



**Range DN:** 6 ~ 150  
**NPS:** 1/4" ~ 6"



PED 97/23/EC  
PED 2014/68/EU



TR TS 10/11,  
12/11, 32/11



**Range PN:** 160 ~ 320  
**Class:** 900 ~ 2500



**HIGH-PRESSURE  
EXECUTION**

**Operating temperature:** -196 °C ~ 550 °C

**Connection into piping:** Flanged, welded ends, combined execution



## DESCRIPTION

GLB valves are controlled shut-off valves. They are designed to stop or allow the flow of the medium by external operation, via either the handwheel or the installed drive. If, upon the customer's request, they are fitted with a regulating cone, they can be used to regulate the flow of the medium. The medium can flow in one direction only. These valves are designed and manufactured to ensure maximum service life and reliability.

## MATERIAL SPECIFICATION

GLB valves are made from carbon, alloy and stainless steels. The material type can be adjusted according to the customer's request to optimally suit the operating conditions.

## APPLICATION

GLB valves are made from carbon, alloy and stainless steels. The material type can be adjusted according to the customer's request to optimally suit the operating conditions..

## BASIC STANDARDS FOR DESIGN

### Basic design

EN 12 516 -1, 2

### Pressure-temperature rating

ASME B16.34, EN 12 516 - 1

### Testing

API 598, EN 12 266 - 1, 2

### Face-to-face dimensions

See the table of dimensions

### Dimensions of the welded ends

ANSI B16.25, EN 12 627

### Top Flange dimensions

EN ISO 5210

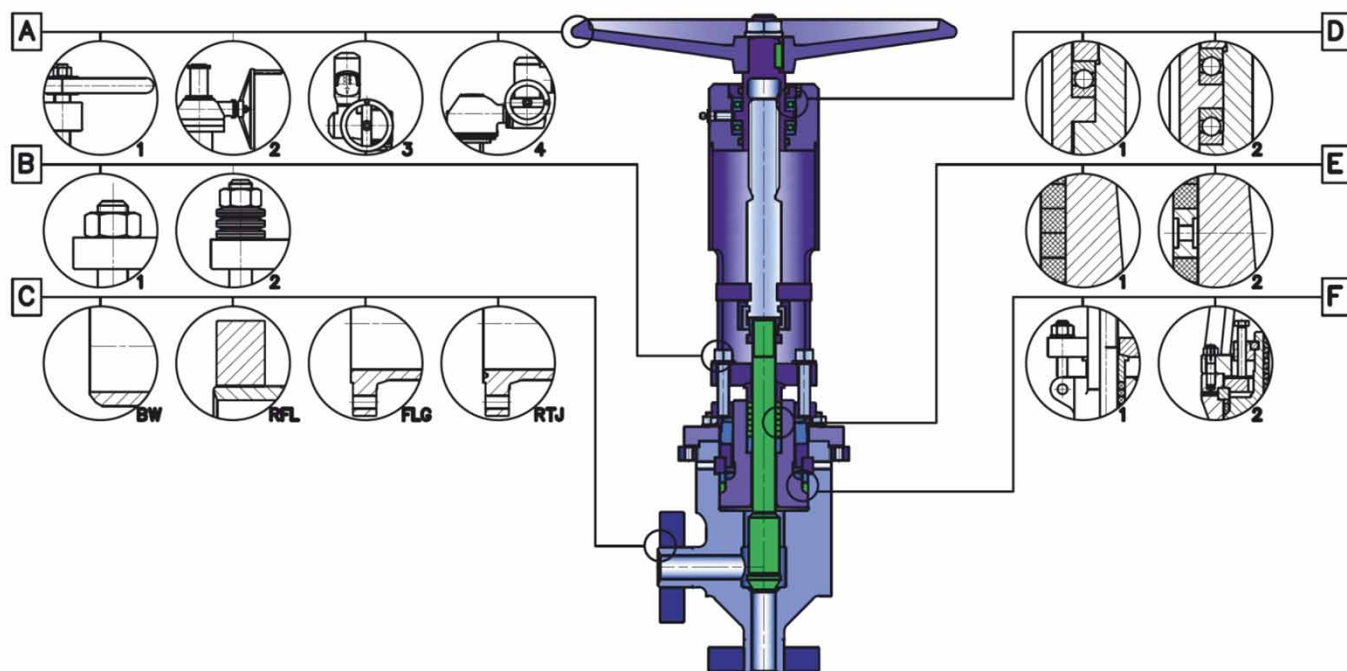
### Flange dimensions

ANSI B 16.5, EN 1092 - 1,  
GOST 12815-80, GOST 9399-81

### Special

NACE MR-0175

## STRUCTURAL DESIGN



### A - Control

- handwheel
- handwheel with gear box
- electric actuator
- electric actuator with gear box

### B – Method of pressing packing seal

- use of compression packing seal with cup springs to provide constant pressure force on the packing is preferred when operating with cyclic pulsations of pressure or at high pressures and temperatures

### C — Connection into pipe

- flanged
- threaded ends
- welded ends
- welded ends according to the customer specifications

### D – Installation of stem nut

- combination of bushing and bearing
- installation on two axial thrust bearings

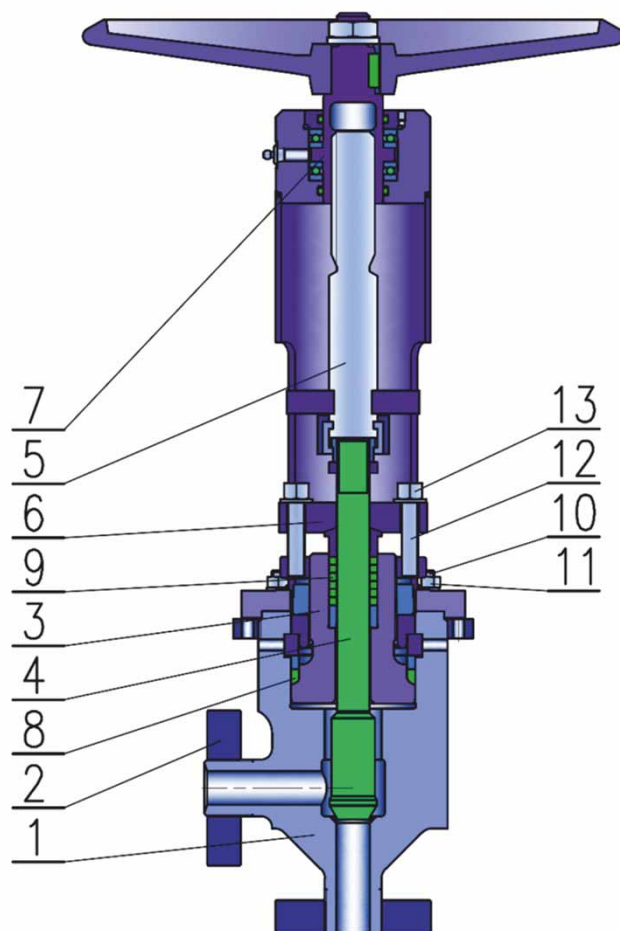
### E — Design of packing seal

- standard
- double packing with spacer - used according to operating conditions

### F — Pressure seal bonnet

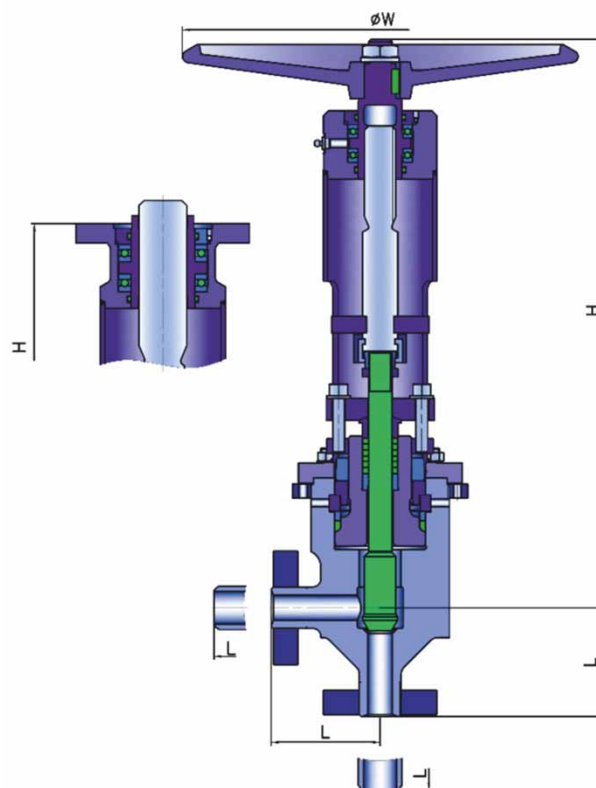
- pressure seal bonnet is used from DN32 and above

### MATERIAL SPECIFICATION



| ITEM | NAME            | P355 NL1                                     | P355 NL2 | 1.4541 | 1.4401 | A350 LF2 | A105    | A182 F5  | A182 F304 | A182 F316 |
|------|-----------------|--|----------|--------|--------|----------|---------|----------|-----------|-----------|
| 1    | BODY            | P355 NL1                                     | P355 NL2 | 1.4541 | 1.4401 | A350 LF2 | A105    | A182 F5  | A182 F304 | A182 F316 |
| 2    | FLANGE          | P355 NL1, P355 NL2, P460 NL2, 1.4541, 1.4401 |          |        |        |          |         |          |           |           |
| 3    | DISCHARGE COVER | P355 NL1                                     | P355 NL2 | 1.4541 | 1.4401 | A350 LF2 | A105    | A182 F5  | A182 F304 | A182 F316 |
| 4    | PLUG            | 1.4541+surfacing                             |          |        |        |          |         |          |           |           |
| 5    | STEM            | 17 027.6                                     |          |        |        |          |         |          |           |           |
| 6    | SEALING FLANGE  | P355 NL1                                     | P355 NL2 | 1.4541 | 1.4401 | A350 LF2 | A105    | A182 F5  | A182 F304 | A182 F316 |
| 7    | STEM NUT        | Bronze                                       |          |        |        |          |         |          |           |           |
| 8    | SEALING         | Graphite                                     |          |        |        |          |         |          |           |           |
| 9    | PACKING         | Graphite                                     |          |        |        |          |         |          |           |           |
| 10   | BOLT            | 42CrMo4                                      | 42CrMo4  | A2-70  | A2-70  | A320 L7  | A193 B7 | A193 B16 | A193 B8   | A193 B8M  |
| 11   | NUT             | A2-70  | A2-70    | A2-70  | A2-70  | A194 4   | A194 2H | A194 2H  | A194 8    | A194 8M   |
| 12   | BOLT            | 42CrMo4                                      | 42CrMo4  | A2-70  | A2-70  | A320 L7  | A193 B7 | A193 B16 | A193 B8   | A193 B8M  |
| 13   | NUT             | A2-70  | A2-70    | A2-70  | A2-70  | A194 4   | A194 2H | A194 2H  | A194 8    | A194 8M   |

## DIMENSIONS



| DN  | PN 160 |     |      |     |           | PN 250 |     |      |     |           | PN 320 |     |      |     |           |
|-----|--------|-----|------|-----|-----------|--------|-----|------|-----|-----------|--------|-----|------|-----|-----------|
|     | 1      | 2   | H    | W   | Mass (kg) | 1      | 2   | H    | W   | Mass (kg) | 1      | 2   | H    | W   | Mass (kg) |
| 6   | 105    | 60  | 203  | 100 | 6         | 115    | 60  | 203  | 100 | 7         | 115    | 60  | 203  | 100 | 8         |
| 10  | 105    | 80  | 246  | 100 | 8         | 115    | 80  | 246  | 160 | 10        | 115    | 85  | 246  | 160 | 11        |
| 15  | 105    | 80  | 410  | 160 | 24        | 115    | 108 | 410  | 200 | 24        | 115    | 132 | 410  | 250 | 27        |
| 25  | 115    | 127 | 575  | 200 | 42        | 130    | 127 | 575  | 250 | 54        | 130    | 154 | 575  | 400 | 61        |
| 40  | 130    | 152 | 550  | 250 | 63        | 150    | 152 | 550  | 350 | 72        | 150    | 192 | 550  | -   | 85        |
| 50  | 150    | 184 | 600  | 350 | 77        | 175    | 184 | 600  | 500 | 110       | 175    | 225 | 600  | -   | 138       |
| 65  | 170    | 210 | 625  | 500 | 136       | 200    | 210 | 625  | 500 | 161       | 200    | 254 | 625  | -   | 192       |
| 80  | 190    | 190 | 720  | 500 | 157       | 225    | 235 | 720  | 500 | 265       | 225    | 289 | 720  | -   | 285       |
| 100 | 215    | 229 | 850  | 500 | 270       | 260    | 273 | 850  | 600 | 426       | 260    | 337 | 850  | -   | 470       |
| 125 | 250    | 279 | 1000 | 600 | 435       | 300    | 337 | 1000 | 700 | 638       | 300    | -   | 1000 | -   | 695       |
| 150 | 275    | 305 | 1450 | 600 | 594       | 350    | 352 | 1450 | 700 | 860       | 350    | -   | 1450 | -   | 922       |

| NPS   | CLASS 900 |     |     |     |           | CLASS 1500 |     |      |     |           | CLASS 2500 |     |      |     |           |
|-------|-----------|-----|-----|-----|-----------|------------|-----|------|-----|-----------|------------|-----|------|-----|-----------|
|       | 1         | 2   | H   | W   | Mass (kg) | 1          | 2   | H    | W   | Mass (kg) | 1          | 2   | H    | W   | Mass (kg) |
| 1/2   | 115 / 114 | 108 | 280 | 200 | 10        | 130 / 114  | 108 | 350  | 200 | 10        | 132        | 108 | 350  | 250 | 10        |
| 1     | 130 / 127 | 127 | 340 | 200 | 15        | 130 / 127  | 127 | 400  | 200 | 15        | 150        | 127 | 400  | 400 | 16        |
| 1 1/2 | 150 / 152 | 152 | 400 | 300 | 25        | 150 / 152  | 152 | 500  | 300 | 25        | 192        | 152 | 500  | 500 | 41        |
| 2     | 170 / 184 | 184 | 500 | 400 | 85        | 175 / 184  | 184 | 600  | 400 | 85        | 225        | 184 | 600  | 630 | 91        |
| 2 1/2 | 215 / 210 | 210 | 550 | 500 | 95        | 215 / 210  | 210 | 700  | 500 | 95        | 254        | 210 | 700  | 710 | 112       |
| 3     | 225 / 190 | 190 | 600 | 630 | 120       | 225 / 235  | 235 | 800  | 630 | 120       | 289        | 235 | 950  | 710 | 144       |
| 4     | 250 / 229 | 229 | 700 | 630 | 155       | 250 / 273  | 273 | 900  | 630 | 155       | 337        | 273 | 1200 | 800 | 186       |
| 5     | 325 / 280 | 279 | 800 | 710 | 230       | 325 / 337  | 337 | 1000 | 710 | 230       | -          | -   | -    | -   | -         |
| 6     | 400 / 305 | 305 | 900 | 710 | 280       | 400 / 352  | 352 | 1100 | 710 | 280       | -          | -   | -    | -   | -         |

## TYPE DESIGNATION

### GLB AC/D E M<sub>1</sub> PN or Class

#### A BODY DESIGN

- 1 Direct
- 2 Angular
- Z Z-shape

#### E CONTROL

- 1 Handwheel
- 2 Gear box + handwheel
- 3 Electric actuator
- 5 Pneumatic actuator
- 9 Without control

#### M<sub>1</sub> BODY MATERIAL

- 0 Stainless steel
- 3 Forged alloy steel
- 4 Forged carbon steel
- LT Carbon steel for low temperatures

#### C CONNECTION INTO PIPE

- 1 Flanged
- 2 Welded
- 6 Threaded flange

#### D FLANGE FACING

##### EN 1092 - 1

- A Flat face
- B Raised face
- C Tongue face
- D Groove face
- E Spigot
- F Recess
- G O - ring recess
- H O - ring groove

##### ANSI B 16.5

- PFF Flat sealing face
- RF Raised face
- LTF Large tongue
- STF Small tongue
- LGF Large groove
- SGF Small groove
- LMF Large male
- SMF Small male
- LFF Large female
- SFF Small female
- RTJ Ring joint

##### GOST / DIN

- L Lens

