



# VB-20

## 3-Pieces Forged Ball Valve

**Working Pressures: 100 | 200 bar (1500 | 2900 PSI)**

Tecval **VB-20** 3-Pieces Ball Valve is a **Forged Body** design. The forging process reduces the surface porosity and closes up internal cavities. The result is mechanical stronger and more durable product, especially suitable for working in high corrosive environment. They are manufactured under ASME B16.34.



### Features

- Unique design Forged Body and Flanges.
- Full bore (FB) or Standard bore (SB).
- Compensation springs on packing stem.
- Three pieces to allow a full disassembling.
- Easy cleaning and maintenance.
- No ejectable stem design.
- 316 SS handle to reduce the risk of corrosion.
- 100% tested.

### Options

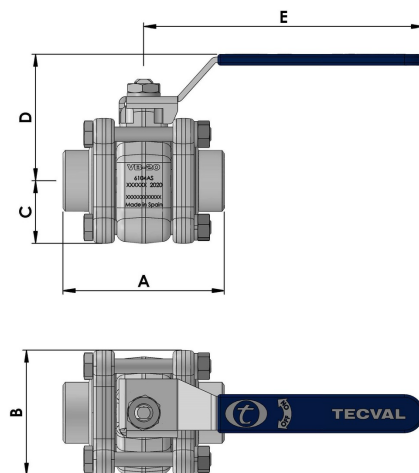
- Flanged ends.
- Antistatic device. **A**
- O-ring seals Nitrile. **B**
- Male-Female (MxF) end connections. **C**
- Degreased for oxygen service. **D**
- PEEK seats for high pressures 200bar (2900PSI). **I**
- Male-Male (MxM) end connections. **J**
- O-ring seals Neopren. **N**
- Prepared for a quick automation (ISO5211). **T**
- O-ring seals FPM. **VI**
- Handle safety lockout. **W**

### Technical data

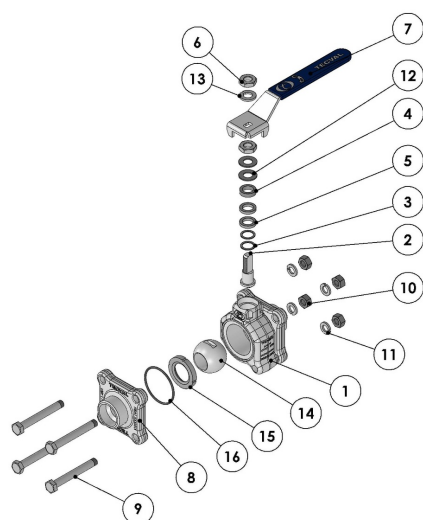
Max. Pressure	TFM Seats up to 100 bar (1500 PSI) & 150 bar (2200 PSI) PEEK Seats up to 200 bar (2900 PSI) only to 1"(FB)							
Temperatures	-20°C/200°C (-4°F/392°F)							
Dimensions	1/2"(FB)	3/4"(SB)	3/4"(FB)	1"(SB)	1"(FB)	1 1/2"(SB)	1 1/2"(FB)	2"(SB)
A	76	76	88	88	110	110	125	125
B	56	56	68	68	90	90	106	106
C	28	28	34	34	45	45	53	53
D	68	68	69	69	105	105	111	111
E	153	153	153	153	198	198	236	236
Orifice Size	15	15	20	20	25	30	38	38
Maximum Cv	12	12	30	30	56	80	118	118

## Order codes

BSP	6061	6081	6091	6101	6111	6141	6151	6201
SW	6063	6083	6093	6103	6113	6143	6153	6203
BW Sch.40s	6064	6084	6094	6104	6114	6144	6154	6204
NPT	6062	6082	6092	6102	6112	6142	6152	6202
VIC Grooved	-	6080	6090	6100	6110	6140	6150	6200



\* Dimensions in mm



## Materials

N° Part	AISI-316L [A4]	Duplex [AD]	SuperDuplex [AS]	Special alloys
1 Body	AISI-316L (1.4404)	Duplex (1.4462)	Superduplex (1.4410/1.4501)	Special alloy
2 Stem	AISI-316L (1.4404)	Superduplex (1.4410/1.4501)	Superduplex (1.4410/1.4501)	Special alloy
3 Stem bearing	PEEK	PEEK	PEEK	PEEK
4 Gland	AISI-316L (1.4404)	AISI-316L (1.4404)	AISI-316L (1.4404)	AISI-316L (1.4404)
5 Packing	P.T.F.E.	P.T.F.E.	P.T.F.E.	P.T.F.E.
6 Nut Handle	AISI-316 (1.4401)	AISI-316 (1.4401)	AISI-316 (1.4401)	AISI-316 (1.4401)
7 Handle	AISI-316L (1.4404)	AISI-316L (1.4404)	AISI-316L (1.4404)	AISI-316L (1.4404)
8 End connection	AISI-316L (1.4404)	Duplex (1.4462)	Superduplex (1.4410/1.4501)	Special alloy
9 Screw	AISI-316 (1.4401)	AISI-316 (1.4401)	AISI-316 (1.4401)	AISI-316 (1.4401)
10 Nut	AISI-316 (1.4401)	AISI-316 (1.4401)	AISI-316 (1.4401)	AISI-316 (1.4401)
11 Grower washer	AISI-316 (1.4401)	AISI-316 (1.4401)	AISI-316 (1.4401)	AISI-316 (1.4401)
12 Spring washer	AISI-301 (1.4310)	AISI-301 (1.4310)	AISI-301 (1.4310)	AISI-301 (1.4310)
13 Handle Grower	AISI-316 (1.4401)	AISI-316 (1.4401)	AISI-316 (1.4401)	AISI-316 (1.4401)
14 Ball	AISI-316L (1.4404)	Duplex (1.4462)	Superduplex (1.4410/1.4501)	Special alloy

## Actuators

Upon request, ball valves VB-20 can be delivered with:

- Pneumatic actuators: either double acting (DA) or spring return (SR).
- Electrical actuators: of 24V, 115V and 230V can also be assembled.

For detailed information please consult the sections on Electric and Pneumatic Actuators.

## Tests

100% valves are tested in accordance to API STANDARD 598, each valve is tested to check the leakage in the seats and packing. However they can also be tested under other standards such as EN12266. Upon request, the corresponding materials (EN10204 3.1) and test certificates can be delivered with the valve.

## Maintenance

15 Seat	TFM	TFM	TFM	TFM
16 O-ring	EPDM	EPDM	EPDM	EPDM

Valves with long no-working period may have a harder initial operating torque. Are designed to be operated in a fully open or fully closed position.

### Special alloys

We can manufacture in:

AISI-316Ti (1.4571) **A6** , AISI-904L (1.4539) **A9** , 254-SMO (1.4547) **AV** , Alloy 400 (2.4360) **MO** , Alloy 625 (2.4856) **IN** , Alloy 825 (2.4858) **CO** , Titanium Gr.2 (3.7034) **TI** , Hastelloy C-276 (2.4819) **HA**

Please address your inquiry to our Technical Department.

### Pressure/Temperature Service Ratings

Pressure Ratings in **bar** for standard combinations bodies and seats.

T(°C)	AISI-316L+TFM	AISI316L+PEEK	Superduplex+TFM Duplex+TFM	Superduplex+PEEK Duplex+PEEK
-20	135,0	206,8	135,0	228,6
0	135,0	206,8	135,0	228,6
50	135,0	200,1	135,0	228,6
100	97,6	173,9	97,6	223,3
150	62,8	157,0	61,6	209,4
200	22,8	145,8	22,8	198,2

### Ordering information

References are formed by three parts:

**Valve Code** Look for it in the order codes chart on the previous page.

**Option/s** If required, add the code/s from the options section on the previous page (in alphabetical order).

**Material** Look for the code on the materials chart.

Example of ball valve VB-20 with two options:

Ball valve VB-20 1"NPT (SB) Superduplex with handle safety lockout and FPM seals:

**6102 VI W AS** The reference required to place the order is **6102VIWAS** .