

## SBV Ball Valves ½" – 8" red. 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

SBV Ball Valves are available with handlever for manual quarter turn operation as per standard or with bare shaft for easy installation onto 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, live loaded stem sealing mechanism
- Consistent low operating torque
- Maximum flow rates at lowest pressure drops
- Integrated ISO top flange for standard actuators
- Flange connections acc. to ANSI 150lbs (DIN optional) 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**

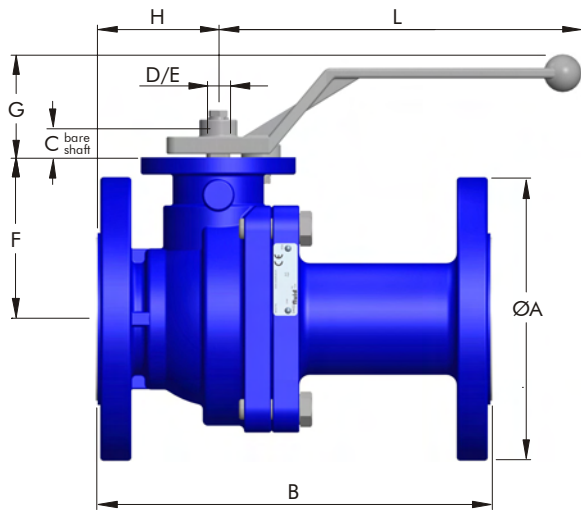
- Temperature range from -40°F up to +392°F, depending on lining material
- Vacuum-/Pressure range from 0.01 psia up to 232 psi, depending on size/pressure/temperature

**Testing / Marking**

- Pressure- and tightness testing acc. to API 598, 9<sup>th</sup> ed. (2009-09) as well as spark testing at 35 kV to assure lining integrity. Marking of valves on body and name plate.
- Material- resp. test certificates acc. to API 598

**Manual Valve**

Standard version with handle/lever



**Dimensions** inch

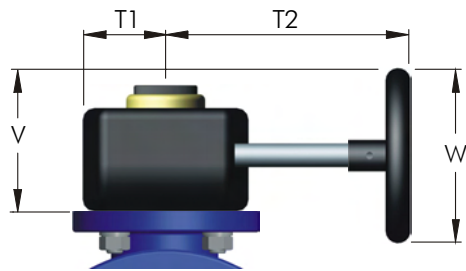
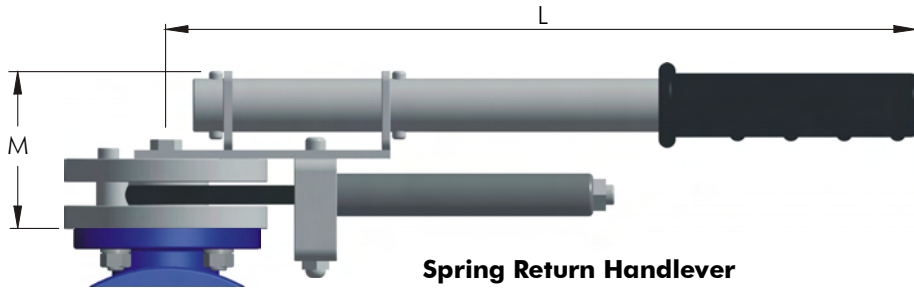
**Weights** lbs

Size nom.	ØA	B	C Shaft end	D Dia.	E DD	F	G	H	L	ISO Top	Valve only	Lever only
1/2"	3.74	5.12	0.75	0.55	0.43	2.52	2.28	1.97	6.34	F05	7.92	0.70
3/4"	4.13	5.91	0.75	0.55	0.43	2.60	2.28	1.97	6.34	F05	9.90	0.70
1"	4.25	5.00	0.75	0.55	0.43	2.76	2.28	1.97	6.34	F05	10.78	0.70
1 1/4"	5.51	7.09	0.75	0.55	0.43	2.95	2.28	2.36	6.34	F05	13.42	0.70
1 1/2"	5.00	6.50	0.75	0.55	0.43	3.43	2.28	2.52	8.31	F07	18.92	0.79
2"	5.98	7.01	0.75	0.55	0.43	3.70	2.28	2.80	8.31	F07	24.86	0.79
2 1/2"	7.01	7.48	0.91	0.71	0.55	4.17	2.28	3.03	9.88	F07	33.00	0.90
3"	7.48	7.99	0.91	0.71	0.55	4.53	2.44	3.19	9.88	F07	40.92	0.90
4"	9.02	9.02	0.91	0.94	0.67	5.12	2.44	3.62	12.40	F10	67.98	1.98
5" RP	10.00	10.00	0.91	0.94	0.67	5.12	2.44	4.61	12.40	F10	88.00	1.98
6" RP	10.98	10.51	0.91	0.94	0.67	5.12	2.44	4.41	12.40	F10	84.92	1.98
6"	11.10	10.51	1.18	1.18	0.87	7.44	-	5.16	-	F12	139.92	-
8" RP	13.39	11.50	1.18	1.18	0.87	7.44	-	7.87	-	F12	182.60	-

Face to face B acc. to ASME B16.10

**Manual Valve**

Versions with manual gearbox or spring return handlever



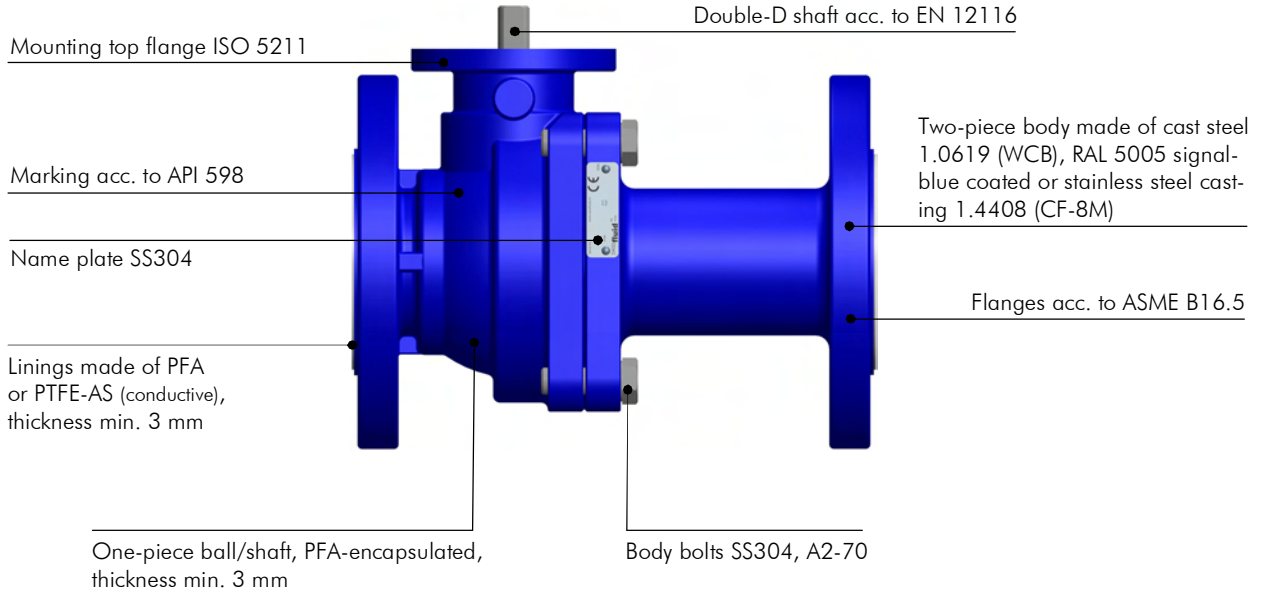
note: gearbox and spring return handlever to be mounted onto valve across to pipeline

**Dimensions** inch

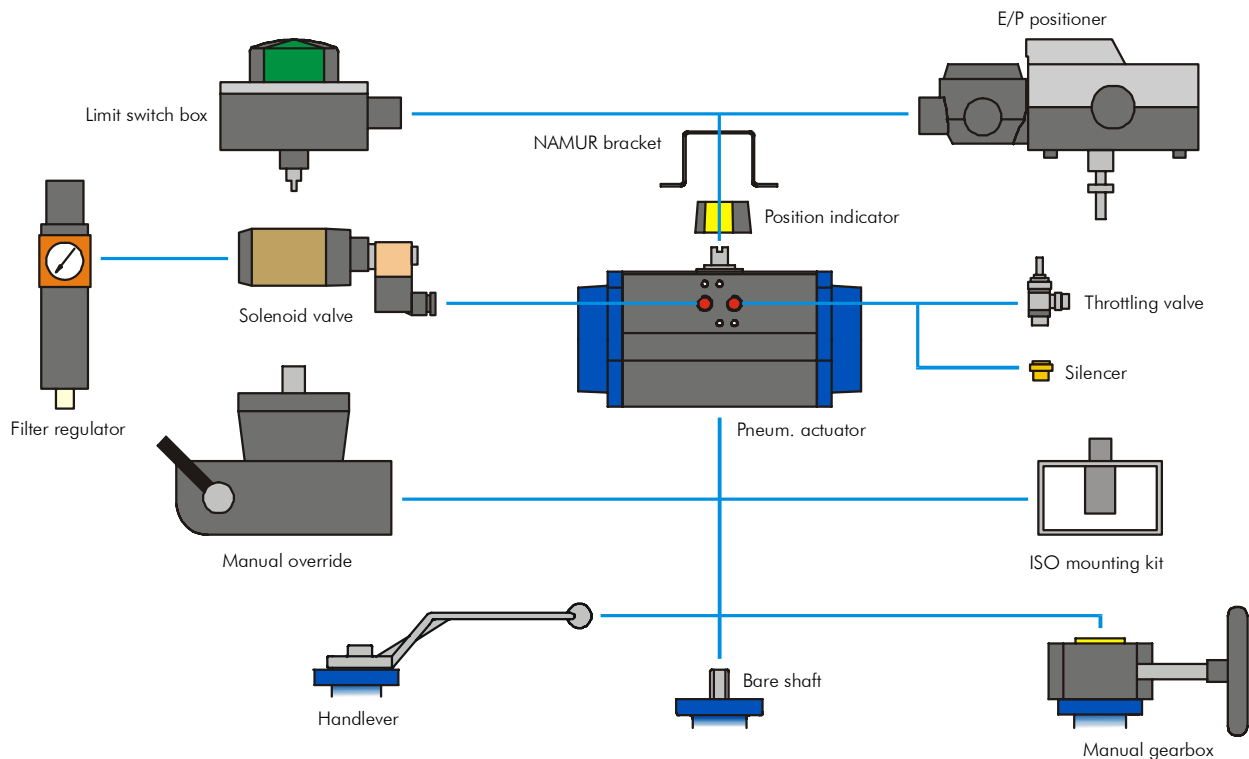
**Weights** lbs

Size nom.	L	M	T1	T2	V	W	SR Lever	Gearbox
							only	only
1/2"	13.66	2.91	1.57	4.72	3.27	4.92	3.52	5.06
3/4"	13.66	2.91	1.57	4.72	3.27	4.92	3.52	5.06
1"	13.66	2.91	1.57	4.72	3.27	4.92	3.52	5.06
1 1/4"	16.38	2.91	1.57	4.72	3.27	4.92	4.40	5.06
1 1/2"	16.38	2.91	1.57	4.72	3.27	4.92	4.40	5.06
2"	16.38	2.91	1.57	4.72	3.27	4.92	4.40	5.06
2 1/2"	-	-	1.57	4.72	3.27	4.92	-	5.06
3"	-	-	1.57	4.72	3.27	4.92	-	5.06
4"	-	-	1.97	8.27	4.80	7.87	-	7.70
5" RP	-	-	1.97	8.27	4.80	7.87	-	7.70
6" RP	-	-	1.97	8.27	4.80	7.87	-	7.70
6"	-	-	2.95	9.45	7.40	11.81	-	14.96
8" RP	-	-	2.95	9.45	7.40	11.81	-	14.96

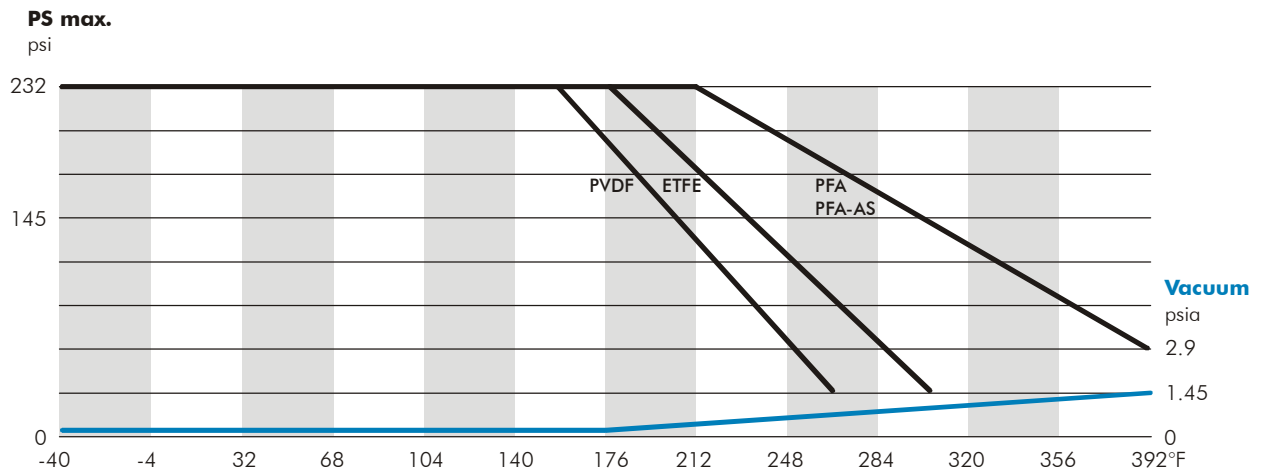
**Construction of Valve**



**Mounting Options**



**Pressure-/Temperature Diagram**



**Torque Values** in-lbs

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

Size nom.	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5" RP/6" RP	6" 8" RP
Torque nom.	71	71	106	159	204	266	443	575	841		2,124
max. allow.	1,283	1,283	1,283	1,283	2,832	2,832	2,832	2,832	6,195		10,620

• 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.

Size nom.	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5" RP/6" RP	6" 8" RP
Flow Rate	18	36	68	139	205	312	610	915	1,405		3,165

**Options**

**Cs-Ball**

to prevent media residues inside ball cavity, for full drainage



**V-Port-Ball**

suitable for control applications, with various contours



**Vented Ball**

with drilled vent hole, suited for upstream pressure relief

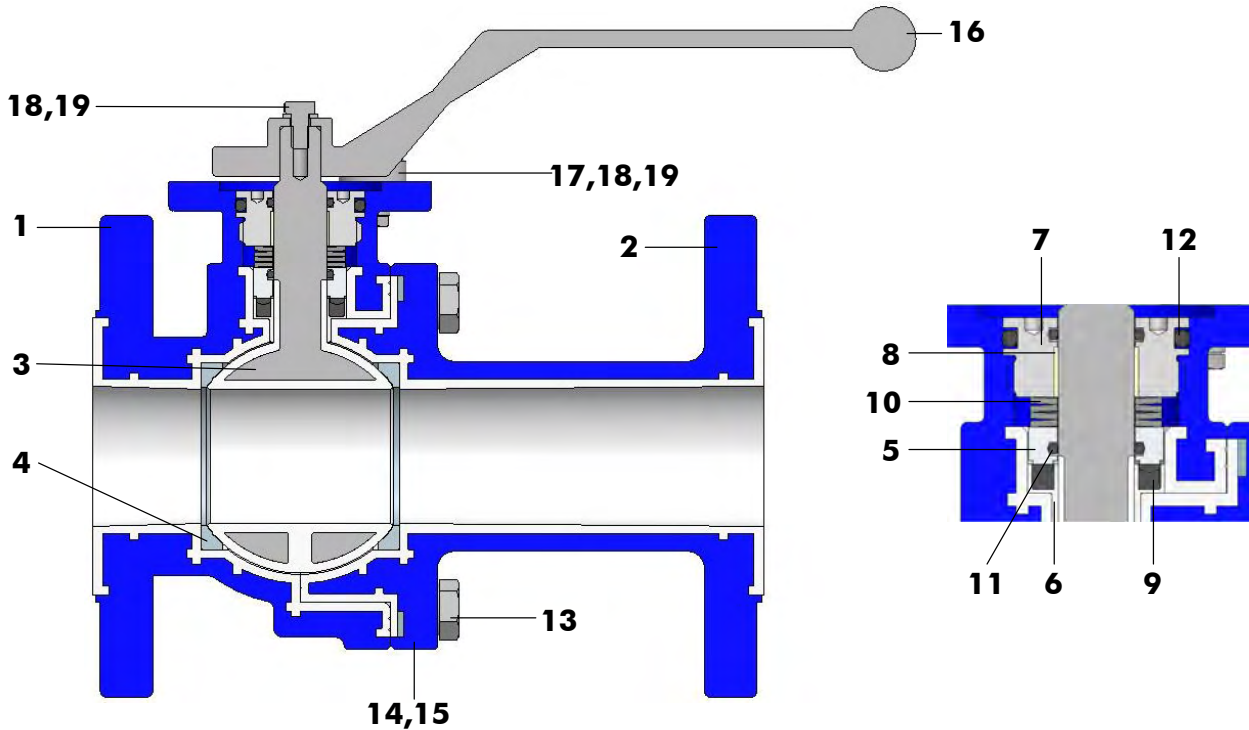


**Typical Service Applications**

- 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 versions upon request

**Standard Version** (Picture showing valve with body WCB A216, PFA-lined, with handlever)



Item	Qty.	Description	Material Description	Material No. DIN 17440/41
1	1	Body Half Left, lined, RAL 5005 epoxy coated	WCB/PFA	1.0619
2	1	Body Half Right, lined, RAL 5005 epoxy coated	WCB/PFA	1.0619
3	1	Ball/Shaft one-piece, encapsulated	Duplex/PFA	1.4462
4	2	Ball Seat	PTFE	
5	1	Pressure Sleeve	SS316L	1.4404
6	1	Sealing Sleeve	PTFE	
7	1	Threaded Bushing	SS316L	1.4404
8	1	Bearing	C.Steel/PTFE	
9	1	Elastomer Insert	FPM	
10	4	Belleville Spring	Spring Steel	1.8159
11	2	O-Ring	FPM	
12	1	O-Ring	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

**Project-/Customer Data**

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

**Ref. SF** \_\_\_\_\_

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"/> Spec. Grav. ____ |
| <input type="checkbox"/> gaseous  | <input type="checkbox"/> Solids ____ %    | <input type="checkbox"/> viscous       | <input type="checkbox"/> Flow Velocity ____ ft/sec |   |
| <input type="checkbox"/> abrasive | <input type="checkbox"/> Particle ____ mm | <input type="checkbox"/> Visc. ____ cp | <input type="checkbox"/> Flow Rate ____ usg/min    |   |

**Pressure**

max. \_\_\_\_ bar  
min. \_\_\_\_ bar

**Temperature**

max. \_\_\_\_ °C  
min. \_\_\_\_ °C

**Mode**

- On/Off  
 Flow Control  
\_\_\_\_ cycles/ \_\_\_\_

**Installation / Environment**

- horizontal  Room dry  
 vertical  Room humid  
 outdoor

Remarks:

**SBV Product Code**

Specification of a complete Ball Valve SBV Series

Product code	Nom. size	Flange conn.	Body	Lining body	Elastomer	Ball encaps./solid	Shaft end	Options																																							
<b>SBV</b>	<b>4"</b>	<b>150#</b>	<b>G10</b>	<b>A85</b>	<b>E67</b>	<b>U85</b>	<b>DD</b>																																								
	<table border="1"> <tr><td>1/2" - 6"</td></tr> <tr><td>5"RP - 8"RP</td></tr> <tr><td>DN15-200RP</td></tr> </table>	1/2" - 6"	5"RP - 8"RP	DN15-200RP	<table border="1"> <tr><td>ANSI150#</td></tr> <tr><td>ANSI300#</td></tr> <tr><td>PN16</td></tr> <tr><td>PN40</td></tr> <tr><td>JIS 10K</td></tr> </table>	ANSI150#	ANSI300#	PN16	PN40	JIS 10K	<table border="1"> <tr><td>G10 WCB</td></tr> <tr><td>G15 CF-8M</td></tr> </table>	G10 WCB	G15 CF-8M	<table border="1"> <tr><td>A85 PFA</td></tr> <tr><td>A86 PFA-AS</td></tr> <tr><td>A88 PVDF</td></tr> <tr><td>A89 PP</td></tr> <tr><td>A91 ETFE</td></tr> </table>	A85 PFA	A86 PFA-AS	A88 PVDF	A89 PP	A91 ETFE	<table border="1"> <tr><td>E60 EPDM</td></tr> <tr><td>E67 FPM</td></tr> <tr><td>E68 VMQ</td></tr> </table>	E60 EPDM	E67 FPM	E68 VMQ	<table border="1"> <tr><td>U85 PFA</td></tr> <tr><td>U86 PFA-AS</td></tr> <tr><td>U88 PVDF</td></tr> <tr><td>U89 PP</td></tr> <tr><td>U91 ETFE</td></tr> <tr><td>S32 SS316L</td></tr> <tr><td>S40 Tit. Gr.2</td></tr> <tr><td>S41 Tit. Gr.7</td></tr> <tr><td>S43 Hast. C-276</td></tr> </table>	U85 PFA	U86 PFA-AS	U88 PVDF	U89 PP	U91 ETFE	S32 SS316L	S40 Tit. Gr.2	S41 Tit. Gr.7	S43 Hast. C-276	<table border="1"> <tr><td>DD DD drive</td></tr> <tr><td>SP SQ parallel</td></tr> <tr><td>SR SQ 45° rot.</td></tr> </table>	DD DD drive	SP SQ parallel	SR SQ 45° rot.	<table border="1"> <tr><td>Cs Cs ball</td></tr> <tr><td>Vh vented ball</td></tr> <tr><td>Vp15 15° V-port</td></tr> <tr><td>Vp30 30° V-port</td></tr> <tr><td>Vp45 45° V-port</td></tr> <tr><td>Vp60 60° V-port</td></tr> <tr><td>B7 B7 body bolts</td></tr> <tr><td>Ti Ti body bolts</td></tr> <tr><td>RAL... special paint</td></tr> </table>	Cs Cs ball	Vh vented ball	Vp15 15° V-port	Vp30 30° V-port	Vp45 45° V-port	Vp60 60° V-port	B7 B7 body bolts	Ti Ti body bolts	RAL... special paint
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Note: actuator options and accessories to be specified on orders separately.