## TANA

TOPNOTCH MACHINE CO.,LTD.

## ■ Design Features

Design complies with the API 600,API 602,API 603,BS 1414
Face to Face dimension:ASME B16.10,BS2080 and ISO 5752,JIS B2002.
Flanged End:ASME B 16.5,26"and larger sizes according to ASME B 16.47Series A or Series B,JIS B2212, B2214.
Butt-weld End:ASME B16,25
Inspection and Test:API 598,BS EN 12266,ISO 5208,JIS B2003.

## Casting Steel Material

Visual check for cast steel material includes: surface quality,dimension,chemical properties,mechanical performance,non-destructive testing to ensure that the comprehensive performance of raw materials comply withthe relevant ASTM,BS,EN.JIS standards,

## Body

The design provides the whole structure of low flow resistance channel structure, enables the body stiffness and strength to bear the nominal piping pressure and stress loading, the valve body wall thickness design complies with the API 600 with sufficient margin corrosion resistance for the medium

## ■Bonnet

Bonnet can be designed with a variety of seal structure of body connection to meet the needs of different operating conditions, the structure can be equipped to connect with jacketed ,flat,spiral or metal ring gasket, and self pressure-seal valve bonnet for class 900/1500/2500.

## - Seat

Seat structure can be designed as per user requirements as a whole alloy steel materials pressed-in sealing structure.welding sealing.or screw connection in assembly. The austenitic stainless steel body material can be provided with integral seat

## - Wedge

The wedge structure design can be solid,flexible.or parallel dual plates.and has enough strength and stiffness to ensure the valve sealing performance,

## Seat and other seal material

The choice of materials for the seat and other seal material can be as per API 600 standard, or users design and manufacturing requirements.

## Stem

The stem is thoroughly forged, its T-shape connecting end is of good stiffness and strength to ensure its safe use and reliability, The stem transmission bearing structure applies sophisticated ACME trapezoidal thread to enable its up and down travel.

## ■ Backseat

All backseats are used on the valve seat seal design.they are replacable,and for austenitic stainless steel material it can be integral backseat design.

## - Bonnet and Body seal structure

Class 150: jacketed flexible graphite and stainless steel gasket
Class 300.600: spiral stainless steel and flexible graphite wound gasket
Class 900 and above: metal ring gasket
Choice for bonnet and body seal can be bassed on the use of specific operating conditions (medium temperature and pressure)

- Stuffing box

Stuffing box is designed in accordance with API 600 standards with precise control of surface finish in 32RMS below and its inner verticality.

## - Packing gland / bushing

Packing gland / bushing are separate structure to ensure packing seal performance.

## Stem Nut

Stem Drive nut bearing structure is provided with sophisticated ACME trapezoidal thread,top entry connection design to the yoke,so even the valves are taken off the handwheel at service,the locking device can be ensured to be at original position and working.

## Operator

## Features

Design and manufacture: API 600 API 603 JIS B2073, B2083
Face-to-Face dimension: 36 "and smaller to ASME B16. 10 .
40 "and larger to manufacturer"s standard
Flanged End: 24 "and smaller to ASME B16.5
26 "and larger to ASME B16.47 series A
B.W.End: ASME B 16.25

Shell Wall Thickness: 24 "and smaller to API 600 26 "and larger to manufacturer's standard
$8^{\prime \prime}$ and smaller valves have a one-piece bonnet and yoke design 10 "and larger valves have a split bonnet and yoke design.

Parts List

| No | Parts | Material |
| :---: | :---: | :---: |
| 1 | Body | ASTM A216 Gr.WCB |
| 2 | Seat ring | ASTM A 105+13Cr |
| 3 | Wedge | ASTM A216 Gr.WCB+13Cr |
| 4 | Stem | ASTM A182 F6a |
| 5 | Gasket | 304S.S.Jacketed Graphite |
| 6 | Stud | ASTM A193 Gr.B7 |
| 7 | Nut | ASTM A $194 \mathrm{Gr}, 2 \mathrm{H}$ |
| 8 | Bonnet | ASTM A216 Gr,WCB |
| 9 | Backseat | ASTM A276 410 |
| 10 | Packing | Graphite |
| 11 | Pin | C.S. |
| 12 | Gland bolt | ASTM A 193 Gr.B7 |
| 13 | Gland nut | ASTM A194 Gr.2H |
| 14 | Bushing | ASTM A276 410 |
| 15 | Gland | ASTM A216 Gr.WCB |
| 16 | Stem nut | Aluminum Bronze |
| 17 | Retaining nut | C. 5 |
| 18 | Handwheel | Malleable Iron |
| 19 | H.W. lock nut | C.S. |
| 20 | Lubricator | Assemly |



Dimensions \& Weights

| Valve Size | in. mm | $\begin{gathered} 1-1 / 2 \\ 40 \end{gathered}$ | $\begin{gathered} 2 \\ 50 \end{gathered}$ | $\begin{gathered} 2-1 / 2 \\ 65 \end{gathered}$ | $\begin{gathered} 3 \\ 80 \end{gathered}$ | $\begin{gathered} 4 \\ 100 \end{gathered}$ | $\begin{gathered} 5 \\ 125 \end{gathered}$ | $\begin{gathered} 6 \\ 150 \end{gathered}$ | $\begin{gathered} 8 \\ 200 \end{gathered}$ | $\begin{gathered} 10 \\ 250 \end{gathered}$ | $\begin{gathered} 12 \\ 300 \end{gathered}$ | $\begin{gathered} 14 \\ 350 \end{gathered}$ | $\begin{gathered} 16 \\ 400 \end{gathered}$ | $\begin{gathered} 18 \\ 450 \end{gathered}$ | $\begin{gathered} 20 \\ 500 \end{gathered}$ | $\begin{gathered} 24 \\ 600 \end{gathered}$ | $\begin{gathered} 28 \\ 700 \end{gathered}$ | $\begin{gathered} 30 \\ 750 \end{gathered}$ | $\begin{gathered} 32 \\ 800 \end{gathered}$ | $\begin{aligned} & 36 \\ & 900 \end{aligned}$ | $\begin{gathered} 40 \\ 1000 \end{gathered}$ | $\begin{gathered} 42 \\ 1050 \end{gathered}$ | $\begin{array}{c\|c} 48 \\ 1200 \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| L(RF) | in. mm | $\begin{aligned} & 6.5 \\ & 165 \end{aligned}$ | $\begin{gathered} 7 \\ 178 \end{gathered}$ | $\begin{aligned} & 7.5 \\ & 190 \end{aligned}$ | $\begin{gathered} 8 \\ 203 \end{gathered}$ | $\begin{gathered} 9 \\ 229 \end{gathered}$ | $\begin{gathered} 10 \\ 254 \end{gathered}$ | $\begin{aligned} & 10.5 \\ & 267 \end{aligned}$ | $\begin{aligned} & 11.5 \\ & 292 \end{aligned}$ | $\begin{gathered} 13 \\ 330 \end{gathered}$ | $\begin{gathered} 14 \\ 356 \end{gathered}$ | $\begin{gathered} 15 \\ 381 \end{gathered}$ | $\begin{gathered} 16 \\ 406 \end{gathered}$ | $\begin{gathered} 17 \\ 432 \end{gathered}$ | $\begin{gathered} 18 \\ 457 \end{gathered}$ | $\begin{aligned} & 20 \\ & 508 \end{aligned}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{gathered} 26 \\ 660 \end{gathered}$ | $\begin{gathered} 28 \\ 711 \end{gathered}$ | $\begin{gathered} 30 \\ 762 \end{gathered}$ | $\begin{gathered} 31 \\ 787 \end{gathered}$ | $\begin{gathered} 34 \\ 864 \end{gathered}$ |
| $\begin{gathered} \text { L1 } \\ (\mathrm{BW}) \end{gathered}$ | $\begin{aligned} & \mathrm{in} . \\ & \mathrm{mm} \end{aligned}$ | $\begin{aligned} & 6.5 \\ & 165 \end{aligned}$ | $\begin{aligned} & 8.5 \\ & 216 \end{aligned}$ | $\begin{aligned} & 9.5 \\ & 241 \end{aligned}$ | $\begin{gathered} 11.13 \\ 282 \end{gathered}$ | $\begin{gathered} 12 \\ 305 \end{gathered}$ | $\begin{gathered} 15 \\ 381 \end{gathered}$ | $\begin{array}{\|c\|c} 15.88 \\ 403 \end{array}$ | $\begin{aligned} & 16.5 \\ & 419 \end{aligned}$ | $\begin{gathered} 18 \\ 457 \end{gathered}$ | $\begin{gathered} 19.75 \\ 502 \end{gathered}$ | $\begin{gathered} 22.5 \\ 572 \end{gathered}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{gathered} 26 \\ 660 \end{gathered}$ | $\begin{gathered} 28 \\ 711 \end{gathered}$ | $\begin{gathered} 32 \\ 813 \end{gathered}$ | $\begin{gathered} 36 \\ 914 \end{gathered}$ | $\begin{gathered} 36 \\ 914 \end{gathered}$ | $\begin{gathered} 38 \\ 965 \end{gathered}$ | $\begin{gathered} 40 \\ 1016 \end{gathered}$ | $\begin{gathered} 42 \\ 1067 \end{gathered}$ | $\begin{gathered} 43 \\ 1092 \end{gathered}$ | $\begin{array}{c\|c} 46 \\ 1168 \end{array}$ |
| $\begin{gathered} \mathrm{L}_{2} \\ (\mathrm{RTJ}) \end{gathered}$ | $\begin{aligned} & \mathrm{in} \text {. } \\ & \mathrm{mm} \end{aligned}$ | $\begin{aligned} & 7.0 \\ & 178 \end{aligned}$ | $\begin{aligned} & 7.5 \\ & 191 \end{aligned}$ | $\begin{gathered} 8 \\ 203 \end{gathered}$ | $\begin{aligned} & 8.5 \\ & 216 \end{aligned}$ | $\begin{aligned} & 9.5 \\ & 242 \end{aligned}$ | $\begin{aligned} & 10.5 \\ & 267 \end{aligned}$ | $\begin{gathered} 11 \\ 280 \end{gathered}$ | $\begin{gathered} 12 \\ 305 \end{gathered}$ | $\begin{aligned} & 13.5 \\ & 343 \end{aligned}$ | $\begin{array}{r} 14.5 \\ 369 \end{array}$ | $\begin{aligned} & 15.5 \\ & 394 \end{aligned}$ | $\begin{aligned} & 16.5 \\ & 419 \end{aligned}$ | $\begin{aligned} & 17.5 \\ & 445 \end{aligned}$ | $\begin{aligned} & 18.5 \\ & 470 \end{aligned}$ | $\begin{gathered} 20.5 \\ 521 \end{gathered}$ | $\begin{aligned} & 24.5 \\ & 623 \end{aligned}$ | $24.5$ | $\begin{aligned} & 26.5 \\ & 673 \end{aligned}$ | $\begin{aligned} & 28.5 \\ & 724 \end{aligned}$ |  |  | -- |
| $\underset{\text { (open) }}{\mathrm{H}}$ | in. mm | $\begin{aligned} & 15.7 \\ & 392 \end{aligned}$ | $\begin{gathered} 16.13 \\ 409 \end{gathered}$ | $\begin{gathered} 18.56 \\ 472 \end{gathered}$ | $\begin{gathered} 20.94 \\ 532 \end{gathered}$ | $\begin{array}{\|c\|} 24.13 \\ 612 \end{array}$ | $\begin{array}{\|c\|} \hline 27.94 \\ 710 \end{array}$ | $\begin{array}{c\|c} 31.75 \\ 806 \end{array}$ | $\begin{gathered} 39 \\ 990 \end{gathered}$ | $\begin{array}{\|l\|} \hline 46.69 \\ 1186 \end{array}$ | $\begin{aligned} & 55.31 \\ & 1405 \end{aligned}$ | $\begin{aligned} & 63.56 \\ & 1615 \end{aligned}$ | $\begin{aligned} & 71.31 \\ & 1811 \end{aligned}$ | $\begin{aligned} & 78.19 \\ & 1986 \end{aligned}$ | $\begin{gathered} 87 \\ 2210 \end{gathered}$ | $\begin{gathered} 106.25 \\ 2698 \end{gathered}$ | $\begin{gathered} 119.31 \\ 3030 \end{gathered}$ | $\begin{gathered} 130.56 \\ 3317 \end{gathered}$ | $\begin{gathered} 137.25 \\ 3487 \end{gathered}$ | $\begin{gathered} 150.56 \\ 3825 \end{gathered}$ | $\begin{gathered} 183.86 \\ 4670 \end{gathered}$ | $\begin{gathered} 193.75 \\ 4920 \end{gathered}$ | $\begin{array}{\|l\|} 217.5 \\ 5525 \end{array}$ |
| Do | in. mm | $\begin{aligned} & 7.86 \\ & 200 \end{aligned}$ | $\begin{gathered} 7.86 \\ 200 \end{gathered}$ | $\begin{aligned} & 7.86 \\ & 200 \end{aligned}$ | $\begin{aligned} & 9.86 \\ & 250 \end{aligned}$ | $\begin{aligned} & 9.86 \\ & 250 \end{aligned}$ | $\begin{gathered} 11.81 \\ 300 \end{gathered}$ | $\begin{gathered} 11.81 \\ 300 \end{gathered}$ | $\begin{array}{\|c\|} 13.75 \\ 350 \end{array}$ | $\begin{gathered} 17.69 \\ 450 \end{gathered}$ | $\begin{gathered} 19.69 \\ 500 \end{gathered}$ | $\begin{array}{\|c\|c} 18.13 \\ 460 \end{array}$ | $\begin{gathered} 18.13 \\ 460 \end{gathered}$ | $\begin{gathered} 18.13 \\ 460 \end{gathered}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{gathered} 30 \\ 760 \end{gathered}$ | $\begin{gathered} 30 \\ 760 \end{gathered}$ | $\begin{gathered} 30 \\ 760 \end{gathered}$ | $\begin{gathered} 30 \\ 760 \end{gathered}$ |
| $\begin{aligned} & \text { WT } \\ & (\mathrm{kg}) \end{aligned}$ | RF BW | 18.5 15.5 | 20 17 | 30 26 | 36 29 | 53 46 | 71 66 | 85 77 | 136 116 | 220 | 323 294 | 387 350 | 553 506 | 660 575 | 810 | 1250 1130 | 1931 1765 | 2380 | 2490 | 3600 3080 | $\begin{aligned} & 4815 \\ & 4840 \end{aligned}$ | 5300 5275 | $\begin{aligned} & 7110 \\ & 7050 \end{aligned}$ |

## Features

Design and manufacture: API 600 /API 603,JIS B2073, B2083.
Face-to-Face dimension: 36 "and smaller to ASME B16. 10 .
40 "and larger to manufacturer"s standard
Flanged End: 24"and smaller to ASME B16.5
26 "and larger to ASME B16.47 series A
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Shell Wall Thickness: 24 "and smaller to API 600
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8"and smaller valves have a one-piece bonnet and yoke design
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## - Parts List

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| 11 | Pin | C.S. |
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| 19 | H.W. lock nut | C.S. |
| 20 | Lubricator | Assemly |
|  |  |  |
| 18 |  |  |
| 10 |  |  |



- Dimensions \& Weights

| Valve Size | in. mm | $\begin{gathered} 1-1 / 2 \\ 40 \end{gathered}$ | $\begin{gathered} 2 \\ 50 \end{gathered}$ | $\begin{gathered} 2-1 / 2 \\ 65 \end{gathered}$ | $\begin{gathered} 3 \\ 80 \end{gathered}$ | $\begin{gathered} 4 \\ 100 \end{gathered}$ | $\begin{gathered} 5 \\ 125 \end{gathered}$ | $\begin{gathered} 6 \\ 150 \end{gathered}$ | $\begin{gathered} 8 \\ 200 \end{gathered}$ | $\begin{gathered} 10 \\ 250 \end{gathered}$ | $\begin{gathered} 12 \\ 300 \end{gathered}$ | $\begin{gathered} 14 \\ 350 \end{gathered}$ | $\begin{gathered} 16 \\ 400 \end{gathered}$ | $\begin{gathered} 18 \\ 450 \end{gathered}$ | $\begin{gathered} 20 \\ 500 \end{gathered}$ | $\begin{gathered} 24 \\ 600 \end{gathered}$ | $\begin{gathered} 28 \\ 700 \end{gathered}$ | $\begin{gathered} 30 \\ 750 \end{gathered}$ | $\begin{array}{c\|} 32 \\ 800 \end{array}$ | $\begin{gathered} 36 \\ 900 \end{gathered}$ | $\begin{array}{c\|c} 40 \\ 1000 \end{array}$ | $\begin{gathered} 42 \\ 1050 \end{gathered}$ | $\begin{gathered} 48 \\ 1200 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| L-L1 | in. mm | $\begin{aligned} & 7.5 \\ & 190 \end{aligned}$ | $\begin{aligned} & 8.5 \\ & 216 \end{aligned}$ | $\begin{aligned} & 9.5 \\ & 241 \end{aligned}$ | $\begin{array}{\|c} 11.12 \\ 282 \end{array}$ | $\begin{gathered} 12 \\ 305 \end{gathered}$ | $\begin{aligned} & 15 \\ & 381 \end{aligned}$ | $\begin{gathered} 15.88 \\ 403 \end{gathered}$ | $\begin{gathered} 16.5 \\ 419 \end{gathered}$ | $\begin{gathered} 18 \\ 457 \end{gathered}$ | $\begin{aligned} & 19.75 \\ & 502 \end{aligned}$ | $\begin{gathered} 30 \\ 762 \end{gathered}$ | $\begin{gathered} 33 \\ 838 \end{gathered}$ | $\begin{gathered} 36 \\ 914 \end{gathered}$ | $\begin{gathered} 39 \\ 991 \end{gathered}$ | $\begin{gathered} 45 \\ 1143 \end{gathered}$ | $\begin{array}{c\|c} 54 \\ 1346 \end{array}$ | $\begin{gathered} 55 \\ 1397 \end{gathered}$ | $\begin{aligned} & 61.12 \\ & 1524 \\ & \hline \end{aligned}$ | $\begin{gathered} 68 \\ 1727 \end{gathered}$ | $\begin{array}{c\|c} 76 \\ 1930 \end{array}$ | $\begin{gathered} 78 \\ 1981 \end{gathered}$ | $\begin{gathered} 88 \\ 2235 \end{gathered}$ |
| $\begin{gathered} \mathrm{L} 2 \\ (\mathrm{RTJ}) \end{gathered}$ | in. mm | $\begin{gathered} 8.0 \\ 203 \end{gathered}$ | $\begin{aligned} & 9.12 \\ & 232 \end{aligned}$ | $\begin{gathered} 10.12 \\ 257 \end{gathered}$ | $\begin{array}{\|c} 11.74 \\ 298 \end{array}$ | $\begin{gathered} 12.62 \\ 321 \end{gathered}$ | $\begin{array}{\|c} 15.62 \\ 397 \end{array}$ | $\begin{array}{r} 16.5 \\ 419 \end{array}$ | $\begin{gathered} 17.12 \\ 435 \end{gathered}$ | $\begin{gathered} 18.62 \\ 473 \end{gathered}$ | $\begin{array}{\|c} 20.27 \\ 518 \end{array}$ | $\begin{gathered} 30.62 \\ 778 \end{gathered}$ | $\begin{array}{\|c\|c} 33.62 \\ 854 \end{array}$ | $\begin{gathered} 36.62 \\ 930 \end{gathered}$ | $\begin{aligned} & 39.75 \\ & 1010 \end{aligned}$ | $\begin{aligned} & 45.88 \\ & 1165 \end{aligned}$ | $\begin{array}{\|c\|} 54 \\ 1371 \end{array}$ | $\begin{array}{\|c\|} 56 \\ 1422 \end{array}$ | $\begin{aligned} & 61.12 \\ & 1581 \end{aligned}$ | $\begin{aligned} & 69.12 \\ & 1755 \end{aligned}$ |  |  | -- |
| $\begin{gathered} \mathrm{H} \\ \text { (open) } \end{gathered}$ | in. mm | $\begin{aligned} & 14.7 \\ & 374 \end{aligned}$ | $\begin{gathered} 15.75 \\ 400 \end{gathered}$ | $\begin{gathered} 18.75 \\ 477 \end{gathered}$ | $\begin{array}{\|c} 21.38 \\ 543 \end{array}$ | $\begin{array}{\|c} 25.63 \\ 650 \end{array}$ | $\begin{gathered} 30.31 \\ 770 \end{gathered}$ | $\begin{gathered} 34.63 \\ 880 \end{gathered}$ | $\begin{aligned} & 40.81 \\ & 1037 \end{aligned}$ | $\begin{aligned} & 50.19 \\ & 1275 \end{aligned}$ | $\begin{aligned} & 56.63 \\ & 1438 \end{aligned}$ | $\begin{gathered} 65 \\ 1650 \end{gathered}$ | $\begin{aligned} & 72.44 \\ & 1840 \end{aligned}$ | $\begin{aligned} & 79.94 \\ & 2030 \end{aligned}$ | $\begin{array}{\|c\|} 88.19 \\ 2240 \end{array}$ | $\begin{gathered} 114.19 \\ 2900 \end{gathered}$ | $\begin{array}{\|c} 122 \\ 3100 \end{array}$ | $\begin{gathered} 139.38 \\ 3540 \end{gathered}$ | $\begin{array}{\|c} 152 \\ 3860 \end{array}$ | $\begin{gathered} 169.75 \\ 4312 \end{gathered}$ | $\begin{array}{c\|} 188.63 \\ 4791 \end{array}$ | $\begin{gathered} 198.13 \\ 5032 \end{gathered}$ | $\begin{gathered} 217.38 \\ 5522 \\ \hline \end{gathered}$ |
| Do | in. mm | $\begin{aligned} & 7.88 \\ & 200 \end{aligned}$ | $\begin{aligned} & 7.88 \\ & 200 \end{aligned}$ | $\begin{array}{\|l} 9.88 \\ 250 \end{array}$ | $\begin{aligned} & 9.88 \\ & 250 \end{aligned}$ | $\begin{gathered} 11.81 \\ 300 \end{gathered}$ | $\begin{gathered} 11.81 \\ 300 \end{gathered}$ | $\begin{gathered} 13.75 \\ 350 \end{gathered}$ | $\begin{gathered} 17.69 \\ 450 \end{gathered}$ | $\begin{gathered} 19.69 \\ 500 \end{gathered}$ | $\begin{array}{\|c\|c} 22.06 \\ 560 \end{array}$ | $\begin{gathered} 18.13 \\ 460 \end{gathered}$ | $\begin{array}{c\|c} 18.13 \\ 460 \end{array}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{gathered} 30 \\ 760 \end{gathered}$ | $\begin{gathered} 30 \\ 760 \end{gathered}$ | $\begin{gathered} 30 \\ 760 \end{gathered}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ |
| $\begin{aligned} & \text { WT } \\ & \text { (kg) } \end{aligned}$ | $\begin{aligned} & \text { RF } \\ & \text { BW } \end{aligned}$ | $\begin{aligned} & 26 \\ & 22 \end{aligned}$ | $\begin{aligned} & 30 \\ & 26 \end{aligned}$ | $\begin{aligned} & 39 \\ & 34 \end{aligned}$ | $\begin{aligned} & 55 \\ & 47 \end{aligned}$ | $\begin{aligned} & 83 \\ & 68 \end{aligned}$ | 92 77 | 137 118 | 240 195 | 333 271 | 536 432 | $\begin{aligned} & 699 \\ & 595 \end{aligned}$ | 1010 848 | $\begin{aligned} & 1205 \\ & 1025 \end{aligned}$ | $\begin{aligned} & 1720 \\ & 1460 \end{aligned}$ | $\begin{array}{\|l\|} 2800 \\ 2294 \end{array}$ | $\begin{array}{\|l\|} 3150 \\ 2870 \end{array}$ | $\begin{aligned} & 3786 \\ & 3220 \end{aligned}$ | $\begin{aligned} & 4210 \\ & 3675 \end{aligned}$ | $\begin{aligned} & 6850 \\ & 4990 \end{aligned}$ | $\begin{array}{\|l\|} 8460 \\ 6160 \end{array}$ | $\begin{aligned} & 9500 \\ & 6800 \end{aligned}$ | $\begin{gathered} 12400 \\ 9000 \end{gathered}$ |

## Features

Design and manufacture:API 600.
Face-to-Face dimension:36"and smaller to ASME B16.10.
40"and larger to manufacturer"s standard
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26 "and larger to ASME B16.47 series A
B.W.End;ASME B 16.25

Shell Wall Thickness;24"and smaller to API 600
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6 "and smaller valves have a one-piece bonnet and yoke design
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- Parts List

| No | Parts | Material |
| :---: | :--- | :--- |
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| 2 | Seat ring | ASTM A 105+13Cr |
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| 10 | Packing | Graphite |
| 11 | Pin | C.S. |
| 12 | Gland bolt | ASTM A 193 Gr.B7 |
| 13 | Gland nut | ASTM A194 Gr.2H |
| 14 | Bushing | ASTM A276 410 |
| 15 | Gland | ASTM A216 Gr.WCB |
| 16 | Bearing | Assemly |
| 17 | Stemnut | Aluminum Bronze |
| 18 | Retaining nut | C.S |
| 19 | Handwheel | Malleable Iron |
| 20 | H.W. lock nut | C.S. |
| 21 | Lubricator | Assemly |
| 22 | Yoke bolt | ASTM A 193 Gr.B7 |
| 23 | Yoke nut | ASTM A 194 Gr.2H |



- Dimensions \& Weights

| Valve <br> Size | in. mm | $\begin{gathered} 2 \\ 50 \end{gathered}$ | $\begin{gathered} 2-1 / 2 \\ 65 \end{gathered}$ | $\begin{gathered} 3 \\ 80 \end{gathered}$ | $\begin{gathered} 4 \\ 100 \end{gathered}$ | $\begin{gathered} 5 \\ 125 \end{gathered}$ | $\begin{gathered} 6 \\ 150 \end{gathered}$ | $\begin{gathered} 8 \\ 200 \end{gathered}$ | $\begin{aligned} & 10 \\ & 250 \end{aligned}$ | $\begin{gathered} 12 \\ 300 \end{gathered}$ | $\begin{gathered} 14 \\ 350 \end{gathered}$ | $\begin{gathered} 16 \\ 400 \end{gathered}$ | $\begin{gathered} 18 \\ 450 \end{gathered}$ | $\begin{gathered} 20 \\ 500 \end{gathered}$ | $\begin{gathered} 24 \\ 600 \end{gathered}$ | $\begin{gathered} 26 \\ 650 \end{gathered}$ | $\begin{gathered} 28 \\ 700 \end{gathered}$ | $\begin{gathered} 30 \\ 750 \end{gathered}$ | $\begin{gathered} 32 \\ 800 \end{gathered}$ | $\begin{gathered} 36 \\ 900 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { L-L1 } \\ (\text { RF-BW }) \end{gathered}$ | in. mm | $\begin{aligned} & 11.5 \\ & 292 \end{aligned}$ | $\begin{gathered} 13 \\ 330 \end{gathered}$ | $\begin{gathered} 14 \\ 356 \end{gathered}$ | $\begin{gathered} 17 \\ 432 \end{gathered}$ | $\begin{gathered} 20 \\ 508 \end{gathered}$ | $\begin{gathered} 22 \\ 559 \end{gathered}$ | $\begin{gathered} 26 \\ 660 \end{gathered}$ | $\begin{gathered} 31 \\ 787 \end{gathered}$ | $\begin{gathered} 33 \\ 838 \end{gathered}$ | $\begin{gathered} 35 \\ 889 \end{gathered}$ | $\begin{gathered} 39 \\ 991 \end{gathered}$ | $\begin{gathered} 43 \\ 1092 \end{gathered}$ | $\begin{gathered} 47 \\ 1194 \end{gathered}$ | $\begin{gathered} 55 \\ 1397 \end{gathered}$ | $\begin{gathered} 57 \\ 1448 \end{gathered}$ | $\begin{gathered} 61 \\ 1549 \end{gathered}$ | $\begin{gathered} 65 \\ 1651 \end{gathered}$ | $\begin{gathered} 70 \\ 1778 \end{gathered}$ | $\begin{gathered} 82 \\ 2083 \end{gathered}$ |
| $\begin{aligned} & \text { L2 } \\ & \text { (RTJ) } \end{aligned}$ | in. mm | $\begin{gathered} 11.62 \\ 295 \end{gathered}$ | $\begin{gathered} 13.12 \\ 333 \end{gathered}$ | $\begin{gathered} 14.12 \\ 359 \end{gathered}$ | $\begin{gathered} 17.12 \\ 435 \end{gathered}$ | $\begin{gathered} 20.12 \\ 511 \end{gathered}$ | $\begin{array}{\|c} 22.12 \\ 562 \end{array}$ | $\begin{gathered} 26.12 \\ 663 \end{gathered}$ | $\begin{gathered} 31.12 \\ 790 \end{gathered}$ | $\begin{gathered} 33.12 \\ 841 \end{gathered}$ | $\begin{gathered} 35.12 \\ 892 \end{gathered}$ | $\begin{gathered} 39.12 \\ 994 \end{gathered}$ | $\begin{aligned} & 43.12 \\ & 1095 \end{aligned}$ | $\begin{aligned} & 47.25 \\ & 1200 \end{aligned}$ | $\begin{aligned} & 55.38 \\ & 1407 \end{aligned}$ | -- | -- | -- | -- | -- |
| $\begin{gathered} \mathrm{H} \\ \text { (open) } \end{gathered}$ | in. mm | $\begin{gathered} 18.63 \\ 474 \end{gathered}$ | $\begin{gathered} 21.75 \\ 553 \end{gathered}$ | $\begin{gathered} 23.38 \\ 593 \end{gathered}$ | $\begin{gathered} 28.06 \\ 713 \end{gathered}$ | $\begin{aligned} & 30.3 \\ & 770 \end{aligned}$ | $\begin{gathered} 38.19 \\ 970 \end{gathered}$ | $\begin{aligned} & 44.19 \\ & 1122 \end{aligned}$ | $\begin{aligned} & 52.38 \\ & 1330 \end{aligned}$ | $\begin{gathered} 59 . / 81 \\ 1519 \end{gathered}$ | $\begin{aligned} & 68.13 \\ & 1730 \end{aligned}$ | $\begin{aligned} & 72.75 \\ & 1835 \end{aligned}$ | $90.13$ | $\begin{aligned} & 98.81 \\ & 2510 \end{aligned}$ | $\begin{gathered} 119 \\ 3022 \end{gathered}$ | $\begin{array}{\|c\|} 127.25 \\ 3232 \end{array}$ | $\begin{array}{\|c} 140.25 \\ 2562 \end{array}$ | $\begin{array}{\|c\|} 152.75 \\ 3880 \end{array}$ | $\begin{gathered} 163 \\ 4140 \end{gathered}$ | $\begin{aligned} & 179.5 \\ & 4560 \end{aligned}$ |
| Do | in. mm | $\begin{aligned} & 9.88 \\ & 250 \end{aligned}$ | $\begin{gathered} 9.88 \\ 250 \end{gathered}$ | $\begin{gathered} 11.81 \\ 300 \end{gathered}$ | $\begin{gathered} 13.75 \\ 350 \end{gathered}$ | $\begin{aligned} & 15.7 \\ & 400 \end{aligned}$ | $\begin{gathered} 19.69 \\ 500 \end{gathered}$ | $\begin{gathered} 22.06 \\ 560 \end{gathered}$ | $\begin{gathered} 28.38 \\ 720 \end{gathered}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{array}{r} 24 \\ 610 \end{array}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{gathered} 30 \\ 760 \end{gathered}$ | $\begin{gathered} 30 \\ 760 \end{gathered}$ | $\begin{gathered} 30 \\ 760 \end{gathered}$ | $\begin{gathered} 30 \\ 760 \end{gathered}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ |
| WT $(\mathrm{kg})$ | $\begin{aligned} & \text { RF } \\ & \text { BW } \end{aligned}$ | $\begin{aligned} & 41 \\ & 35 \end{aligned}$ | $\begin{aligned} & 58 \\ & 50 \end{aligned}$ | $\begin{aligned} & 88 \\ & 68 \end{aligned}$ | $\begin{aligned} & 131 \\ & 104 \end{aligned}$ | $\begin{aligned} & 205 \\ & 192 \end{aligned}$ | $\begin{aligned} & 253 \\ & 208 \end{aligned}$ | $\begin{aligned} & 413 \\ & 328 \end{aligned}$ | $\begin{aligned} & 623 \\ & 496 \end{aligned}$ | $\begin{aligned} & 784 \\ & 637 \end{aligned}$ | $\begin{aligned} & 1288 \\ & 1120 \end{aligned}$ | $\begin{aligned} & 1820 \\ & 1448 \end{aligned}$ | $\begin{aligned} & 2150 \\ & 1828 \end{aligned}$ | $\begin{aligned} & 2540 \\ & 2201 \end{aligned}$ | $\begin{aligned} & 4080 \\ & 3360 \end{aligned}$ | $\begin{aligned} & 5220 \\ & 4295 \end{aligned}$ | $\begin{aligned} & 6050 \\ & 4980 \end{aligned}$ | $\begin{aligned} & 6945 \\ & 5710 \end{aligned}$ | $\begin{aligned} & 7965 \\ & 5223 \end{aligned}$ | $\begin{gathered} 10000 \\ 8220 \end{gathered}$ |

## - Features

Design and manufacture: API 600.
Face-to-Face dimension: 36 "and smaller to ASME B16.10.
40 "and larger to manufacturer"s standard
Flanged End: 24"and smaller to ASME B16.5
26"and larger to ASME B16.47 series A
B.W.End: ASME B 16.25

Shell Wall Thickness: 24 "and smaller to API 600
26 "and larger to manufacturer's standard
6 "and smaller valves have a one-piece bonnet and yoke design
8 "and larger valves have a split bonnet and yoke design.

- Parts List

| No | Parts | Material |
| :--- | :--- | :--- |
| 1 | Body | ASTM A216 Gr.WCB |
| 2 | Seat ring | ASTM A 105+13Cr |
| 3 | Wedge | ASTM A216 Gr.WCB+13Cr |
| 4 | Stem | ASTM A182 F6a |
| 5 | Gasket | Soft Iron |
| 6 | Stud | ASTM A 193 Gr.B7 |
| 7 | Nut | ASTM A194 Gr.2H |
| 8 | Bonnet | ASTM A216 Gr WCB |
| 9 | Backseat | ASTM A276 410 |
| 10 | Packing | Graphite |
| 11 | Pin | C.S. |
| 12 | Gland bolt | ASTM A 193 Gr.B7 |
| 13 | Gland nut | ASTM A194 Gr.2H |
| 14 | Bushing | ASTM A276 410 |
| 15 | Gland | ASTM A216 Gr.WCB |
| 16 | Bearing | Assemly |
| 17 | Stemnut | Aluminum Bronze |
| 18 | Retaining nut | C.S |
| 19 | Handwheel | Malleable Iron |
| 20 | H.W. lock nut | C.S. |
| 21 | Lubricator | Assemly |
| 22 | Yoke bolt | ASTM A 193 Gr.B7 |
| 23 | Yoke nut | ASTM A 194 Gr.2H |



- Dimensions \& Weights

| Class 900 | Valve Size | $\begin{aligned} & \mathrm{in} . \\ & \mathrm{mm} \end{aligned}$ | $\begin{aligned} & 2 \\ & 50 \end{aligned}$ | 2-1/2 65 | 3 |  | ${ }_{150}^{6}$ | $\begin{gathered} 8 \\ 200 \end{gathered}$ | $\begin{array}{r} 10 \\ 250 \end{array}$ | $\begin{gathered} 12 \\ 300 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\left(\mathrm{RF}^{\mathrm{L}-\mathrm{L}}-\mathrm{BW}\right)$ | $\begin{aligned} & \mathrm{in} . \\ & \mathrm{mm} \end{aligned}$ | $\begin{aligned} & 14.5 \\ & 368 \end{aligned}$ | $\begin{aligned} & 16.5 \\ & 419 \end{aligned}$ | $\begin{array}{r} 15 \\ 381 \end{array}$ | $\begin{gathered} 18 \\ 457 \end{gathered}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{gathered} 29 \\ 737 \\ \hline \end{gathered}$ | $\begin{gathered} 33 \\ 838 \end{gathered}$ | $\begin{aligned} & 38 \\ & 965 \end{aligned}$ |
|  | $\frac{L_{2}}{(R T J)}$ | $\begin{aligned} & \text { in. } \\ & \mathrm{mm} \end{aligned}$ | $\begin{gathered} 14.62 \\ 371 \end{gathered}$ | $\begin{gathered} 16.62 \\ 422 \end{gathered}$ | $\begin{gathered} 15.12 \\ 384 \end{gathered}$ | $\begin{gathered} 18.12 \\ 460 \\ \hline \end{gathered}$ | $\begin{gathered} 24.12 \\ 613 \end{gathered}$ | $\begin{gathered} 29.12 \\ 740 \end{gathered}$ | $\begin{gathered} 33.12 \\ 841 \end{gathered}$ | $\begin{array}{r} 38.12 \\ 968 \\ \hline \end{array}$ |
|  | $\underset{\text { (open) }}{\mathrm{H}}$ | $\mathrm{in}_{\mathrm{mm}}$ | $\begin{gathered} 21.56 \\ 547 \\ \hline \end{gathered}$ | $\begin{gathered} 27.56 \\ 700 \\ \hline \end{gathered}$ | $\begin{gathered} 28.15 \\ 715 \\ \hline \end{gathered}$ | $\begin{gathered} 28.69 \\ 729 \\ \hline \end{gathered}$ | $\begin{gathered} 41 \\ 1041 \\ \hline \end{gathered}$ | $\begin{aligned} & 49.63 \\ & 1260 \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 62.63 \\ & 1590 \\ & \hline \end{aligned}$ | $\begin{array}{r} 70.69 \\ 1795 \\ \hline \end{array}$ |
|  | D0 | in. mm | $\begin{array}{r} 11.81 \\ 300 \\ \hline \end{array}$ | $\begin{array}{r} 14 \\ 355 \\ \hline \end{array}$ | $\begin{gathered} 15.75 \\ 400 \\ \hline \end{gathered}$ | $\begin{gathered} 17.69 \\ 450 \\ \hline \end{gathered}$ | $\begin{array}{r} 22.06 \\ 560 \\ \hline \end{array}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{array}{r} 24 \\ 610 \\ \hline \end{array}$ | $\begin{array}{r} 24 \\ 610 \\ \hline \end{array}$ |
|  | $\begin{aligned} & \text { WT } \\ & \text { (kg) } \end{aligned}$ | $\begin{aligned} & \text { RF } \\ & \text { BW } \\ & \hline \end{aligned}$ | $\begin{aligned} & 90 \\ & 82 \end{aligned}$ | $\begin{gathered} 110 \\ 93 \\ \hline \end{gathered}$ | $\begin{aligned} & 123 \\ & 108 \end{aligned}$ | $\begin{aligned} & 148 \\ & 122 \end{aligned}$ | $\begin{array}{r} 420 \\ 359 \\ \hline \end{array}$ | $\begin{array}{r} 650 \\ 566 \\ \hline \end{array}$ | $\begin{gathered} 1160 \\ 980 \\ \hline \end{gathered}$ | $\begin{array}{r} 1700 \\ 1450 \\ \hline \end{array}$ |
| Class 1500 | $(\mathrm{RF}-\mathrm{BW})$ | in. mm | $\begin{array}{r} 14.5 \\ 368 \\ \hline \end{array}$ | $\begin{aligned} & 16.5 \\ & 419 \end{aligned}$ | $\begin{aligned} & 18.5 \\ & 470 \end{aligned}$ | $\begin{aligned} & 21.5 \\ & 546 \\ & \hline \end{aligned}$ | $\begin{gathered} 27.75 \\ 705 \\ \hline \end{gathered}$ | $\begin{gathered} 32.75 \\ 832 \\ \hline \end{gathered}$ | $\begin{aligned} & 39 \\ & 991 \end{aligned}$ | $\begin{array}{r} 44.5 \\ 1130 \\ \hline \end{array}$ |
|  | $\frac{\mathrm{L} 2}{(\mathrm{RTJ})}$ | in. mm | $\begin{gathered} 14.62 \\ 371 \end{gathered}$ | $\begin{gathered} 16.62 \\ 422 \end{gathered}$ | $\begin{gathered} 18.62 \\ 473 \end{gathered}$ | $\begin{gathered} 21.62 \\ 549 \\ \hline \end{gathered}$ | $\begin{gathered} 28 \\ 711 \end{gathered}$ | $\begin{gathered} 33.13 \\ 842 \\ \hline \end{gathered}$ | $\begin{aligned} & 39.38 \\ & 1001 \end{aligned}$ | $\begin{aligned} & 45.12 \\ & 1146 \end{aligned}$ |
|  | $\begin{gathered} \mathrm{H} \\ \text { (open) } \end{gathered}$ | in. mm | $\begin{gathered} 22.63 \\ 574 \\ \hline \end{gathered}$ | $\begin{gathered} 27.56 \\ 700 \\ \hline \end{gathered}$ | $\begin{gathered} 31.75 \\ 806 \\ \hline \end{gathered}$ | $\begin{gathered} 34.94 \\ 887 \end{gathered}$ | $\begin{array}{r} 42.5 \\ 1079 \\ \hline \end{array}$ | $\begin{array}{r} 53,94 \\ 1370 \\ \hline \end{array}$ | $\begin{aligned} & 59.81 \\ & 1520 \\ & \hline \end{aligned}$ | $\begin{gathered} 65 \\ 1651 \\ \hline \end{gathered}$ |
|  | D0 | in. mm | $\begin{gathered} 13.75 \\ 350 \\ \hline \end{gathered}$ | $\begin{gathered} 15.75 \\ 400 \\ \hline \end{gathered}$ | $\begin{aligned} & 17.75 \\ & 450 \\ & \hline \end{aligned}$ | $\begin{gathered} 22.06 \\ 560 \\ \hline \end{gathered}$ | $\begin{gathered} 24 \\ 610 \\ \hline \end{gathered}$ | $\begin{gathered} \hline 24 \\ 610 \\ \hline \end{gathered}$ | $\begin{gathered} 30 \\ 760 \\ \hline \end{gathered}$ | $\begin{gathered} 30 \\ 760 \\ \hline \end{gathered}$ |
|  | $\begin{aligned} & \text { WT } \\ & (\mathrm{kg}) \end{aligned}$ | $\begin{aligned} & \mathrm{RF} \\ & \mathrm{BW} \\ & \hline \end{aligned}$ | $\begin{array}{r} 117 \\ 93 \\ \hline \end{array}$ | $\begin{aligned} & 175 \\ & 144 \\ & \hline \end{aligned}$ | $\begin{aligned} & 240 \\ & 185 \end{aligned}$ | $\begin{array}{r} 337 \\ 385 \\ \hline \end{array}$ | $\begin{array}{r} 680 \\ 584 \\ \hline \end{array}$ | $\begin{array}{r} 1228 \\ 978 \\ \hline \end{array}$ | $\begin{array}{r} 2278 \\ 1990 \\ \hline \end{array}$ | $\begin{aligned} & 3260 \\ & 2850 \\ & \hline \end{aligned}$ |
| Class 2500 | $\left(\mathrm{RF}^{\mathrm{L}}-\mathrm{L}-\mathrm{BW}\right)$ | in. mm | $\begin{array}{r} 17.75 \\ 451 \\ \hline \end{array}$ | $\begin{gathered} 20 \\ 508 \\ \hline \end{gathered}$ | $\begin{gathered} 22.75 \\ 578 \\ \hline \end{gathered}$ | $\begin{aligned} & 26.5 \\ & 673 \\ & \hline \end{aligned}$ | $\begin{aligned} & 36 \\ & 914 \\ & \hline \end{aligned}$ | $\begin{aligned} & 40.25 \\ & 1022 \\ & \hline \end{aligned}$ | $\begin{array}{r} 50 \\ 1270 \\ \hline \end{array}$ | -- |
|  | $\frac{L_{2}}{(R T J)}$ | in. mm | $\begin{gathered} 17.87 \\ 454 \end{gathered}$ | $\begin{gathered} 20.25 \\ 514 \end{gathered}$ | $\begin{gathered} 23 \\ 584 \end{gathered}$ | $\begin{gathered} 26.88 \\ 683 \\ \hline \end{gathered}$ | $\begin{array}{r} 36.5 \\ 927 \\ \hline \end{array}$ | $\begin{array}{r} 40.87 \\ 1038 \\ \hline \end{array}$ | $\begin{aligned} & 50.88 \\ & 1292 \\ & \hline \end{aligned}$ | -- |
|  | $\begin{gathered} \mathrm{H} \\ \text { (open) } \end{gathered}$ | in . mm | $\begin{array}{r} 27.56 \\ 700 \\ \hline \end{array}$ | $\begin{aligned} & 29.5 \\ & 750 \\ & \hline \end{aligned}$ | $\begin{gathered} 34.63 \\ 887 \\ \hline \end{gathered}$ | $\begin{array}{r} 42.5 \\ 1079 \\ \hline \end{array}$ | $\begin{aligned} & 53.94 \\ & 1370 \\ & \hline \end{aligned}$ | $\begin{aligned} & 60.25 \\ & 1530 \\ & \hline \end{aligned}$ | $\begin{aligned} & 80.5 \\ & 2045 \end{aligned}$ | -- |
|  | Do | in. mm | $\begin{gathered} 13.75 \\ 350 \\ \hline \end{gathered}$ | $\begin{gathered} 17.75 \\ 450 \\ \hline \end{gathered}$ | $\begin{gathered} 22.06 \\ 560 \\ \hline \end{gathered}$ | $\begin{gathered} 28.38 \\ 720 \\ \hline \end{gathered}$ | $\begin{array}{r} 18.13 \\ 460 \\ \hline \end{array}$ | $\begin{gathered} 24 \\ 610 \\ \hline \end{gathered}$ | $\begin{gathered} 30 \\ 760 \\ \hline \end{gathered}$ | -- |
|  | $\begin{aligned} & \text { WT } \\ & (\mathrm{kg}) \end{aligned}$ | $\begin{aligned} & \text { RF } \\ & \text { BW } \\ & \hline \end{aligned}$ | $\begin{aligned} & 132 \\ & 99 \\ & \hline \end{aligned}$ | $\begin{array}{r} 206 \\ 155 \\ \hline \end{array}$ | $\begin{array}{r} 256 \\ 192 \\ \hline \end{array}$ | $\begin{aligned} & 498 \\ & 390 \\ & \hline \end{aligned}$ | $\begin{array}{r} 1550 \\ 1230 \\ \hline \end{array}$ | $\begin{aligned} & 2395 \\ & 1980 \\ & \hline \end{aligned}$ | $\begin{aligned} & 4460 \\ & 3700 \end{aligned}$ | -- |

- Features

Design and manufacture: API 600 and ASME B 16.34.
Face-to-Face dimension: ASME B16.10.
Flanged dimension: ASME B16.5.
B.W.End: ASME B 16.25

Shell Wall Thickness: API 600 BS 1868
Inspection \& Test: API 598

Parts List

| No | Parts | Material |
| :---: | :--- | :--- |
| 1 | Body | ASTM A216 Gr.WCB |
| 2 | Seat ring | ASTM A 105+13Cr |
| 3 | Wedge | ASTM A216 Gr.WCB+13Cr |
| 4 | Stem | ASTM A182 F6a |
| 5 | Bonnet | ASTM A216 Gr.WCB |
| 6 | Sealing ring | ASTM A182 F304 |
| 7 | Soacer ring | ASTM A182 F6a |
| 8 | Segment ring | ASTM A182 F6a |
| 9 | Supporting plate | ASTM A105 |
| 10 | Stud | ASTM A193 Gr.B7 |
| 11 | Nut | ASTM A 194 Gr.2H |
| 12 | Packing plate | ASTM A276 410 |
| 13 | Split ring | ASTM A216 Gr.WCB |
| 14 | Gland flange | ASTM A216 Gr.WCB |
| 15 | Gland bolt | ASTM A193 Gr.B7 |
| 16 | Gland nut | ASTM A 194 Gr.2H |
| 17 | Bolt | C.S |
| 18 | Stem nut | Aluminum Bronze |
| 19 | Gear box | Assemly |
| 20 | Yode | ASTM A 216 Gr.WCB |
| 21 | Bushing | ASTM A276 410 |
| 22 | Packing | Graphite |
| 23 | Bolt | ASTM A 193 Gr B7 |
| 24 | Nut | ASTM A 194 Gr 2H |



- Dimensions \& Weights

| Class 900 | Valve Size | $\begin{gathered} \hline \mathrm{in.} \\ \mathrm{~mm} \\ \hline \end{gathered}$ | $\begin{gathered} 2 \\ 50 \\ \hline \end{gathered}$ | $\begin{gathered} 2-1 / 2 \\ 65 \\ \hline \end{gathered}$ | $\begin{gathered} \hline 3 \\ 80 \\ \hline \end{gathered}$ | $\begin{gathered} 4 \\ 100 \\ \hline \end{gathered}$ | $\begin{gathered} 6 \\ 150 \\ \hline \end{gathered}$ | $\begin{gathered} 8 \\ 200 \\ \hline \end{gathered}$ | $\begin{array}{r} 10 \\ 250 \\ \hline \end{array}$ | $\begin{gathered} 12 \\ 300 \\ \hline \end{gathered}$ | $\begin{array}{r} 14 \\ 350 \\ \hline \end{array}$ | $\begin{gathered} 16 \\ 400 \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | BW(L) | $\begin{gathered} \mathrm{in} . \\ \mathrm{mm} \end{gathered}$ | $\begin{array}{r} 8.5 \\ 216 \\ \hline \end{array}$ | $\begin{array}{r} 10 \\ 254 \\ \hline \end{array}$ | $\begin{array}{r} 12 \\ 305 \\ \hline \end{array}$ | $\begin{gathered} 13.98 \\ 356 \\ \hline \end{gathered}$ | $\begin{gathered} 20 \\ 508 \\ \hline \end{gathered}$ | $\begin{gathered} 26 \\ 660 \\ \hline \end{gathered}$ | $\begin{gathered} 31 \\ 787 \end{gathered}$ | $\begin{gathered} 36 \\ 914 \\ \hline \end{gathered}$ | $\begin{gathered} 39 \\ 991 \end{gathered}$ | $\begin{gathered} 43 \\ 1092 \end{gathered}$ |
|  | RF(L1) | $\begin{gathered} \mathrm{in} . \\ \mathrm{mm} \end{gathered}$ | $\begin{aligned} & 14.5 \\ & 368 \\ & \hline \end{aligned}$ | $\begin{gathered} 16.5 \\ 419 \end{gathered}$ | $\begin{aligned} & 15 \\ & 381 \end{aligned}$ | $\begin{array}{r} 18 \\ 457 \\ \hline \end{array}$ | $\begin{gathered} 24 \\ 610 \end{gathered}$ | $\begin{gathered} 29 \\ 737 \\ \hline \end{gathered}$ | $\begin{gathered} 33 \\ 838 \end{gathered}$ | $\begin{gathered} \hline 38 \\ 965 \\ \hline \end{gathered}$ | $\begin{aligned} & 40.5 \\ & 1029 \\ & \hline \end{aligned}$ | $\begin{aligned} & 44.5 \\ & 1130 \\ & \hline \end{aligned}$ |
|  | RTJ(L2) | $\begin{gathered} \text { in. } \\ \mathrm{mm} \end{gathered}$ | $\begin{gathered} 14.62 \\ 371 \\ \hline \end{gathered}$ | $\begin{gathered} 16.62 \\ 422 \\ \hline \end{gathered}$ | $\begin{gathered} 15.12 \\ 384 \\ \hline \end{gathered}$ | $\begin{gathered} 18.12 \\ 460 \\ \hline \end{gathered}$ | $\begin{gathered} 24.12 \\ 613 \\ \hline \end{gathered}$ | $\begin{gathered} 29.12 \\ 740 \\ \hline \end{gathered}$ | $\begin{gathered} 33.12 \\ 841 \\ \hline \end{gathered}$ | $\begin{gathered} 38.12 \\ 968 \\ \hline \end{gathered}$ | $\begin{aligned} & 40.88 \\ & 1039 \\ & \hline \end{aligned}$ | $\begin{aligned} & 44.88 \\ & 1140 \\ & \hline \end{aligned}$ |
|  | Open(H) | $\begin{gathered} \hline \mathrm{in} . \\ \mathrm{mm} \\ \hline \end{gathered}$ | $\begin{gathered} \hline 21.81 \\ 554 \\ \hline \end{gathered}$ | $\begin{gathered} 25.08 \\ 637 \\ \hline \end{gathered}$ | $\begin{gathered} 26.77 \\ 680 \\ \hline \end{gathered}$ | $\begin{gathered} 31,34 \\ 796 \\ \hline \end{gathered}$ | $\begin{aligned} & 42.68 \\ & 1084 \\ & \hline \end{aligned}$ | $\begin{aligned} & 54.02 \\ & 1372 \\ & \hline \end{aligned}$ | $\begin{array}{r} 58.82 \\ 1494 \\ \hline \end{array}$ | $\begin{aligned} & 61.02 \\ & 1550 \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 77.17 \\ & 1960 \\ & \hline \end{aligned}$ | $\begin{gathered} 87 \\ 2210 \\ \hline \end{gathered}$ |
|  | Do | $\begin{gathered} \mathrm{in} . \\ \mathrm{mm} \\ \hline \end{gathered}$ | $\begin{gathered} 11.81 \\ 300 \\ \hline \end{gathered}$ | $\begin{gathered} 13.78 \\ 350 \\ \hline \end{gathered}$ | $\begin{gathered} 13.78 \\ 350 \\ \hline \end{gathered}$ | $\begin{gathered} 15.75 \\ 400 \\ \hline \end{gathered}$ | $\begin{gathered} 22.05 \\ 560 \\ \hline \end{gathered}$ | $\begin{gathered} 18.11 \\ 460 \\ \hline \end{gathered}$ | $\begin{array}{r} 24 \\ 610 \\ \hline \end{array}$ | $\begin{gathered} 24 \\ 610 \\ \hline \end{gathered}$ | $\begin{array}{r} 24 \\ 610 \\ \hline \end{array}$ | $\begin{aligned} & 30 \\ & 760 \\ & \hline \end{aligned}$ |
|  | WT(kg) | $\begin{aligned} & \text { RF } \\ & \text { BW } \end{aligned}$ | $\begin{aligned} & 48 \\ & 37 \end{aligned}$ | $\begin{aligned} & 82 \\ & 62 \end{aligned}$ | $\begin{aligned} & 90 \\ & 80 \\ & \hline \end{aligned}$ | $\begin{aligned} & 152 \\ & 118 \end{aligned}$ | $\begin{aligned} & 339 \\ & 364 \end{aligned}$ | $\begin{aligned} & 620 \\ & 522 \end{aligned}$ | $\begin{aligned} & 948 \\ & 758 \\ & \hline \end{aligned}$ | $\begin{aligned} & 1293 \\ & 1088 \end{aligned}$ | $\begin{aligned} & 1718 \\ & 1448 \\ & \hline \end{aligned}$ | $\begin{aligned} & 2378 \\ & 2016 \\ & \hline \end{aligned}$ |
| Class 1500 | BW(L) | $\begin{gathered} \mathrm{in} . \\ \mathrm{mm} \end{gathered}$ | $\begin{array}{r} \hline 8.5 \\ 216 \\ \hline \end{array}$ | $\begin{array}{r} 10 \\ 254 \\ \hline \end{array}$ | $\begin{array}{r} 12 \\ 305 \\ \hline \end{array}$ | $\begin{gathered} 16 \\ 406 \\ \hline \end{gathered}$ | $\begin{gathered} 22 \\ 559 \\ \hline \end{gathered}$ | $\begin{array}{r} 28 \\ 711 \\ \hline \end{array}$ | $\begin{gathered} \hline 34 \\ 864 \\ \hline \end{gathered}$ | $\begin{gathered} 39 \\ 991 \\ \hline \end{gathered}$ | $\begin{gathered} 42 \\ 1067 \\ \hline \end{gathered}$ | $\begin{gathered} 47 \\ 1194 \\ \hline \end{gathered}$ |
|  | RF(L1) | $\begin{gathered} \hline \mathrm{in} . \\ \mathrm{mm} \\ \hline \end{gathered}$ | $\begin{aligned} & \hline 14.5 \\ & 368 \\ & \hline \end{aligned}$ | $\begin{array}{r} 16.5 \\ 419 \\ \hline \end{array}$ | $\begin{gathered} 18.5 \\ 470 \\ \hline \end{gathered}$ | $\begin{aligned} & \hline 21.5 \\ & 546 \\ & \hline \end{aligned}$ | $\begin{gathered} 27.75 \\ 705 \\ \hline \end{gathered}$ | $\begin{gathered} 32.75 \\ 832 \\ \hline \end{gathered}$ | $\begin{gathered} \hline 39 \\ 991 \\ \hline \end{gathered}$ | $\begin{aligned} & 44.5 \\ & 1130 \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 49.5 \\ & 1257 \\ & \hline \end{aligned}$ | $\begin{aligned} & 54.5 \\ & 1384 \\ & \hline \end{aligned}$ |
|  | RTJ(L2) | $\begin{gathered} \text { in. } \\ \mathrm{mm} \end{gathered}$ | $\begin{gathered} 14.62 \\ 371 \\ \hline \end{gathered}$ | $\begin{gathered} 16.62 \\ 422 \\ \hline \end{gathered}$ | $\begin{gathered} 18.62 \\ 473 \\ \hline \end{gathered}$ | $\begin{gathered} 21.62 \\ 549 \\ \hline \end{gathered}$ | $\begin{array}{r} 28 \\ 711 \\ \hline \end{array}$ | $\begin{gathered} 33.13 \\ 842 \\ \hline \end{gathered}$ | $\begin{aligned} & 39.38 \\ & 1001 \\ & \hline \end{aligned}$ | $\begin{aligned} & 45.12 \\ & 1146 \\ & \hline \end{aligned}$ | $\begin{aligned} & 50.25 \\ & 1276 \\ & \hline \end{aligned}$ | $\begin{aligned} & 55.38 \\ & 1407 \\ & \hline \end{aligned}$ |
|  | Open(H) | in. mm | $\begin{gathered} 21.81 \\ 554 \end{gathered}$ | $\begin{gathered} 25.08 \\ 637 \end{gathered}$ | $\begin{aligned} & 30.2 \\ & 767 \end{aligned}$ | $\begin{gathered} 34.45 \\ 875 \\ \hline \end{gathered}$ | $\begin{aligned} & 43.07 \\ & 1094 \\ & \hline \end{aligned}$ | $\begin{gathered} 54 \\ 1372 \end{gathered}$ | $\begin{aligned} & 65.16 \\ & 1655 \end{aligned}$ | $\begin{aligned} & 72.20 \\ & 1834 \\ & \hline \end{aligned}$ | $\begin{aligned} & 84.65 \\ & 2150 \end{aligned}$ | $\begin{aligned} & 88.98 \\ & 2260 \end{aligned}$ |
|  | Do | $\begin{gathered} \text { in. } \\ \mathrm{mm} \\ \hline \end{gathered}$ | $\begin{gathered} 11.81 \\ 300 \\ \hline \end{gathered}$ | $\begin{gathered} 17.72 \\ 450 \\ \hline \end{gathered}$ | $\begin{gathered} 17.72 \\ 450 \\ \hline \end{gathered}$ | $\begin{gathered} 22.05 \\ 560 \\ \hline \end{gathered}$ | $\begin{array}{r} 12 \\ 305 \\ \hline \end{array}$ | $\begin{gathered} 18.11 \\ 460 \\ \hline \end{gathered}$ | $\begin{array}{r} 24 \\ 610 \\ \hline \end{array}$ | $\begin{gathered} 24 \\ 610 \\ \hline \end{gathered}$ | $\begin{gathered} 30 \\ 760 \\ \hline \end{gathered}$ | $\begin{gathered} 30 \\ 760 \\ \hline \end{gathered}$ |
|  | WT(kg) | $\begin{aligned} & \text { RF } \\ & \text { BW } \\ & \hline \end{aligned}$ | $\begin{aligned} & 58 \\ & 44 \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 89 \\ & 69 \\ & \hline \end{aligned}$ | $\begin{gathered} \hline 126 \\ 83 \\ \hline \end{gathered}$ | $\begin{aligned} & \hline 180 \\ & 128 \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 392 \\ & 290 \\ & \hline \end{aligned}$ | $\begin{array}{r} 793 \\ 585 \\ \hline \end{array}$ | $\begin{gathered} 1368 \\ 972 \\ \hline \end{gathered}$ | $\begin{aligned} & 2118 \\ & 1613 \\ & \hline \end{aligned}$ | $\begin{aligned} & 2798 \\ & 2008 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3868 \\ & 2813 \\ & \hline \end{aligned}$ |
| Class 2500 | BW(L) | $\begin{array}{r} \mathrm{in} . \\ \mathrm{mm} \\ \hline \end{array}$ | $\begin{gathered} 11 \\ 279 \\ \hline \end{gathered}$ | $\begin{array}{r} 13 \\ 330 \\ \hline \end{array}$ | $\begin{aligned} & 14.5 \\ & 368 \\ & \hline \end{aligned}$ | $\begin{gathered} 18 \\ 457 \\ \hline \end{gathered}$ | $\begin{array}{r} 24 \\ 610 \\ \hline \end{array}$ | $\begin{gathered} 30 \\ 762 \\ \hline \end{gathered}$ | $\begin{array}{r} 36 \\ 914 \\ \hline \end{array}$ | $\begin{gathered} 41 \\ 1041 \\ \hline \end{gathered}$ | -- | -- |
|  | RF(L1) | $\begin{gathered} \mathrm{in} . \\ \mathrm{mm} \\ \hline \end{gathered}$ | $\begin{gathered} 17.75 \\ 451 \\ \hline \end{gathered}$ | $\begin{gathered} 20 \\ 508 \\ \hline \end{gathered}$ | $\begin{gathered} 22.75 \\ 578 \\ \hline \end{gathered}$ | $\begin{gathered} 26.50 \\ 673 \\ \hline \end{gathered}$ | $\begin{array}{r} 36 \\ 914 \\ \hline \end{array}$ | $\begin{aligned} & 40.25 \\ & 1022 \\ & \hline \end{aligned}$ | $\begin{gathered} 50 \\ 1270 \\ \hline \end{gathered}$ | $\begin{gathered} 56 \\ 1422 \\ \hline \end{gathered}$ | -- | -- |
|  | RTJ(L2) | $\begin{gathered} \hline \mathrm{in} . \\ \mathrm{mm} \\ \hline \end{gathered}$ | $\begin{gathered} 17.87 \\ 454 \\ \hline \end{gathered}$ | $\begin{gathered} 20.25 \\ 514 \\ \hline \end{gathered}$ | $\begin{gathered} 23 \\ 584 \\ \hline \end{gathered}$ | $\begin{gathered} 26.88 \\ 683 \\ \hline \end{gathered}$ | $\begin{gathered} 36.50 \\ 927 \\ \hline \end{gathered}$ | $\begin{aligned} & 40.87 \\ & 1038 \\ & \hline \end{aligned}$ | $\begin{aligned} & 50.88 \\ & 1292 \\ & \hline \end{aligned}$ | $\begin{aligned} & 56.88 \\ & 1445 \\ & \hline \end{aligned}$ | -- | -- |
|  | Open(H) | $\begin{gathered} \mathrm{in} . \\ \mathrm{mm} \\ \hline \end{gathered}$ | $\begin{array}{r} 24 \\ 610 \\ \hline \end{array}$ | $\begin{gathered} 25.75 \\ 654 \\ \hline \end{gathered}$ | $\begin{gathered} 29.65 \\ 753 \\ \hline \end{gathered}$ | $\begin{gathered} 33.46 \\ 850 \\ \hline \end{gathered}$ | $\begin{aligned} & 49.37 \\ & 1254 \\ & \hline \end{aligned}$ | $\begin{aligned} & 54.09 \\ & 1374 \end{aligned}$ | $\begin{aligned} & \hline 66.34 \\ & 1685 \\ & \hline \end{aligned}$ | $\begin{gathered} 74 \\ 1873 \end{gathered}$ | -- | -- |
|  | Do | $\begin{gathered} \mathrm{in} . \\ \mathrm{mm} \\ \hline \end{gathered}$ | $\begin{gathered} 19.69 \\ 500 \\ \hline \end{gathered}$ | $\begin{gathered} 19.69 \\ 500 \\ \hline \end{gathered}$ | $\begin{gathered} 23.62 \\ 600 \\ \hline \end{gathered}$ | $\begin{gathered} 23.62 \\ 600 \\ \hline \end{gathered}$ | $\begin{gathered} 18.11 \\ 460 \end{gathered}$ | $\begin{gathered} 18.11 \\ 460 \\ \hline \end{gathered}$ | $\begin{gathered} 24 \\ 610 \\ \hline \end{gathered}$ | $\begin{gathered} \hline 24 \\ 610 \\ \hline \end{gathered}$ | -- | -- |
|  | WT(kg) | $\begin{aligned} & \hline \text { RF } \\ & \text { BW } \end{aligned}$ | $\begin{gathered} 119 \\ 86 \end{gathered}$ | $\begin{aligned} & 173 \\ & 133 \end{aligned}$ | $\begin{aligned} & \hline 193 \\ & 142 \end{aligned}$ | $\begin{aligned} & \hline 227 \\ & 156 \end{aligned}$ | $\begin{aligned} & 718 \\ & 498 \end{aligned}$ | $\begin{gathered} 1293 \\ 890 \\ \hline \end{gathered}$ | $\begin{aligned} & 2248 \\ & 1548 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3091 \\ & 2330 \end{aligned}$ | -- | -- |

## - Technical specification

1, Design and manufacturing: per API 602.
2. Consturction Feature: B.B OS\&Y or WB OS\&Y

3, Face to face dimensions per ANSI B 16.10.
4, Flanged connection per ANSI B 16.5 .
5, Test and inspection per API 598.
6, Body material: A105, F304, F316, F304L, F316L, F5, F11, F22...

- Main parts and materials

| No | Accessory Name | Material |
| :--- | :--- | :--- |
| 1 | Body | A105 |
| 2 | Seat | 13 Cr |
| 3 | Wedge | 13 Cr |
| 4 | Stem | A182-F6a |
| 5 | Gear box | 304 S.S. Jacketed Graphite |
| 6 | Bonnet | A105 |
| 7 | Nut | A194-2H |
| 8 | Bolt | A193-B7 |
| 9 | Packing | Graphite |
| 10 | Stem nut | $13 C r$ |
| 11 | Handwheel | Malleable Iron |
| 12 | Flange | A105 |



Main dimensions and weights

| DN |  | Class | L | D | C | g | T | $\mathrm{n}-\mathrm{d}$ | H(Open) |  | W |  | WT (kg) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| inch | mm |  |  |  |  |  |  |  | Reduced Bore | Full Bore | Reduced Bore | Full Bore | Reduced Bore | Full Bore |
| 1/2" | 15 | 150 | 108 | 90 | 60.3 | 35 | 11.5 | 4-16 | 166 | 169 | 100 | 100 | 4.5 | 5 |
|  |  | 300 | 140 | 95 | 66.5 |  | 14.5 | 4-16 |  |  |  |  | 4.8 | 5.2 |
|  |  | 600 | 165 | 95 | 66.5 |  | 14.5 | 4-16 |  |  |  |  | 5.9 | 5.9 |
| 3/4" | 20 | 150 | 117 | 100 | 70 | 43 | 13 | 4-16 | 169 | 193 | 100 | 125 | 5.2 | 6.1 |
|  |  | 300 | 152 | 115 | 82.5 |  | 16 | 4-19 |  |  |  |  | 6.2 | 6.3 |
|  |  | 600 | 190 | 115 | 82.5 |  | 16 | 4-19 |  |  |  |  | 7.4 | 7.5 |
| $1{ }^{\prime \prime}$ | 25 | 150 | 127 | 110 | 79.5 | 51 | 14.5 | 4-16 | 193 | 230 | 125 | 160 | 8.2 | 8.4 |
|  |  | 300 | 165 | 125 | 89 |  | 18 | 4-19 |  |  |  |  | 9.3 | 8.6 |
|  |  | 600 | 216 | 125 | 89 |  | 18 | 4-19 |  |  |  |  | 10.4 | 10.2 |
| 11/4" | 32 | 150 | 140 | 115 | 89 | 63 | 16 | 4-16 | 230 | 246 | 160 | 160 | 11.5 | 14.3 |
|  |  | 300 | 178 | 135 | 98.5 |  | 19.5 | 4-19 |  |  |  |  | 14 | 14.5 |
|  |  | 600 | 229 | 135 | 98.5 |  | 21 | 4-19 |  |  |  |  | 16.2 | 16.7 |
| $1^{1 / 2 \prime}{ }^{\prime \prime}$ | 40 | 150 | 165 | 125 | 98.5 | 73 | 18 | 4-16 | 246 | 283 | 160 | 180 | 12.5 | 15.4 |
|  |  | 300 | 190 | 155 | 114.5 |  | 21 | 4-22.5 |  |  |  |  | 15.5 | 15.6 |
|  |  | 600 | 241 | 155 | 114.5 |  | 22.5 | 4-22.5 |  |  |  |  | 17.5 | 17.4 |
| 2" | 50 | 150 | 178 | 150 | 120.5 | 92 | 19.5 | 4-19 | 283 | 330 | 180 | 200 | 20.3 | 22.7 |
|  |  | 300 | 216 | 165 | 127 |  | 22.5 | 8-19 |  |  |  |  | 23.4 | 22.8 |
|  |  | 600 | 292 | 165 | 127 |  | 26 | 8-19 |  |  |  |  | 28.3 | 28.7 |

## -Technical specification

1, Design and manufacturing: per API 602.
2, Consturction Feature: B.B OS\&Y or WB OS\&Y
3, FNPT connection per ANSI B1.20.1
Socket weld connection per ANSI B16.11
4, Test and inspection per API 598.
5, Body material: A105, F304, F316, F304L, F316L, F5, F11, F22...

- Main parts and materials

| No | Accessory Name | Material |
| :--- | :--- | :--- |
| 1 | Body | A105 |
| 2 | Seat | 13 Cr |
| 3 | Wedge | 13 Cr |
| 4 | Stem | A182-F6a |
| 5 | Gasket | Bo4S.S. Jacketed Graphite |
| 6 | Bonnet | A105 |
| 7 | Nut | A194-2H |
| 8 | Polt | Graphite |
| 9 | Stem nut | 13Cr |
| 10 | Handwheel | Malleable Iron |
| 11 |  |  |

- Main dimensions and weights

| DN |  | L | B |  | S |  |  | H(Open) | W | WT(kg) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| inch | mm |  | ANSI | JIS | ANSI NPT600 | $\begin{gathered} \text { ISO, BS } \\ \text { RC560 } \end{gathered}$ | JIS PT550 |  |  |  |
| 1/2" | 15 | 92 | 21.8 | 22.2 |  | 1/2" |  | 169 | 100 | 2.2 |
| 3/4" | 20 | 111 | 27.1 | 27.7 |  | 3/4" |  | 193 | 125 | 4.3 |
| 1 " | 25 | 120 | 33.8 | 34.5 |  | $1^{\prime \prime}$ |  | 230 | 160 | 5.9 |
| 11/4" | 32 | 120 | 42.6 | 43.2 |  | $11 / 4^{\prime \prime}$ |  | 246 | 160 | 6.9 |
| 11/2" | 40 | 140 | 48.7 | 49.1 |  | 11/2" |  | 283 | 180 | 11.1 |
| 2 " | 50 | 178 | 61.1 | 61.1 |  | $2^{\prime \prime}$ |  | 330 | 200 | 15.2 |

## -Technical specification

1, Design and manufacturing: per API 602.
2, Consturction Feature: B.B OS\&Y or WB OS\&Y
3, FNPT connection per ANSI B1.20.1
Socket weld connection per ANSI B16.11
4, Test and inspection per API 598.
5, Body material: A105, F304, F316, F304L, F316L, F5, F11, F22...

- Main parts and materials

| No | Accessory Name | Material |
| :---: | :--- | :--- |
| 1 | Body | A105 |
| 2 | Seat | 13 Cr |
| 3 | Wedge | A182-F6a |
| 4 | Stem | Sealed ring |

- Main dimensions and weights

| DN |  | L |  | B |  | S |  |  | H(Open) | W | WT(kg) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| inch | mm | $\begin{aligned} & \text { Class } 900 \\ & \text { Cass } 1500 \end{aligned}$ | Class 2500 | ANSI | JIS | ANSI NPT600 | $\begin{aligned} & \text { ISO, BS } \\ & \text { RC560 } \end{aligned}$ | $\begin{aligned} & \text { JIS } \\ & \text { PT550 } \end{aligned}$ |  |  |  |
| 1/2" | 15 | 140 | 186 | 21.8 | 22.2 |  | 1/2" |  | 321 | 125 | 12.3 |
| 3/4" | 20 | 140 | 186 | 27.1 | 27.7 |  | 3/4" |  | 321 | 125 | 11.6 |
| $1{ }^{\prime \prime}$ | 25 | 140 | 186 | 33.8 | 34.5 |  | $1{ }^{\prime \prime}$ |  | 321 | 160 | 10.8 |
| $11 / 4^{\prime \prime}$ | 32 | 178 | 232 | 42.6 | 43.2 |  | 11/4" |  | 380 | 160 | 26 |
| 11/2" | 40 | 178 | 232 | 48.7 | 49.1 |  | $11 / 2^{\prime \prime}$ |  | 414 | 180 | 28.4 |
| $2^{\prime \prime}$ | 50 | 216 | 279 | 61.1 | 61.1 |  | $2^{\prime \prime}$ |  | 502 | 200 | 60 |

## - Technical specification

1. Design and manufacturing per API 602.

2, Face to face dimensions per ANSI B 16.10.
3, Flanged connection per ANSI B16.5
4, Test and inspection per API 598.
5, Body material:A105, F304, F304L, F316, F316L...

- Main parts and materials

| No | Accessory Name | Material |
| :---: | :--- | :--- |
| 1 | Body | A105 |
| 2 | Seat | 13Cr+STL |
| 3 | Wedge | 13Cr+STL |
| 4 | Stem | A182-F6a |
| 5 | Bonnet | A104L |
| 6 | Packing | A105 |
| 7 | Stem nut | Copper alloy |
| 9 | Handwheel | Malleable Iron |
| 10 | Flange | A105 <br> 11 |



Main dimensions and weights

| Pressure (LB) | DN |  | L | D | C | g | T | n-d | H(Open) | W | $\mathrm{KT}(\mathrm{kg})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | inch | mm |  |  |  |  |  |  |  |  |  |
| Class 150 | 1/2" | 15 | 108 | 90 | 60.5 | 35 | 11.5 | 4-16 | 253 | 100 | 15 |
|  | $3 / 4^{\prime \prime}$ | 20 | 117 | 100 | 70 | 43 | 13 | 4-16 | 292 | 125 | 19 |
|  | $1{ }^{\prime \prime}$ | 25 | 127 | 110 | 79.5 | 51 | 14.5 | 4-16 | 335 | 160 | 23 |
|  | $11 / 2^{\prime \prime}$ | 40 | 165 | 125 | 98.5 | 73 | 18 | 4-16 | 442 | 180 | 35 |
|  | $2^{\prime \prime}$ | 50 | 178 | 150 | 120.5 | 92 | 19.5 | 4-19 | 536 | 200 | 38 |
| Cass 300 | $11 / 2^{\prime \prime}$ | 15 | 140 | 95 | 66.5 | 35 | 14.5 | 4-16 | 265 | 100 | 17 |
|  | $3 / 4^{\prime \prime}$ | 20 | 152 | 115 | 82.5 | 43 | 16 | 4-19 | 310 | 125 | 21 |
|  | 1 " | 25 | 165 | 125 | 89 | 51 | 18 | 4-19 | 345 | 160 | 25 |
|  | 11/2" | 40 | 190 | 155 | 114.5 | 73 | 21 | 4-22 | 350 | 180 | 37 |
|  | $2^{\prime \prime}$ | 50 | 216 | 165 | 127 | 92 | 22.5 | 8-19 | 548 | 200 | 40 |

## - Technical specification

1, Design and manufacturing per API 602.
2, Socket Weld connection per ANSI B16.11
3, Test and inspection per API 598.
4, Body material:A105, F304, F304L, F316, F316L...

- Main parts and materials

| No | Accessory Name | Material |
| :---: | :---: | :---: |
| 1 | Body | A105 |
| 2 | Seat | 13Cr+STL |
| 3 | Wedge | 13Cr+STL |
| 4 | Stem | A182-F6a |
| 5 | Bonnet | A105 |
| 6 | Yoke | A105 |
| 7 | Stem nut | Graphite |
| 8 | Handwheel | Copper alloy |
| 9 | Malleable Iron |  |
| 10 | Brang |  |



- Main dimensions and weights

| DN |  | L | B | H(Open) | W | KT(kg) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| inch | mm |  |  |  |  |  |
| 1/2" | 15 | 92 | 21.8 | 253 | 100 | 15 |
| $3 / 4^{\prime \prime}$ | 20 | 111 | 27.1 | 292 | 125 | 19 |
| 1 " | 25 | 120 | 33.8 | 335 | 160 | 23 |
| $1^{1 / 2 \prime}$ | 40 | 140 | 48.7 | 442 | 180 | 35 |
| 2" | 50 | 178 | 61.1 | 536 | 200 | 38 |

