RISER




# HIGH QUALITY VALVES

- Gate Valve
- Globe Valve
- Check Valve
- Strainer Valve
- Ball Valve
- Butterfly Valve


# High Quality Valves

Sebagai salah satu produsen terbaik untuk valve, kami menyediakan valve dengan kualitas terbaik kepada pelanggan kami di berbagai industri, serta telah mendapatkan reputasi yang sangat baik dari para customer.

Visi kami adalah menjadi "Pemimpin produsen untuk valves di wilayah Indonesia. Perusahaan telah menginvestasikan sejumlah dana yang cukup besar demi pengembangan dan inovasi produk.

Saat ini, kami telah mengembangkan jenis produk yang lebih banyak dan ukuran yang lebih lengkap. Di tengah pengembangan mutu yang selalu dijalani, kami terus berusaha menuju kesempurnaan untuk memberikan kualitas valves yang terbaik bagi para customer.

Produk yang kami jual merupakan salah satu rangkaian pelengkap instansi suatu proyek yang meliputi Plumbing, Fire Fighting, Air Conditioning, Clean Water, Water Treatment, dan sebagainya. Umumnya produk kami dapat digunakan untuk perusahaan penghasil minyak dan gas bumi, apartemen, sekolah, gedung perkantoran, mall, hotel, rumah sakit, rumah pribadi, pabrik, dan lain-lain. Sasaran pemasaran produk kami adalah kontraktor, pabrik, dan toko-toko yang bergerak dalam bidang teknik mekanik.

Kami berkomitmen untuk menyediakan kualitas produk yang terbaik serta pengiriman tepat waktu. Mengejar kepuasan pelanggan tertinggi adalah misi kami. Sekarang ini, Riser Valves sedang menghadapi tantangan baru, yakni pengembangan produk yang lebih berkualitas dan memperluas bisnis kami ke pasar global.

"Kami menyediakan flange dan fitting dengan kualitas terbaik kepada pelanggan kami di berbagai industri, guna mendukung pembangunan Indonesia sebagai salah satu negara berkembang"

Kami melewati beberapa sistem manajemen mutu yang dijalani untuk menjamin semua proses produksi telah dikendalikan, memastikan bahwa semua bahan yang digunakan dapat dilacak dan hanya produk yang berkualitas terbaik yang diserahkan kepada customer.

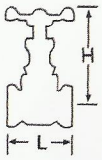
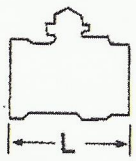
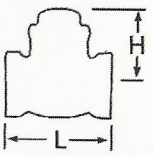
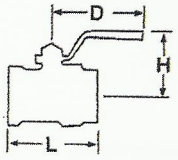
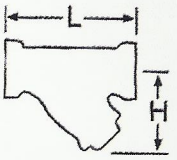
Kepuasan customer menjadi motivasi dan penghargaan bagi kami untuk selalu berusaha memberikan layanan profesional dan produk-produk bermutu. Kami selalu siap memberi pelayanan yang maksimal terhadap setiap kebutuhan klien dan pada akhirnya selalu mendapat kepercayaan klien atas kepuasan pelayanan yang telah kami berikan. Karena pada dasarnya, kepuasan klien lah yang menjadi penghargaan terbesar dan motivasi bagi kami untuk selalu berusaha memberikan yang terbaik. Kami memiliki misi utama yakni melayani customer dengan tingkat kepuasan terbaik. tingkat kepuasan terbaik. Untuk mencapai pengembangan perusahaan agar menjadi menjadi distributor berskala besar di pasar dalam negeri maupun di pasar internasional dalam bidang pemipaan. Di bawah ini terdapat beberapa project reference yang menjadi portfolio kami dalam menyuplai sistem pemipaan:

| No. | Project | Location | Year |
|---|---|---|---|
| 1 | Pabrik Pembuat Panel | Surabaya | 2011 |
| 2 | Apartemen Margonda Residance III | Depok | 2011 |
| 3 | Apartemen DR | Surabaya | 2011 |
| 4 | Hotel Hegar Sari | Bandung | 2011 |
| 5 | Hotel Amaris Cihamplas | Bandung | 2011 |
| 6 | Pabrik Novell | Jakarta | 2012 |
| 7 | Rumah Dinas Papua | Papua | 2012 |
| 8 | PD. Viking Protekindo | Jakarta | 2012 |
| 9 | Hotel Citadin Tahap I | Bali | 2012 |
| 10 | Hotel Citadin Tahap II | Bali | 2012 |
| 11 | Universitas Negeri( UNNAS) | Semarang | 2012 |
| 12 | Rumah Sakit Tugu Rejo | Semarang | 2012 |
| 13 | Bogor Trade Mall | Bogor | 2012 |
| 14 | Hotel Harmoni | Tasikmalaya | 2012 |
| 15 | Hotel Fave | Bandung | 2012 |
| 16 | Hotel Dadap | Jakarta | 2012 |
| 17 | Kantor Diklat Depnakers | Lombok | 2012 |
| 18 | UNS | Solo | 2012 |
| 19 | UNNES Kolam Renang | Semarang | 2012 |
| 20 | Siloam Hospital Bali | Bali | 2012 |
| 21 | Hotel Sultan Raja | Cirebon | 2012 |
| 22 | Gedung DPRD Bandung | Bandung | 2012 |
| 23 | Askes Kediri | Kediri | 2012 |
| 24 | Q - Hotel | Bali | 2012 |
| 25 | Aveda Hotel | Bali | 2012 |
| 26 | Hotel Grand Namaste | Bali | 2012 |
| 27 | PDAM Karangasem | Bali | 2012 |
| 28 | Apartement Pancoran Riverside | Jakarta | 2012 |

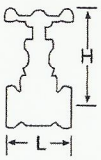
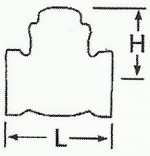
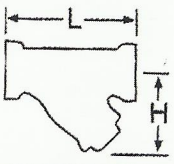
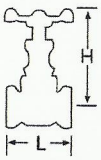
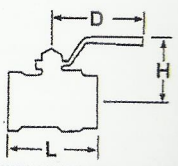
| No. | Project | Location | Year |
|---|---|---|---|
| 29 | Scientia Office Park I | Serpong | 2012 |
| 30 | Hotel Lorin Bali | Bali | 2012 |
| 31 | Hotel Sutan Raja | Jakarta | 2012 |
| 32 | Bank Permata Hayam Wuruk | Jakarta | 2012 |
| 33 | Kemang Village Infinity | Jakarta | 2012 |
| 34 | Pondok Ungu Bekasi | Jakarta | 2012 |
| 35 | Pembangunan BLKI | Lombok | 2012 |
| 36 | Scientia Office Park II | Serpong | 2013 |
| 37 | Al-Azhar International School | Bekasi | 2013 |
| 38 | Spring Sport Club | Serpong | 2013 |
| 39 | All Season Hotel | Jakarta | 2013 |
| 40 | Sampoerna Strategic | Jakarta | 2013 |
| 41 | Scientia Office Park III | Serpong | 2013 |
| 42 | Gaung OSBL | Lampung | 2013 |
| 43 | Aston TB Simatupang | Jakarta | 2014 |
| 44 | Fave Hotel Puri Indah | Jakarta | 2014 |
| 45 | Pahoa School | Serpong | 2014 |
| 46 | Hotel Widya Loka | Bandung | 2014 |
| 47 | Hotel Daffam Lampung | Lampung | 2014 |
| 48 | Hotel Neo | Bali | 2014 |
| 49 | Hotel Harper | Makassar | 2014 |
| 50 | Hotel Ara | Lampung | 2014 |
| 51 | Hotel Aston Simatupang | Jakarta | 2014 |
| 52 | Daya Grand Square Mall | Makassar | 2014 |
| 53 | Kinocare | Cikande | 2014 |
| 54 | Hotel Grace | Makassar | 2014 |
| 55 | The Sidji Hotel | Pekalongan | 2014 |
| 56 | Marunda Rafinary | Jakarta | 2014 |

## Brass & Bronza Valve

### Brass Valve 10K

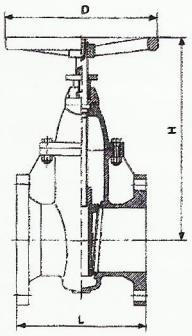
| Material List | Gate Valve Fig.289 | Magnetic Brass Lockable Ball Valve Fig.BW-L07 | Check Valve Fig.279 | Flat Steel Handle Brass, Lockable Ball Valve Fig.BW-L10 | Strainer Valve Fig.299 |
|---|---|---|---|---|---|
| |  |  |  |  |  |
| |  |  |  |  |  |
| Body | Brass | Brass | Brass | Brass | Brass |
| Steam | Brass | Brass | Brass | Brass | - |
| Disc | Bronze | Brass / Chrome Plated | Bronze | Brass / Chrome Plated | - |
| Class | PN10 | 125 lbs | PN10 | 125 lbs | PN 10 |
| Service Condition | 150 psi WOG non-shock 125 psi Saturated Steam | 125 psi WOG non-shock | 150 psi WOG non-shock 125 psi Saturated Steam | 125 psi WOG non-shock | 150 psi WOG non-shock 125 psi Saturated Steam |
| | | Seat / PTFE | | Seat / PTFE | |
| Nominal Siza (inch) | H (mm) / L (mm) / W (kg) | H (mm) / L (mm) / D (mm) / W (kg) | H (mm) / L (mm) / W (kg) | H (mm) / L (mm) / D (mm) / W (kg) | H (mm) / L (mm) / W (kg) |
| 1/2" | 64 / 42 / 0.24 | 46 / 52 / 80 / 0.225 | 35 / 47 / 0.165 | 40 / 52 / 83 / 0.170 | 38 / 56.5 / 0.170 |
| 3/4" | 70 / 45.5 / 0.32 | 54 / 58 / 100 / 0.300 | 36 / 55 / 0.210 | 54 / 58 / 92 / 0.260 | 46 / 68 / 0.230 |
| 1" | 90 / 50 / 0.47 | 57 / 68 / 100 / 0.455 | 41 / 61 / 0.300 | 57 / 66 / 92 / 0.370 | 59 / 78 / 0.340 |
| 1 1/4" | 98 / 54.5 / 0.63 | 62 / 82 / 130 / 0.700 | 46 / 70.5 / 0.520 | 65 / 71 / 125 / 0.540 | 67 / 96 / 0.580 |
| 1 1/2" | 116 / 63 / 0.85 | 82 / 87.5 / 150 / 0.910 | 56 / 81 / 0.720 | 71 / 82 / 130 / 0.860 | 76 / 105 / 0.850 |
| 2" | 136 / 69 / 1.35 | 92 / 106.5 / 150 / 1.385 | 66 / 94 / 1.500 | 83 / 95 / 145 / 1.330 | 95 / 125 / 1.350 |

### Bronze Valve PN16

| Material List | Gate Valve Fig.288 | Check Valve Fig.277 | Strainer Valve Fig.298 | Globe Valve Fig.208 | Ball Valve Fig.269 |
|---|---|---|---|---|---|
| |  |  |  |  |  |
| |  |  |  |  | Full Bore  |
| Body | Bronze | Bronze | Bronze | Bronze | Brass |
| Steam | Brass | Brass | - | Bronze | Brass |
| Disc | Bronze | Bronze | - | Bronze | Brass / Chrome Plated |
| Class | PN16 | PN16 | PN16 | PN16 | 600 lbs |
| Service Condition | 250 psi WOG non-shock 150 psi Saturated Steam | 250 psi WOG non-shock 150 psi Saturated Steam | 250 psi WOG non-shock 150 psi Saturated Steam | 250 psi WOG non-shock 150 psi Saturated Steam | 600 psi WOG non - shock |
| | | | | | Seat / PTFE |
| Nominal Siza (inch) | H (mm) / L (mm) / W (kg) | H (mm) / L (mm) / W (kg) | H (mm) / L (mm) / W (kg) | H (mm) / L (mm) / W (kg) | H (mm) / L (mm) / D (mm) / W (kg) |
| 1/2" | 77 / 43 / 0.32 | 33 / 55 / 0.220 | 49 / 80 / 0.290 | 80 / 53 / 0.30 | 45 / 60 / 100 / 0.260 |
| 3/4" | 87 / 48 / 0.34 | 37 / 65 / 0.380 | 59 / 100 / 0.470 | 100 / 64 / 0.48 | 48 / 69 / 100 / 0.390 |
| 1" | 100 / 53 / 0.45 | 42 / 76 / 0.660 | 70 / 115 / 0.750 | 115 / 75 / 0.70 | 54 / 80 / 130 / 0.630 |
| 1 1/4" | 117 / 60 / 0.72 | 50 / 85 / 0.920 | 81 / 135 / 1.230 | 140 / 84 / 1.12 | 59 / 94 / 130 / 0.910 |
| 1 1/2" | 128 / 63 / 0.90 | 58 / 98 / 1.330 | 93 / 160 / 1.720 | 155 / 95 / 1.60 | 70 / 104 / 150 / 1.430 |
| 2" | 152 / 71 / 1.37 | 67 / 115 / 2.000 | 120 / 195 / 2.810 | 177 / 112 / 2.55 | 77 / 125 / 150 / 2.360 |

## NRS Gate Valve - JIS 10k — FIG. 829

### Drawing & Picture




**Body Marking**


| One Side | Other Side |
|---|---|
| 4<br>10 K<br>200 WOG | RISER |

### Dimensions (mm)

| Size | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | 178 | 190 | 203 | 229 | 254 | 267 | 292 | 330 | 356 | 381 | 406 | 432 | 457 | 508 |
| H (open) | 322 | 412 | 482 | 569 | 672 | 783 | 885 | 897 | 1055 | 1015 | 1120 | 1210 | 1250 | 1390 |
| D | 178 | 178 | 190 | 250 | 300 | 300 | 356 | 360 | 400 | 508 | 558 | 610 | 610 | 762 |
| W (kg) | 15 | 18 | 24 | 38 | 51 | 66 | 104 | 108 | 241 | 420 | 558 | 748 | 847 | 1280 |

### Specification :

- **Valve Standard :** Comply with BS 5150 (EN 1171) & MSS SP-70
- **Flange Type :** JIS 10K
- **Operator :** Handwheel or gear operator

### Working Pressure / Test Pressure

- 10 bar / 16 bar

### Working Temperature

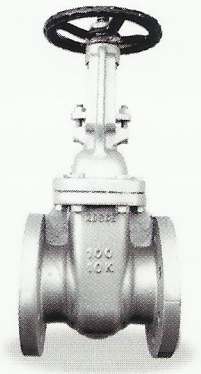
- -10$^0$C to 120$^0$C

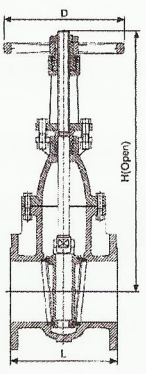
### Material Specification

| Part name | Materials | ASTM Spec. |
|---|---|---|
| Body* | Cast Iron-EN-JL 1030 | A126 B |
| Seat | Bronze-EN1982 CC491K | B62 |
| Wedge | EN-JL 1030 | A126 B |
| Wegde RIng | EN1982 CC491K | B62 |
| Wedge RUshing | Brass | - |
| Gasket | Graphite + Steel | - |
| Bolt | EN-10025-2 S235JR | A307 B |
| Nut | EN-10025-2 S235JR | A307 B |
| Stem | EN10088-1 X6Cr13 | 13 Cr |
| Bonnet | EN-JL 1030 | A126 B |
| Stuffing Box Gasket | Graphite + Steel | - |
| Stuffing Box | EN-JL 1030 | A126 B |
| Stud | EN-10025-2 S235JR | A307 B |
| Nut | EN-10025-2 S235JR | A307 B |
| Packing | Graphite | - |
| Gland | EN-JL 1050 | A536 |
| Stud | EN-10025-2 S235JR | A307 B |
| Nut | EN-10025-2 S235JR | A307 B |
| Handwheel | Cast Iron-EN-JL 1030 | A126 B |
| Washer | Brass-EN-10025-2 S235JR | A307 B |
| Nut | Brass-EN-10025-2 S235JR | A307 B |
| Indicator | ALUMUNIUM | - |
| Indicator Plate | ALUMUNIUM | - |
| Bolt | EN-10025-2 | A307 B |
| Name Plate | ALUMUNIUM | - |

## OS&Y Gate Valve - JIS 10k — FIG. 839

### Drawing & Picture






**Body Marking**


| One Side | Other Side |
|---|---|
| 4<br>10 K<br>200 WOG | RISER |

### Dimensions (mm)

| Size | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | 178 | 191 | 203 | 229 | 254 | 267 | 292 | 292 | 356 | 381 | 406 | 432 | 457 | 508 |
| H (open) | 322 | 415 | 482 | 569 | 672 | 783 | 885 | 897 | 1055 | 1595 | 1900 | 2210 | 2600 | 3040 |
| D | 178 | 178 | 190 | 250 | 300 | 300 | 356 | 360 | 400 | 508 | 558 | 610 | 610 | 762 |
| W (kg) | 16 | 21 | 24 | 38 | 68 | 68 | 105 | 175 | 248 | 442 | 556 | 796 | 990 | 1341 |

### Specification :

- **Valve Standard :** Comply with BS 5150 (EN 1171) & MSS SP-70
- **Flange Type :** JIS 10K
- **Operator :** Handwheel or gear operator

### Working Pressure / Test Pressure

- 10 bar / 16 bar

### Working Temperature

- -10$^0$C to 120$^0$C

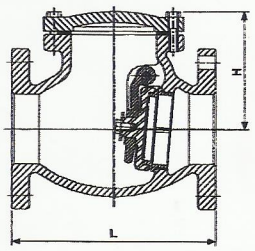
### Material Specification

| Part name | Materials | ASTM Spec. |
|---|---|---|
| Body* | Cast Iron-EN-JL 1030 | A126 B |
| Seat | Bronze-EN1982 CC491K | B62 |
| Wedge | EN-JL 1030 | A126 B |
| Wegde RIng | EN1982 CC491K | B62 |
| Stem | EN 10088-1 X6Cr13 | 13 Cr |
| Bolt | EN-10025-2 S235JR | A307 B |
| Gasket | Graphite + Steel | - |
| Nut | EN-10025-2 S235 JR | A307 B |
| Bonnet | EN-JL 1030 | A126 B |
| Packing | Graphite | - |
| Bolt | EN-10025-2 S235 JR | A307 B |
| Gland Flange | EN-JS1050 | A536 |
| Nut | EN-10025-2 S235 JR | A307 B |
| Stem Nut | Brass | - |
| Washer | Brass | - |
| Handwheel | Cast Iron-EN-JL 1030 | A126 B |
| Handwheel Nut | Cast Iron-EN-JL 1050 | A536 |
| Name Plate | ALUMUNIUM | - |

## Swing Check Valve - JIS 10k

FIG. 819

### Drawing & Picture


**Body Marking**

| One Side | Other Side |
|---|---|
| 4<br>10K<br>200 WOG | RISER |

### Specification :

- **Valve Standard :** Comply with BS 5153 (EN 12334) & MSS SP-71 or AWWA C508
- **Flange Type :** JIS 10K

### Working Pressure / Test Pressure

- 10 bar / 16 bar

### Working Temperature

- -10$^0$C to 120$^0$C

### Material Specification

| Part name | Materials | ASTM Spec. |
|---|---|---|
| Body* | Cast Iron-EN-GJL-200 | ASTM A126 |
| Seat | Bronze-EN1982 CC491K | B62 |
| Disc Ring | EN1982 CC491K | B62 |
| Disc* | Cast Iron-EN-GJL-200 | ASTM A126 B |
| Hinge | WCB | - |
| Washer | EN 1005-2 S235 JR | A307 B |
| Nut | EN 1005-2 S235 JR | A53 |
| Pin | 304SS | - |
| Hinge Pin | 13Cr | - |
| Set Screw | EN 10025-2S235JR | A307B |
| Bolt | EN 10025-2S235JR | A307B |
| Gasket | Graphite + Steel | - |
| Bonnet | EN-GJL-200 | - |
| Plug | Malleable | ASTM A47 |
| Name Plate | Alumunium | - |
| Lifting Bolt | EN 1005-2 S235JR | A307B |

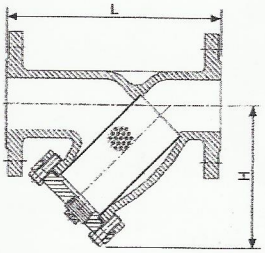
### Dimensions (mm)

| Size | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | 203 | 216 | 241 | 292 | 330 | 356 | 459 | 622 | 699 | 787 | 914 | 914 | 1016 | 1219 |
| H (open) | 152 | 162 | 176 | 220 | 226 | 321 | 352 | 384 | 426 | 590 | 608 | 698 | 742 | 844 |
| W (kg) | 10 | 14 | 19 | 32 | 45 | 59 | 107 | 171 | 246 | 461 | 633 | 722 | 980 | 1580 |

## Y-Strainer - JIS 10k

FIG. 809

### Drawing & Picture




**Body Marking**

| Other Side |
|---|
| RISER |

### Specification :

- **Valve Standard :** Comply with B161
- **Flange Type :** JIS 10K

### Working Pressure / Test Pressure

- 10 bar / 16 bar

### Working Temperature

- -10$^0$C to 120$^0$C

### Material Specification

| Part name | Materials | ASTM Spec. |
|---|---|---|
| Body | Cast Iron-EN-JL 1030 | A126 Class B |
| Screen | Stainless Steel - 304 SS | - |
| Bonnet | EN-JL 1030 | A123 Class B |
| Gasket | Graphite + Steel | - |
| Plug | Malleable | - |
| Stud | EN 10025-2 S235JR | A307B |
| Nut | EN 10025-2 S235JR | A307B |

### Standard Screens

| Size | Hole Diameter | Free Flow Area |
|---|---|---|
| DN50 to 80 | 1.5 mm | 33 % |
| DN100 to 600 | 3.0 mm | 40 % |

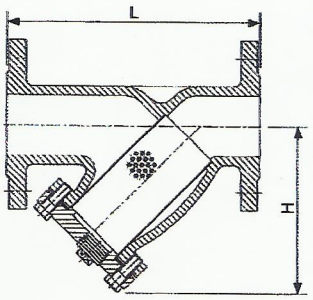
### Dimensions (mm)

| Size | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | 230 | 273 | 295 | 352 | 416 | 470 | 543 | 660 | 770 | 770 | 1079 | 1168 | 1275 | 1450 |
| H (open) | 146 | 174 | 198 | 232 | 285 | 305 | 410 | 473 | 554 | 554 | 840 | 910 | 968 | 1160 |
| W (kg) | 10 | 16 | 23 | 34 | 52 | 70 | 110 | 177 | 295 | 295 | 660 | 752 | 780 | 850 |
| Plug | 1/2" | 1" | 1" | 1" | 1-1/4" | 1-1/2" | 1-1/2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" |

## Y-Strainer - PN16

FIG. 909

### Drawing & Picture




**Body Marking**

| Other Side |
|---|
| RISER |

### Specification :

- **Valve Standard :** Comply with B16.1
- **Flange Type :** PN16

### Working Pressure / Test Pressure

- 16 bar / 24 bar

### Working Temperature

- -10°C to 120°C

### Material Specification

| Part name | Materials | ASTM Spec. |
|---|---|---|
| Body* | Cast Iron-EN-JL1030 | A126 Class B |
| Screen | Stainless Steel-304SS | - |
| Bonnet | EN-JL 1030 | A126 Class B |
| Gasket | Graphite +Steel | - |
| Plug | Malleable | - |
| Stud | EN 10025-2 S235JR | A307B |
| Nut | EN 10025-2 S235JR | A307B |

### Standard Screens

| Size | Hole Diameter | Free Flow Area |
|---|---|---|
| DN50 to 80 | 1.5 mm | 33 % |
| DN100 to 600 | 3.0 mm | 40 % |

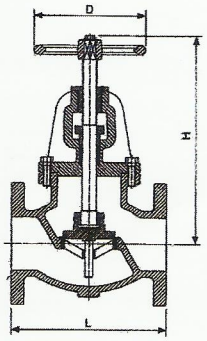
### Dimensions (mm)

| Size | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | 220 | 270 | 290 | 350 | 390 | 440 | 540 | 660 | 720 | 960 | 1079 | 1168 | 1275 | 1450 |
| H (open) | 135 | 165 | 186 | 226 | 267 | 305 | 358 | 495 | 530 | 740 | 840 | 910 | 968 | 1160 |
| W (kg) | 10 | 16 | 23 | 34 | 52 | 70 | 110 | 177 | 295 | - | - | - | - | - |
| Plug | 1/2" | 1" | 1" | 1" | 1-1/4" | 1-1/2" | 1-1/2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" |

## Globe Valve - PN16

FIG. 949

### Drawing & Picture




**Body Marking**


| One Side | Other Side |
|---|---|
| 4<br>PN16<br>200 WOG | RISER |

### Specification :

- **Valve Standard :** Comply with B161
- **Flange Type :** PN 16

### Working Pressure / Test Pressure

- 16 bar / 24 bar

### Working Temperature

- -10°C to 120°C

### Material Specification

| Part name | Materials | ASTM Spec. |
|---|---|---|
| Body* | Cast Iron-EN-JL 1030 | ASTM A126 B |
| Seat | Bronze-EN1982 CC491K | ASTM B62 |
| Disc Ring | EN 1982 CC491K | ASTM B62 |
| Disc | EN-JL 1030 | ASTM A126 B |
| Screw | EN 10025-2 S235JR | ASTM A307 B |
| Disc Cover | EN-JL 1030 | ASTM A126 B |
| Gasket | Graphite + Steel | - |
| Packing | Graphite | - |
| Nut | EN 10025-2 S235JR | ASTM A307 B |
| Stud | EN 10025-2 S235JR | ASTM A307 B |
| Gland Flange | EN-JS 1050 | ASTM A536 |
| Square Bolt | EN 10025-2 S235JR | ASTM A307 B |
| Nut | EN 10025-2 S235JR | ASTM A536 |
| Stem | EN 10088-1 X6CR13 | 13Cr |
| Bonnet | EN-JL 1030 | ASTM A126 B |
| Steam Nut | Brass | - |
| Screw | EN 10025-2 S235JR | ASTM A307 B |
| Handwheel | Cast Iron EN-JL 1030 | ASTM A307 B |
| Name Plat | Alumunium | - |
| Washer | EN 10025-2 S235JR | ASTM A307 B |
| Nut | EN 10025-2 S235JR | ASTM A307 B |

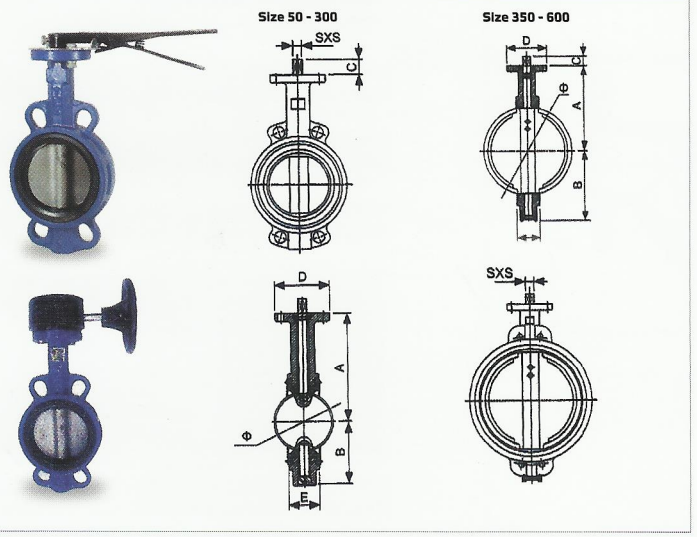
### Dimensions (mm)

| Size | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
|---|---|---|---|---|---|---|---|---|---|
| L | 203,2 | 215,9 | 241,3 | 392 | 330 | 356 | 495 | 622 | 698 |
| D | 318 | 339 | 366 | 390 | 437 | 477 | 542 | 614 | 697 |
| H | 200 | 200 | 200 | 250 | 300 | 300 | 360 | 450 | 500 |
| W (kg) | 23 | 30 | 38 | 60 | 70 | 106 | 189 | 302 | 412 |

## Butterfly Valves

FIG. 209 (L/G), FIG. 229 (L/G)

### Drawing & Picture




### Specification :

- **Valve Standard :** Comply with EN593/BS5155/MSS SP-67
- **Flange Type :** PN16

### Working Pressure

- 16 bar

### Working Temperature

- -10$^0$C to 120$^0$C

### Material Specification

| Part name | | Materials | EN Spec. | ASTM Spec. |
|---|---|---|---|---|
| Body* | | Cast Iron | EN-JL 1040 | ASTM A126 Class B |
| Shaft | | Stainless Steel | BS970 420S37 | AISI 420 |
| Disc | 209 | Ductile Iron | EN-JS1050 | ASTM A536 65-45-12 |
| | 229 | Stainless Steel | BS970 304S15 | A351 CF8 |
| Bushing | | PTFE | Commercial | Commercial |
| Liner | | EPDM/NBR/Viton | Commercial | Commercial |
| O-Ring | | EPDM/NBR/Viton | Commercial | Commercial |

### Dimensions (mm)

| Size | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 161 | 175 | 181 | 200 | 215 | 225 | 241 | 296 | 336 | 368 | 400 | 422 | 480 | 562 |
| B | 80 | 91 | 95 | 115 | 134 | 138 | 174 | 198 | 234 | 288 | 315 | 340 | 388 | 450 |
| C | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 45 | 45 | 45 | 45 | 45 |
| D | 90 | 90 | 90 | 90 | 90 | 90 | 125 | 125 | 125 | 150 | 175 | 175 | 210 | 210 |
| E | 43 | 45 | 46 | 51.5 | 56 | 56.5 | 60 | 68.5 | 79.5 | 78 | 88 | 109 | 127 | 154 |
| Φ | 56.8 | 71.5 | 83 | 101.5 | 127.8 | 151.1 | 200.5 | 250.8 | 300.5 | 335.5 | 393.5 | 443.5 | 500.5 | 600.8 |
| SXS | 11 x 11 | | | 14 x 14 | | 17 x 17 | | | 22 x 22 | | 27 x 27 | | Φ48 | |

## Lever Handle and Gear Operator

### Dimensions of Ductile Iron Lever Handle (mm)

| Valve Size | Part Number | T |
|---|---|---|
| 50 - 150 | 2000-S | 263 |
| 200 - 250 | 2000-M | 326 |
| 300 | 2000-L | 415 |

### Dimensions of Steel Lever Handle (mm)

| Valve Size | Part Number | T |
|---|---|---|
| 50 - 150 | 2000-S | 260 |
| 200 - 250 | 2000-M | 325 |
| 300 | 2000-L | 400 |

### Dimensions of Gear Operation (mm)

| Valve Size | 50 - 100 | 200 - 250 | 300 - 350 | 400 - 500 | 500 - 600 |
|---|---|---|---|---|---|
| Part No | 2000 - 24 | 2000 - 30 | 2000 - 50 | 2000 - 80 | 2000 - 70 |
| Ratio | 24:1 | 30:1 | 50:1 | 80:1 | 70:1 |
| L | 160 | 238 | 266 | 266 | 241 |
| H | 65 | 85 | 95 | 121 | 118 |
| D | 195 | 297 | 297 | 388 | 388 |
| E | 108 | 153 | 161 | 252 | 264 |
| C | 130 | 177 | 198 | 181 | 303 |

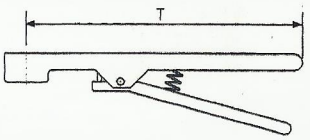
### Gear Operator Output Torque Max. (N.m)

| Part No. | 2000 - 24 | 2000 - 30 | 2000 - 50 | 2000 - 80 | 2000 - 70 |
|---|---|---|---|---|---|
| Ratio | 24:1 | 30:1 | 50:1 | 80:1 | 70:1 |
| Output Torque Max | 270 | 700 | 1200 | 2000 | 4500 |

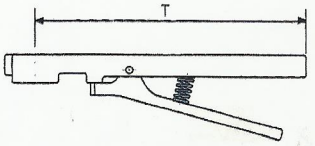
### Materials Specification for Gear Operator

| Part Name | Material | EN Spec. | ASTM Spec |
|---|---|---|---|
| Housing | Cast Iron | EN-JL 1040 | A126 Class B |
| Cover | Cast Iron | EN-JL 1040 | A126 Class B |
| Worm | Carbon Steel | BS970 060A47 | AISI 1045 |
| Worm Gear | Ductile Iron | EN-JL 1050 | A536 65 - 45 - 12 |
| Shaft | Carbon Steel | BS9770 060A47 | AISI 1045 |
| Handwheel | Cast Iron | EN-JL 1040 | A126 Class B |

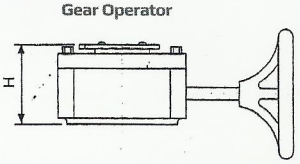
Ductile Iron Level Handle

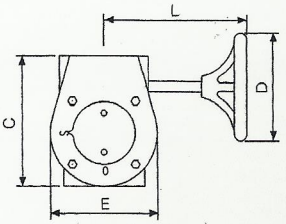



Steel Lever Handle, FBE Coated



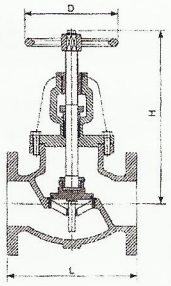

Gear Operator



## Globe Valve - JIS 10k — FIG. 849

### Drawing & Picture




**Body Marking**


| One Side | Other Side |
|---|---|
| 4<br>10 K<br>200 WOG | RISER |

### Dimensions (mm)

| Size | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
|---|---|---|---|---|---|---|---|---|---|
| L | 203.2 | 215.9 | 241.5 | 292 | 300 | 356 | 495 | 622 | 698 |
| H (open) | 318 | 339 | 366 | 390 | 437 | 447 | 542 | 614 | 697 |
| D | 200 | 200 | 250 | 250 | 300 | 300 | 360 | 450 | 500 |
| W (kg) | 16 | 20 | 26 | 42 | 70 | 80 | 135 | 215 | 318 |

### Specification :

- **Valve Standard :** Comply with BS 5152 (EN 1378) & MSS SP-85
- **Flange Type :** JIS 10K

### Working Pressure / Test Pressure

- 10 bar / 16 bar

### Working Temperature

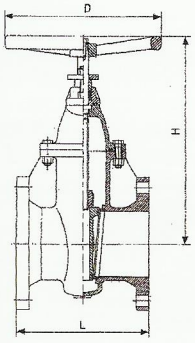
- -10$^0$C to 120$^0$C

### Material Specification

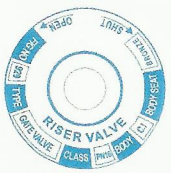
| Part name | Materials | ASTM Spec. |
|---|---|---|
| Body* | Cast Iron-EN-JL-1030 | ASTM A126 B |
| Seat | Bronze-EN1982 CC491K | ASTM B62 |
| Disc Ring | EN1982 CC491K | ATM B62 |
| Disc* | EN-JL 1030 | ASTM A126 B |
| Screw | EN 10025-2 S235JR | ATM A370 B |
| Disc Cover | EN-JL 1030 | ASTM A126 B |
| Gasket | Graphite + Steel | - |
| Packing | Graphite | - |
| Nut | EN 10025-2 S235JR | ASTM A307 B |
| Stud | EN 10025-2 S235JR | ASTM A307 B |
| Gland Flange | EN-JS 1050 | ASTM A536 |
| Square Bolt | EN 10025-2 S235JR | ASTM A307 B |
| Nut | EN 10025-2 S235JR | ASTM A536 |
| Stem | EN 10088-1 X6CR13 | 13CR |
| Bonnet | EN-JL 1030 | ASTM A126 B |
| Stem Nut | Brass | - |
| Screw | EN 10025-2 S235JR | ASTM A307 B |
| Handwheel | Cast Iron-EN-JL 1030 | ASTM A307 B |
| Name Plat | Alumunium | - |
| Washer | EN 10025-2 S235JR | ASTM A307 B |
| Nut | EN 10025-2 S235JR | ASTM A307 B |

## NRS Gate Valve - PN16 — FIG. 929

### Drawing & Picture




**Body Marking**




| One Side | Other Side |
|---|---|
| 4<br>PN16<br>200 WOG | RISER |

### Dimensions (mm)

| Size | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
|---|---|---|---|---|---|---|---|---|---|
| L | 178 | 190 | 203 | 229 | 254 | 267 | 292 | 330 | 356 |
| H (open) | 318 | 348 | 400 | 455 | 542 | 601 | 710 | 781 | 888 |
| D | 180 | 180 | 200 | 250 | 280 | 300 | 360 | 360 | 400 |
| W (kg) | 18 | 25 | 31 | 47 | 64 | 79 | 141 | 202 | 291 |

### Specification :

- **Valve Standard :** Comply with BS 5152 (EN 1378) & MSS SP-85
- **Flange Type :** PN 16

### Working Pressure / Test Pressure

- 16 bar / 24 bar

### Working Temperature

- -10$^0$C to 120$^0$C

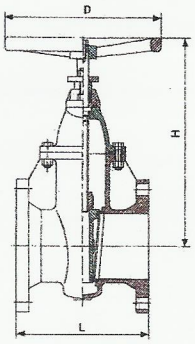
### Material Specification

| Part name | Materials | ASTM Spec. |
|---|---|---|
| Body* | Cast Iron-EN-JL-1030 | ASTM A126 B |
| Seat | Bronze-EN1982 CC491K | ASTM B62 |
| Disc Ring | EN1982 CC491K | ATM B62 |
| Disc* | EN-JL 1030 | ASTM A126 B |
| Screw | EN 10025-2 S235JR | ATM A370 B |
| Disc Cover | EN-JL 1030 | ASTM A126 B |
| Gasket | Graphite + Steel | - |
| Packing | Graphite | - |
| Nut | EN 10025-2 S235JR | ASTM A307 B |
| Stud | EN 10025-2 S235JR | ASTM A307 B |
| Gland Flange | EN-JS 1050 | ASTM A536 |
| Square Bolt | EN 10025-2 S235JR | ASTM A307 B |
| Nut | EN 10025-2 S235JR | ASTM A536 |
| Stem | EN 10088-1 X6CR13 | 13CR |
| Bonnet | EN-JL 1030 | ASTM A126 B |
| Stem Nut | Brass | - |
| Screw | EN 10025-2 S235JR | ASTM A307 B |
| Handwheel | Cast Iron-EN-JL 1030 | ASTM A307 B |
| Name Plat | Alumunium | - |
| Washer | EN 10025-2 S235JR | ASTM A307 B |
| Nut | EN 10025-2 S235JR | ASTM A307 B |

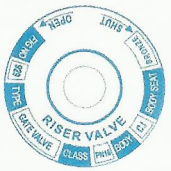
## OS&Y Gate Valve - PN16

FIG. 939

### Drawing & Picture




**Body Marking**




| One Side | Other Side |
|---|---|
| 4<br>PN16<br>200 WOG | RISER |

### Specification :

- **Valve Standard :** Comply with BS 3464/BS5150 (EN 1171)
- **Flange Type :** PN16

### Working Pressure / Test Pressure

- 16 bar / 24 bar

### Working Temperature

- -10°C to 120°C

### Material Specification

| Part name | Materials | ASTM Spec. |
|---|---|---|
| Body* | Cast Steel-EN-JL 1030 | A126 B |
| Seat | Bronze-EN1982 CC491K | B62 |
| Wedge | EN-JL 1030 | A126 B |
| Wedge Ring | EN1982 CC491K | B62 |
| Stem | EN10088-1 X6Cr13 | 13Cr |
| Bolt | EN-10025-2 S235JR | A307 B |
| Gasket | Graphite + Steel | - |
| Nut | EN-10025-2 S235JR | A307 B |
| Bonnet | EN-JL 1030 | A126 B |
| Packing | Graphite | - |
| Bolt | EN-10025-2 S235JR | A307 B |
| Gland Flange | EN-JS1050 | A536 |
| Nut | EN-10025-2 S235JR | A307 |
| Stem Nut | Brass | - |
| Washer | Brass | - |
| Handwheel | Cast Steel | A126 B |
| Handwheel Nut | EN-JS 1050 | A536 |
| Name Plate | Alumunium | - |

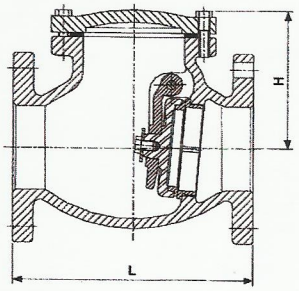
### Dimensions (mm)

| Size | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
|---|---|---|---|---|---|---|---|---|---|
| L | 146 | 159 | 165 | 171 | 191 | 210 | 241 | 330 | 356 |
| H (open) | 405 | 415 | 486 | 632 | 710 | 842 | 1100 | 1228 | 1373 |
| D | 190 | 190 | 190 | 305 | 305 | 305 | 305 | 405 | 450 |
| W (kg) | 16 | 21 | 27 | 44 | 58 | 80 | 124 | 199 | 254 |

## Swing Check Valve - PN16

FIG. 919

### Drawing & Picture


**Body Marking**

| One Side | Other Side |
|---|---|
| 4<br>PN16<br>200 WOG | RISER |

### Specification :

- **Valve Standard :** EN12334 Face to Face Dimension to EN558 F6 Series 48
- **Flange Type :** PN16

### Working Pressure / Test Pressure

- 16 bar / 24 bar

### Working Temperature

- -10°C to 120°C

### Material Specification

| Part name | Materials | ASTM Spec. |
|---|---|---|
| Body* | Cast Iron (EN-GJL-200) | ASTM A126 |
| Seat | Bronze-EN 1982 CC491K | B62 |
| Disc Ring | EN 1982 CC491K | B62 |
| Disc* | EN-GJL-200 | ASTM A126 B |
| Hinge | WCB | - |
| Washer | EN 1005-2 S235JR | A307 B |
| Nut | EN 1005-2 S235JR | A563 |
| Pin | 304SS | - |
| Hinge Pin | 13Cr | - |
| Set Screw | EN 1005-2 S235JR | A307 B |
| Bolt | EN 1005-2 S235JR | A307 B |
| Gasket | Graphite + Steel | - |
| Bonnet | EN-GJL-200 | - |
| Plug | Malleable | ASTM A47 |
| Name Plate | Alumunium | - |
| Lifting Bolt | EN 1005-2 S235JR | A307 B |

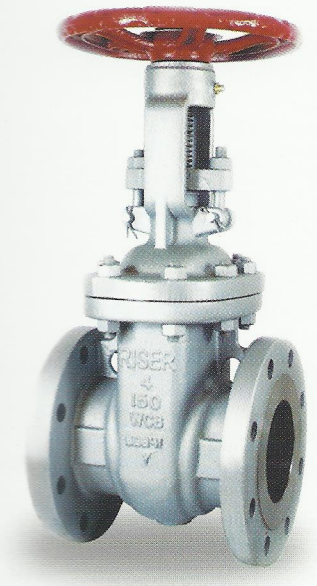
### Dimensions (mm)

| Size | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | 200 | 240 | 260 | 300 | 350 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1300 |
| H (open) | 153 | 162 | 176 | 220 | 226 | 321 | 352 | 384 | 426 | 590 | 608 | 698 | 742 | 844 |
| W (kg) | 10 | 14 | 19 | 32 | 50 | 59 | 107 | 158 | 246 | 500 | 690 | 780 | 1000 | 1600 |

## Cast Steel Valves - Ansi 150

FIG. 628

### Picture




Outside screw and yoke, rising stem bolted bonnet, flanged ends 13%Cr. Trim with half stellite facing (Standard model) 13%Cr. Trim with double stellite facing (Optional model)


One Side
**RISER**
**4**
**150**
**WCB**

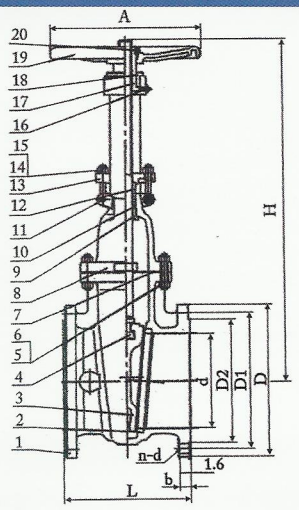
### Pressure-Temperature Ratings

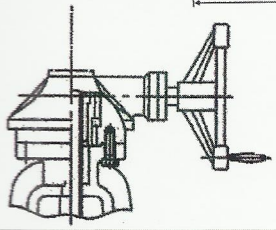
| Class 150, ASTM A216 WCB | | | |
|---|---|---|---|
| Temperature in $^0$F | Pressure in psig | Temperature in $^0$C | Pressure in bar |
| -20 to 100 | 300 | -29 to 38 | 20.0 |
| 200 | 260 | 50 | 19.2 |
| 300 | 230 | 100 | 17.7 |
| 400 | 200 | 150 | 15.8 |
| 500 | 170 | 200 | 14.0 |
| 600 | 140 | 250 | 12.1 |
| 650 | 125 | 300 | 10.2 |
| 700 | 110 | 350 | 8.4 |
| 750 | 95 | 375 | 7.4 |
| 800 | 80 | 400 | 6.5 |
| 850 | 65 | 425 | 5.6 |
| 900 | 50 | 450 | 4.7 |
| 950 | 35 | 475 | 3.7 |
| 1000 | 20 | 500 | 2.8 |
| - | - | 525 | 1.9 |
| - | - | 540 | 1.3 |
| Test Pressure | Shell (a) 450<br>Seat (b) 315<br>Seat (c) 60 - 100 | Test Pressure | Shell (a) 30<br>Seat (b) 21.6<br>Seat (c) 4.1 - 6.9 |

(a) Shell Test ... Hydrostatic (ASME B16.5)
(b) Seat Test ... Hydrostatic (MSS SP-61)
(C) Seat Test ... Air (API std. 598)

1. The above table is according to the ASME B16.34.
2. Permissible, but not recommended for prolonged usage above about 800$^0$F (425$^0$C)
3. Not to be used over 1000$^0$F (540$^0$C)
4. Ratings for all valves ar the maximum allowable working pressures, expressed in gage pressure, at the temperature shown.

### Drawing



It can be operated with bevel gear according to costumer's requirement.

Shell material may be CF8, CF8M, WC6, WC9.

30", 36" flange dimensions conform to ASME B16.47 series.

- Design and Manufacture Conform to API 600
- Flange dimensions Conform to ANZI B16.5
- Face to Face dimensions Conform tp ANZI B16.10
- Testing COnform to API 598

### Material Specification

| No. | Part name | Materials |
|---|---|---|
| 1 | Body | Cast Steel-ASTM A216 WCB |
| 2 | Seat Ring | ASTM A105+ERCoCr-A |
| 3 | Wedge | ASTM A216 WCB+13Cr |
| 4 | Stem | ASTM A276 T410 |
| 5 | Stud | ASTM A193 B7 |
| 6 | NT | ASTM A194 2H |
| 7 | Bonnet Gasket | 13Cr + Graphite |
| 8 | Bonnet | ASTM A216 WCB |
| 9 | Back Seat Bushing | ASTM A276 T410 |
| 10 | Packing | Graphite |
| 11 | Pin | Carbon Steel |
| 12 | Packing Gland | ASTM A276 T410 |
| 13 | Gland Follwer | ASTM A216 WCB |
| 14 | Eye Bolt | ASTM A193 B7 |
| 15 | Nut | ASTM A194 2H |
| 16 | Oil Cup | Brass |
| 17 | Stem Nut | A1 - Bronze |
| 18 | Stem Nut Bushing | Carbon Steel |
| 19 | Handwheel | ASTM A536 |
| 20 | Handwheel Nut | Carbon Steel |

### Dimensions (mm)

| DN | d | L | D | D1 | D2 | b | n - d | H | A | W.T (kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| 2" | 50 | 177.8 | 152 | 120.7 | 92 | 15.8 | 4 - 19 | 342 | 200 | 19 |
| 2 1/2" | 64 | 190.5 | 178 | 139.7 | 105 | 17.5 | 4 - 19 | 415 | 200 | 26 |
| 3" | 78 | 203.2 | 190 | 152.4 | 127 | 19 | 4 - 19 | 465 | 250 | 33 |
| 4" | 102 | 228.6 | 229 | 190.5 | 157 | 23.9 | 8 - 19 | 509 | 250 | 48 |
| 5" | 127 | 254 | 254 | 215.9 | 186 | 23.9 | 8 - 22 | 676 | 300 | 59 |
| 6" | 152 | 266.7 | 279 | 241.3 | 216 | 25.4 | 8 - 22 | 641 | 300 | 69 |
| 8" | 203 | 292.1 | 343 | 298.5 | 270 | 28.5 | 8 - 22 | 784 | 360 | 130 |
| 10" | 254 | 330.2 | 406 | 362 | 324 | 30.2 | 12 - 25 | 922 | 400 | 180 |
| 12" | 305 | 355.6 | 483 | 431.8 | 381 | 31.8 | 12 - 25 | 1096 | 450 | 262 |
| 14" | 337 | 381 | 533 | 476.3 | 413 | 35 | 12 - 9 | 1207 | 600 | 378 |
| 16" | 387 | 406.4 | 597 | 539.8 | 470 | 36.6 | 16 - 29 | 1350 | 650 | 553 |
| 18" | 438 | 431.8 | 635 | 577.9 | 533 | 39.6 | 16 - 32 | 1472 | 650 | 660 |
| 20" | 489 | 457.2 | 699 | 635 | 584 | 42.9 | 20 - 32 | 1630 | 800 | 810 |
| 24" | 591 | 508 | 813 | 749.3 | 692 | 47.8 | 20 - 35 | 1922 | 800 | 1250 |
| 30" | 743 | 610 | 978 | 914.4 | 857 | 74.6 | 28 - 35 | 3148 | - | 2480 |
| 36" | 889 | 711 | 1168 | 1086 | 1022 | 90.4 | 32 - 44 | 3825 | - | 3600 |

## Cast Steel Check Valve - Ansi 150 — FIG. 618

### Picture


Swing type, bolted cover, flanged ends 13%Cr. Trim with half stellite facing (Standard model) 13%Cr. Trim with double stellite facing (Optional model)

**Body Marking**

One Side
**RISER**
**4**
**150**
**WCB**

### Pressure-Temperature Ratings

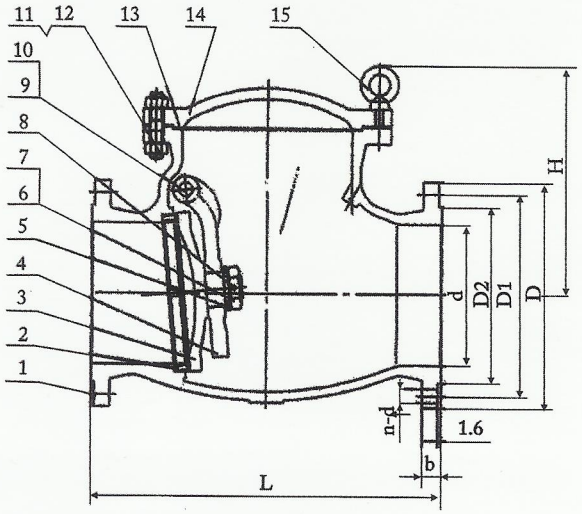
| Class 150, ASTM A216 WCB | | | |
|---|---|---|---|
| Temperature in $^0$F | Pressure in psig | Temperature in $^0$C | Pressure in bar |
| -20 to 100 | 300 | -29 to 38 | 20.0 |
| 200 | 260 | 50 | 19.2 |
| 300 | 230 | 100 | 17.7 |
| 400 | 200 | 150 | 15.8 |
| 500 | 170 | 200 | 14.0 |
| 600 | 140 | 250 | 12.1 |
| 650 | 125 | 300 | 10.2 |
| 700 | 110 | 350 | 8.4 |
| 750 | 95 | 375 | 7.4 |
| 800 | 80 | 400 | 6.5 |
| 850 | 65 | 425 | 5.6 |
| 900 | 50 | 450 | 4.7 |
| 950 | 35 | 475 | 3.7 |
| 1000 | 20 | 500 | 2.8 |
| - | - | 525 | 1.9 |
| - | - | 540 | 1.3 |

| Test Pressure | | | Test Pressure | | |
|---|---|---|---|---|---|
| | Shell (a) | 450 | | Shell (a) | 30 |
| | Seat (b) | 315 | | Seat (b) | 21.6 |
| | Seat (c) | 60 - 100 | | Seat (c) | 4.1 - 6.9 |

(a) Shell Test ... Hydrostatic (ASME B16.5)
(b) Seat Test ... Hydrostatic (MSS SP-61)
(C) Seat Test ... Air (API std. 598)

1. The above table is according to the ASME B16.34.
2. Permissible, but not recommended for prolonged usage above about 800$^0$F (425$^0$C)
3. Not to be used over 1000$^0$F (540$^0$C)
4. Ratings for all valves ar the maximum allowable working pressures, expressed in gage pressure, at the temperature shown.

### Drawing




Shell material may be CF8, CF8M, WC6, WC9.

### Material Specification

| No. | Part name | Materials |
|---|---|---|
| 1 | Body | Cast Steel-ASTM 216 WCB |
| 2 | Seat Ring | ASTM A105+ERCoCr-A |
| 3 | Disc | ASTM A216 WCB+13Cr |
| 4 | Hinge | ASTM A216 WCB |
| 5 | Washer | Carbon Steel |
| 6 | Nut | Carbon Steel |
| 7 | Stud | Carbon Steel |
| 8 | Split Pin | 304 |
| 9 | Hinge Pin | 13Cr |
| 10 | Plug | Carbon Steel |
| 11 | Stud | ASTM A193 B7 |
| 12 | Nut | ASTM A194 2H |
| 13 | Bonnet Gasket | 13Cr + Graphite |
| 14 | Bonnet | ASTM A216 WCB |
| 15 | Eye Screw | Carbon Steel |

### Dimensions (mm)

| DN | d | L | D | D1 | D2 | b | n - d | H | W.T (kg) |
|---|---|---|---|---|---|---|---|---|---|
| 2" | 51 | 203.2 | 152 | 120.7 | 92 | 15.8 | 4 - 19 | 135 | 19 |
| 2 1/2" | 64 | 215.9 | 178 | 139.7 | 105 | 17.5 | 4 - 19 | 147 | 26 |
| 3" | 78 | 241.3 | 290 | 152.4 | 127 | 19 | 4 - 19 | 178 | 31 |
| 4" | 102 | 292.1 | 229 | 190.5 | 157 | 23.9 | 8 - 19 | 222 | 51 |
| 5" | 127 | 330.2 | 254 | 215.9 | 186 | 23.9 | 8 - 22 | 253 | 67 |
| 6" | 152 | 355.6 | 279 | 241.3 | 216 | 25.4 | 8 - 22 | 314 | 85 |
| 8" | 203 | 495.3 | 343 | 298.5 | 270 | 28.5 | 8 - 22 | 350 | 148 |
| 10" | 254 | 622.3 | 406 | 362 | 324 | 30.2 | 12 - 25 | 406 | 218 |
| 12" | 305 | 698.5 | 483 | 431.8 | 381 | 31.8 | 12 - 25 | 445 | 345 |

- Design and Manufacture Conform to API 600
- Flange dimensions Conform to ANZI B16.5
- Face to Face dimensions Conform tp ANZI B16.10
- Testing COnform to API 598

## Gear Actuator with Tamper Switch

### Design and Instaalation

Design Requirements

Riser Butterfly should be connected to the piping system with appored couplings or flanges. flow may be from either direction and the valves may be positioned in any direction.

Riser Butterfly valves have been designed with a slow close handwheel operator, which effectively minimizes water hammer.

These valves feature minimum flow restriction and pressure loss when in the fully open position.

### Installation

When the valves are recieved from the manufacturer they should be handled carefully to avoid breakage and damage to the seating area. Before installation of the valves, clean piping flange and coupling.

When the valves close hard, it is usually due to debris in the seating area. Often this may be corrected by backing off the handwheel and closing again.

The valve should never be forced to seat by appllying a wrench to the handwheel as this may distort the valve components or score the sealing surface. Care must be taken to align wafer valves correctly so thats the disc operation to the fully open position will not be osbtructed. The use of excessive force to open or close the valve violates all warranties, whether express or implied.

The inlet and outlet pipe adjacent to the valve should be properly supported to prevent excessive stress on the valve ody.

The valve should not be used to force a pipeline into position as this may result in distortion of the valve body.

### Care and Maintenance

Riser Butterfly valves require no regular maintenance, however, it is advisable to inspect and verify proper operation of the unit annually or in accordance with the requirements of the authority having jurisdiction.

The inspection should include a visual check for leakage at the valve pipe connection and body to operator connection.

Inspection and maintenance should be performend by a qualified inspection service.

### Switch Installation

Riser Butterfly valves are provided with internal supervisor position switches. The tamper switch operates by acam connected to the valve stem. The switch will change position and close with two (2) full turns of the handwheel from the fully open position.

**Switch #1**

For connection to the supervisory circuit

Normally open : 1 Yellow

Normally closed : 1 Red

Common : 1 White

**Switch #2**

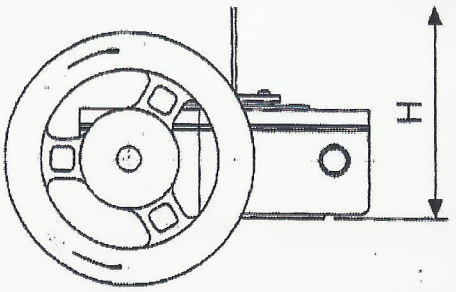
Auxilliary switch connected per authority

Normally open : 1 Blue

Normally closed : 1 Orange

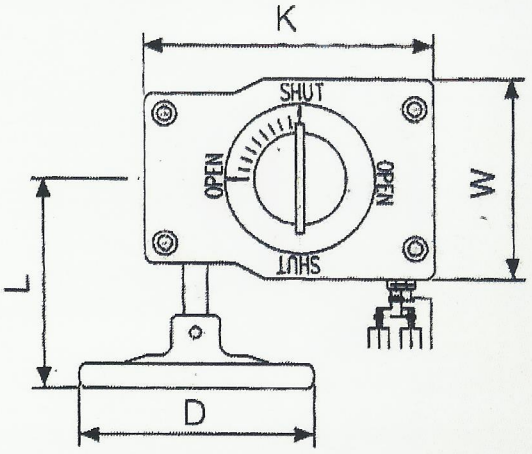
Common : 1 Black

Ground Lead : 1 Grean




### Dimension (mm)

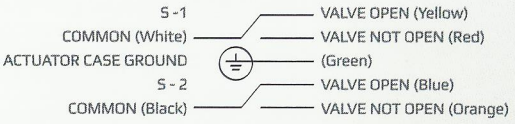
| Valve Size | Part Number | H | D | L | K | W |
|---|---|---|---|---|---|---|
| 50 - 150 | S2000 - 40 | 100 | 120 | 115 | 145 | 110 |
| 200 - 300 | S2000 - 50 | 115 | 170 | 162 | 200 | 165 |




### Materials Specification

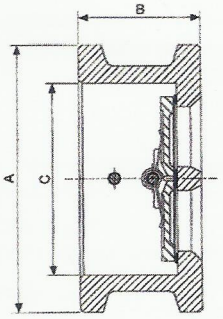
| Part Name | Material | EN Spec. | ASTM Spec |
|---|---|---|---|
| Housing | Cast Iron | EN-JL 1040 | A126 Class B |
| Cover | Cast Iron | EN-JL 1040 | A126 Class B |
| Worm | Carbon Steel | BS970 060A47 | AISI 1045 |
| Worm Gear | Ductile Iron | EN-JL 1050 | A536 65-45-12 |
| Shaft | Stainless Steel | S5970 420S37 | AISI 420 |
| Handwheel | Cast Iron | EN-JL 1040 | A126 Class B |

**SWITCH WIRE OPTION**



## Dual Plate Check Valve - JIS 10K — FIG. 300

### Drawing & Picture




### Material Specification

| Part name | Materials | ASTM Spec. | ASTM Spec. |
|---|---|---|---|
| Body* | Cast Iron | ASTM A126 Class B | ASTM A126 Class B |
| Disc | Ductile Iron | A351 CF8 | A351 CF8 |
| Seat | NBR | Commercial | Commercial |
| Hinge Pin | Stainless Steel | AISI 420 | AISI 420 |
| Stop Pin | Stainless Steel | AISI 420 | AISI 420 |
| Pin Retainer | Stainless Steel | AISI 304 | AISI 304 |
| Spring | Stainless Steel | AISI 304 | AISI 304 |
| Washer | PTFE | Commercial | Commercial |
| Gasket | EPDM/NBR/Viton | Commercial | Commercial |

### Specification :

- **Valve Standard :** Comply with EN593/BS5155/MSS SP-67
- **Flange Type :** JIS 10K

### Working Pressure / Test Pressure

- 10 bar / 16 bar

### Working Temperature

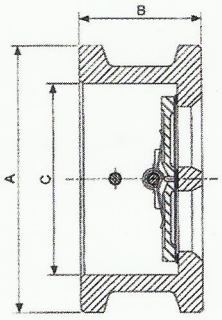
- -10$^0$C to 120$^0$C

### Dimensions (mm)

| Size | A | | | B | C | Weight (kg) |
|---|---|---|---|---|---|---|
| | JIS 10K | ANSI 125# Flange | EN1092-2 PN16 Flange | | | |
| 50 | 96 | 102 | 106 | 54 | 66 | 1.8 |
| 65 | 109 | 121 | 126 | 54 | 78 | 2.4 |
| 80 | 126 | 134 | 141 | 57 | 90 | 3.2 |
| 100 | 158 | 172 | 161 | 64 | 115 | 4.8 |
| 125 | 190 | 194 | 191 | 70 | 141 | 7.3 |
| 150 | 210 | 220 | 217 | 76 | 170 | 10 |
| 200 | 267 | 277 | 272 | 95 | 210 | 14.2 |
| 250 | 331 | 337 | 327 | 108 | 273 | 23.6 |
| 300 | 379 | 407 | 382 | 143 | 324 | 37.5 |
| 350 | 445 | 447 | 442 | 184 | 356 | 62 |
| 400 | 493 | 511 | 494 | 191 | 406 | 74 |
| 450 | 559 | 546 | 554 | 203 | 457 | 100 |
| 500 | 616 | 602 | 616 | 213 | 508 | 155 |
| 600 | 723 | 715 | 733 | 222 | 600 | 215 |

## Dual Plate Check Valve - JIS 10K — FIG. 301

### Drawing & Picture




### Material Specification

| Part name | Materials | ASTM Spec. | ASTM Spec. |
|---|---|---|---|
| Body* | Cast Iron | EN-JL 1040 | ASTM A126 Class B |
| Disc | Stainless Steel | BS970 304S15 | A351 CF8 |
| Seat | NBR | Commercial | Commercial |
| Hinge Pin | Stainless Steel | BS970 420S37 | AISI 420 |
| Stop Pin | Stainless Steel | BS970 420S37 | AISI 420 |
| Pin Retainer | Stainless Steel | BS970 304S15 | AISI 304 |
| Spring | Stainless Steel | BS970 304S15 | AISI 304 |
| Washer | PTFE | Commercial | Commercial |
| Gasket | EPDM/NBR/Viton | Commercial | Commercial |

### Specification :

- **Valve Standard :** Comply with EN593/BS5155/MSS SP-67
- **Flange Type :** JIS 10K

### Working Pressure / Test Pressure

- 10 bar / 16 bar

### Working Temperature

- -10$^0$C to 120$^0$C

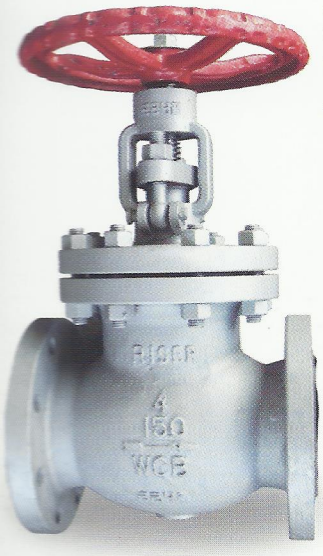
### Dimensions (mm)

| Size | A | | | B | C | Weight (kg) |
|---|---|---|---|---|---|---|
| | JIS 10K | ANSI 125# Flange | EN1092-2 PN16 Flange | | | |
| 50 | 96 | 102 | 106 | 54 | 66 | 1.8 |
| 65 | 109 | 121 | 126 | 54 | 78 | 2.4 |
| 80 | 126 | 134 | 141 | 57 | 90 | 3.2 |
| 100 | 158 | 172 | 161 | 64 | 115 | 4.8 |
| 125 | 190 | 194 | 191 | 70 | 141 | 7.3 |
| 150 | 210 | 220 | 217 | 76 | 170 | 10 |
| 200 | 267 | 277 | 272 | 95 | 210 | 14.2 |
| 250 | 331 | 337 | 327 | 108 | 273 | 23.6 |
| 300 | 379 | 407 | 382 | 143 | 324 | 37.5 |
| 350 | 445 | 447 | 442 | 184 | 356 | 62 |
| 400 | 493 | 511 | 494 | 191 | 406 | 74 |
| 450 | 559 | 546 | 554 | 203 | 457 | 100 |
| 500 | 616 | 602 | 616 | 213 | 508 | 155 |
| 600 | 723 | 715 | 733 | 222 | 600 | 215 |

## Cast Steel Globe Valve - Ansi 150

FIG. 608

### Picture

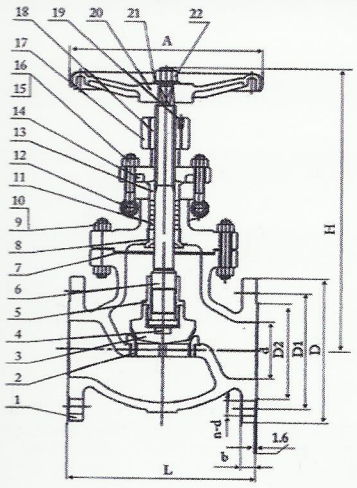


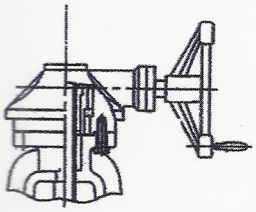
Outside screw and yoke, rising stem bolted bonnet, flanged ends 13%Cr. Trim with half stellite facing (Standard model) 13%Cr. Trim with double stellite facing (Optional model)

**Body Marking**


One Side
**RISER**
**4**
**150**
**WCB**

### Drawing



It can be operated with bevel gear according to costumer's requirement.

Shell material may be CF8, CF8M, WC6, WC9.

- Design and Manufacture Conform to API 623, BS 1873
- Flange dimensions Conform to ANZI B16.5
- Face to Face dimensions Conform tp ANZI B16.10
- Testing COnform to API 598

### Pressure-Temperature Ratings

| Class 150, ASTM A216 WCB | | | |
|---|---|---|---|
| Temperature in $^0$F | Pressure in psig | Temperature in $^0$C | Pressure in bar |
| -20 to 100 | 300 | -29 to 38 | 20.0 |
| 200 | 260 | 50 | 19.2 |
| 300 | 230 | 100 | 17.7 |
| 400 | 200 | 150 | 15.8 |
| 500 | 170 | 200 | 14.0 |
| 600 | 140 | 250 | 12.1 |
| 650 | 125 | 300 | 10.2 |
| 700 | 110 | 350 | 8.4 |
| 750 | 95 | 375 | 7.4 |
| 800 | 80 | 400 | 6.5 |
| 850 | 65 | 425 | 5.6 |
| 900 | 50 | 450 | 4.7 |
| 950 | 35 | 475 | 3.7 |
| 1000 | 20 | 500 | 2.8 |
| - | - | 525 | 1.9 |
| - | - | 540 | 1.3 |

| | | | | | |
|---|---|---|---|---|---|
| Test Pressure | Shell (a) | 450 | Test Pressure | Shell (a) | 30 |
| | Seat (b) | 315 | | Seat (b) | 21.6 |
| | Seat (c) | 60 - 100 | | Seat (c) | 4.1 - 6.9 |

(a) Shell Test ... Hydrostatic (ASME B16.5)
(b) Seat Test ... Hydrostatic (MSS SP-61)
(C) Seat Test ... Air (API std. 598)

1. The above table is according to the ASME B16.34.
2. Permissible, but not recommended for prolonged usage above about 800$^0$F (425$^0$C)
3. Not to be used over 1000$^0$F (540$^0$C)
4. Ratings for all valves ar the maximum allowable working pressures, expressed in gage pressure, at the temperature shown.

### Material Specification

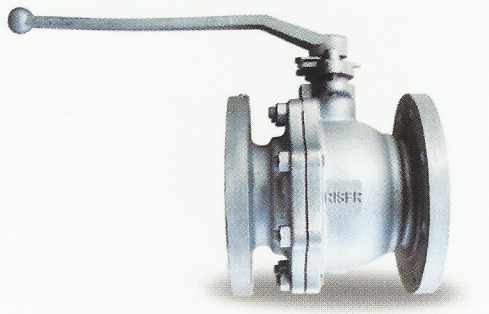
| No. | Part name | Materials |
|---|---|---|
| 1 | Body | Cast Steel-ASTM A216 WCB |
| 2 | Seat Ring | ASTM A105+ERCoCr-A |
| 3 | Wedge | ASTM A216 WCB+13Cr |
| 4 | Stem | ASTM A276 T410 |
| 5 | Stud | ASTM A193 B7 |
| 6 | NT | ASTM A194 2H |
| 7 | Bonnet Gasket | 13Cr + Graphite |
| 8 | Bonnet | ASTM A216 WCB |
| 9 | Back Seat Bushing | ASTM A276 T410 |
| 10 | Packing | ASTM A276 T410 |
| 11 | Packing | Graphite |
| 12 | Pin | Carbon Steel |
| 13 | Packing Gland | ASTM A276 T410 |
| 14 | Gland Follwer | ASTM A216 WCB |
| 15 | Eye Bolt | ASTM A193 B7 |
| 16 | Nut | ASTM A194 2H |
| 17 | Oil Cup | Brass |
| 18 | Stem Nut | A1 - Bronce |
| 19 | Stem Nut Bushing | Carbon Steel |
| 20 | Handwheel | ASTM A536 |
| 21 | Handwheel Nut | Carbon Steel |

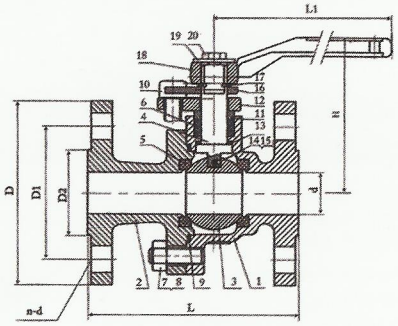
### Dimensions (mm)

| DN | d | L | D | D1 | D2 | b | n - d | H | A | W.T (kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| 2" | 51 | 215.9 | 165 | 127 | 92 | 22.2 | 8 - 19 | 356 | 250 | 30 |
| 2 1/2" | 64 | 241.3 | 190 | 149.2 | 105 | 25.4 | 8 - 22 | 395 | 250 | 39 |
| 3" | 78 | 282.5 | 210 | 168.3 | 127 | 28.6 | 8 - 22 | 440 | 300 | 55 |
| 4" | 102 | 304.8 | 254 | 200 | 157 | 31.8 | 8 - 22 | 500 | 350 | 83 |
| 5" | 127 | 381 | 279 | 235 | 186 | 34.9 | 8 - 22 | 587 | 350 | 92 |
| 6" | 152 | 403.4 | 318 | 269.9 | 216 | 36.5 | 12 - 22 | 630 | 400 | 137 |
| 8" | 203 | 419.1 | 381 | 330.2 | 270 | 41.3 | 12 - 25 | 850 | 500 | 240 |
| 10" | 254 | 457.2 | 445 | 387.3 | 324 | 47.6 | 16 - 29 | 1010 | 600 | 378 |
| 12" | 305 | 501.7 | 521 | 450.8 | 381 | 50.8 | 16 - 32 | 1160 | 650 | 536 |
| 14" | 337 | 762 | 584 | 514.3 | 413 | 54 | 20 - 32 | 1310 | 650 | 880 |
| 16" | 387 | 838.2 | 648 | 571.5 | 470 | 57.2 | 20 - 35 | 1545 | 650 | 1080 |
| 18" | 438 | 914.4 | 711 | 628.7 | 533 | 60.3 | 24 - 35 | 1623 | 650 | 1300 |
| 20" | 489 | 990.6 | 775 | 685.4 | 584 | 63.5 | 24 - 35 | 1770 | 800 | 1190 |
| 24" | 591 | 1143 | 914 | 812.8 | 692 | 69.9 | 24 - 41 | 2102 | 800 | 2900 |
| 30" | 743 | 1397 | 1092 | 997 | 857 | 92 | 28 - 48 | 3540 | - | 3786 |
| 36" | 889 | 1727 | 1270 | 1168 | 1022 | 105 | 32 - 54 | 4200 | - | 4800 |

## Ball Valve - Ansi 150 — FIG. 997

### Picture & Drawing






- Design and Manufacture Conform to API 623, BS 1873
- Flange dimensions Conform to ANZI B16.5
- Face to Face dimensions Conform tp ANZI B16.10
- Testing COnform to API 598

Note : It can be operated with gear according to customer's requirement.

### Working Pressure

- 25 bar

### Working Temperature

- -10$^0$C to 120$^0$C

### Material Specification

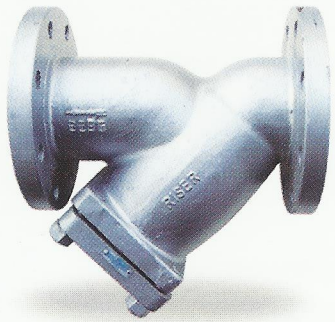
| No. | Part name | Materials |
|---|---|---|
| 1 | Body | Cast Steel-ASTM A216 WCB |
| 2 | Seat Ring | ASTM A105+ERCoCr-A |
| 3 | Wedge | ASTM A216 WCB+13Cr |
| 4 | Stem | ASTM A276 T410 |
| 5 | Stud | ASTM A193 B7 |
| 6 | NT | ASTM A194 2H |
| 7 | Bonnet Gasket | 13Cr + Graphite |
| 8 | Bonnet | ASTM A216 WCB |
| 9 | Back Seat Bushing | ASTM A276 T410 |
| 10 | Packing | ASTM A276 T410 |
| 11 | Packing | Graphite |
| 12 | Pin | Carbon Steel |
| 13 | Packing Gland | ASTM A276 T410 |
| 14 | Gland Follwer | ASTM A216 WCB |
| 15 | Eye Bolt | ASTM A193 B7 |
| 16 | Nut | ASTM A194 2H |
| 17 | Oil Cup | Brass |
| 18 | Stem Nut | A1 - Bronce |
| 19 | Stem Nut Bushing | Carbon Steel |
| 20 | Handwheel | ASTM A536 |
| 21 | Handwheel Nut | Carbon Steel |

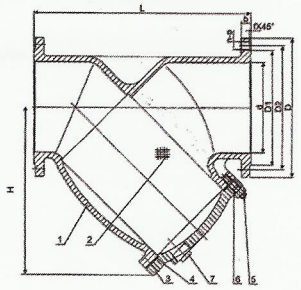
### Dimensions (mm)

| DN | d | L | D | D1 | D2 | b | n - d | H | L1 |
|---|---|---|---|---|---|---|---|---|---|
| 2" | 49 | 178 | 150 | 120.7 | 92 | 15.8 | 4 - 19 | 135 | 240 |
| 2 1/2" | 64 | 190 | 178 | 139.7 | 105 | 17.5 | 4 - 19 | 165 | 300 |
| 3" | 74 | 203 | 190 | 152.4 | 127 | 19 | 4 - 19 | 183 | 330 |
| 4" | 100 | 229 | 230 | 190.5 | 157 | 23.9 | 8 - 19 | 200 | 365 |
| 5" | 127 | 356 | 255 | 215.9 | 186 | 23.9 | 8 - 22 | 280 | 800 |
| 6" | 150 | 394 | 280 | 241.3 | 216 | 25.4 | 8 - 22 | 310 | 800 |
| 8" | 201 | 457 | 345 | 298.5 | 270 | 28.5 | 8 - 22 | 350 | 1000 |

## Cast Steel Y-Strainer - PN25 — FIG. 936

### Picture & Drawing






### Working Pressure

- 30 bar

### Working Temperature

- -10$^0$C to 120$^0$C

### Material of Main Parts

| Part | | Materials | | | |
|---|---|---|---|---|---|
| No. | Name | Carbon Steel | Stainles Steel | | High Temperature Steel |
| 1 | Body | ASTM A216WCB | ASTM A351 Cf8 | ASTM A351 Cf8M | ASTM A217 WOG |
| 2 | Screen | 304 | 304 | 316 | 304 |
| 3 | Gasket | 304SS + Graphite | 304SS + Graphite | 304SS + Graphite | 304SS + Graphite |
| 4 | Bonnet | ASTM A216WCB | ASTM A351 Cf8 | ASTM A351 CF8M | ASTM A317 WC6 |
| 5 | Stud | ASTM A 193 B7 | ASTM A 193 B8 | ASTM A 193 B8 | ASTM A 193 B16 |
| 6 | Nut | ASTM A 194 2H | ASTM A 194 8 | ASTM A 194 8 | ASTM A 194 4 |
| 7 | Plug | A105 | 304 | 304 | 304 |

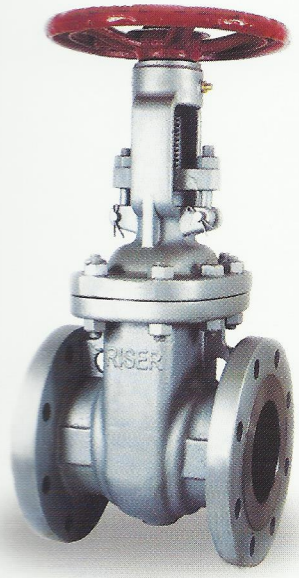
### Dimensions (mm)

| NPS | DN | L (RF) | D | D1 | D2 | b | n - d | H | H1 | W.T (kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 50 | 200 | 165 | 125 | 99 | 15.9 | 4 - 19 | 145 | 186 | 9 |
| 2 1/2 | 65 | 247.6 | 185 | 145 | 118 | 17.5 | 8 - 19 | 170 | 233 | 13 |
| 3 | 80 | 255.6 | 200 | 160 | 132 | 19.1 | 8 - 19 | 183 | 249 | 16 |
| 4 | 100 | 308 | 235 | 190 | 156 | 23.9 | 8 - 23 | 221 | 314 | 26 |
| 5 | 125 | 397 | 270 | 220 | 184 | 23.9 | 8 - 28 | 294 | 422 | 41 |
| 6 | 150 | 470 | 300 | 250 | 211 | 25.4 | 8 - 28 | 345 | 491 | 56 |
| 8 | 200 | 543 | 360 | 310 | 274 | 28.5 | 12 - 28 | 397 | 556 | 91 |
| 10 | 250 | 660.5 | 425 | 370 | 330 | 30.2 | 12 - 31 | 477 | 700 | 153 |
| 12 | 300 | 758.8 | 485 | 430 | 389 | 31.8 | 16 - 31 | 555 | 807 | 222 |

## Cast Steel Gate Valve - Ansi 300

FIG. 729

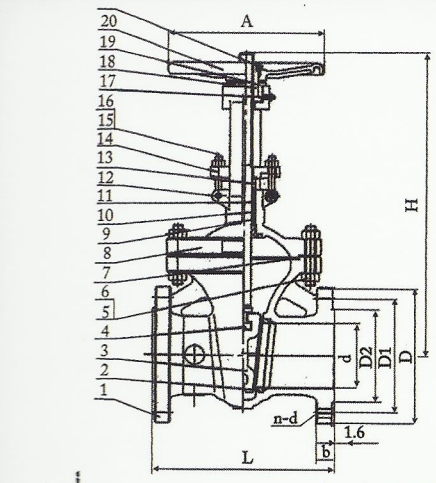
### Picture

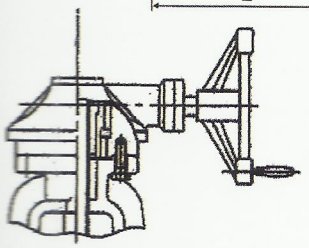



Outside screw and yoke, rising stem bolted bonnet, flanged ends 13%Cr. Trim with half stellite facing (Standard model) 13%Cr. Trim with double stellite facing (Optional model)

One Side
**RISER**
**4**
**300**
**WCB**

### Drawing



It can be operated with bevel gear according to costumer's requirement.

Shell material may be CF8, CF8M, WC6, WC9.

30", 36" flange dimensions conform to ASME B16.47 series.

- Design and Manufacture Conform to API 600
- Flange dimensions Conform to ANZI B16.5
- Face to Face dimensions Conform tp ANZI B16.10
- Testing COnform to API 598

### Pressure-Temperature Ratings

| Class 150, ASTM A216 WCB | | | | | |
|---|---|---|---|---|---|
| Temperature in $^0$F | | Pressure in psig | Temperature in $^0$C | | Pressure in bar |
| -20 to 100 | | 740 | -29 to 38 | | 51.1 |
| 200 | | 675 | 50 | | 50.1 |
| 300 | | 655 | 100 | | 46.4 |
| 400 | | 635 | 150 | | 45.2 |
| 500 | | 600 | 200 | | 43.8 |
| 600 | | 550 | 250 | | 41.7 |
| 650 | | 535 | 300 | | 38.7 |
| 700 | | 535 | 350 | | 37.0 |
| 750 | | 505 | 375 | | 36.5 |
| 800 | | 410 | 400 | | 34.5 |
| 850 | | 270 | 425 | | 28.8 |
| 900 | | 170 | 450 | | 20.0 |
| 950 | | 105 | 475 | | 13.5 |
| 1000 | | 50 | 500 | | 8.8 |
| - | | - | 525 | | 5.2 |
| - | | - | 540 | | 3.3 |
| Test Pressure | Shell (a) | 1125 | Test Pressure | Shell (a) | 77 |
| | Seat (b) | 815 | | Seat (b) | 56.3 |
| | Seat (c) | 60 - 100 | | Seat (c) | 4.1 - 6.9 |

(a) Shell Test ... Hydrostatic (ASME B16.5)
(b) Seat Test ... Hydrostatic (MSS SP-61)
(C) Seat Test ... Air (API std. 598)

1. The above table is according to the ASME B16.34.
2. Permissible, but not recommended for prolonged usage above about 800$^0$F (425$^0$C)
3. Not to be used over 1000$^0$F (540$^0$C)
4. Ratings for all valves ar the maximum allowable working pressures, expressed in gage pressure, at the temperature shown.

### Material Specification

| No. | Part name | Materials |
|---|---|---|
| 1 | Body | Cast Steel-ASTM A216 WCB |
| 2 | Seat Ring | ASTM A105+ERCoCr-A |
| 3 | Wedge | ASTM A216 WCB+13Cr |
| 4 | Stem | ASTM A276 T410 |
| 5 | Stud | ASTM A193 B7 |
| 6 | NT | ASTM A194 2H |
| 7 | Bonnet Gasket | 13Cr + Graphite |
| 8 | Bonnet | ASTM A216 WCB |
| 9 | Back Seat Bushing | ASTM A276 T410 |
| 10 | Packing | ASTM A276 T410 |
| 11 | Packing | Graphite |
| 12 | Pin | Carbon Steel |
| 13 | Packing Gland | ASTM A276 T410 |
| 14 | Gland Follwer | ASTM A216 WCB |
| 15 | Eye Bolt | ASTM A193 B7 |
| 16 | Nut | ASTM A194 2H |
| 17 | Oil Cup | Brass |
| 18 | Stem Nut | A1 - Bronce |
| 19 | Stem Nut Bushing | Carbon Steel |
| 20 | Handwheel | ASTM A536 |
| 21 | Handwheel Nut | Carbon Steel |

### Dimensions (mm)

| DN | d | L | D | D1 | D2 | b | n - d | H | A | W.T (kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| 2" | 51 | 215.9 | 165 | 127 | 92 | 22.2 | 8 - 19 | 356 | 250 | 30 |
| 2$^1$/2" | 64 | 241.3 | 190 | 149.2 | 105 | 25.4 | 8 - 22 | 395 | 250 | 39 |
| 3" | 78 | 282.5 | 210 | 168.3 | 127 | 28.6 | 8 - 22 | 440 | 300 | 55 |
| 4" | 102 | 304.8 | 254 | 200 | 157 | 31.8 | 8 - 22 | 500 | 350 | 83 |
| 5" | 127 | 381 | 279 | 235 | 186 | 34.9 | 8 - 22 | 587 | 350 | 92 |
| 6" | 152 | 403.4 | 318 | 269.9 | 216 | 36.5 | 12 - 22 | 630 | 400 | 137 |
| 8" | 203 | 419.1 | 381 | 330.2 | 270 | 41.3 | 12 - 25 | 850 | 500 | 240 |
| 10" | 254 | 457.2 | 445 | 387.3 | 324 | 47.6 | 16 - 29 | 1010 | 600 | 378 |
| 12" | 305 | 501.7 | 521 | 450.8 | 381 | 50.8 | 16 - 32 | 1160 | 650 | 536 |
| 14" | 337 | 762 | 584 | 514.3 | 413 | 54 | 20 - 32 | 1310 | 650 | 880 |
| 16" | 387 | 838.2 | 648 | 571.5 | 470 | 57.2 | 20 - 35 | 1545 | 650 | 1080 |
| 18" | 438 | 914.4 | 711 | 628.7 | 533 | 60.3 | 24 - 35 | 1623 | 650 | 1300 |
| 20" | 489 | 990.6 | 775 | 685.4 | 584 | 63.5 | 24 - 35 | 1770 | 800 | 1190 |
| 24" | 591 | 1143 | 914 | 812.8 | 692 | 69.9 | 24 - 41 | 2102 | 800 | 2900 |
| 30" | 743 | 1397 | 1092 | 997 | 857 | 92 | 28 - 48 | 3540 | - | 3786 |
| 36" | 889 | 1727 | 1270 | 1168 | 1022 | 105 | 32 - 54 | 4200 | - | 4800 |

## Cast Steel Gate Valve - Ansi 300 — FIG. 729

### Picture


Swing type, bolted cover, flanged ends 13%Cr. Trim with half stellite facing (Standard model) 13%Cr. Trim with double stellite facing (Optional model)

One Side
**RISER**
**4**
**300**
**WCB**

### Pressure-Temperature Ratings

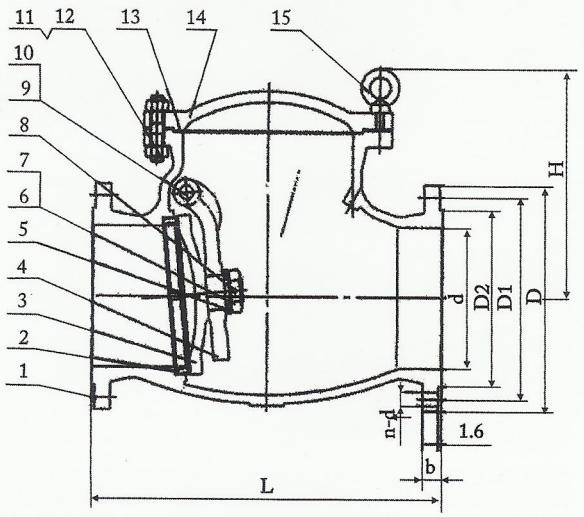
| Class 150, ASTM A216 WCB | | | |
|---|---|---|---|
| Temperature in $^0$F | Pressure in psig | Temperature in $^0$C | Pressure in bar |
| -20 to 100 | 740 | -29 to 38 | 51.1 |
| 200 | 675 | 50 | 50.1 |
| 300 | 655 | 100 | 46.4 |
| 400 | 635 | 150 | 45.2 |
| 500 | 600 | 200 | 43.8 |
| 600 | 550 | 250 | 41.7 |
| 650 | 535 | 300 | 38.7 |
| 700 | 535 | 350 | 37.0 |
| 750 | 505 | 375 | 36.5 |
| 800 | 410 | 400 | 34.5 |
| 850 | 270 | 425 | 28.8 |
| 900 | 170 | 450 | 20.0 |
| 950 | 105 | 475 | 13.5 |
| 1000 | 50 | 500 | 8.8 |
| - | - | 525 | 5.2 |
| - | - | 540 | 3.3 |

| Test Pressure | | | Test Pressure | | |
|---|---|---|---|---|---|
| | Shell (a) | 1125 | | Shell (a) | 77 |
| | Seat (b) | 815 | | Seat (b) | 56.3 |
| | Seat (c) | 60 - 100 | | Seat (c) | 4.1 - 6.9 |

(a) Shell Test ... Hydrostatic (ASME B16.5)
(b) Seat Test ... Hydrostatic (MSS SP-61)
(C) Seat Test ... Air (API std. 598)

1. The above table is according to the ASME B16.34.
2. Permissible, but not recommended for prolonged usage above about 800$^0$F (425$^0$C)
3. Not to be used over 1000$^0$F (540$^0$C)
4. Ratings for all valves ar the maximum allowable working pressures, expressed in gage pressure, at the temperature shown.

### Drawing




Shell material may be CF8, CF8M, WC6, WC9.

### Material Specification

| No. | Part name | Materials |
|---|---|---|
| 1 | Body | Cast Steel-ASTM 216 WCB |
| 2 | Seat Ring | ASTM A105+ERCoCr-A |
| 3 | Disc | ASTM A216 WCB+13Cr |
| 4 | Hinge | ASTM A216 WCB |
| 5 | Washer | Carbon Steel |
| 6 | Nut | Carbon Steel |
| 7 | Stud | Carbon Steel |
| 8 | Split Pin | 304 |
| 9 | Hinge Pin | 13Cr |
| 10 | Plug | Carbon Steel |
| 11 | Stud | ASTM A193 B7 |
| 12 | Nut | ASTM A194 2H |
| 13 | Bonnet Gasket | 13Cr + Graphite |
| 14 | Bonnet | ASTM A216 WCB |
| 15 | Eye Screw | Carbon Steel |

### Dimensions (mm)

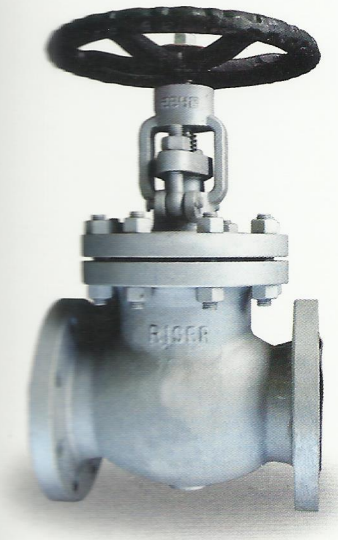
| DN | d | L | D | D1 | D2 | b | n - d | H | W.T (kg) |
|---|---|---|---|---|---|---|---|---|---|
| 2" | 51 | 266.7 | 165 | 127 | 92 | 22.2 | 8 - 19 | 160 | 25 |
| 2 1/2" | 64 | 292.1 | 190 | 149.2 | 105 | 25.4 | 8 - 22 | 172 | 34 |
| 3" | 78 | 317.5 | 210 | 168.3 | 127 | 28.6 | 8 - 22 | 189 | 44 |
| 4" | 102 | 355.6 | 254 | 200 | 157 | 31.8 | 8 - 22 | 210 | 68 |
| 5" | 127 | 400.1 | 279 | 235 | 186 | 34.9 | 8 - 22 | 270 | 88 |
| 6" | 152 | 444.5 | 318 | 269.9 | 216 | 36.5 | 12 - 22 | 330 | 126 |
| 8" | 203 | 533.4 | 381 | 330.2 | 270 | 41.3 | 12 - 25 | 418 | 197 |
| 10" | 254 | 622.3 | 445 | 387.3 | 324 | 47.6 | 16 - 29 | 450 | 322 |
| 12" | 305 | 711.2 | 521 | 450.8 | 381 | 50.8 | 16 - 32 | 508 | 410 |

- Design and Manufacture Conform to API 600
- Flange dimensions Conform to ANZI B16.5
- Face to Face dimensions Conform tp ANZI B16.10
- Testing COnform to API 598

## Cast Steel Globe Valve - Ansi 300

FIG. 709

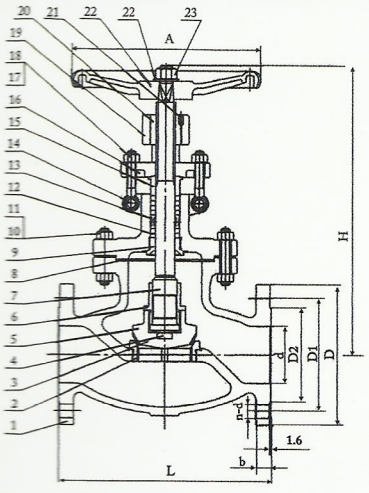
### Picture

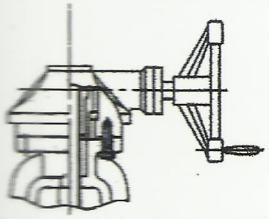


Outside screw and yoke, rising stem bolted bonnet, flanged ends 13%Cr. Trim with half stellite facing (Standard model) 13%Cr. Trim with double stellite facing (Optional model)

One Side
**RISER**
**4**
**300**
**WCB**

### Drawing



It can be operated with bevel gear according to costumer's requirement.

Shell material may be CF8, CF8M, WC6, WC9.

- Design and Manufacture Conform to API 600
- Flange dimensions Conform to ANZI B16.5
- Face to Face dimensions Conform tp ANZI B16.10
- Testing Conform to API 598

### Pressure-Temperature Ratings

| Class 150, ASTM A216 WCB | | | | | |
|---|---|---|---|---|---|
| Temperature in $^0$F | | Pressure in psig | Temperature in $^0$C | | Pressure in bar |
| -20 to 100 | | 740 | -29 to 38 | | 51.1 |
| 200 | | 675 | 50 | | 50.1 |
| 300 | | 655 | 100 | | 46.4 |
| 400 | | 635 | 150 | | 45.2 |
| 500 | | 600 | 200 | | 43.8 |
| 600 | | 550 | 250 | | 41.7 |
| 650 | | 535 | 300 | | 38.7 |
| 700 | | 535 | 350 | | 37.0 |
| 750 | | 505 | 375 | | 36.5 |
| 800 | | 410 | 400 | | 34.5 |
| 850 | | 270 | 425 | | 28.8 |
| 900 | | 170 | 450 | | 20.0 |
| 950 | | 105 | 475 | | 13.5 |
| 1000 | | 50 | 500 | | 8.8 |
| - | | - | 525 | | 5.2 |
| - | | - | 540 | | 3.3 |
| Test Pressure | Shell (a) | 1125 | Test Pressure | Shell (a) | 77 |
| | Seat (b) | 815 | | Seat (b) | 56.3 |
| | Seat (c) | 60 - 100 | | Seat (c) | 4.1 - 6.9 |

(a) Shell Test ... Hydrostatic (ASME B16.5)
(b) Seat Test ... Hydrostatic (MSS SP-61)
(C) Seat Test ... Air (API std. 598)

1. The above table is according to the ASME B16.34.
2. Permissible, but not recommended for prolonged usage above about 800$^0$F (425$^0$C)
3. Not to be used over 1000$^0$F (540$^0$C)
4. Ratings for all valves ar the maximum allowable working pressures, expressed in gage pressure, at the temperature shown.

### Material Specification

| No. | Part name | Materials |
|---|---|---|
| 1 | Body | Cast Steel-ASTM 216 WCB |
| 2 | Seat Ring | ASTM A105+ERCoCr-A |
| 3 | Disc | ASTM A216 WCB+13Cr |
| 4 | Raiser Block | 13 Cr |
| 5 | Disc Cover | ASTM A276 T410 |
| 6 | Stem | ASTM A276 T410 |
| 7 | Bonnet Gasket | 13Cr + Graphite |
| 8 | Back Seat Bushing | ASTM A276 T410 |
| 9 | Stud | ASTM A193 B7 |
| 10 | Nut | ASTM A194 2H |
| 11 | Packing | Graphite |
| 12 | Pin | Carbon Steel |
| 13 | Packing Gland Ring | ASTM A276 T410 |
| 14 | Packing Gland | ASTM A276 T410 |
| 15 | Gland Follower | ASTM A216 WCB |
| 16 | Ege Bolt | ASTM A193 B7 |
| 17 | Nut | ASTM A194 2H |
| 18 | Bonnet | ASTM A216 WCB |
| 19 | Stem Nut | A1 - Bronze |
| 20 | Screw | Carbon Steel |
| 21 | Handwheel | ASTM A536 |
| 22 | Washer | Carbon Steel |
| 23 | Handwheel Nut | Carbon Steel |

### Dimensions (mm)

| DN | d | L | D | D1 | D2 | b | n - d | H | A | W.T (kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| 2" | 51 | 266.7 | 165 | 127 | 92 | 22.2 | 8 - 19 | 386 | 200 | 34 |
| 2 1/2" | 64 | 292.1 | 190 | 149.2 | 105 | 25.4 | 8 - 22 | 410 | 250 | 50 |
| 3" | 78 | 317.5 | 210 | 168.3 | 127 | 28.6 | 8 - 22 | 440 | 300 | 64 |
| 4" | 102 | 355.6 | 254 | 200 | 157 | 31.8 | 8 - 22 | 498 | 350 | 91 |
| 5" | 127 | 400.1 | 279 | 235 | 186 | 34.9 | 8 - 22 | 563 | 350 | 128 |
| 6" | 152 | 444.5 | 318 | 269.9 | 216 | 36.5 | 12 - 22 | 620 | 450 | 169 |
| 8" | 203 | 558.8 | 381 | 330.2 | 270 | 41.3 | 12 - 25 | 750 | 600 | 298 |
| 10" | 254 | 622.3 | 445 | 387.3 | 324 | 47.6 | 16 - 29 | 890 | 700 | 482 |
| 12" | 305 | 711.2 | 521 | 450.8 | 381 | 50.8 | 16 - 32 | 990 | 800 | 682 |

BALAI BESAR TEKNOLOGI KEKUATAN STRUKTUR

# LAPORAN
# REPORT

## PENGUJIAN HIDROSTATIS
## Gate Valve Merek Riser 10 K - 3"
## PT. Sinabu Nusa Indo
## Jl.Kebon Jeruk Raya – Komplek Kebon Jeruk
## JAKARTA

Nomor : C.2012.2688 A
Tanggal : 05 Nopember 2012

| Dikerjakan oleh<br>Prepared by | Tanggal<br>Date | Diperiksa oleh<br>Checked by | Tanggal<br>Date | Disetujui oleh<br>Approved by | Tanggal<br>Date |
|---|---|---|---|---|---|
| Suprivatno, ST<br>Penyelia | 05-11-2012 | DR.Tjahjo Pranoto<br>Ka. Laboratorium | 6-11-12 | Ir. Sudarmadi, M.Eng, Sc<br>Manajer Teknis | 6-11-12 |

| BPPT<br>BALAI BESAR TEKNOLOGI KEKUATAN STRUKTUR | **LAPORAN PENGUKURAN**<br>**Measurement Report** | Halaman / Page 1 Dari / Of 5<br>Nomor / Number 133A.PAB.2688.2012 |
|---|---|---|

## I. PENDAHULUAN

Sesuai permintaan dari PT. Sinabu Nusa Indo, melalui Surat Permohonan Uji No : 2688/PL/2688/X/2012 tertanggal 16 Oktober 2012 mengenai Pengujian Hidrostatis Gate Valve, maka pada tanggal 30 Oktober 2012 telah dilakukan uji hidrostatis tersebut di B2TKS BPPT Puspiptek Serpong.

## II. TUJUAN PENGUJIAN

Pengujian dilakukan untuk mengetahui kemampuan dan kekuatan Gate Valve menahan tekanan internal maksimal sebesar 15 bar melalui pengujian hidrostatis.

## III. BENDA UJI

Identifikasi benda uji adalah sebagai berikut :

- Gate Valve Merek Riser 10K - 3"

## IV. PERALATAN PENGUKURAN

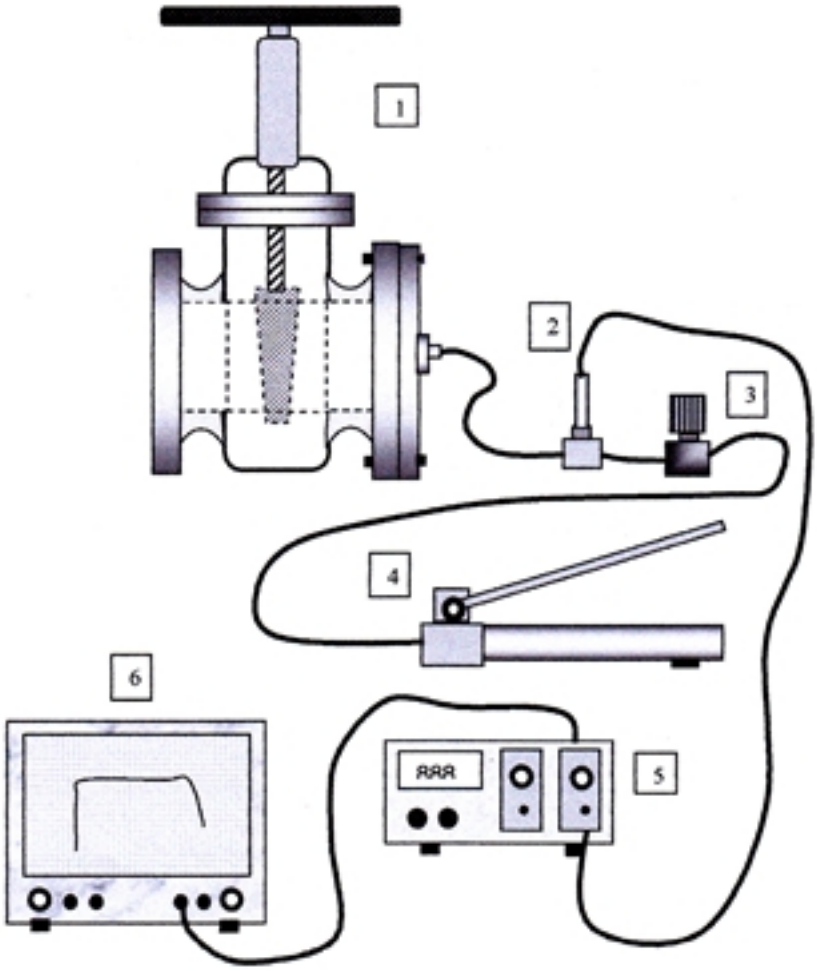
1. Pompa dengan fluida air sebagai pemberi tekanan
2. Pressure Transducer sebagai sensosr tekanan , merek TML Tipe/No.Seri : PW-10 MPA, CPK04043. Sertifikat B2TKS-BPPT Nomor : 7044.0632.2012
3. Amplifier KWS 3073 sebagai penguat sinyal
4. X -t Recorder sebagai perekam data.

## V. METODA PENGUKURAN

Dudukan Katup (Katup tertutup).
Pengukuran hidrostatis dilakukan dengan tahapan sebagai berikut :

1. Tutup secara penuh dudukan katup dan salah satu sisinya ditutup dengan flange
2. Mengisi benda uji dengan air sampai penuh, sehingga tidak ada udara yang terjebak
3. Memberi tekanan pada benda uji sebesar 15 bar. Pengamatan tekanan dilakukan melalui penguat sinyal KWS 3073 yang dihubungkan ke *Pressure Transducer* seperti pada gambar 1, kemudian menutup valve dan merekamnya pada X-t recorder selama ± 30 menit.
4. Memeriksa kebocoran atau kerusakan pada benda uji secara visual.
5. Tekanan diturunkan apabila pengujian dianggap selesai.

| Dikerjakan oleh / Prepared by | Diperiksa oleh / Checked by |
|---|---|
| 05-11-2012 | |




**Keterangan Gambar**

1. Benda Uji
2. Pressure Transducer
3. Valve
4. Pompa Air
5. Amplifier KWS 3073
6. X-t Recorder

Gambar 1. Rangkaian Sistem Pengujian Hidrostatis

## VI. HASIL PENGUKURAN

Hasil uji hidrostatis diperlihatkan pada grafik (lampiran) dan tabel

Tabel Hasil Pengujian Hidrostatis Gate Valve

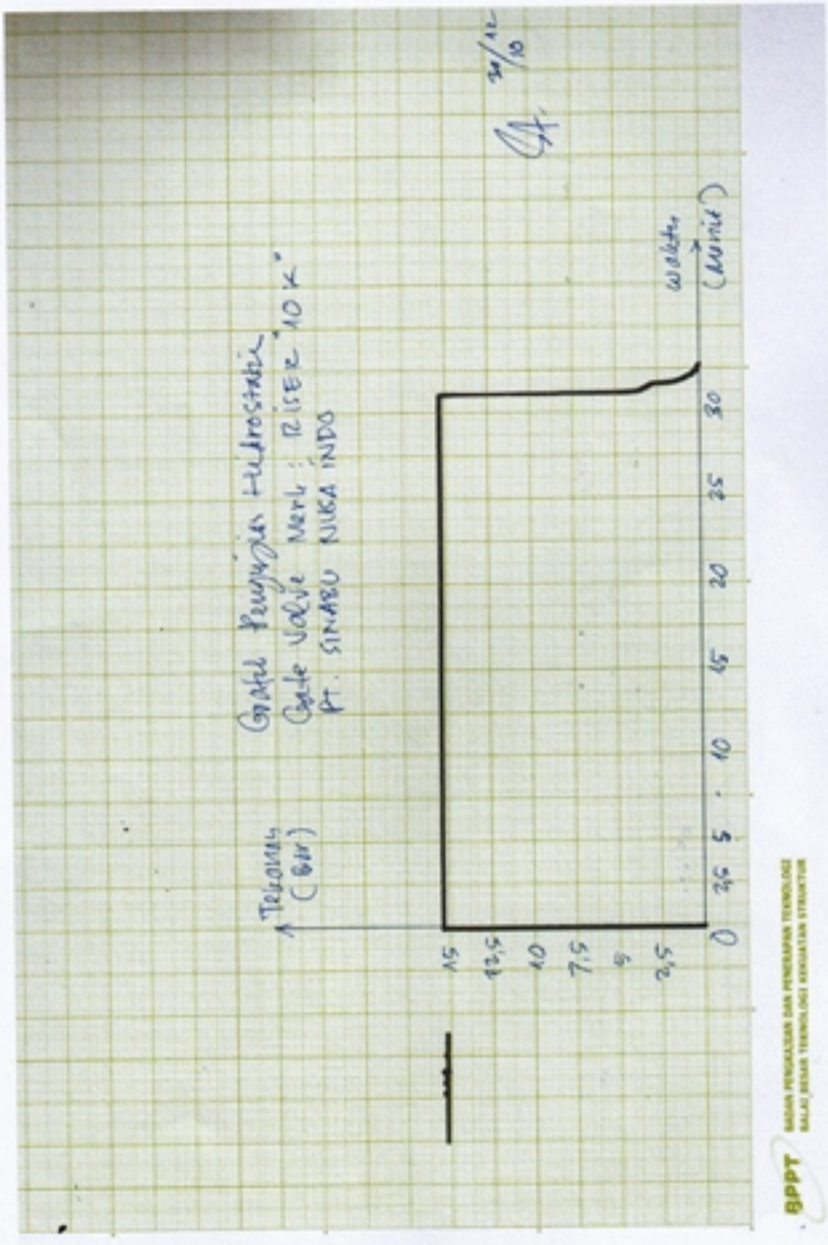
| Benda Uji | Tekanan Pengujian (bar) | | | Keterangan |
|---|---|---|---|---|
| | Permintaan | Aktual | Penurunan setelah ± 30 menit | |
| Gate Valve Riser 10 K - 3" | 15.0 | 15.0 | 0.0 | Secara visual tidak bocor |

## VII. KESIMPULAN

Dari hasil pengamatan secara visual dinyatakan sebagai berikut :
Selama pengujian Gate Valve Riser 10 K - 3" tidak mengalami kerusakan dan kebocoran.

Keterangan :

Hasil Pengujian ini hanya representatif benda uji yang diuji, diluar benda uji tersebut bukan tanggung jawab B2TKS – BPPT.




Gambar 2. Grafik Pengujian Gate Valve Riser 10K 3"

| Dikerjakan oleh / Prepared by | Diperiksa oleh / Checked by |
|---|---|
| 05/11 - 2012 | |


Gambar 3. Gate Valve Riser PN16 4"

Gambar 4. Pengujian Hidrostatis

BALAI BESAR TEKNOLOGI KEKUATAN STRUKTUR

# LAPORAN
# REPORT

## PENGUJIAN HIDROSTATIS
## Gate Valve Merek Riser PN 16 - 4"
## PT. Sinabu Nusa Indo
## Jl.Kebon Jeruk Raya – Komplek Kebon Jeruk
## JAKARTA

Nomor : C.2012.2688 B
Tanggal : 05 Nopember 2012

| Dikerjakan oleh<br>Prepared by | Tanggal<br>Date | Diperiksa oleh<br>Checked by | Tanggal<br>Date | Disetujui oleh<br>Approved by | Tanggal<br>Date |
|---|---|---|---|---|---|
| Suprivatno, ST<br>Penyelia | 05-11-2012 | DR.Tjahjo Prancto<br>Ka. Laboratorium | 6.12 | Ir. Sudarmadi, M.Eng. Sc<br>Manajer Teknis | 6-12 |

## I. PENDAHULUAN

Sesuai permintaan dari PT. Sinabu Nusa Indo, melalui Surat Permohonan Uji No : 2688/PL/2688/X/2012 tertanggal 16 Oktober 2012 mengenai Pengujian Hidrostatis Gate Valve, maka pada tanggal 31 Oktober 2012 telah dilakukan uji hidrostatis tersebut di B2TKS BPPT Puspiptek Serpong.

## II. TUJUAN PENGUJIAN

Pengujian dilakukan untuk mengetahui kemampuan dan kekuatan Gate Valve menahan tekanan internal maksimal sebesar 20 bar melalui pengujian hidrostatis.

## III. BENDA UJI

Identifikasi benda uji adalah sebagai berikut :

- Gate Valve Merek Riser PN 16 - 4"

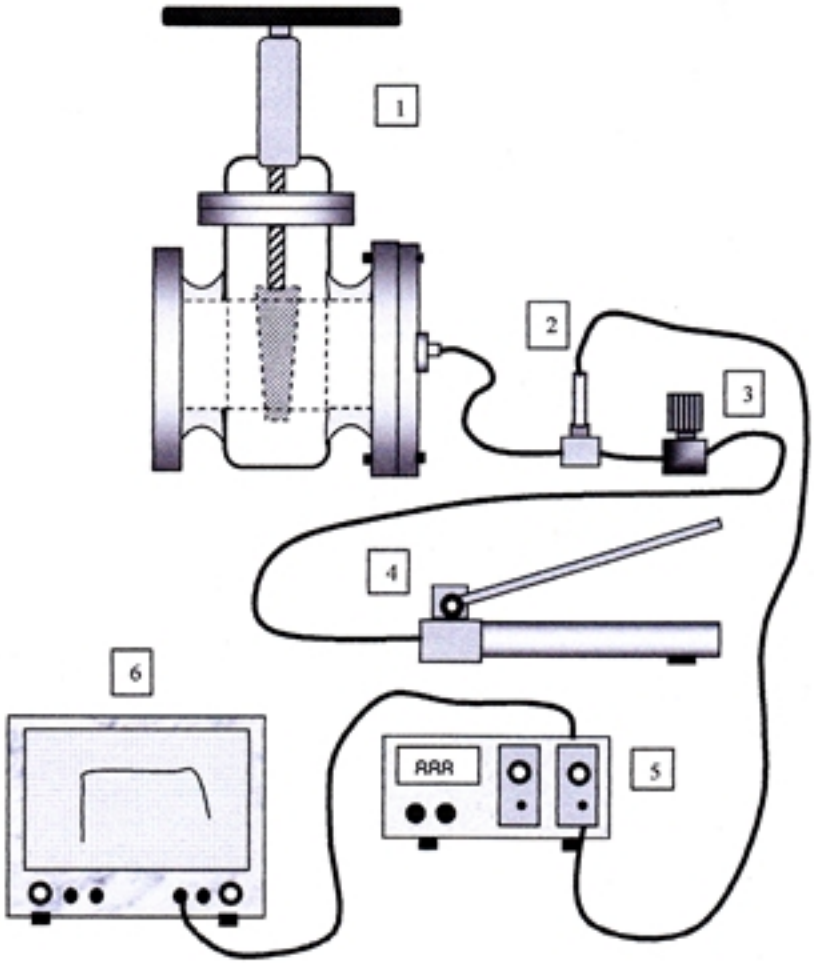
## IV. PERALATAN PENGUKURAN

1. Pompa dengan fluida air sebagai pemberi tekanan
2. Pressure Transducer sebagai sensosr tekanan, merek TML Tipe/No.Seri : PW-10 MPA, CPK04043. Sertifikat B2TKS-BPPT Nomor : 7044.0632.2012
3. Amplifier KWS 3073 sebagai penguat sinyal
4. X -t Recorder sebagai perekam data.

## V. METODA PENGUKURAN

Dudukan Katup (Katup tertutup).
Pengukuran hidrostatis dilakukan dengan tahapan sebagai berikut :

1. Tutup secara penuh dudukan katup dan salah satu sisinya ditutup dengan flange
2. Mengisi benda uji dengan air sampai penuh, sehingga tidak ada udara yang terjebak
3. Memberi tekanan pada benda uji sebesar 20 bar. Pengamatan tekanan dilakukan melalui penguat sinyal KWS 3073 yang dihubungkan ke *Pressure Transducer* seperti pada gambar 1, kemudian menutup valve dan merekamnya pada X-t recorder selama ± 30 menit.
4. Memeriksa kebocoran atau kerusakan pada benda uji secara visual.
5. Tekanan diturunkan apabila pengujian dianggap selesai.




**Keterangan Gambar**

1. Benda Uji
2. Pressure Transducer
3. Valve
4. Pompa Air
5. Amplifier KWS 3073
6. X-t Recorder

Gambar 1. Rangkaian Sistem Pengujian Hidrostatis

## VI. HASIL PENGUKURAN

Hasil uji hidrostatis diperlihatkan pada grafik (lampiran) dan tabel

Tabel Hasil Pengujian Hidrostatis Gate Valve

| Benda Uji | Tekanan Pengujian (bar) | | | Keterangan |
|---|---|---|---|---|
| | Permintaan | Aktual | Penurunan setelah ± 30 menit | |
| Gate Valve Riser PN16 - 4" | 20.0 | 20.2 | 0.2 | Secara visual tidak bocor |

## VII. KESIMPULAN

Dari hasil pengamatan secara visual dinyatakan sebagai berikut :
Selama pengujian Gate Valve Riser PN 16 - 4" tidak mengalami kerusakan dan kebocoran

Keterangan :

Hasil Pengujian ini hanya representatif benda uji yang diuji, diluar benda uji tersebut bukan tanggung jawab B2TKS – BPPT.

BPPT

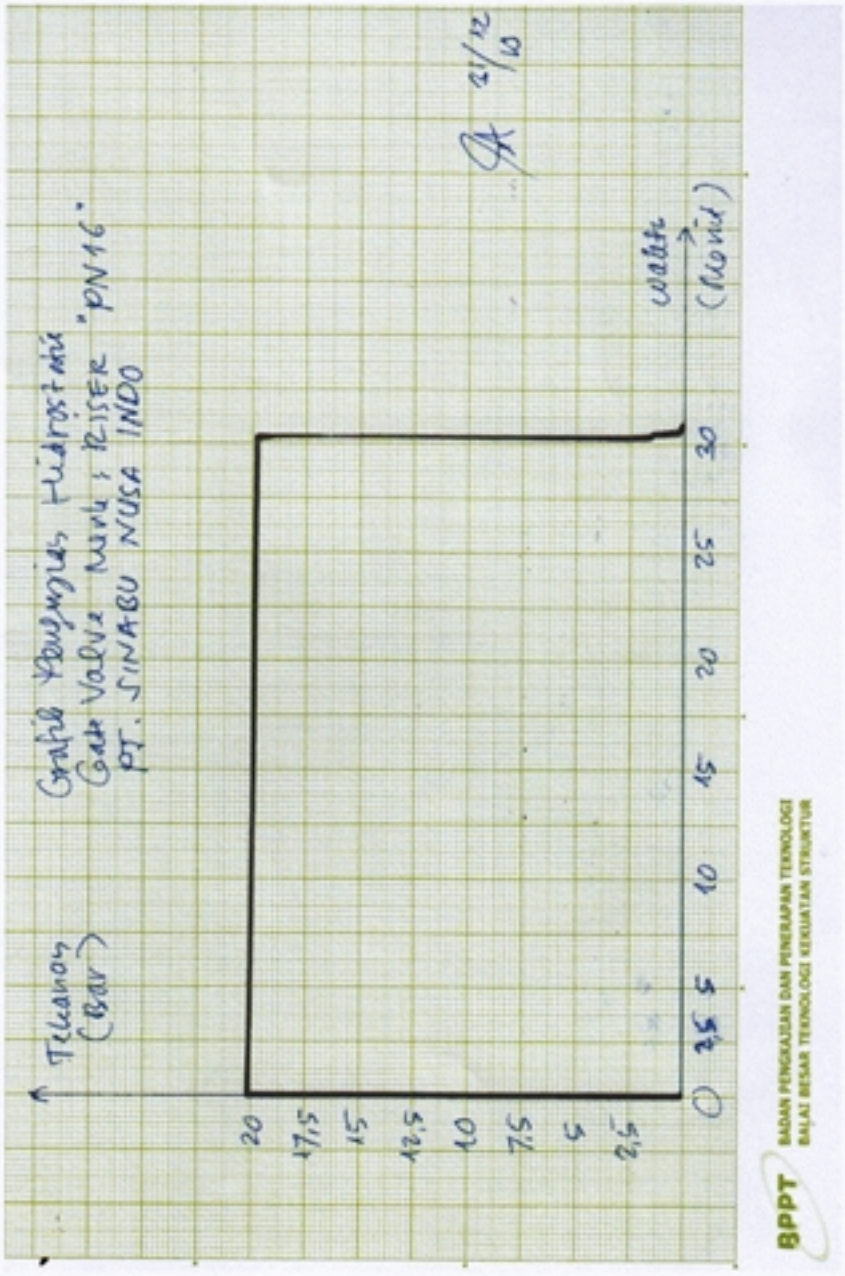
BALAI BESAR TEKNOLOGI KEKUATAN STRUKTUR

**LAPORAN PENGUKURAN**

**Measurement Report**



Nomor / Number 133B.PAB.2688.2012




Gambar 2. Grafik Pengujian Gate Valve Riser PN16 - 4"

| Dikerjakan oleh / Prepared by | Diperiksa oleh / Checked by |
|---|---|
| 05/11 - 2012 | |

BALAI BESAR TEKNOLOGI KEKUATAN STRUKTUR

# LAPORAN
# REPORT

PENGUJIAN HIDROSTATIS
Gate Valve Merek Riser ANSI 150 - 4"
PT. Sinabu Nusa Indo
Jl.Kebon Jeruk Raya – Komplek Kebon Jeruk
JAKARTA

Nomor : C.2012.2688 C
Tanggal : 05 Nopember 2012

| Dikerjakan oleh<br>Prepared by<br><br>Suprivatno, ST<br>Penyelia | Tanggal<br>Date<br>05 - 11 - 2012 | Diperiksa oleh<br>Checked by<br><br>DR.Tjahjo Prancto<br>Ka. Laboratorium | Tanggal<br>Date<br>6 - 11 - 12 | Disetujui oleh<br>Approved by<br><br>Ir. Sudarmadi, M.Eng. Sc<br>Manajer Teknis | Tanggal<br>Date<br>6 - 11 - 12 |
|---|---|---|---|---|---|

| BPPT<br>BALAI BESAR TEKNOLOGI KEKUATAN STRUKTUR | **LAPORAN PENGUKURAN**<br>**Measurement Report** | Halaman / Page 1 Dari / Of 5<br>Nomor / Number 133C.PAB.2688.2012 |
|---|---|---|

## I. PENDAHULUAN

Sesuai permintaan dari PT. Sinabu Nusa Indo, melalui Surat Permohonan Uji No : 2688/PL/2688/X/2012 tertanggal 16 Oktober 2012 mengenai Pengujian Hidrostatis Gate Valve , maka pada tanggal 01 Nopember 2012 telah dilakukan uji hidrostatis tersebut di B2TKS BPPT Puspiptek Serpong.

## II. TUJUAN PENGUJIAN

Pengujian dilakukan untuk mengetahui kemampuan dan kekuatan Gate Valve menahan tekanan internal maksimal sebesar 25 bar melalui pengujian hidrostatis.

## III. BENDA UJI

Identifikasi benda uji adalah sebagai berikut :

- Gate Valve Merek Riser ANSI 150 - 4"

## IV. PERALATAN PENGUKURAN

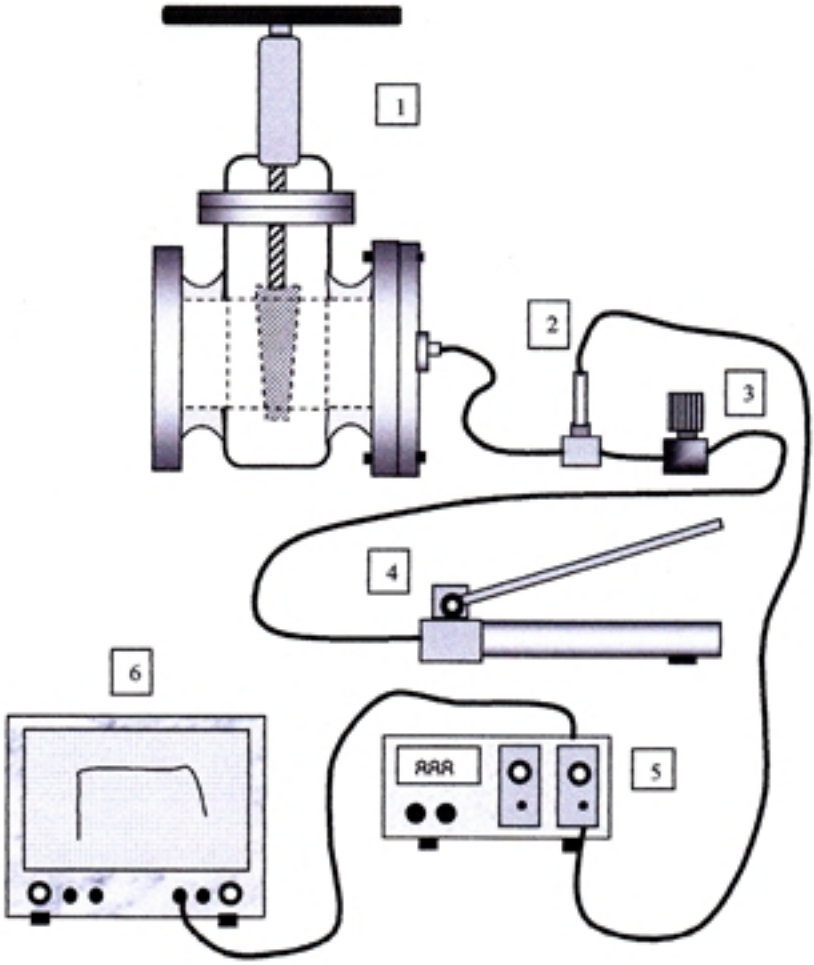
1. Pompa dengan fluida air sebagai pemberi tekanan
2. Pressure Transducer sebagai sensosr tekanan, merek TML Tipe/No.Seri : PW-10 MPA, CPK04043. Sertifikat B2TKS-BPPT Nomor : 7044.0632.2012
3. Amplifier KWS 3073 sebagai penguat sinyal
4. X -t Recorder sebagai perekam data.

## V. METODA PENGUKURAN

Dudukan Katup (Katup tertutup).
Pengukuran hidrostatis dilakukan dengan tahapan sebagai berikut :

1. Tutup secara penuh dudukan katup dan salah satu sisinya ditutup dengan flange
2. Mengisi benda uji dengan air sampai penuh, sehingga tidak ada udara yang terjebak
3. Memberi tekanan pada benda uji sebesar 25 bar. Pengamatan tekanan dilakukan melalui penguat sinyal KWS 3073 yang dihubungkan ke *Pressure Transducer* seperti pada gambar 1, kemudian menutup valve dan merekamnya pada X-t recorder selama ± 30 menit.
4. Memeriksa kebocoran atau kerusakan pada benda uji secara visual.
5. Tekanan diturunkan apabila pengujian dianggap selesai.

| Dikerjakan oleh / Prepared by 05/11 - 2012 | Diperiksa oleh / Checked by |
|---|---|




**Keterangan Gambar**

1. Benda Uji
2. Pressure Transducer
3. Valve
4. Pompa Air
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6. X-t Recorder

Gambar 1. Rangkaian Sistem Pengujian Hidrostatis

## VI. HASIL PENGUKURAN

Hasil uji hidrostatis diperlihatkan pada grafik (lampiran) dan tabel

Tabel Hasil Pengujian Hidrostatis Gate Valve

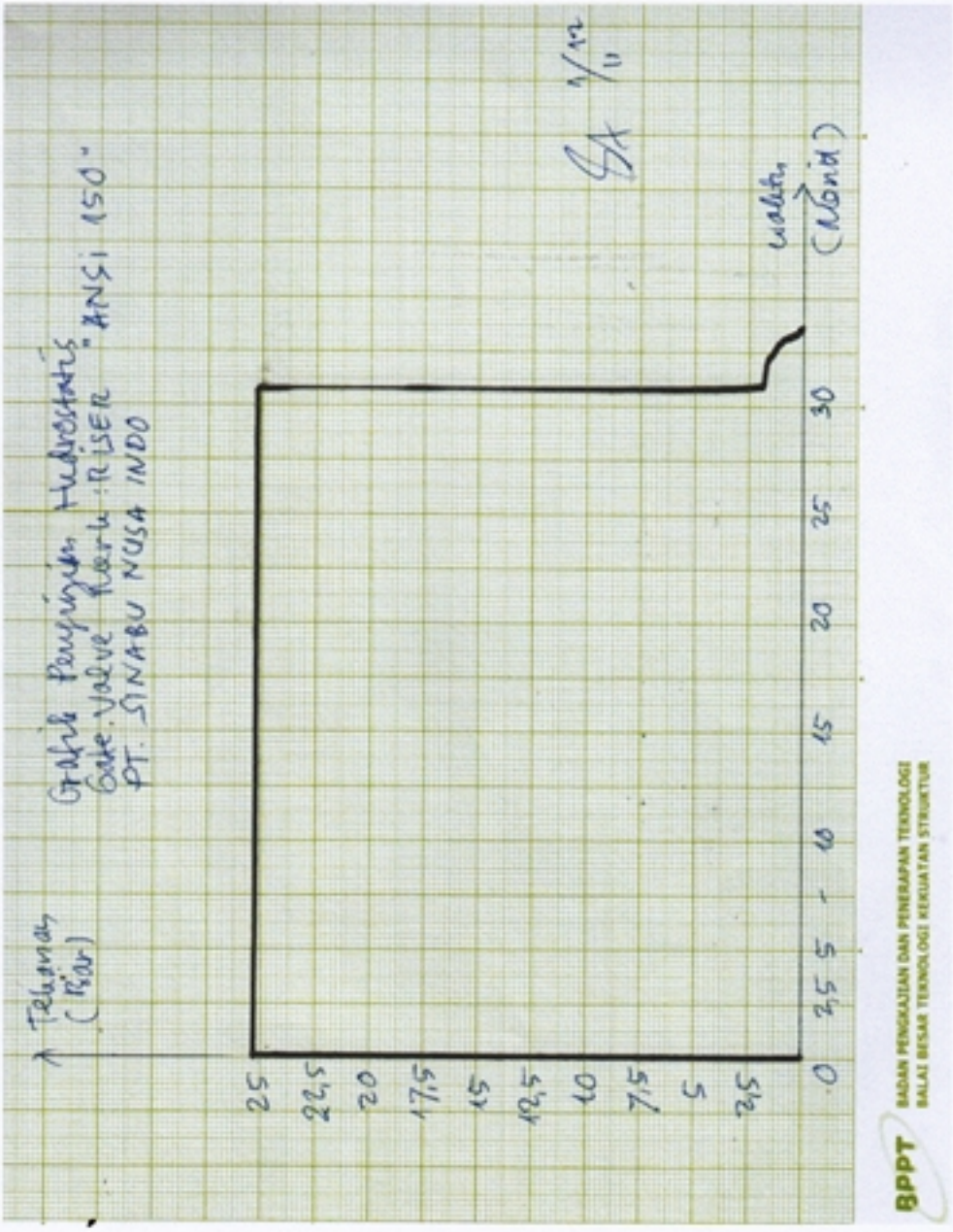
| Benda Uji | Tekanan Pengujian (bar) | | | Keterangan |
|---|---|---|---|---|
| | Permintaan | Aktual | Penurunan setelah ± 30 menit | |
| Gate Valve Riser ANSI 150 - 4" | 25.0 | 25.35 | 0.15 | Secara visual tidak bocor |

## VII. KESIMPULAN

Dari hasil pengamatan secara visual dinyatakan sebagai berikut :
Selama pengujian Gate Valve Riser ANSI 150 - 4" tidak mengalami kerusakan dan bocoran.

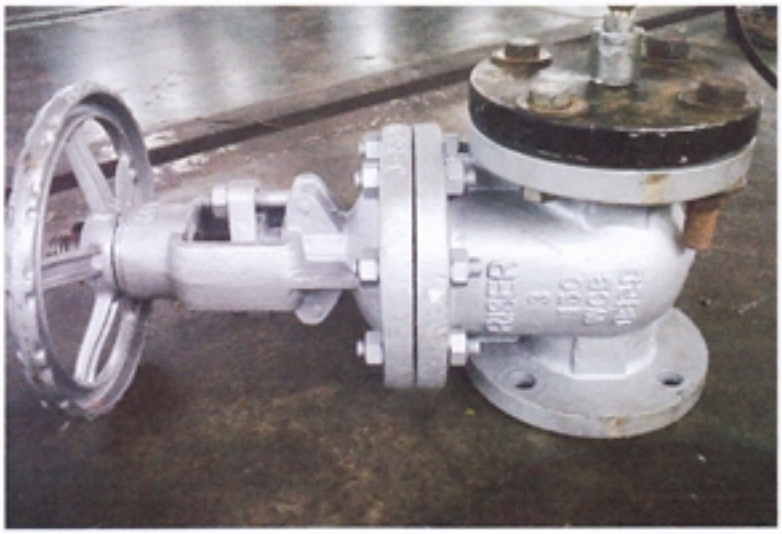
Keterangan :

Hasil Pengujian ini hanya representatif benda uji yang diuji, diluar benda uji tersebut bukan tanggung jawab B2TKS – BPPT.




Gambar 2. Grafik Pengujian Gate Valve Riser ANSI 150 - 4"

| Dikerjakan oleh / Prepared by | Diperiksa oleh / Checked by |
|---|---|
| 05 / 11 - 2012 | |



Gambar 3. Gate Valve Riser ANSI 150 - 4"

Gambar 4. Pengujian Hidrostatis

# Project Refference
# RISER "valve"



| NO | PROJECT | LOCATION | YEAR |
|---|---|---|---|
| 1 | Pabrik Pembuat Panel | Surabaya | 2011 - Sekarang |
| 2 | Apartemen Margonda Residance III | Depok | 2011 - Sekarang |
| 3 | Apartemen DR | Surabaya | 2011 |
| 4 | Hotel Hegar Sari | Bandung | 2011 |
| 5 | Hotel Amaris Cihamplas | Bandung | 2011 |
| 6 | Pabrik Novell | Jakarta | 2012 |
| 7 | Rumah Dinas Papua | Papua | 2012 |
| 8 | PD. Viking Protekindo | Jakarta | 2012 |
| 9 | Hotel Citadin Tahap I | Bali | 2012 |
| 10 | Hotel Citadin Tahap II | Bali | 2012 |
| 11 | Universitas Negeri( UNNAS) | Semarang | 2012 |
| 12 | Rumah Sakit Tugu Rejo | Semarang | 2012 |
| 13 | Bogor Trade Mall | Bogor | 2012 |
| 14 | Hotel Harmoni | Tasikmalaya | 2012 |
| 15 | Hotel Fave | Bandung | 2012 |
| 16 | Hotel Dadap | Jakarta | 2012 |
| 17 | Kantor Diklat Depnakers | Lombok | 2012 |
| 18 | UNS | Solo | 2012 |
| 19 | UNNES Kolam Renang | Semarang | 2012 |
| 20 | Siloam Hospital Bali | Bali | 2012 |
| 21 | Hotel Sultan Raja | Cirebon | 2012 |
| 22 | Gedung DPRD Bandung | Bandung | 2012 |
| 23 | Askes Kediri | Kediri | 2012 |
| 24 | Q - Hotel | Bali | 2012 |
| 25 | Aveda Hotel | Bali | 2012 |
| 26 | Hotel Grand Namaste | Bali | 2012 |
| 27 | PDAM Karangasem | Bali | 2012 |
| 28 | Apartement Pancoran Riverside | Jakarta | 2012 |
| 29 | Hotel Lorin Bali | Bali | 2012 |
| 30 | Hotel Sutan Raja | Jakarta | 2012 |
| 31 | Bank Permata Hayam Wuruk | Jakarta | 2012 |
| 32 | Kemang Village Infinity | Jakarta | 2012 |
| 33 | Pondok Ungu Bekasi | Jakarta | 2012 |
| 34 | Pembangunan BLKI | Jakarta | 2012 |
| 35 | Scientia Office Park I | Serpong | 2013 |
| 36 | Al-Azhar International School | Bekasi | 2013 |
| 37 | Spring Sport Club | Bekasi | 2013 |
| 38 | All Season Hotel | Jakarta | 2013 |
| 39 | Sampoerna Strategic | Jakarta | 2013 |
| 40 | PDAM Ngurah Rai | Bali | 2013 |
| 41 | By Pass Ngurah Rai | Bali | 2013 |
| 42 | RS Gambiran | Kediri | 2013 |

| NO | PROJECT | LOCATION | YEAR |
|---|---|---|---|
| 43 | Rusunawa Demak | Demak | 2013 |
| 44 | Sekolah Tinggi Ilmu Quran Demak | Demak | 2013 |
| 45 | Pondok Pesantren Al-Islah | Demak | 2013 |
| 46 | Pondok Pesantren Yanbu'ul Quran | Demak | 2013 |
| 47 | Hotel Aston Kupang | NTT | 2013 |
| 48 | Tretes View Hotel | Tretes | 2013 |
| 49 | RSUD Margono | Purwokerto | 2013 |
| 50 | Scientia Office Park II | Serpong | 2013 |
| 51 | Pahoa International School IV | Serpong | 2013 |
| 52 | Tarjun Rafinary Phase II | Kalimantan | 2013 |
| 53 | RS. PHC | Surabaya | 2014 |
| 54 | OSBL - Rafinary | Lampung | 2014 |
| 55 | OSBL - Phase I | Marunda | 2014 |
| 56 | Spring Sport Hall | Serpong | 2014 |
| 57 | Aston Hotel_Tb Simatupang | Jakarta | 2014 |
| 58 | The Papilio Apartement | Surabaya | 2014 |
| 59 | Hotel Budget - Mastrip | Surabaya | 2015 |
| | | | |