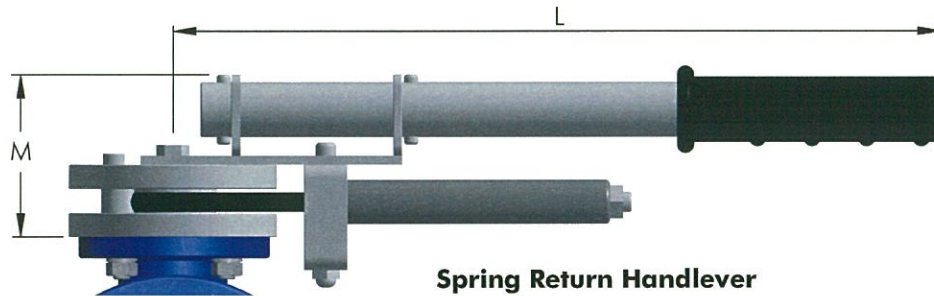
Face to face B acc. to DIN EN 558-1 range 1 resp. ASME B16.10

6" red. with eff. throughput dia. 100 mm

\*weights for DIN valves

**Manual Valve**

Versions with manual gearbox or spring return handlever



Note: Gearbox and spring return handlever to be mounted onto valve across to pipeline

**Dimensions** in mm (lbs = kg x 2.2)

DN Size	L	M	T1	T2	V	W	kg Return lever	kg Gearbox
15/1/2"	347	74	40	120	83	125	1.6	2.3
20/3/4"	347	74	40	120	83	125	1.6	2.3
25/1"	347	74	40	120	83	125	1.6	2.3
32/1/4"	416	74	40	120	83	125	2.0	2.3
40/1/2"	416	74	40	120	83	125	2.0	2.3
50/2"	416	74	40	120	83	125	2.0	2.3
65/2/2"	-	-	40	120	83	125	-	2.3
80/3"	-	-	40	120	83	125	-	2.3
100/4"	-	-	50	210	122	200	-	3.5
6" red.	-	-	50	210	122	200	-	3.5
150/6"	-	-	75	240	188	300	-	6.8

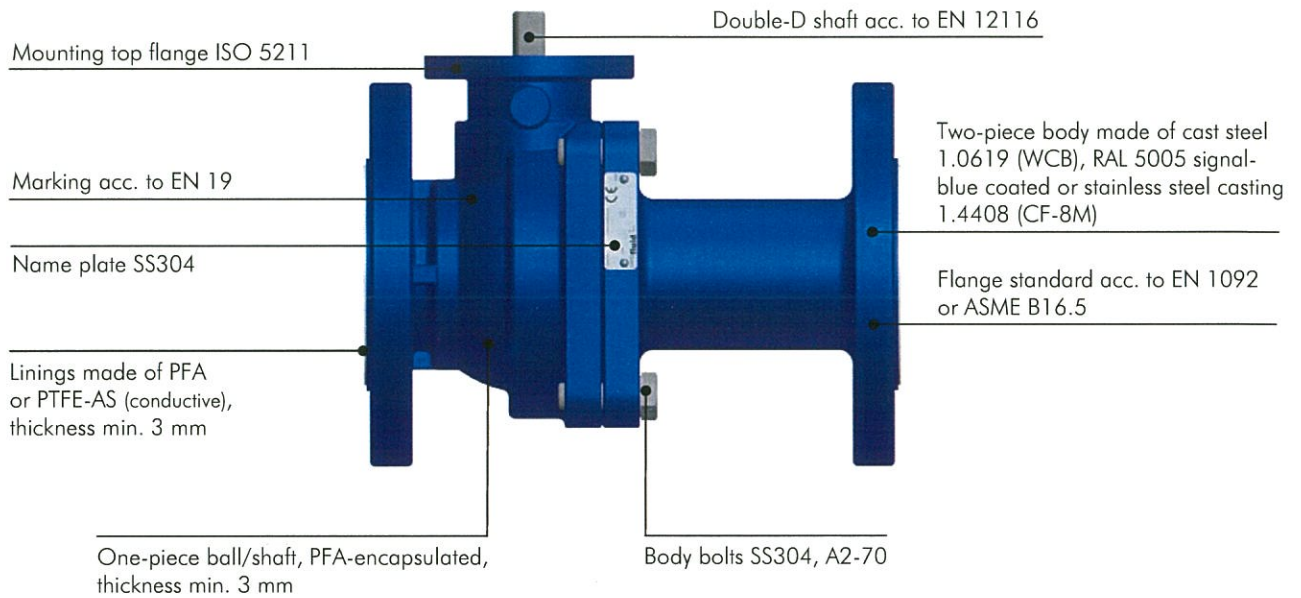
# SBV: Construction, Mounting Options

23 Ball Valves, plastomer-lined

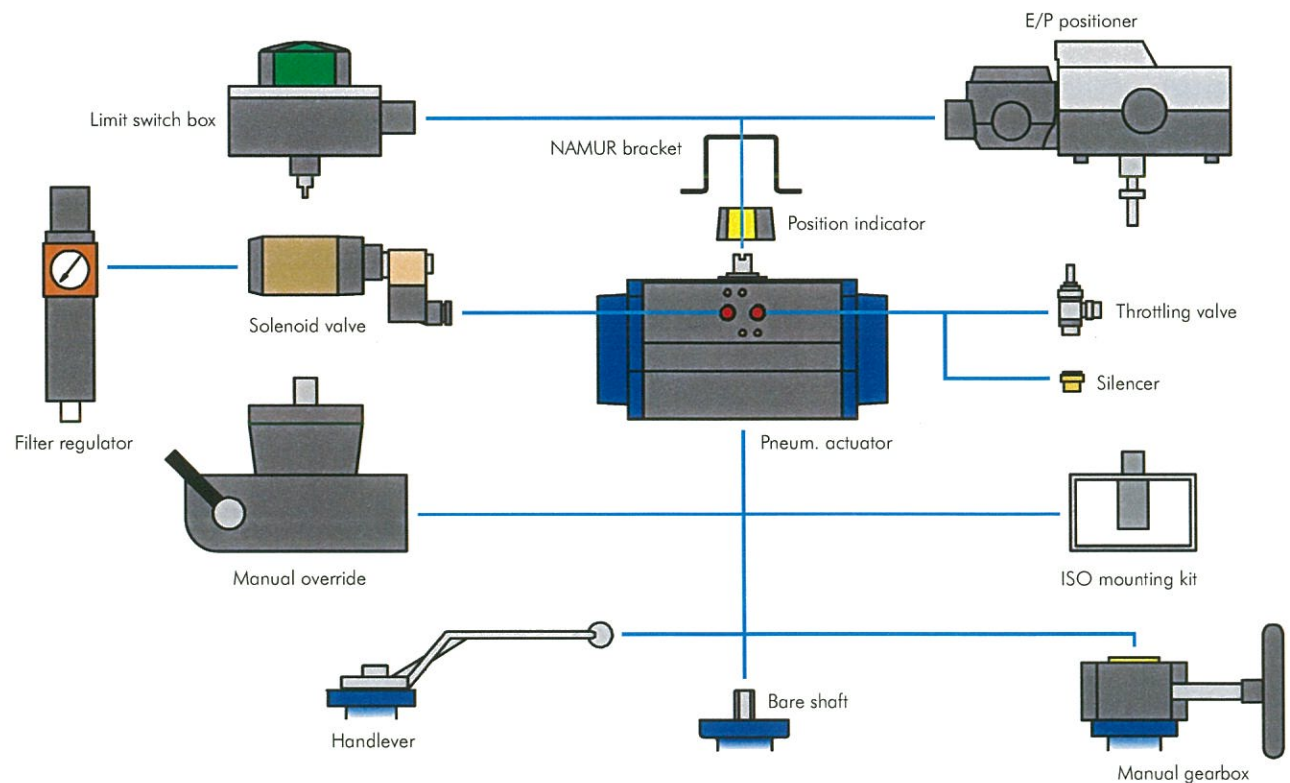
PM 23 M.02 e  
October 2006



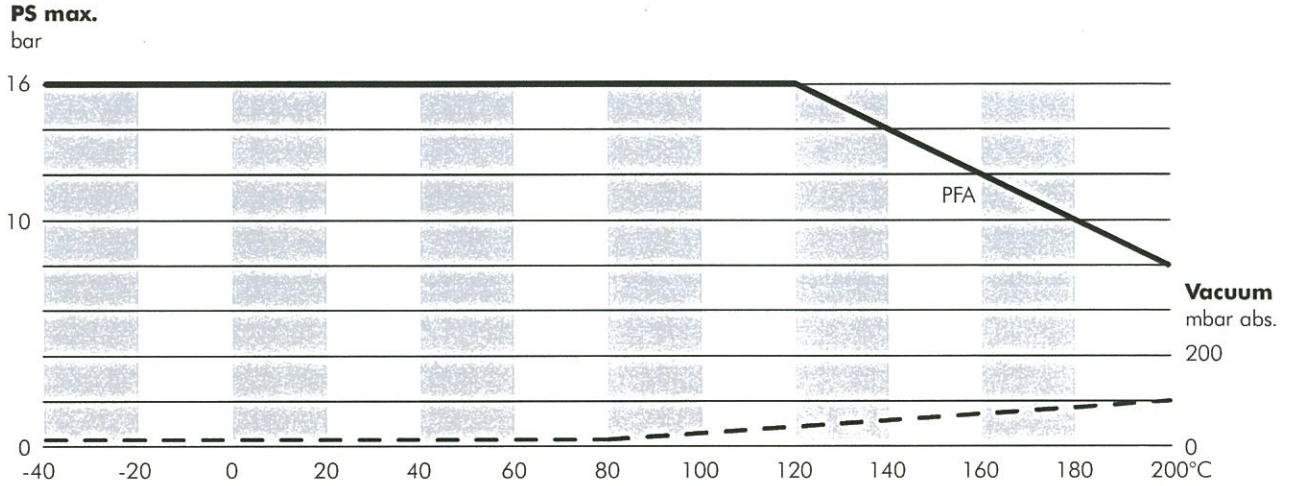
## Construction of Valve



## Mounting Options



**Pressure-/Temperature Diagram**



**Torque Values** in Nm (in-lbs = Nm x 8.85)

Max. torque values for PFA-encapsulated balls and PFA-lined bodies

Size DN	15/1/2"	20/3/4"	25/1"	32/1 1/4"	40/1 1/2"	50/2"	65/2 1/2"	80/3"	100/4"	6" red.	150/6"
Torque nom.	8	8	12	18	23	30	50	65	95	95	240
max. allow.	145	145	145	145	320	320	320	320	700	700	1'200

- Stated values to be break-away torques without any consideration of safety factors (min. 1.3) for pneum. actuators.

**Flow Rate Values Cv** usg/min. (Kv = Cv/1.16)

Size DN	15/1/2"	20/3/4"	25/1"	32/1 1/4"	40/1 1/2"	50/2"	65/2 1/2"	80/3"	100/4"	6" red.	150/6"
Full Port	18	36	68	139	205	312	610	915	1'405	1'405	3'165

**Options**

**C-Ball**

to prevent media residues inside ball cavity, for full drainage



**Cs-Ball**



**V-Port-Ball**

for control applications, with various contours

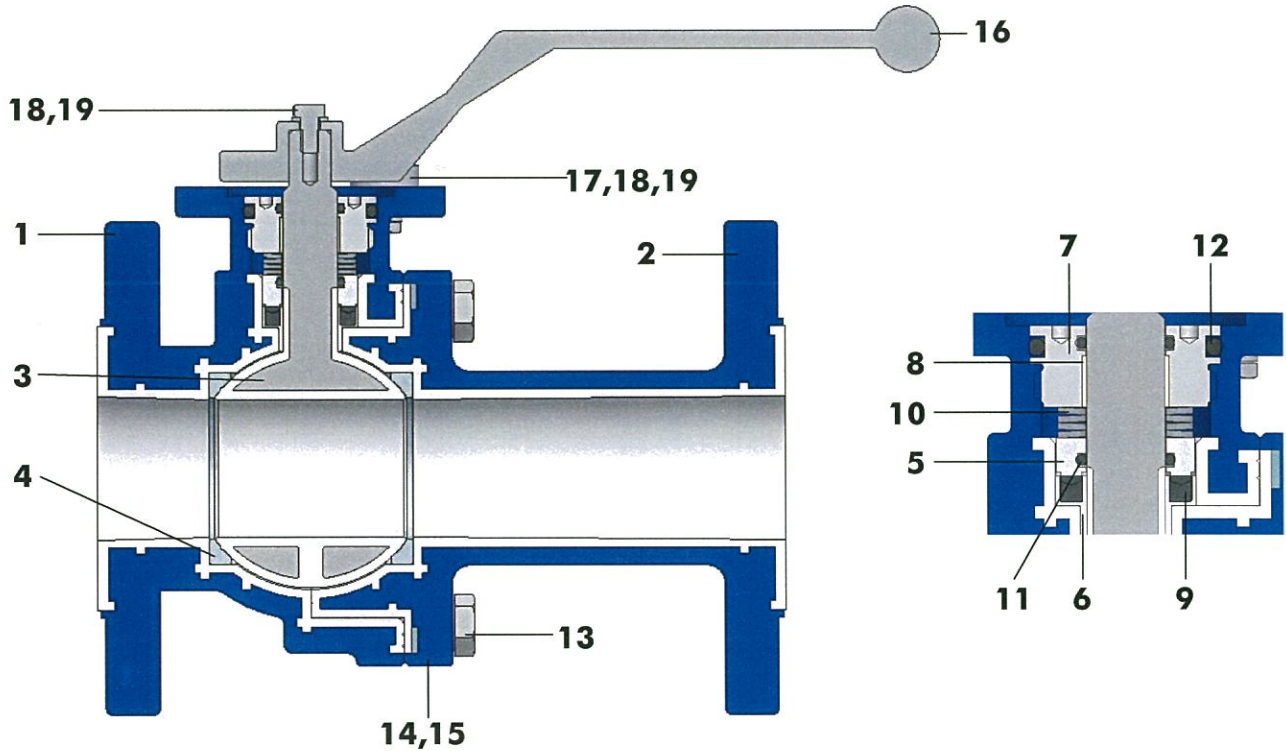


**Typical Service Applications**

- Chemical CPI
- Petro-Chemical
- Bio-Technical
- Pharmaceutical Industry
- Pulp and Paper
- Food Processing
- Paint and Pigments
- Fertilizers
- Textile Industry
- Mining and Steel
- Water Treatment
- ...

Special executions upon request

**Standard Version** (Picture showing Valve DN50 PN16 WCB A216, PFA-lined, with Handlever)



Item	Qty.	Description	Spares Set	Material Description	Matrrial No. DIN 17440/41
1	1	Body Half Left, lined, RAL 5005		WCB/PFA	1.0619
2	1	Body Half Right, lined, RAL 5005		WCB/PFA	1.0619
3	1	Ball/Shaft one-piece, encapsulated		Duplex/PFA	1.4462
4	2	Ball Seat	<b>S</b>	PTFE	
5	1	Pressure Sleeve	<b>E</b>	SS316L	1.4404
6	1	Sealing Sleeve	<b>E</b>	PTFE	
7	1	Threaded Bushing	<b>E</b>	SS316L	1.4404
8	1	Bearing	<b>E</b>	C.Steel/PTFE	
9	1	Elastomer Insert	<b>E</b>	VMQ	
10	4	Belleville Spring	<b>E</b>	Spring Steel	1.8159
11	2	O-Ring	<b>E</b>	FPM	
12	1	O-Ring	<b>E</b>	FPM	
13	4	Hex. Head Cap Screw		A2-70	1.4310
14	1	Name Plate 42 x 14 CE		A2	1.4301
15	2	Hammer Screw 2.49 x 4.76		A2	1.4310
16	1	Handlever		SS304	1.4308
17	1	Stop		SS316L	1.4404
18	2	Hex. Head Cap Screw		A2-70	1.4310
19	2	Lock Washer		SS304	1.4310

**Spare Sets:** **E** = Repair Kit **S** = Ball Seat

## SBV: Specification

23 Ball Valves, plastomer-lined

PM 23 M.10 e

July 2009

### Project-/Customer Data

Inquiry/Date: \_\_\_\_\_

Ref. Swissfluid  

Company: _____	Contact Person: _____	Phone: _____
Address: _____	Function: _____	Fax: _____
ZIP/Place: _____	Department: _____	E-mail: _____
Project: _____	Phone direct: _____	Mobile: _____

### Operating Conditions

#### Media / Chemical Composition:

- |                                   |  |  |   |   |
|-----------------------------------|--|--|---|---|
| <input type="checkbox"/> Liquid   | <input type="checkbox"/> powdery         | <input type="checkbox"/> crystallizing   | <input type="checkbox"/> sticky                           | <input type="checkbox"/> Spez. Grav. ____ |
| <input type="checkbox"/> gaseous  | <input type="checkbox"/> Solids ____ %   | <input type="checkbox"/> viscous         | <input type="checkbox"/> Flow Velocity ____ m/s           |   |
| <input type="checkbox"/> abrasive | <input type="checkbox"/> Paricle ____ mm | <input type="checkbox"/> Visc. ____ mPas | <input type="checkbox"/> Flow Rate ____ m <sup>3</sup> /h |   |

#### Pressure

max. \_\_\_\_ bar

min. \_\_\_\_ bar

#### Temperature

max. \_\_\_\_ °C

min. \_\_\_\_ °C

#### Mode

On/Off

Flow Control

\_\_\_\_ cycles/ \_\_\_\_

#### Installation / Environment

horizontal

vertical

\_\_\_\_\_

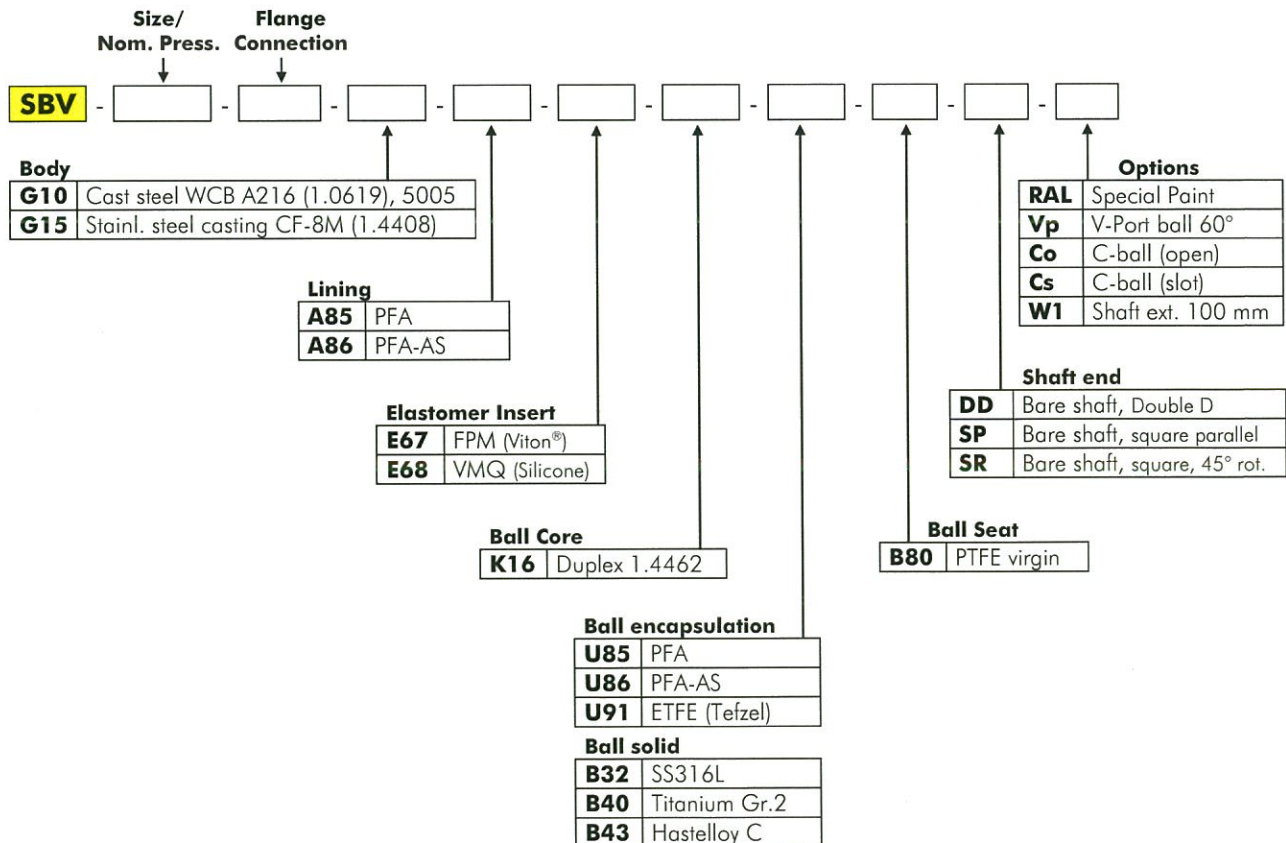
Room dry

Room humid

outdoor

Remarks:

### Specification of a complete Ball Valve SBV Series



**Note:** Handlers, Manual Gearboxes and Pneum. Actuators (acc. to PM 61 M.04 e) to be stated separately on quotations and order confirmations.