### **BV 4**







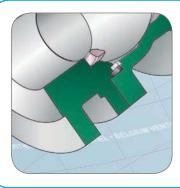
High pressed graphite stem packing between double glands

- Double nut locking with disc springs
- Non-contamination execution
- Heavy industrial stopper plate with locking device
- Centring point on top of stem
- Galvanised steel or stainless steel lever
- Double D oversized stem
- Triple stem packing
- Low friction finishing stem



Stem seats: primary PTFE seat, secondary graphite seat

- Double antistatic execution (ATEX certified)
- Anti blow-out stem (TA-luft certified)
- ISO-mounting flange DIN 3337
- Complete machined ISO-top and flanges
- PTFE stem packing with double 0-rings
- Pressure relieve hole in sleeve
- Separate PTFE trust
- Double cavity relieve seats



Body seats: primary PTFE seat, secondary graphite seat

- Separate chambered body seals
- Complete inside machined body and minimum dead spaces
- Double sealed body & stem
- Machined integral full bore
- Solid internal machined ball
- Chambered cavity relieve ball seats
- Fire safe metal/metal ball seats
- Maximum overlapping ball seats

### DESIGN

ANSI B16.5, ANSI B16.10, API 607, API 6FA, API 6D

BS 5351, BS 5159, BS 5146, BS 6755/2

DIN 2505, DIN 3202, DIN 3840, DIN 2501, DIN 7121, DIN 3337, DIN 2526, DIN 3357

ISO 5208, ISO 5211, ISO 7121, ISO 5752, ISO 10497, ISO 7268, ISO 2081, ISO 4520, ISO 9227

EN 12516, EN 1759, EN 1983, EN 13828, EN 19, EN 12351, EN 558, EN 10204 (DIN 50.049-3.1B), EN 1092, EN 736, EN 12570, EN 1503, EN 6708, EN 1775

### CERTIFICATES



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

**TA Luft** approved (TÜV Süddeutschland)
Technische Anleitung zur Reinhaltung der Luft
According to TA luft (27.02.86) punkt 3.1.8.4



PRAGA 2

The Company of the Company

**ADR** approved (Apragaz) International Carriage of Dangerous Goods by Road According to KB 09.03.2003, Class 3, 4, 5, 6, 8 and 9

> **Fire Safe** approved (TÜV Süddeutschland) According to BS 6755/2 - API 6FA - ISO 10497





**GAS** approved (KVBG/ARGB)
Resistance to high temperature (RHT)
According to EN 1775

**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)

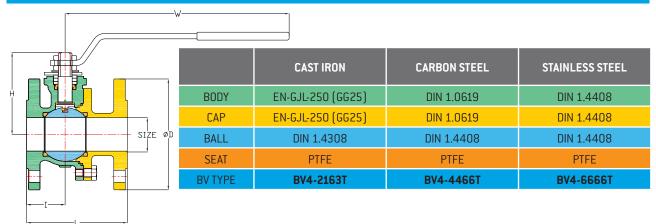
Non-electric devices and components group II



To maintain a high quality standard of BV4, the product is casted in a certified foundry  $(AD - Merkblatt\ WO / TRD\ 100)$  and assembled in our European facilities.

## **BV4-DIN**

### MATERIAL



### DIMENSIONS

### DIN 10/16/40 - F4 - F5

| SIZE   | D     | D     | D     | 1.0   | Н       | W       | L     |
|--------|-------|-------|-------|-------|---------|---------|-------|
| DN 15  | 95,0  | 95,0  | 95,0  | 49,0  | 52,0    | 131,0   | 115,0 |
| DN 20  | 105,0 | 105,0 | 105,0 | 52,0  | 56,0    | 131,0   | 120,0 |
| DN 25  | 115,0 | 115,0 | 115,0 | 53,0  | 73,0    | 174,0   | 125,0 |
| DN 32  | 140,0 | 140,0 | 140,0 | 55,0  | 76,0    | 174,0   | 130,0 |
| DN 40  | 150,0 | 150,0 | 150,0 | 51,0  | 107,0   | 250,0   | 140,0 |
| DN 50  | 165,0 | 165,0 | 165,0 | 58,0  | 122,0   | 321,0   | 150,0 |
| DN 65  | 185,0 | 185,0 | 185,0 | 61,0  | 133,0   | 321,0   | 170,0 |
| DN 80  | 200,0 | 200,0 | 200,0 | 75,5  | 152,0   | 381,0   | 180,0 |
| DN 100 | 220,0 | 220,0 | 235,0 | 80,0  | 165,0   | 381,0   | 190,0 |
| DN 125 | 250,0 | 250,0 | U/R   | 149,0 | 187,0   | 382,0   | 325,0 |
| DN 150 | 285,0 | 285,0 | 300,0 | 157,0 | 305,0   | 700,0   | 350,0 |
| DN 200 | 340,0 | 340,0 | 375,0 | 190,0 | 348,0   | 700,0   | 400,0 |
| DN 250 | 395,0 | 405,0 | 450,0 | 225,0 | 367,0   | 1100,0  | 450,0 |
| DN 300 | 445,0 | 460,0 | 515,0 | 250,0 | 403,0   | 1100,0  | 500,0 |
|        | PN 10 | PN 16 | PN 40 |       | PN 10 / | 16 / 40 |       |

Dimensions in mm / U/R = Upon request / Larger sizes in process and on request

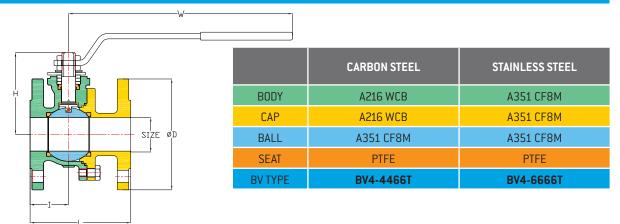
#### DIN 10/16/40 - F1

| SIZE   | D     | D     | D     | 1    | Н               | W     | L     |  |  |  |  |  |
|--------|-------|-------|-------|------|-----------------|-------|-------|--|--|--|--|--|
| DN 15  | 95,0  | 95,0  | 95,0  | 49,0 | 52,0            | 131,0 | 130,0 |  |  |  |  |  |
| DN 20  | 105,0 | 105,0 | 105,0 | 52,0 | 56,0            | 131,0 | 150,0 |  |  |  |  |  |
| DN 25  | 115,0 | 115,0 | 115,0 | 53,0 | 73,0            | 174,0 | 160,0 |  |  |  |  |  |
| DN 32  | 140,0 | 140,0 | 140,0 | 55,0 | 76,0            | 174,0 | 180,0 |  |  |  |  |  |
| DN 40  | 150,0 | 150,0 | 150,0 | 51,0 | 107,0           | 250,0 | 200,0 |  |  |  |  |  |
| DN 50  | 165,0 | 165,0 | 165,0 | 58,0 | 122,0           | 321,0 | 230,0 |  |  |  |  |  |
| DN 65  | 185,0 | 185,0 | U/R   | 61,0 | 133,0           | 321,0 | 290,0 |  |  |  |  |  |
| DN 80  | 200,0 | 200,0 | U/R   | 75,5 | 152,0           | 381,0 | 310,0 |  |  |  |  |  |
| DN 100 | 220,0 | 220,0 | U/R   | 80,0 | 165,0           | 381,0 | 350,0 |  |  |  |  |  |
|        | PN 10 | PN 16 | PN 40 |      | PN 10 / 16 / 40 |       |       |  |  |  |  |  |

Dimensions in mm / U/R = Upon request / Larger sizes in process and on request

# **BV 4 - ANSI**

### MATERIAL



### DIMENSIONS

### **ANSI 150**

| SIZE   | D     | 1     | Н     | W      | L     |
|--------|-------|-------|-------|--------|-------|
| 1/2"   | 90,0  | 46,0  | 50,7  | 131,0  | 108,0 |
| 3/4"   | 100,0 | 50,0  | 52,5  | 131,0  | 117,0 |
| 1"     | 110,0 | 57,0  | 70,0  | 174,0  | 127,0 |
| 1 1/2" | 130,0 | 60,0  | 107,0 | 250,0  | 165,0 |
| 2"     | 150,0 | 65,0  | 122,0 | 321,0  | 178,0 |
| 3"     | 190,0 | 78,0  | 151,0 | 382,0  | 203,0 |
| 4"     | 230,0 | 80,0  | 165,0 | 381,0  | 229,0 |
| 6"     | 280,0 | 157,0 | 288,0 | 700,0  | 394,0 |
| 8"     | 345,0 | 190,0 | 332,0 | 700,0  | 457,0 |
| 10"    | 406,4 | 225,0 | 367,0 | 1100,0 | 534,0 |
| 12"    | 482,6 | 250,0 | 403,0 | 1100,0 | 610,0 |

Dimensions in mm / Larger sizes in process and on request

### **ANSI 300**

| SIZE   | D     | 1     | Н      | W      | L     |
|--------|-------|-------|--------|--------|-------|
| 1/2"   | 95,0  | 61,5  | 52,0   | 131,0  | 140,0 |
| 3/4"   | 117,5 | 61,5  | 56,0   | 131,0  | 152,0 |
| 1"     | 125,0 | 70,5  | 72,0   | 174,0  | 165,0 |
| 1 1/2" | 155,0 | 78,5  | 107,0  | 250,0  | 190,0 |
| 2"     | 165,0 | 86,0  | 122,0  | 321,0  | 216,0 |
| 3"     | 210,0 | 81,0  | 151,0  | 381,0  | 283,0 |
| 4"     | 255,0 | 88,5  | 165,0  | 381,0  | 305,0 |
| 6"     | 320,0 | 172,0 | 245,0  | 700,0  | 403,0 |
| 10"    | 444,5 | 225,0 | 1100,0 | 1100,0 | 568,0 |
| 12"    | 520,7 | 250,0 | 1100,0 | 1100,0 | 648,0 |

Dimensions in mm / Larger sizes in process and on request

### **MATERIAL**

**BV4 BALL VALVE** is widely used throughout the world in various industries such as chemical, petrochemical, food & beverage, pulp and paper, pharmaceutical and a variety of other industrial-product and processing plants. In these applications the mostly common requested material is steel and stainless steel. BV4 standard types are as such based on these two materials.

Type of sealing is depending on industrial process, herewith an overview of possible ball seats material for BV4



| MATERIAL    | COMPOSITION                  |  |
|-------------|------------------------------|--|
| Virgin PTFE | PolyTetraFluoro-<br>Ethylene | A synthetic fluoropolymer with numerous applications due to its outstanding resistance to chemical attack by most chemicals and solvents as well as its high temperature resistance and electical isolating properties.  This self lubricating compound is used as standard sealing material in our ball valves. |
| RTFE        | PTFE + glassfiber            | Glassfilling slightly increases PTFE's very low coefficient of friction, but considerably increases wear- and pressure-resistance.   |
| CTFE        | PTFE + carbon/<br>graphite   | Carbon is one of the best fillers for chemical use. It features high heat-conductibility and high wear- and pressure-resistance.   |
| MPTFE       | PTFE + SS metal core         | When high pressure is the property to beat, the metal core provides a solution. The core is surrounded by virgin PTFE.   |
| PEEK        | PolyEtherEther-<br>Ketone    | PEEK is a semicrystalline thermoplastic with very interesting mechanical properties.<br>It is highly resistant to thermal degradation and pressure thus providing a solution<br>in high demanding processes.   |

### MATERIAL & CODES

|           |   |   |   |   |   |   |   | De | esc | rip | tio | n ai | nd | exp | lar | nati | on | BV | 4 |   |   |   |   |   |  |
|-----------|---|---|---|---|---|---|---|----|-----|-----|-----|------|----|-----|-----|------|----|----|---|---|---|---|---|---|--|
| Туре      | В | V | 4 | - |   |   |   |    | -   |     |     |      |    |     | -   |      |    | -  |   |   | - |   |   | = | Split body ball valve produced by BELVEN NV                    |
| DIN       |   |   |   | - | D |   |   |    |     |     |     |      |    |     | -   |      |    |    |   |   |   |   |   | = | Flange connection - DIN 2501                                   |
|           |   |   | ٠ | - |   | 1 | 0 |    | -   |     |     |      |    |     | -   |      |    | -  |   |   | - |   |   | = | Flange connection -<br>DIN 2501/DIN 2526 form C - PN10         |
|           |   |   |   | - |   | 1 | 6 |    | -   |     |     |      |    |     | -   |      |    | -  |   |   | - |   |   | = | Flange connection -<br>DIN 2501/DIN 2526 form C - PN16         |
|           |   |   |   | - |   | 4 | 0 |    |     |     |     |      |    |     | -   |      |    | -  |   |   | - |   |   | = | Flange connection -<br>DIN 2501/DIN 2526 form C - PN40         |
|           |   |   |   | - |   |   |   | 4  | -   |     |     |      |    |     | -   |      |    | -  |   |   | - |   |   | = | Face to face dimension -<br>DIN 3202-F4 , F18 , EN 558-1-14/15 |
|           |   |   |   | - |   |   |   | 5  | -   |     |     |      |    |     |     |      |    | -  |   |   | - |   |   | = | Face to face dimension -<br>DIN 3202-F5 , F18 , EN 558-1-14/15 |
| ANSI      |   |   |   |   | A |   |   |    |     |     |     |      |    |     |     |      |    |    |   |   |   |   |   | = | Flange connection - ANSI B16.5                                 |
|           |   |   |   | - |   | 1 | 5 | 0  | -   |     |     |      |    |     | -   |      |    | -  |   |   | - |   |   | = | Face to face dimension -<br>ANSI B16.10 - A-150                |
|           |   |   |   | - |   | 3 | 0 | 0  | -   |     |     |      |    |     | -   |      |    | -  |   |   | - |   |   | = | Face to face dimension -<br>ANSI B16.10 - A-300                |
| Body      |   |   |   |   |   |   |   |    |     | 2   | 1   |      |    |     |     |      |    |    |   |   |   |   |   | = | Cast iron: GG-25   |
| J         |   |   |   | - |   |   |   |    | -   |     | 4   |      |    |     |     |      |    |    |   |   | - |   |   | = | Cast carbon steel:<br>DIN 1.0619, A216-WCB                     |
|           |   |   |   | - |   |   |   |    | -   | 6   | 6   |      |    |     | -   |      |    | -  |   |   | - |   |   | = | Cast stainless steel:<br>DIN 1.4408, A351-CF8M                 |
| Ball      |   |   |   | - |   |   |   |    |     |     |     | 6    |    |     |     |      |    |    |   |   | - |   |   | = | Stainless steel: DIN 1.4308, AISI F304                         |
|           |   | ٠ | ٠ | - | ٠ | ٠ | ٠ | ٠  | -   | ٠   | ٠   | 6    | 6  | ٠   | -   | ٠    | ٠  | •  | ٠ | ٠ | - | ٠ | ٠ | = | Stainless steel: DIN 1.4408, AISI F316                         |
| Seats     |   |   |   | - |   |   |   |    |     |     |     |      |    |     |     |      |    |    |   |   | - |   |   | = | PTFE   |
|           |   | ٠ | ٠ | • | ٠ | ٠ | ٠ | ٠  | •   |     |     | ٠    |    | C   |     | ٠    |    | •  | ٠ | ٠ | - | ٠ | ٠ | = | CTFE   |
|           | ٠ | ٠ | ٠ |   | ٠ | ٠ | ٠ | ٠  |     |     |     | ٠    |    | R   |     | ٠    |    | -  | ٠ | ٠ | - | ٠ | ٠ | = | RTFE   |
|           |   | ٠ | ٠ | • | ٠ | ٠ |   | ٠  |     |     |     | ٠    |    |     |     |      |    |    |   | ٠ | - | ٠ | ٠ | = | MPTFE  |
|           |   | ٠ | ٠ | - | ٠ |   | ٠ |    |     |     |     | ٠    |    | P   |     | ٠    |    |    |   | ٠ | - | ٠ | ٠ | = | PEEK   |
|           |   | • | ٠ | - |   | ٠ | ٠ | •  | -   |     |     |      |    | G   | -   | •    |    | •  |   | • | - |   | • | = | Gasexecution and certified KVBG/ARGB                           |
| Bore      |   |   |   | - |   |   |   |    | -   |     |     |      |    |     | -   | F    | В  | -  |   |   | - |   |   | = | Integral full bore   |
| Execution |   |   |   |   |   |   |   |    | -   |     |     |      |    |     | -   |      |    | -  | F | S |   |   |   | = | Fire safe execution , non contamination                        |
| Operation |   |   |   |   |   |   |   |    |     |     |     |      |    |     |     |      |    |    |   |   |   | В | S | = | Bare shaft   |
|           |   |   |   | - |   |   |   |    | -   |     |     |      |    |     | -   |      |    | -  |   |   | - | L | Ε | = | Lever  |
|           |   |   |   | - |   |   |   |    | -   |     |     |      |    |     | -   |      |    | -  |   |   | - | 0 | L | = | Oval lever   |
|           |   |   |   | - |   |   |   |    | -   |     |     |      |    |     | -   |      |    | -  |   |   | - | G | В | = | Gearbox operated   |
|           |   |   |   |   |   |   |   |    |     |     |     |      |    |     | -   |      |    | -  |   |   | - | D | Α | = | Pneumatic double acting  |
|           |   |   |   |   |   |   |   |    |     |     |     |      |    |     |     |      |    | -  |   |   | - | S | Α | = | Pneumatic single acting  |
|           |   |   |   |   |   |   |   |    |     |     |     |      |    |     |     |      |    |    |   |   |   |   |   |   |  |
|           |   |   |   | - |   |   |   |    | -   |     |     |      |    |     | -   |      |    | -  |   |   | S | Α | М | = | Pneumatic single acting + MOD                                  |