

Hand Shut-Off Valves

for Standard and Extended Bonnets

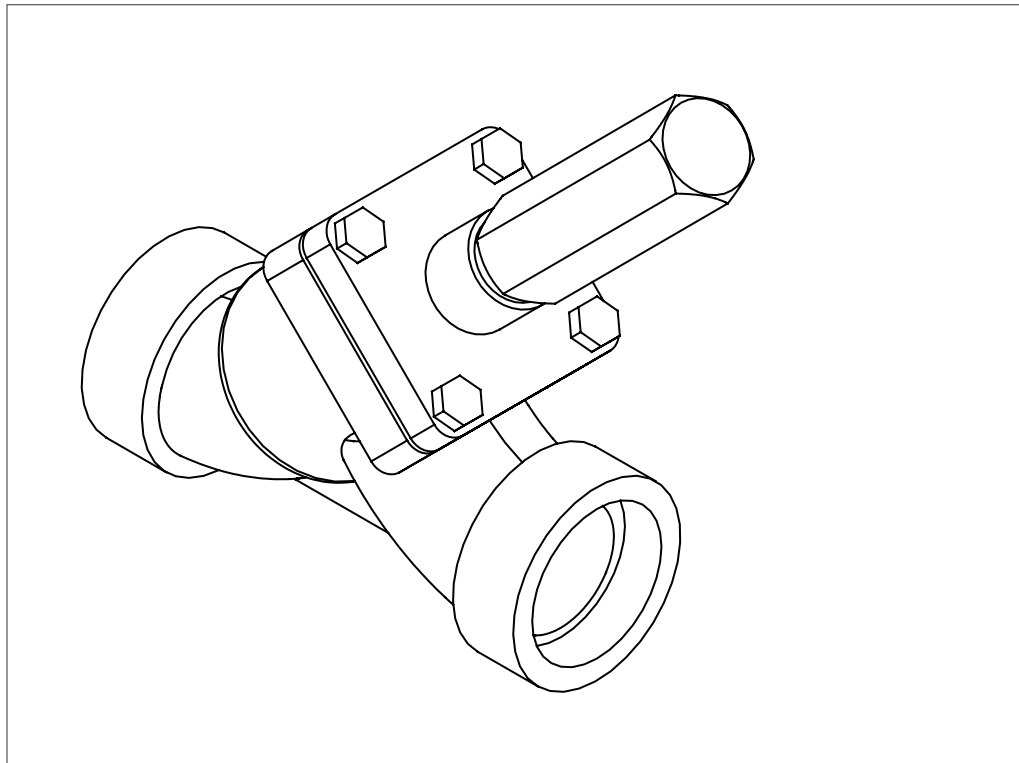
Product Bulletin 80-01 K

Type: Angle, Globe "T" & Globe "Y"



Purpose:

Refrigerating Specialties Division offers a complete line of cast steel body valves with stainless steel trim. Hand valves are available in threaded (FPT), socket weld (SW) and weld neck (WN) connections with options in globe "T", angle, and globe "Y" body style. Designed and built to maintain reliability both in their seating and back seating functions. Maintenance costs are reduced and simplified with bolt-on bonnets.



Contact Information: Product Features:

Parker Hannifin Corporation
Refrigerating Specialties Division
2445 South 25th. Avenue
Broadview, IL 60155-3891

phone (708) 681-6300
fax (708) 681-6306

www.parker.com/refspec

- Suitable for Ammonia, R-22, R-507, R-134a, CO₂, Nitrogen and other common refrigerants
- ASTM 352 LCB Cast Steel Body 6 – 300 mm (1/4" - 12")
- Fluid Temperature Range: -50° C to 204° C (-60° F to 400° F)
- Type 303 Stainless Steel Stem and packing nut; 304 Stainless Steel Bolts
- Reliable Back Seating
- Complete Line of Bolted Bonnets
- 25% Carbon Filled PTFE Seat
- Linear flow "Y" Pattern Globe Bodies (1/4" - 12") for Low Pressure Drop
- Extended Bonnets for Insulation
- Hand wheel and Seal Cap Interchangeable on Same Valve



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Technical Data

Material:

| | |
|--------------------------------------|----------------------------|
| Body | Cast Steel (A-352 GR, LCB) |
| Standard Bonnet: | |
| 6mm - 38mm (1/4" - 1 1/2") | Forged Steel |
| 50mm - 200mm (2" - 8") | Ductil Iron |
| Extended Bonnet: | |
| 6mm - 100mm (1/4" - 4") | LCB Cast Steel |
| Stem | 304 Stainless Steel |
| Packing | 25% Carbon Filled PTFE |

Temperature Range:

| | |
|---------------------------|---------------------------------|
| Standard Bonnet | -29°C to 204°C (-20°F to 400°F) |
| Extended Bonnet | -50°C to 204°C (-60°F to 400°F) |

Maximum Rated Pressure (MRP) 27.6 bar (400 psig)

Description

This complete line of all steel bodied valves with bolt-on bonnets is designed and built to maintain reliability both in their seating and back seating functions. This entire line is supplied with stainless steel stems for maximum corrosion resistance and back seating capability. A unique carbon filled PTFE seat is standard throughout the line, lending durability to the seating surface. In addition, a dual O-ring stem packing design along with a stem packing seal is standard on all valves 1/4" thru 12". This innovative design seals both the valve stem and bonnet bore with independent O-rings, which are captured in a carbon PTFE carrier. The addition of the packing provides for backup sealing capability in the unlikely event of an O-ring failure.

A packing nut design with either 1/4" or 5/16" flats provides a generous wrench engagement area, with little likelihood of "rounding" the flats. With the O-ring cartridge used in all valve bonnets, there will typically be no need to loosen the packing nut when opening or closing a valve. In most cases, stem resistance will be negligible, allowing the valve to be easily repositioned.

Extended Bonnet

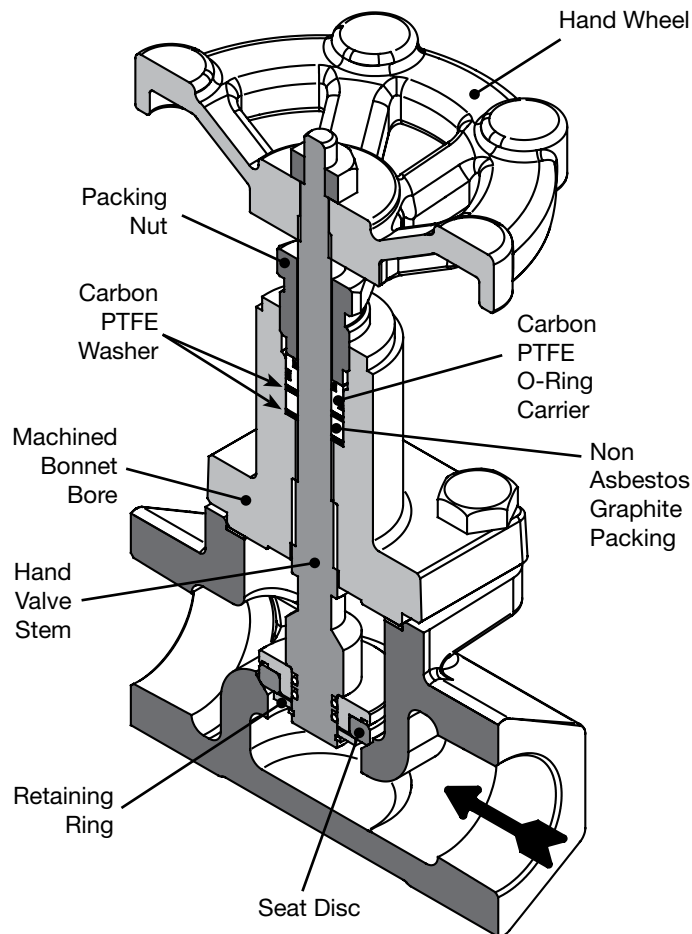
The extended bonnet is available for globe style valves in the Tee body configuration and in angle style bodies. Valves are available with either hand wheel or seal cap. These caps are exclusive to this series of valves and should not be exchanged with seal caps from other R/S service valves.

Note: The new hand expansion valve plugs and bonnet assemblies will not retrofit to either a prior design hand expansion valve body or to prior design stop valve.

Installation

Screwed End

The most important factor other than the valve itself in achieving a leak-tight and secure threaded valve installation is selection and preparation of mating piping. Pipe 1 1/2" and smaller should be Schedule 80 Steel ASTM A-106 Grade B or equal, properly cut to correct length and cleanly and properly threaded with U.S. National Tapered Male Pipe Threads. The male thread sealant is recommended. Sealant should be applied evenly to act as a lubricant between the threads to avoid any chance of metal-to-metal galling. Valve and piping should be adequately tightened with two wrenches positioned as close together as possible, but not touching the pipe threads. In horizontal piping of suction, overfeed gas return, or condenser drain lines, globe valve or angle valve stems should be horizontal to avoid liquid trapping of gas flow at the valve body casting seat orifice.



Cross-Section: Part Descriptions

Before putting valves into service, all pipe connections, valve seats, bonnet seals, and stem seals should be tested for leaks at pressure levels called for in appropriate codes.

Socket Weld (SW) and Weld Neck (WN)

Welding valves may be installed in horizontal or vertical pipelines. Stems may be horizontal, vertical, or angled upward. Globe valves in horizontal suction lines or liquid overfeed return lines, condenser drain lines, purge lines, oil pot drain lines, and level control column isolation valves should preferably have stems horizontal, rather than upward, to avoid liquid or gas trapping at valve seat orifices. Inlet pressure for all valve sizes should normally be under seat valve disc, although not required.

The valve stem should be open during welding. Normally, it is not necessary to disassemble valves for welding. However, if welding is prolonged enough to overheat the body, a wet rag should be wrapped around the valve bonnet and upper body during welding. The codes applicable to the welding of socket weld valves require that the pipe be inserted into the socket until bottomed against the stop. The pipe is then to be backed out approximately 1/16 of an inch before welding.

Use of welding rings is optional but recommended for Weld Neck valves. They help alignment, control gap for full penetration welding, and reduce welding debris entry. Welds should be annealed as necessary in accordance with good practice. Painting of valves and welds is recommended for corrosion protection. Pipe covering where applied, should have proper moisture barrier.

Shut-off valves leading to atmosphere, even if it is temporary, must be plugged or capped to prevent corrosion inside of the valve as well as leakage due to vibration, pressure shock, or improper opening; the valve seat should be cracked open to prevent hydrostatic expansion between the valve and the cap. Valves should never directly feed a water tank because of potential internal corrosion or seat opening caused by vibration.

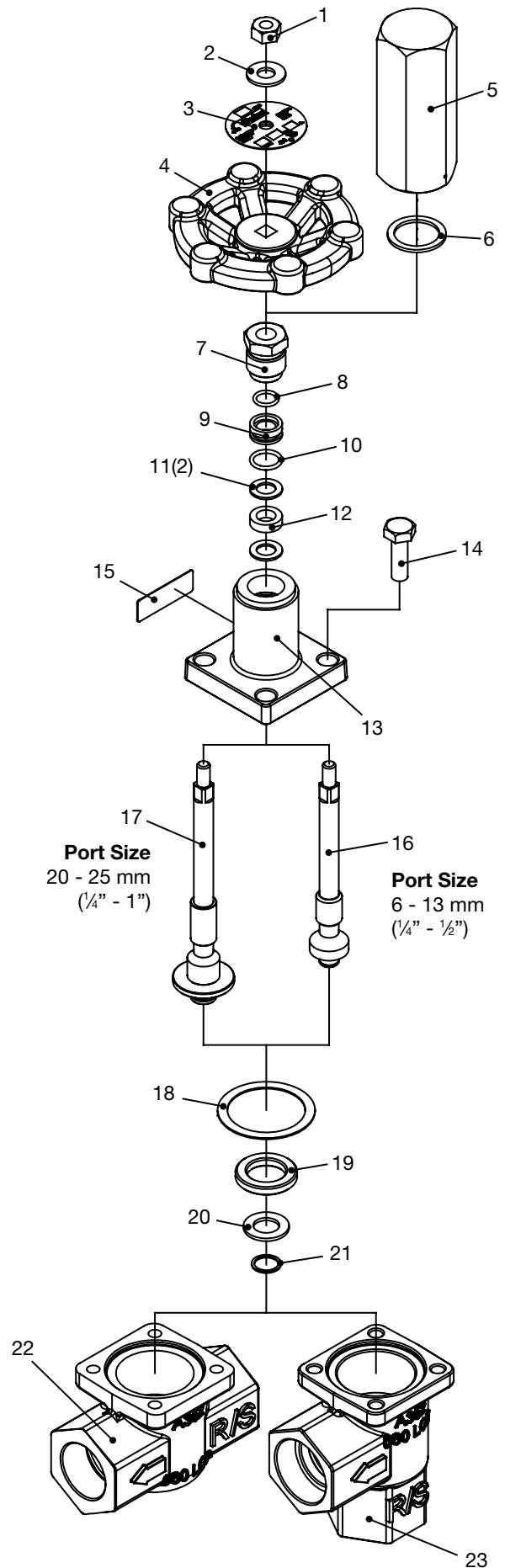
Before putting valves into service, all pipe connections, valve seats, bonnet seats, and stem seals should be tested for leaks at pressure levels called for in appropriate codes.

| Hand Valve Specifications | | | | | | | | |
|---------------------------|------------------------|-------|--------------------------|-------|--------------------------------|-------|------------------------|-------|
| Flow Path | Globe | Angle | Globe | Angle | Globe | Angle | Globe | Angle |
| Connections | Threaded & S.W. | | Threaded & S.W. | | S.W. & B.W. | | Weld Neck | |
| Sizes | 1/4", 3/8", 1/2" | | 3/4", 1", 1 1/4", 1 1/2" | | 2", 2 1/2", 3", 4", 5", 6", 8" | | 10", 12" | |
| Bonnet Material | Forged Steel | | Forged Steel | | Ductile Iron | | Fabricated Steel | |
| Body Material | Cast Steel | | Cast Steel | | Cast Steel | | Cast Steel | |
| Packing Material | Non-Asbestos Graphite | | Non-Asbestos Graphite | | Non-Asbestos Graphite | | Non-Asbestos Graphite | |
| Seat Materials | 25% Carbon Filled PTFE | | 25% Carbon Filled PTFE | | 25% Carbon Filled PTFE | | 25% Carbon Filled PTFE | |

| Hand Shut Off Valve General Information | | | | | | | | | | | | | |
|---|-------|-------------------|-------|-----------|------|-------|------|-----------|------|-----------|------|-------|------|
| Port Size | | Flow Coefficients | | | | | | Weights | | | | | |
| | | Globe "T" | | Globe "Y" | | Angle | | Globe "T" | | Globe "Y" | | Angle | |
| mm | in | Kv | Cv | Kv | Cv | Kv | Cv | kg | lb | kg | lb | kg | lb |
| 6 | 1/4 | 2.2 | 2.6 | — | — | 3.1 | 3.6 | 1.0 | 2.2 | — | — | 1 | 2.2 |
| 10 | 3/8 | 3.5 | 4.1 | — | — | 4.7 | 5.5 | 1.0 | 2.2 | — | — | 1 | 2.2 |
| 13 | 1/2 | 6.2 | 7.2 | — | — | 6.9 | 8.0 | 1.1 | 2.4 | — | — | 1.1 | 2.4 |
| 20 | 3/4 | 12.0 | 14.0 | — | — | 14.6 | 17 | 1.8 | 4.0 | — | — | 1.8 | 4 |
| 25 | 1 | 18.9 | 22.0 | — | — | 23.2 | 27 | 1.8 | 4.0 | — | — | 1.8 | 4 |
| 32 | 1 1/4 | 25.8 | 30.0 | 40.5 | 47 | 30.1 | 35 | 4.2 | 9.2 | 4.2 | 9.2 | 4.2 | 9.2 |
| 38 | 1 1/2 | 35.0 | 43.0 | 45.6 | 53 | 40 | 46 | 4.5 | 10 | 4.5 | 10 | 4.5 | 10 |
| 50 | 2 | 52.0 | 61.0 | 80 | 92.6 | 73 | 85 | 6.5 | 14.4 | 6.5 | 14.4 | 6.5 | 14.4 |
| 65 | 2 1/2 | 89.0 | 103.0 | 131 | 153 | 128 | 149 | 9.5 | 21 | 9.5 | 21 | 9.5 | 21 |
| 75 | 3 | 98.0 | 114.0 | 179 | 208 | 184 | 214 | 20.0 | 45 | 15 | 33 | 15 | 33 |
| 100 | 4 | 173.0 | 202.0 | 292 | 340 | 301 | 350 | 34.0 | 74 | 22 | 47 | 18 | 40 |
| 125 | 5 | — | — | 716 | 718 | 635 | 739 | — | — | 45 | 98 | 34 | 75 |
| 150 | 6 | — | — | 788 | 916 | 811 | 943 | — | — | 80 | 132 | 45 | 99 |
| 200 | 8 | — | — | 1244 | 1446 | 1280 | 1489 | — | — | 116 | 255 | 87 | 192 |
| 250 | 10 | — | — | 2047 | 2380 | 2128 | 2475 | — | — | 190 | 417 | 142 | 313 |
| 300 | 12 | — | — | 2820 | 3280 | 2941 | 3420 | — | — | 308 | 680 | 153 | 337 |

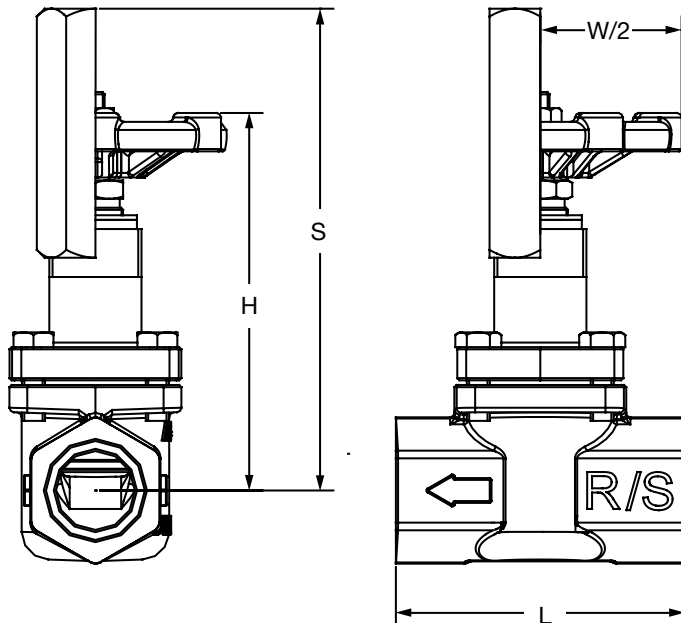
| Valve Bolt Torque Recommendations | | | | | | | |
|-----------------------------------|-----------|--------------------|-----|---------------|-------|-------------|-------|
| Port Size | | Bolt Size | Qty | Torque | | | |
| | | | | Bonnet Screws | | Packing Nut | |
| mm | in | | | mkg | ft lb | mkg | ft lb |
| 6 - 25 | 1/4 - 3/4 | 5/16" - 18 x 1" | 4 | 2.6 | 19 | 0.4 | 2.5 |
| 32 | 1/4 | 3/8"-16 x 1" | 4 | 4.3 | 31 | 0.4 | 2.5 |
| 40 - 50 | 1 1/2 - 2 | 7/8" - 14 x 1 1/4" | 4 | 6.2 | 45 | 0.4 | 1.8 |
| 65 | 2 1/2 | 1/2" - 13 x 1 1/2" | 4 | 8.3 | 60 | 0.4 | 1.8 |
| 75 | 3 | 1/2" - 13 x 1 1/2" | 4 | 10.4 | 75 | 0.4 | 2.5 |
| 100 | 4 | 5/8" - 11 x 1 1/2" | 4 | 10.4 | 75 | 0.4 | 2.5 |
| 125 - 150 | 5 - 6 | 5/8" - 11 x 2" | 6 | 19.4 | 140 | 0.9 | 6.7 |
| 200 | 8 | 5/8" - 11 x 2" | 8 | 19.4 | 140 | 0.9 | 6.7 |
| 250 - 300 | 10 - 12 | 7/8" - 9 x 2 3/4" | 12 | 19.4 | 140 | 0.9 | 6.7 |

| FPT Standard Bonnet Parts List | | | |
|--------------------------------|------------------------------|-------------------|-----|
| No. | Description | Material | Qty |
| 1 | 1/4"-20 Hex Jam Nut | Nylon, S.S. | 1 |
| 2 | Washer, Flat | S.S. | 1 |
| 3 | Name Plate | Aluminum | 1 |
| 4 | Handwheel | Ductile Iron | 1 |
| 5 | Seal Cap | Aluminum 2011-T3 | 1 |
| 6 | Gasket, Seal Cap | Nylon | 1 |
| 7 | Nut, Packing | 303 S.S. | 1 |
| 8 | O-ring | Neoprene | 1 |
| 9 | Gland, O-ring | Carbon, PTFE | 1 |
| 10 | O-ring | Neoprene | 1 |
| 11 | Washer, Packing | Teflon, Carbon | 2 |
| 12 | Packing, Stem | Crane Foil | 1 |
| 13 | Bonnet | A105 | 1 |
| 14 | Bolts, 5/16"-18 x1" | 304 S.S. | 4 |
| 15 | Sticker, Warning | - | 1 |
| 16 | Stem, 6 - 13mm (1/4" - 1/2") | 303 S.S. | 1 |
| 17 | Stem, 20 - 25mm (3/4" - 1") | 303 S.S. | 1 |
| 18 | Gasket | Garlock 2930 | 1 |
| 19 | Seat Disc | Ebolon 48, Carbon | 1 |
| 20 | Washer, Flat | Zinc | 1 |
| 21 | Ring, Retaining | Carbon | 1 |
| 22 | Globe-T Body | LCB ASTM A352 | 1 |
| 23 | Angle Body | LCB ASTM A352 | 1 |



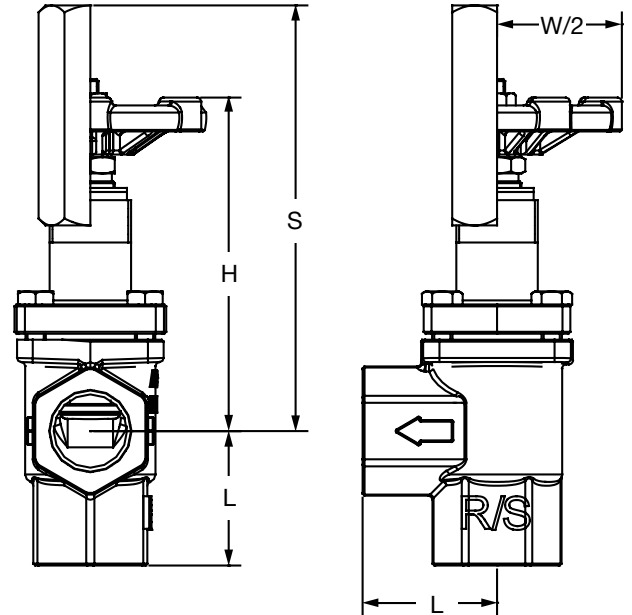
Explosion View: FPT Globe "T" and Angle Standard Bonnet Valves

| FPT Standard Bonnet Replacement Part Kits | | | | | | |
|---|----------------------|----------------|-----------------|-----------------|-----------------|---------------|
| Item | Kit Description | Port Size | | | | |
| | | 6 mm (1/4") | 10 mm (3/8") | 13 mm (1/2") | 20 mm (3/4") | 25 mm (1") |
| 1, 2, 4 | Hand Wheel | 204267 | 204267 | 204267 | 204268 | 204268 |
| 5, 6 | Seal Cap | 204273 | 204273 | 204273 | 204273 | 204273 |
| 7 - 12 | Packing | 204471 | 204471 | 204471 | 204471 | 204471 |
| 7 - 12, 16, 18 - 21 | Plug Stem | 204297 | 204297 | 204297 | — | — |
| 7 - 12, 17 - 21 | Plug Stem | — | — | — | 204298 | 204298 |
| 7 - 16, 18 - 21 | Bonnet Assembly | 205684 | 205684 | 205684 | — | — |
| 7 - 15, 17 - 21 | Bonnet Assembly | — | — | — | 205685 | 205685 |
| 18(6) | Gasket Pkg, Bonnet | 204281 | 204281 | 204281 | 204282 | 204282 |
| 7(6) | Gasket Pkg, Seal Cap | 204292 | 204292 | 204292 | 204292 | 204292 |



| Port Size | L | H | S | W |
|-----------------|--------------------|---------------------|---------------------|---------------------|
| 6 mm (1/4") | 93.7 mm (3.69") | 114.3 mm (4.50") | 143.0 mm (5.63") | 63.5 mm (2.50") |
| 10 mm (3/8") | 93.7 mm (3.69") | 114.3 mm (4.50") | 143.0 mm (5.63") | 63.5 mm (2.50") |
| 13 mm (1/2") | 93.7 mm (3.69") | 114.3 mm (4.50") | 143.0 mm (5.63") | 63.5 mm (2.50") |
| 20 mm (3/4") | 99.6 mm (3.92") | 152.4 mm (6.00") | 190.5 mm (7.50") | 108.0 mm (4.25") |
| 25 mm (1") | 99.6 mm (3.92") | 152.4 mm (6.00") | 190.5 mm (7.50") | 108.0 mm (4.25") |

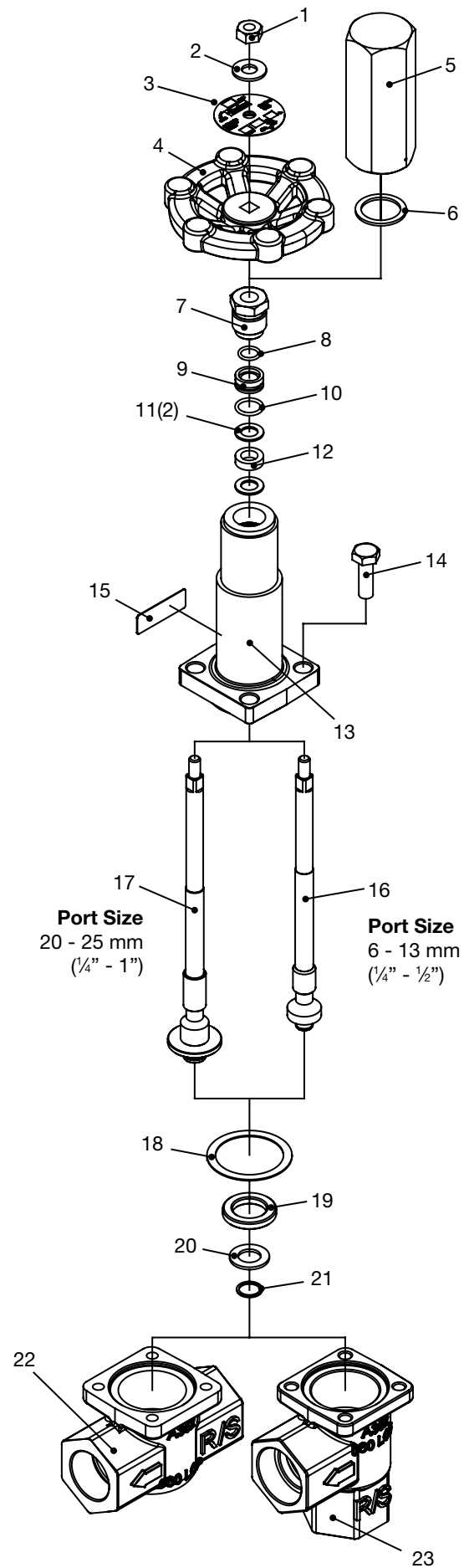
Dimensional Data: FPT Globe "T" Standard Bonnet Valve



| Port Size | L | H | S | W |
|-----------------|--------------------|---------------------|---------------------|---------------------|
| 6 mm (1/4") | 44.5 mm (1.75") | 114.3 mm (4.50") | 143.0 mm (5.63") | 63.5 mm (2.50") |
| 10 mm (3/8") | 44.5 mm (1.75") | 114.3 mm (4.50") | 143.0 mm (5.63") | 63.5 mm (2.50") |
| 13 mm (1/2") | 44.5 mm (1.75") | 114.3 mm (4.50") | 143.0 mm (5.63") | 63.5 mm (2.50") |
| 20 mm (3/4") | 52.4 mm (2.06") | 152.4 mm (6.00") | 190.5 mm (7.50") | 108.0 mm (4.25") |
| 25 mm (1") | 52.4 mm (2.06") | 152.4 mm (6.00") | 190.5 mm (7.50") | 108.0 mm (4.25") |

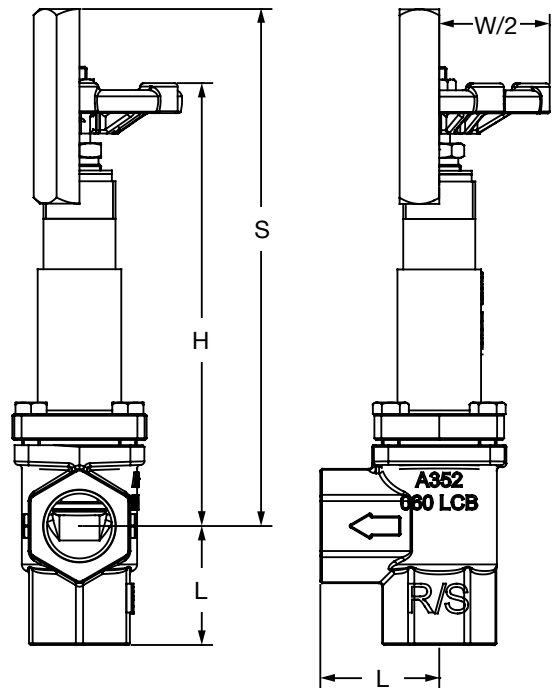
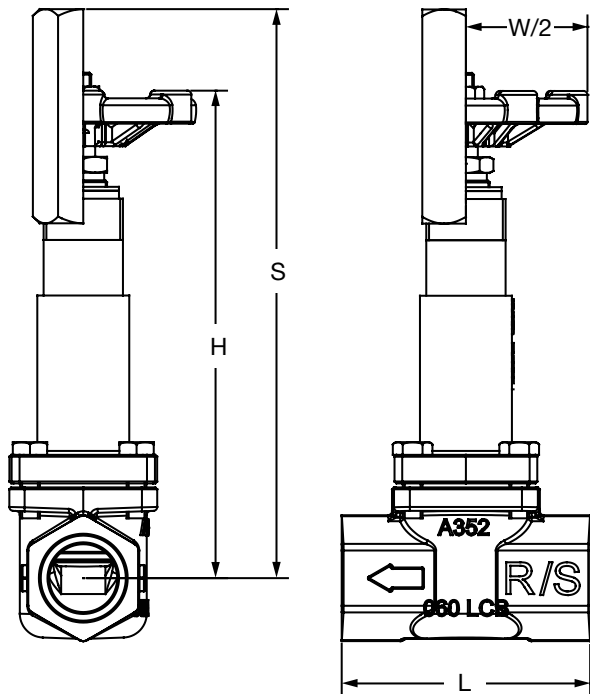
Dimensional Data: FPT Angle Standard Bonnet Valve

| FPT Extended Bonnet Parts List | | | |
|--------------------------------|------------------------------|-------------------|-----|
| No. | Description | Material | Qty |
| 1 | 1/4"-20 Hex Jam Nut | Nylon, S.S. | 1 |
| 2 | Washer, Flat | S.S. | 1 |
| 3 | Name Plate | Aluminum | 1 |
| 4 | Handwheel | Ductile Iron | 1 |
| 5 | Seal Cap | Aluminum 2011-T3 | 1 |
| 6 | Gasket, Seal Cap | Nylon | 1 |
| 7 | Nut, Packing | 303 S.S. | 1 |
| 8 | O-ring | Neoprene | 1 |
| 9 | Gland, O-ring | Carbon, PTFE | 1 |
| 10 | O-ring | Neoprene | 1 |
| 11 | Washer, Packing | Teflon, Carbon | 2 |
| 12 | Packing, Stem | Crane Foil | 1 |
| 13 | Bonnet | A105 | 1 |
| 14 | Bolts, 5/16"-18 x1" | 304 S.S. | 4 |
| 15 | Sticker, Warning | - | 1 |
| 16 | Stem, 6 - 13mm (1/4" - 1/2") | 303 S.S. | 1 |
| 17 | Stem, 20 - 25mm (3/4" - 1") | 303 S.S. | 1 |
| 18 | Gasket | Garlock 2930 | 1 |
| 19 | Seat Disc | Ebolon 48, Carbon | 1 |
| 20 | Washer, Flat | Zinc | 1 |
| 21 | Ring, Retaining | Carbon | 1 |
| 22 | Globe-T Body | LCB ASTM A352 | 1 |
| 23 | Angle Body | LCB ASTM A352 | 1 |



Explosion View: FPT Globe "T" and Angle Extended Bonnet Valves

| FPT Extended Bonnet Replacement Part Kits | | | | | | |
|---|----------------------|---------------------------|----------------------------|----------------------------|----------------------------|--------------|
| Item | Kit Description | Port Size | | | | |
| | | 6 mm ($\frac{1}{4}$ " | 10 mm ($\frac{3}{8}$ " | 13 mm ($\frac{1}{2}$ " | 20 mm ($\frac{3}{4}$ " | 25 mm (1" |
| 1, 2, 4 | Hand Wheel | 204267 | 204267 | 204267 | 204268 | 204268 |
| 5, 6 | Seal Cap | 204273 | 204273 | 204273 | 204273 | 204273 |
| 7 - 12 | Packing | 204471 | 204471 | 204471 | 204471 | 204471 |
| 7 - 15, 16, 18 - 21 | Bonnet Assembly | 205975 | 205975 | 205975 | — | — |
| 7 - 15, 17 - 21 | Bonnet Assembly | — | — | — | 205976 | 205976 |
| 18(6) | Gasket Pkg, Bonnet | 204281 | 204281 | 204281 | 204282 | 204282 |
| 6(6) | Gasket Pkg, Seal Cap | 204292 | 204292 | 204292 | 204292 | 204292 |



| Port Size | L | H | S | W |
|----------------------------|--------------------|---------------------|---------------------|---------------------|
| 13 mm ($\frac{1}{2}$ " | 93.7 mm (3.69") | 184.2 mm (7.25") | 206.5 mm (8.13") | 63.5 mm (2.50") |
| 20 mm ($\frac{3}{4}$ " | 99.6 mm (3.92") | 215.9 mm (8.50") | 254.0 mm (10.0") | 108.0 mm (4.25") |
| 25 mm (1" | 99.6 mm (3.92") | 215.9 mm (8.50") | 254.0 mm (10.0") | 108.0 mm (4.25") |

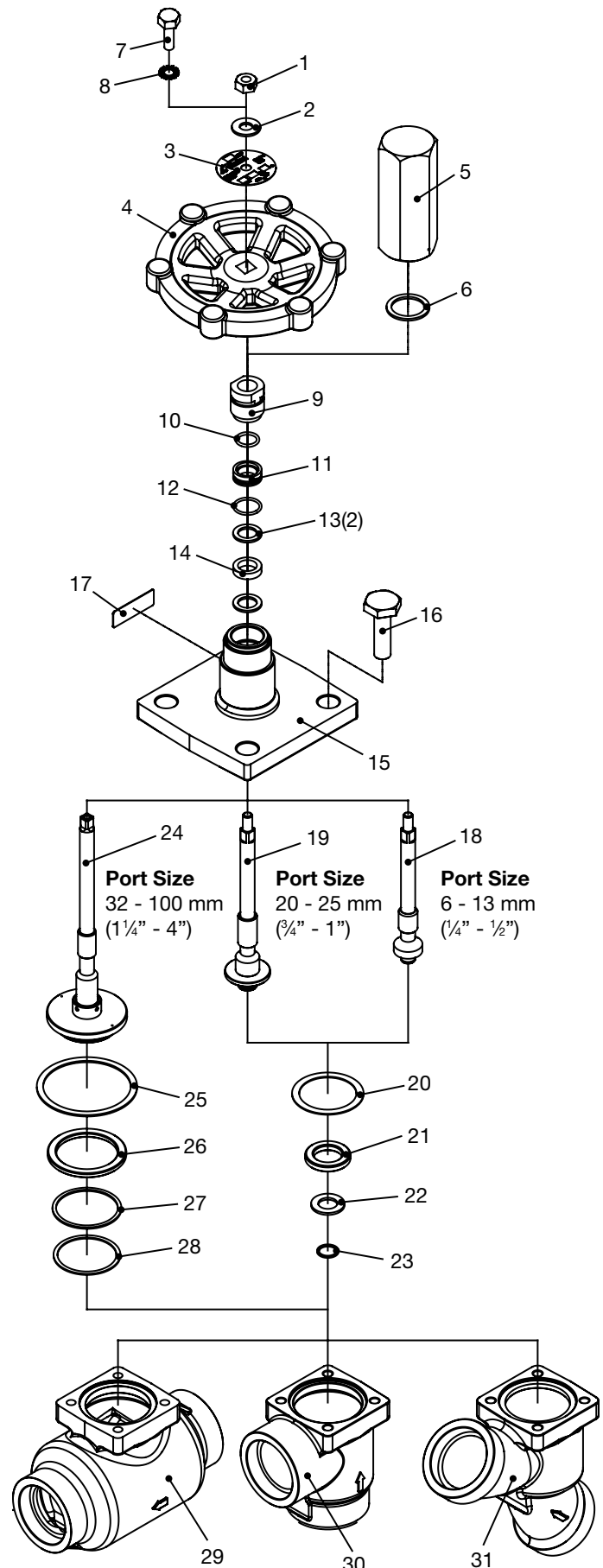
Dimensional Data: FPT Globe "T" Extended Bonnet Valves

| Port Size | L | H | S | W |
|----------------------------|--------------------|---------------------|---------------------|---------------------|
| 13 mm ($\frac{1}{2}$ " | 44.5 mm (1.75") | 184.2 mm (7.25") | 206.5 mm (8.13") | 63.5 mm (2.50") |
| 20 mm ($\frac{3}{4}$ " | 52.4 mm (2.06") | 215.9 mm (8.50") | 254.0 mm (10.0") | 108.0 mm (4.25") |
| 25 mm (1" | 52.4 mm (2.06") | 215.9 mm (8.50") | 254.0 mm (10.0") | 108.0 mm (4.25") |

Dimensional Data: FPT Angle Extended Bonnet Valves

Socket Weld (SW) Standard Bonnet Parts List

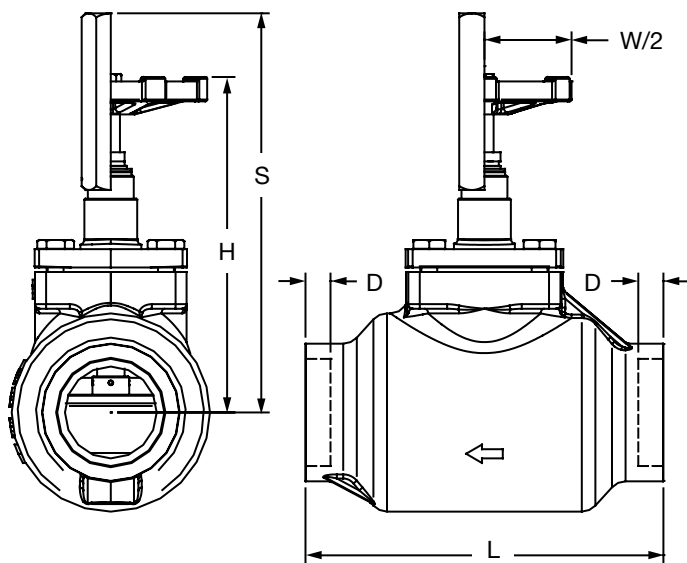
| No. | Description | Material | Qty |
|--|--|-----------------------|-----|
| 1 | 1/4"-20 Hex Jam Nut | Nylon, S.S. | 1 |
| 2 | Washer, Flat | S.S. | 1 |
| 3 | Name Plate | Aluminum | 1 |
| 4 | Handwheel | Ductile Iron | 1 |
| 5 | Seal Cap | Aluminum | 1 |
| 6 | Gasket, Seal Cap | Nylon | 1 |
| 7 | Screw, Hex 1/4" - 20 | S.S. | 1 |
| 8 | Washer, Ext - Star 1/4" ID | S.S. | 1 |
| 9 | Nut, Packing | 303 S.S. | 1 |
| 10 | O-ring | Neoprene | 1 |
| 11 | Gland, O-ring | Carbon, PTFE | 1 |
| 12 | O-ring | Neoprene | 1 |
| 13 | Washer, Packing | Teflon, Carbon | 2 |
| 14 | Packing, Stem | Crane Foil | 1 |
| 15 | Bonnet | A105 | 1 |
| Bolts: | | | |
| 6 - 25 mm (1/4" - 3/4") 5/16" - 18 x 1" | | | |
| 32 mm (1 1/4") 3/8" - 16 x 1" | | | |
| 16 | 40 - 50 mm (1 1/2" - 2") 7/8" - 14 x 1 1/4" | 304 S.S. | 4 |
| 65 - 75 mm (2 1/2" - 3") 1/2" - 13 x 1 1/2" | | | |
| 100 mm (4") 5/8" - 11 x 1 1/2" | | | |
| 17 | Sticker, Warning | - | 1 |
| 18 | Stem, 6 - 13mm (1/4" - 1/2") | 303 S.S. | 1 |
| 19 | Stem, 20 - 25mm (3/4" - 1") | 303 S.S. | 1 |
| 20 | Gasket | Garlock 2930 | 1 |
| 21 | Seat Disc | Ebolon, Carbon | 1 |
| 22 | Washer, Flat | Zinc | 1 |
| 23 | Ring, Retaining | Carbon | 1 |
| 24 | Stem, 32 - 100 mm (1 1/4" - 4") | 303 S.S. | 1 |
| 25 | Gasket | Garlock 2930 | 1 |
| 26 | Seat Disc | Ebolon, Carbon | 1 |
| 27 | Washer, Retaining | Zinc - Chromate | 1 |
| 28 | Ring, Retaining | Carbon - Temper Steel | 1 |
| 29 | Globe-T Body | LCB ASTM A352 | 1 |
| 30 | Angle Body | LCB ASTM A352 | 1 |
| 31 | Globe-Y Body | LCB ASTM A352 | 1 |



Explosion View: Socket Weld (SW) Standard Bonnet Valves

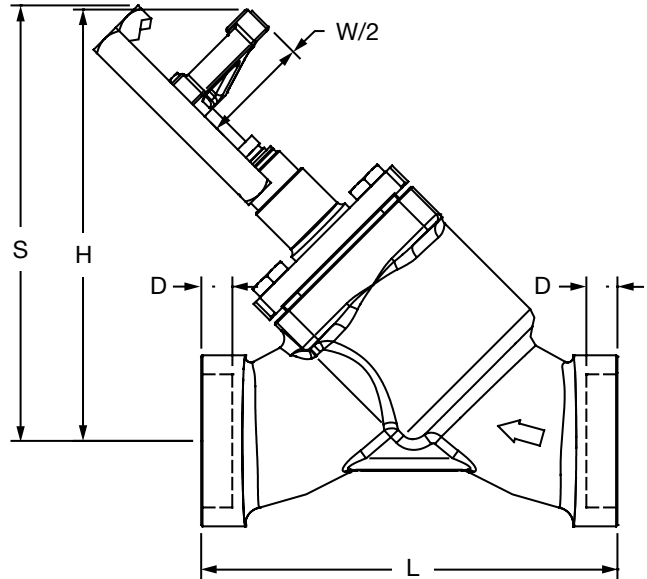
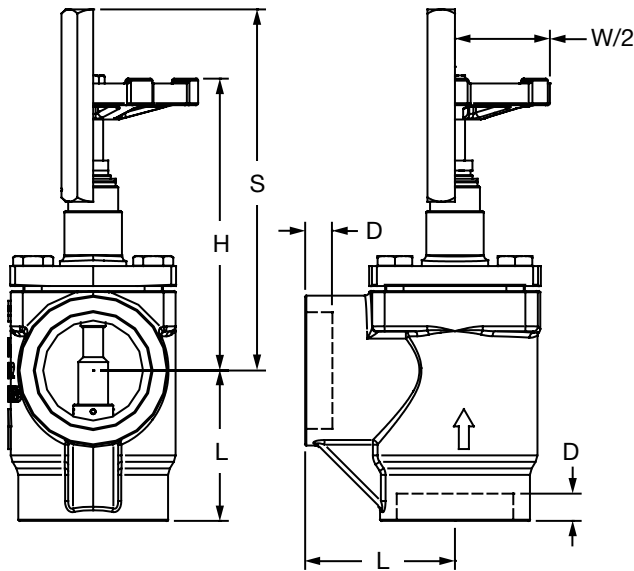
| Socket Weld (SW) Standard Bonnet Replacement Part Kits | | | | | | | | | | | | |
|--|----------------------|--------------|---------------|---------------|---------------|---------------|----------------|-------------------|---------------|----------------|---------------|----------------|
| Item | Kit Description | Port Size | | | | | | | | | | |
| | | 6 mm (¼") | 10 mm (⅜") | 13 mm (½") | 20 mm (¾") | 25 mm (1") | 32 mm (1¼") | 40 mm (1½") | 50 mm (2") | 65 mm (2½") | 75 mm (3") | 100 mm (4") |
| 1, 2, 4 | Hand Wheel | 204267 | 204267 | 204267 | 204268 | 204268 | — | — | — | — | — | — |
| 2, 4, 7, 8 | Hand Wheel | — | — | — | — | — | 204269 | 204269 | 204269 | 204269 | 204270 | 204270 |
| 5, 6 | Seal Cap | 204273 | 204273 | 204273 | 204273 | 204273 | 204274 | 204274 | 204274 | 204274 | 204275 | 204275 |
| 9 - 14 | Packing | 204471 | 204471 | 204471 | 204471 | 204471 | 204472 | 204472 | 204472 | 204472 | 204473 | 204473 |
| 9 - 14, 18, 20 - 23 | Plug Stem | 204297 | 204297 | 204297 | — | — | — | — | — | — | — | — |
| 9 - 14, 19 - 23 | Plug Stem | — | — | — | 204298 | 204298 | — | — | — | — | — | — |
| 9 - 14, 24 - 28 | Plug Stem | — | — | — | — | — | 204300 | 204300 | 204301 | 204302 | 204303 | 204304 |
| 25 - 28 | Disc | — | — | — | — | — | 204322 | 204322 | 204323 | 204324 | 204325 | — |
| 9 - 14, 24 - 28 | Disc | — | — | — | — | — | — | — | — | — | — | 204304 |
| 9 - 18, 20 - 23 | Bonnet Assembly | 205684 | 205684 | 205684 | — | — | — | — | — | — | — | — |
| 9 - 17, 19 - 23 | Bonnet Assembly | — | — | — | 205685 | 205685 | — | — | — | — | — | — |
| 9 - 17, 24 - 28 | Bonnet Assembly | — | — | — | — | — | 205687 | 205687 *205688 | 205688 | 205689 | 205690 | 205691 |
| 20(6) | Gasket Pkg, Bonnet | 204281 | 204281 | 204281 | 204282 | 204282 | — | — | — | — | — | — |
| 25(6) | Gasket Pkg, Bonnet | — | — | — | — | — | 204283 | 204283 | 204284 | 204285 | 204286 | 204287 |
| 6(6) | Gasket Pkg, Seal Cap | 204292 | 204292 | 204292 | 204292 | 204292 | 204292 | 204292 | 204292 | 204292 | 204293 | 204293 |

* 1½" Globe "T" valve body only



| Port Size | L | D | H | S | W |
|----------------|---------------------|--------------------|---------------------|---------------------|---------------------|
| 6 mm (¼") | 93.7 mm (3.69") | 10.4 mm (0.41") | 114.3 mm (4.50") | 142.9 mm (5.63") | 63.5 mm (2.50") |
| 10 mm (⅜") | 93.7 mm (3.69") | 10.4 mm (0.41") | 114.3 mm (4.50") | 142.9 mm (5.63") | 63.5 mm (2.50") |
| 13 mm (½") | 93.7 mm (3.69") | 10.4 mm (0.41") | 114.3 mm (4.50") | 142.9 mm (5.63") | 63.5 mm (2.50") |
| 20 mm (¾") | 99.5 mm (3.92") | 12.7 mm (0.50") | 152.4 mm (6.00") | 190.5 mm (7.50") | 108.0 mm (4.25") |
| 25 mm (1") | 99.5 mm (3.92") | 12.7 mm (0.50") | 152.4 mm (6.00") | 190.5 mm (7.50") | 108.0 mm (4.25") |
| 32 mm (1¼") | 174.8 mm (6.88") | 14.3 mm (0.56") | 165.1 mm (6.50") | 206.4 mm (8.13") | 136.5 mm (5.38") |
| 40 mm (1½") | 207.8 mm (8.18") | 14.3 mm (0.56") | 168.3 mm (6.23") | 209.6 mm (8.25") | 136.5 mm (5.38") |
| 50 mm (2") | 207.8 mm (8.18") | 17.3 mm (0.68") | 171.5 mm (6.75") | 219.1 mm (8.63") | 136.5 mm (5.38") |
| 65 mm (2½") | 241.3 mm (9.50") | 17.3 mm (0.68") | 209.6 mm (8.25") | 231.8 mm (9.13") | 136.5 mm (5.38") |

Dimensional Data: SW Globe "T" Standard Bonnet Valves



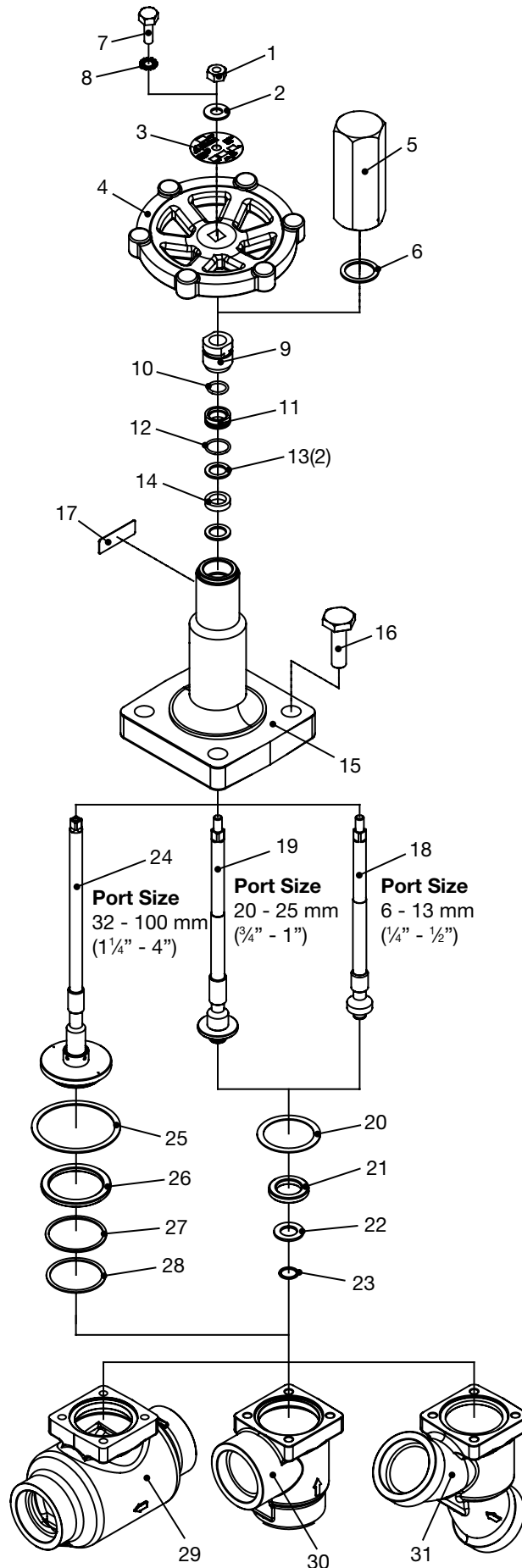
| Port Size | L | D | H | S | W |
|-------------------|---------------------|--------------------|----------------------|----------------------|---------------------|
| 6 mm (1/4") | 44.5 mm (1.75") | 10.4 mm (0.41") | 114.3 mm (4.50") | 142.9 mm (5.63") | 63.5 mm (2.50") |
| 10 mm (3/8") | 44.5 mm (1.75") | 10.4 mm (0.41") | 114.3 mm (4.50") | 142.9 mm (5.63") | 63.5 mm (2.50") |
| 13 mm (1/2") | 44.5 mm (1.75") | 10.4 mm (0.41") | 114.3 mm (4.50") | 142.9 mm (5.63") | 63.5 mm (2.50") |
| 20 mm (3/4") | 52.4 mm (2.06") | 13.6 mm (0.53") | 152.4 mm (6.00") | 190.5 mm (7.50") | 108.0 mm (4.25") |
| 25 mm (1") | 52.4 mm (2.06") | 12.7 mm (0.50") | 152.4 mm (6.00") | 190.5 mm (7.50") | 108.0 mm (4.25") |
| 32 mm (1 1/4") | 67.6 mm (2.66") | 14.3 mm (0.56") | 165.1 mm (6.50") | 206.4 mm (8.13") | 136.5 mm (5.38") |
| 40 mm (1 1/2") | 66.3 mm (2.61") | 14.3 mm (0.56") | 168.3 mm (6.23") | 209.6 mm (8.25") | 136.5 mm (5.38") |
| 50 mm (2") | 78.1 mm (3.08") | 17.3 mm (0.68") | 171.5 mm (6.75") | 219.1 mm (8.63") | 136.5 mm (5.38") |
| 65 mm (2 1/2") | 92.1 mm (3.63") | 17.3 mm (0.68") | 209.6 mm (8.25") | 231.8 mm (9.13") | 136.5 mm (5.38") |
| 75 mm (3") | 92.7 mm (3.65") | 17.3 mm (0.68") | 257.2 mm (10.13") | 295.3 mm (11.63") | 158.8 mm (6.25") |
| 100 mm (4") | 112.0 mm (4.41") | 20.8 mm (0.82") | 273.1 mm (10.75") | 308.0 mm (12.13") | 158.8 mm (6.25") |

| Port Size | L | D | H | S | W |
|-------------------|----------------------|--------------------|----------------------|----------------------|---------------------|
| 32 mm (1 1/4") | 158.8 mm (6.25") | 14.3 mm (0.56") | 165.1 mm (6.50") | 196.9 mm (7.75") | 136.5 mm (5.38") |
| 40 mm (1 1/2") | 158.8 mm (6.25") | 14.3 mm (0.56") | 165.1 mm (6.50") | 196.9 mm (7.75") | 136.5 mm (5.38") |
| 50 mm (2") | 202.4 mm (7.97") | 17.3 mm (0.68") | 174.6 mm (6.88") | 209.6 mm (8.25") | 136.5 mm (5.38") |
| 65 mm (2 1/2") | 228.6 mm (9.00") | 17.3 mm (0.68") | 215.9 mm (8.50") | 231.8 mm (9.13") | 136.5 mm (5.38") |
| 75 mm (3") | 285.8 mm (11.25") | 17.3 mm (0.68") | 257.2 mm (10.13") | 285.8 mm (11.25") | 158.8 mm (6.25") |
| 100 mm (4") | 339.7 mm (13.38") | 20.8 mm (0.82") | 279.4 mm (11.00") | 304.8 mm (12.00") | 158.8 mm (6.25") |

Dimensional Data: SW Globe "Y" Standard Bonnet Valves

Dimensional Data: SW Angle Standard Bonnet Valves

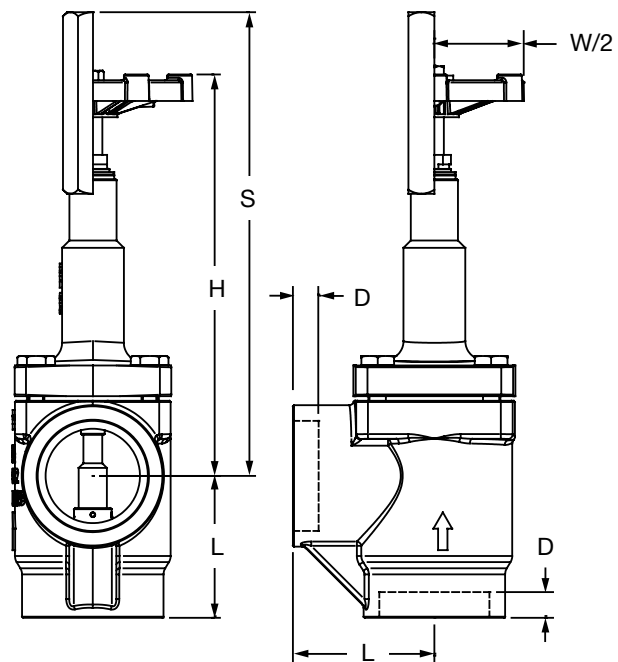
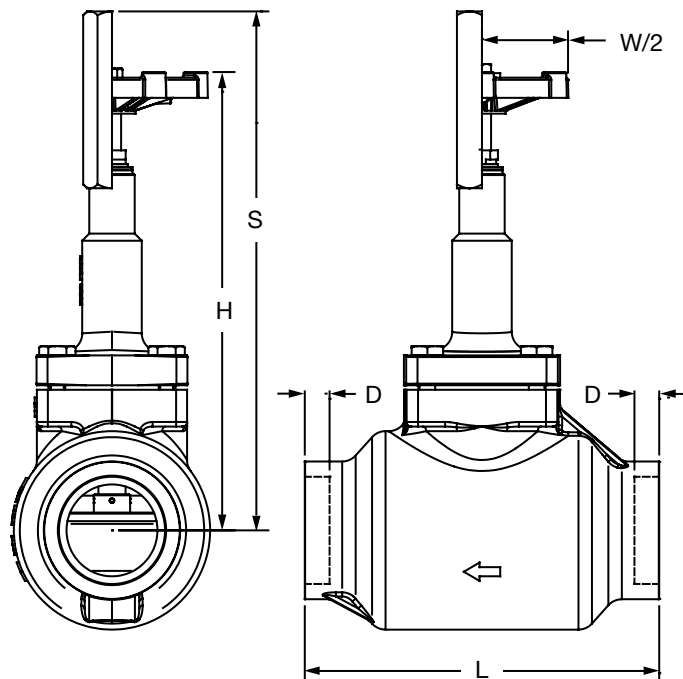
| Socket Weld (SW) Extended Bonnet Parts List | | | |
|---|---------------------------------|-----------------------|-----|
| No. | Description | Material | Qty |
| 1 | 1/4"-20 Hex Jam Nut | Nylon, S.S. | 1 |
| 2 | Washer, Flat | S.S. | 1 |
| 3 | Name Plate | Aluminum | 1 |
| 4 | Handwheel | Ductile Iron | 1 |
| 5 | Seal Cap | Aluminum | 1 |
| 6 | Gasket, Seal Cap | Nylon | 1 |
| 7 | Screw, Hex 1/4" - 20 | S.S. | 1 |
| 8 | Washer, Ext - Star 1/4" ID | S.S. | 1 |
| 9 | Nut, Packing | 303 S.S. | 1 |
| 10 | O-ring | Neoprene | 1 |
| 11 | Gland, O-ring | Carbon, PTFE | 1 |
| 12 | O-ring | Neoprene | 1 |
| 13 | Washer, Packing | Teflon, Carbon | 2 |
| 14 | Packing, Stem | Crane Foil | 1 |
| 15 | Bonnet | A105 | 1 |
| Bolts: | | | |
| 6 - 25mm (1/4" - 3/4") | | | |
| 5/16" - 18 x 1" | | | |
| 32mm (1 1/4") | | | |
| 3/8" - 16 x 1" | | | |
| 16 | 40 - 50mm (1 1/2" - 2") | 304 S.S. | 4 |
| 7/8" - 14 x 1 1/4" | | | |
| 65 - 75mm (2 1/2" - 3") | | | |
| 1/2" - 13 x 1 1/2" | | | |
| 100 mm (4") | | | |
| 5/8" - 11 x 1 1/2" | | | |
| 17 | Sticker, Warning | - | 1 |
| 18 | Stem, 6 - 13mm (1/4" - 1/2") | 303 S.S. | 1 |
| 19 | Stem, 20 - 25mm (3/4" - 1") | 303 S.S. | 1 |
| 20 | Gasket | Garlock 2930 | 1 |
| 21 | Seat Disc | Ebolon, Carbon | 1 |
| 22 | Washer, Flat | Zinc | 1 |
| 23 | Ring, Retaining | Carbon | 1 |
| 24 | Stem, 32 - 100 mm (1 1/4" - 4") | 303 S.S. | 1 |
| 25 | Gasket | Garlock 2930 | 1 |
| 26 | Seat Disc | Carbon - Ebolon 48 | 1 |
| 27 | Washer, Retaining | Zinc - Chromate | 1 |
| 28 | Ring, Retaining | Carbon - Temper Steel | 1 |
| 29 | Globe-T Body | LCB ASTM A352 | 1 |
| 30 | Angle Body | LCB ASTM A352 | 1 |
| 31 | Globe-Y Body | LCB ASTM A352 | 1 |



Explosion View: Socket Weld (SW) Extended Bonnet Valves

| Socket Weld (SW) Extended Bonnet Replacement Part Kits | | | | | | | | | | | | |
|--|----------------------|---------------------------|----------------------------|----------------------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------|-----------------------------|--------------|---------------|
| Item | Kit Description | Port Size | | | | | | | | | | |
| | | 6 mm ($\frac{1}{4}$ " | 10 mm ($\frac{3}{8}$ " | 13 mm ($\frac{1}{2}$ " | 20 mm ($\frac{3}{4}$ " | 25 mm (1" | 32 mm ($1\frac{1}{4}$ " | 40 mm ($1\frac{1}{2}$ " | 50 mm (2" | 65 mm ($2\frac{1}{2}$ " | 75 mm (3" | 100 mm (4" |
| 1, 2, 4 | Hand Wheel | 204267 | 204267 | 204267 | 204268 | 204268 | — | — | — | — | — | — |
| 2, 4, 7, 8 | Hand Wheel | — | — | — | — | — | 204269 | 204269 | 204269 | 204269 | 204270 | 204270 |
| 5, 6 | Seal Cap | 204273 | 204273 | 204273 | 204273 | 204273 | 204274 | 204274 | 204274 | 204274 | 204275 | 204275 |
| 9 - 14 | Packing | 204471 | 204471 | 204471 | 204471 | 204471 | 204472 | 204472 | 204472 | 204472 | 204473 | 204473 |
| 25 - 28 | Disc | — | — | — | — | — | 204322 | 204322 | 204323 | 204324 | 204325 | — |
| 9 - 14, 25 - 28 | Disc | — | — | — | — | — | — | — | — | — | — | 204304 |
| 9 - 18, 20 - 23 | Bonnet Assembly | 205975 | 205975 | 205975 | — | — | — | — | — | — | — | — |
| 9 - 17, 19 - 23 | Bonnet Assembly | — | — | — | 205976 | 205976 | — | — | — | — | — | — |
| 9 - 17, 24 - 28 | Bonnet Assembly | — | — | — | — | — | 205977 | 205977 *205978 | 205978 | 205979 | 205980 | 205981 |
| 20(6) | Gasket Pkg, Bonnet | 204281 | 204281 | 204281 | 204282 | 204282 | — | — | — | — | — | — |
| 25(6) | Gasket Pkg, Bonnet | — | — | — | — | — | 204283 | 204283 | 204284 | 204285 | 204286 | 204287 |
| 6(6) | Gasket Pkg, Seal Cap | 204292 | 204292 | 204292 | 204292 | 204292 | 204292 | 204292 | 204292 | 204292 | 204293 | 204293 |

* $1\frac{1}{2}$ " Globe "T" valve body only

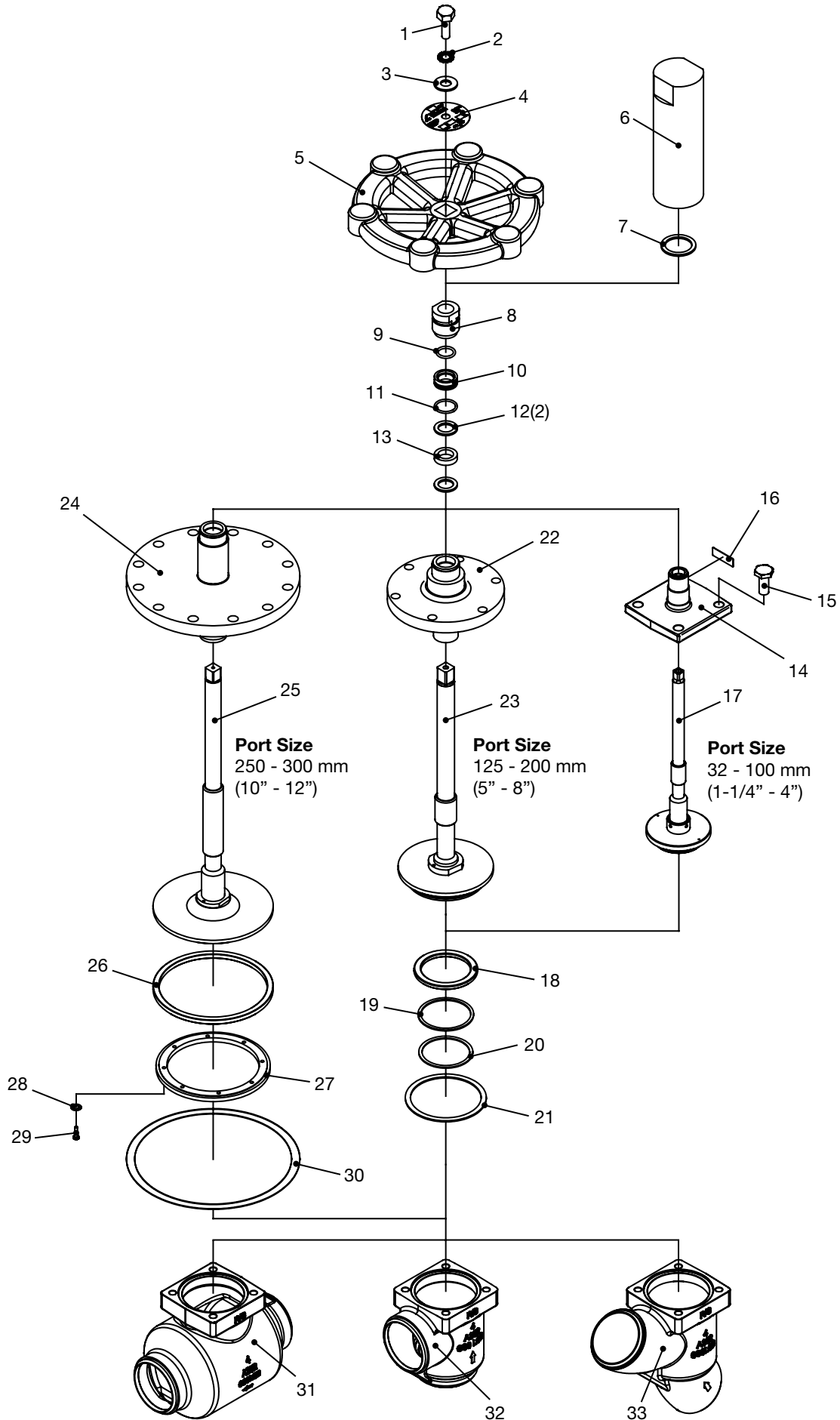


| Port Size | L | D | H | S | W |
|----------------|---------------------|--------------------|---------------------|----------------------|---------------------|
| 13 mm (½") | 93.7 mm (3.69") | 10.4 mm (0.41") | 142.9 mm (5.63") | 184.2 mm (7.25") | 63.5 mm (2.50") |
| 20 mm (¾") | 99.5 mm (3.92") | 12.7 mm (0.50") | 190.5 mm (7.50") | 215.9 mm (8.50") | 108.0 mm (4.25") |
| 25 mm (1") | 99.5 mm (3.92") | 12.7 mm (0.50") | 190.5 mm (7.50") | 215.9 mm (8.50") | 108.0 mm (4.25") |
| 32 mm (1¼") | 174.8 mm (6.88") | 14.3 mm (0.56") | 206.4 mm (8.13") | 257.2 mm (10.13") | 136.5 mm (5.38") |
| 40 mm (1½") | 207.8 mm (8.18") | 14.3 mm (0.56") | 209.6 mm (8.25") | 292.1 mm (11.50") | 136.5 mm (5.38") |
| 50 mm (2") | 207.8 mm (8.18") | 17.3 mm (0.68") | 219.1 mm (8.63") | 292.1 mm (11.50") | 136.5 mm (5.38") |
| 65 mm (2½") | 241.3 mm (9.50") | 17.3 mm (0.68") | 231.8 mm (9.13") | 311.2 mm (12.25") | 136.5 mm (5.38") |

Dimensional Data: SW Globe "T" Extended Bonnet Valves

| Port Size | L | D | H | S | W |
|----------------|---------------------|---------------------|----------------------|----------------------|---------------------|
| 13 mm (½") | 44.5 mm (1.75") | 44.5 mm (1.75") | 142.9 mm (5.63") | 184.2 mm (7.25") | 63.5 mm (2.50") |
| 20 mm (¾") | 52.4 mm (2.06") | 52.4 mm (2.06") | 190.5 mm (7.50") | 215.9 mm (8.50") | 108.0 mm (4.25") |
| 25 mm (1") | 52.4 mm (2.06") | 52.4 mm (2.06") | 190.5 mm (7.50") | 215.9 mm (8.50") | 108.0 mm (4.25") |
| 32 mm (1¼") | 67.6 mm (2.66") | 67.6 mm (2.66") | 206.4 mm (8.13") | 228.6 mm (9.00") | 136.5 mm (5.38") |
| 40 mm (1½") | 66.3 mm (2.61") | 66.3 mm (2.61") | 209.6 mm (8.25") | 244.5 mm (9.63") | 136.5 mm (5.38") |
| 50 mm (2") | 78.1 mm (3.08") | 78.1 mm (3.08") | 219.1 mm (8.63") | 254.0 mm (10.00") | 136.5 mm (5.38") |
| 65 mm (2½") | 92.1 mm (3.63") | 92.1 mm (3.63") | 231.8 mm (9.13") | 266.7 mm (10.50") | 136.5 mm (5.38") |
| 75 mm (3") | 92.7 mm (3.65") | 92.7 mm (3.65") | 295.3 mm (11.63") | 282.6 mm (11.13") | 158.8 mm (6.25") |
| 100 mm (4") | 112.0 mm (4.41") | 112.0 mm (4.41") | 308.0 mm (12.13") | 327.0 mm (12.88") | 158.8 mm (6.25") |

Dimensional Data: SW Angle Extended Bonnet Valves



Explosion View: Weld Neck (WN) Standard Bonnet Valves

| Weld Neck (WN) Standard Bonnet Replacement Part Kits | | | | | | | |
|--|------------------|----------------|--------------------|---------------|----------------|---------------|----------------|
| Item | Kit Description | Port Size | | | | | |
| | | 32 mm (1¼") | 40 mm (1½") | 50 mm (2") | 65 mm (2½") | 75 mm (3") | 100 mm (4") |
| 1, 2, 3, 5 | Hand Wheel | 204269 | 204269 | 204269 | 204269 | 204270 | 204270 |
| 6, 7 | Cap, Seal | 204274 | 204274 | 204274 | 204274 | 204275 | 204275 |
| 8 - 12 | Packing | 204472 | 204472 | 204472 | 204472 | 204473 | 204473 |
| 8 -13, 17 - 21 | Plug Stem | 204300 | 204300 | 204301 | 204302 | 204303 | 204304 |
| 18 - 21 | Disc | 204322 | 204322 | 204323 | 204324 | 204325 | — |
| 8 -13, 17 - 21 | Disc | — | — | — | — | — | 204304 |
| 8 - 17 | Bonnet Assembly | 205687 | 205687 * 205688 | 205688 | 205689 | 205690 | 205691 |
| 21(6) | Gasket, Bonnet | 204283 | 204283 | 204284 | 204285 | 204286 | 204287 |
| 7(6) | Gasket, Seal Cap | 204292 | 204292 | 204292 | 204292 | 204293 | 204293 |

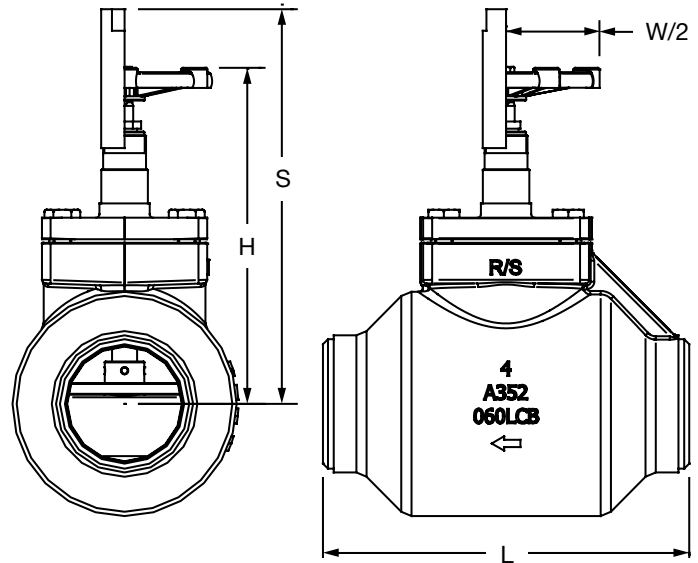
* 1½" Globe "T" valve body only

| Weld Neck (WN) Standard Bonnet Replacement Part Kits | | | | | | |
|--|------------------|----------------|----------------|----------------|-----------------|-----------------|
| Item | Kit Description | Port Size | | | | |
| | | 125 mm (5") | 150 mm (6") | 200 mm (8") | 250 mm (10") | 300 mm (12") |
| 1, 2, 4 | Hand Wheel Kit | 204271 | 204271 | 204271 | 207232 | 207232 |
| 6, 7 | Cap, Seal | 204633 | 204633 | 204634 | 204635 | — |
| 8 - 12 | Packing | 204474 | 204474 | 204474 | 204474 | 204474 |
| 18 - 20, 23 | Plug Stem | * 204305 | * 204306 | * 204307 | — | — |
| 25 - 29 | Plug Stem | — | — | — | 208481 | 208482 |
| 18 - 21 | Disc | 204327 | 204328 | 204329 | — | — |
| 26 - 30 | Disc | — | — | — | 204330 | 205033 |
| 8 - 13, 18 - 21, 22 - 23 | Bonnet Assembly | 205692 | 205693 | 205694 | — | — |
| 8 - 13, 24 - 30 | Bonnet Assembly | — | — | — | 208483 | 208484 |
| 21(2) | Gasket, Bonnet | 204288 | 204289 | 204290 | — | — |
| 30(2) | Gasket, Bonnet | — | — | — | 204291 | 209171 |
| 7(6) | Gasket, Seal Cap | 204295 | 204295 | 204295 | 204296 | 204296 |

* Plug stem are for valve 2006 and present. For valves older than 2006 purchase a complete bonnet assembly kit

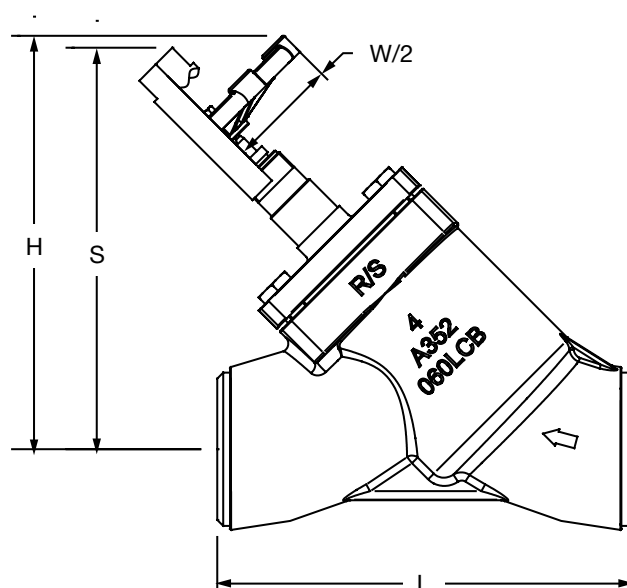
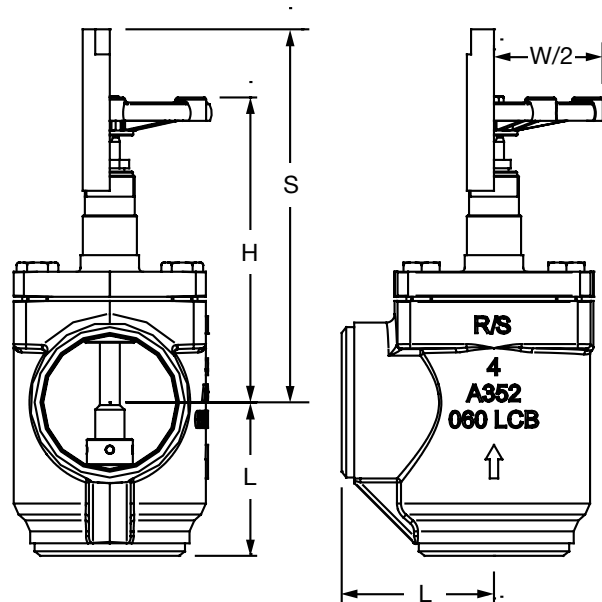
Weld Neck (WN) Standard Bonnet Parts List

| No. | Description | Material | Qty |
|-----|--|-------------------|-----|
| 1 | Screw, Hex 1/4" - 20 | S.S. | 1 |
| 2 | Washer, Ext - Star 1/4" ID | S.S. | 1 |
| 3 | Washer, Flat | S.S. | 1 |
| 4 | Name Plate | Aluminum | 1 |
| 5 | Handwheel | Ductile Iron | 1 |
| 6 | Seal Cap | Aluminum 2011-T3 | 1 |
| 7 | Gasket, Seal Cap | Nylon | 1 |
| 8 | Nut, Packing | 303 S.S. | 1 |
| 9 | O-ring | Neoprene | 1 |
| 10 | Gland, O-ring | Carbon, PTFE | 1 |
| 11 | O-ring | Neoprene | 1 |
| 12 | Washer, Packing | Teflon, Carbon | 2 |
| 13 | Packing, Stem | Crane Foil | 1 |
| 14 | Bonnet: 32 - 100 mm (1 1/4" - 4") | A105 | 1 |
| | Bolts: | | |
| | 32 mm (1 1/4") 5/8"-16 x 1" | | |
| | 40 - 50 mm (1 1/2" - 2") 7/8" - 14 x 1 1/4" | | 4 |
| | 65 - 75 mm (2 1/2" - 3") 1/2" - 13 x 1 1/2" | | |
| 15 | 100 mm (4") 5/8" - 11 x 1 1/2" | 304 S.S. | |
| | 125 - 150 mm (5" - 6") 5/8" - 11 x 2" | | 6 |
| | 200 mm (8") 5/8" - 11 x 2" | | 8 |
| | 250 - 300 mm (10" - 12") 7/8" - 9 x 2 3/4" | | 12 |
| 16 | Sticker, Warning | — | 1 |
| 17 | Stem: 32 - 100 mm (1 1/4" - 4") | 303 S.S. | 1 |
| 18 | Seat Disc | Ebolon 48, Carbon | 1 |
| 19 | Washer, Retaining | Zinc - Chromate | 1 |
| 20 | Ring, Retaining | Carbon - Steel | 1 |
| 21 | Gasket | Garlock 2930 | 1 |
| 22 | Bonnet: 125 - 200 mm (5" - 8") | A105 | 1 |
| 23 | Stem: 125 - 200 mm (5" - 8") | 303 S.S. | 1 |
| 24 | Bonnet: 250 - 300 mm (10" - 12") | A105 | 1 |
| 25 | Stem: 250 - 300 mm (10" - 12") | 303 S.S. | 1 |
| 26 | Seat Disc | Carbon PTFE | 1 |
| 27 | Ring, Retaining | A36 | 1 |
| 28 | Washer, Int. Star 0.25 ID | S.S. | 1 |
| 29 | Screw, 1/4"-20 x 1" | S.S. | 8 |
| 30 | Gasket | Garlock 2930 | 1 |
| 31 | Globe-T Body | LCB ASTM A352 | 1 |
| 32 | Angle Body | LCB ASTM A352 | 1 |
| 33 | Globe-Y Body | LCB ASTM A352 | 1 |



| Port Size | L | H | S | W |
|----------------|----------------------|----------------------|----------------------|---------------------|
| 75 mm (3") | 282.6 mm (11.13") | 308.0 mm (12.13") | 346.1 mm (13.63") | 158.8 mm (6.25") |
| 100 mm (4") | 304.8 mm (12.00") | 390.5 mm (15.38") | 425.5 mm (16.75") | 158.8 mm (6.25") |

Dimensional Data: Weld Neck (WN) Globe "T" Standard Bonnet Valves



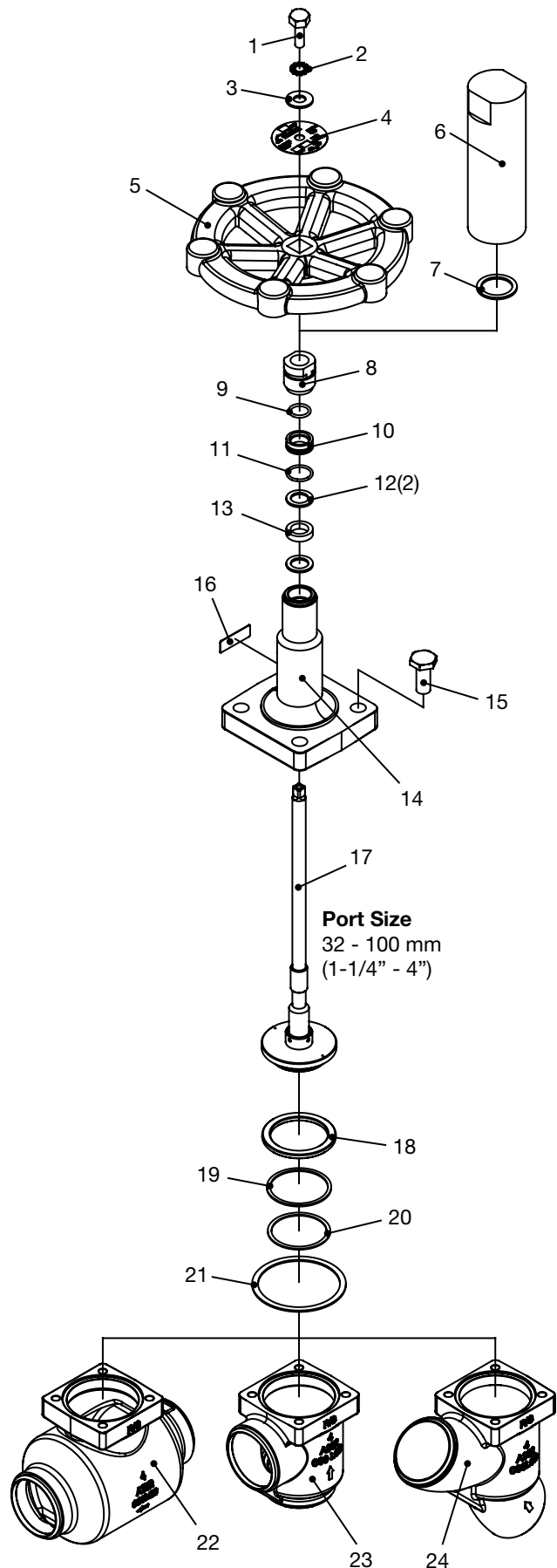
| Port Size | L | H | S | W |
|-----------------|----------------------|----------------------|----------------------|----------------------|
| 32 mm (1¼") | 67.6 mm (2.66") | 165.1 mm (6.50") | 206.4 mm (8.13") | 136.5 mm (5.38") |
| 40 mm (1½") | 66.3 mm (2.61") | 168.3 mm (6.23") | 209.6 mm (8.25") | 136.5 mm (5.38") |
| 50 mm (2") | 77.1 mm (3.04") | 171.5 mm (6.75") | 219.1 mm (8.63") | 136.5 mm (5.38") |
| 65 mm (2½") | 92.1 mm (3.63") | 209.6 mm (8.25") | 231.8 mm (9.13") | 136.5 mm (5.38") |
| 75 mm (3") | 91.4 mm (3.60") | 257.2 mm (10.13") | 295.3 mm (11.63") | 158.8 mm (6.25") |
| 100 mm (4") | 112.0 mm (4.41") | 273.1 mm (10.75") | 308.0 mm (12.13") | 158.8 mm (6.25") |
| 125 mm (5") | 154.0 mm (6.06") | 301.6 mm (11.88") | 400.1 mm (15.75") | 304.8 mm (12.00") |
| 150 mm (6") | 162.6 mm (6.40") | 384.2 mm (15.13") | 482.6 mm (19.00") | 304.8 mm (12.00") |
| 200 mm (8") | 200.0 mm (7.88") | 447.7 mm (17.63") | 546.1 mm (21.50") | 304.8 mm (12.00") |
| 250 mm (10") | 247.7 mm (9.75") | 117.5 mm (4.63") | 682.6 mm (26.88") | 412.8 mm (16.25") |
| 300 mm (12") | 266.7 mm (10.50") | 736.6 mm (29.00") | 793.8 mm (31.25") | 412.8 mm (16.25") |

Dimensional Data: Weld Neck (WN) Angle Standard Bonnet Valves

| Port Size | L | H | S | W |
|-----------------|-----------------------|----------------------|----------------------|----------------------|
| 32 mm (1¼") | 177.8 mm (7.00") | 165.1 mm (6.50") | 196.9 mm (7.75") | 136.5 mm (5.38") |
| 40 mm (1½") | 193.8 mm (7.63") | 165.1 mm (6.50") | 196.9 mm (7.75") | 136.5 mm (5.38") |
| 50 mm (2") | 206.2 mm (8.12") | 174.6 mm (6.88") | 209.6 mm (8.25") | 136.5 mm (5.38") |
| 65 mm (2½") | 247.7 mm (9.75") | 215.9 mm (8.50") | 231.8 mm (9.13") | 136.5 mm (5.38") |
| 75 mm (3") | 285.8 mm (11.25") | 257.2 mm (10.13") | 285.8 mm (11.25") | 158.8 mm (6.25") |
| 100 mm (4") | 300.1 mm (11.82") | 279.4 mm (11.00") | 304.8 mm (12.00") | 158.8 mm (6.25") |
| 125 mm (5") | 489.0 mm (19.25") | 377.8 mm (14.88") | 447.7 mm (17.63") | 304.8 mm (12.00") |
| 150 mm (6") | 555.6 mm (21.88") | 457.2 mm (18.00") | 527.1 mm (20.75") | 304.8 mm (12.00") |
| 200 mm (8") | 717.6 mm (28.25") | 546.1 mm (21.50") | 616.0 mm (24.25") | 304.8 mm (12.00") |
| 250 mm (10") | 892.2 mm (35.13") | 730.3 mm (28.75") | 771.5 mm (30.38") | 412.8 mm (16.25") |
| 300 mm (12") | 1027.4 mm (40.45") | 844.6 mm (33.25") | 885.8 mm (34.88") | 412.8 mm (16.25") |

Dimensional Data: Weld Neck (WN) Globe "Y" Standard Bonnet Valves

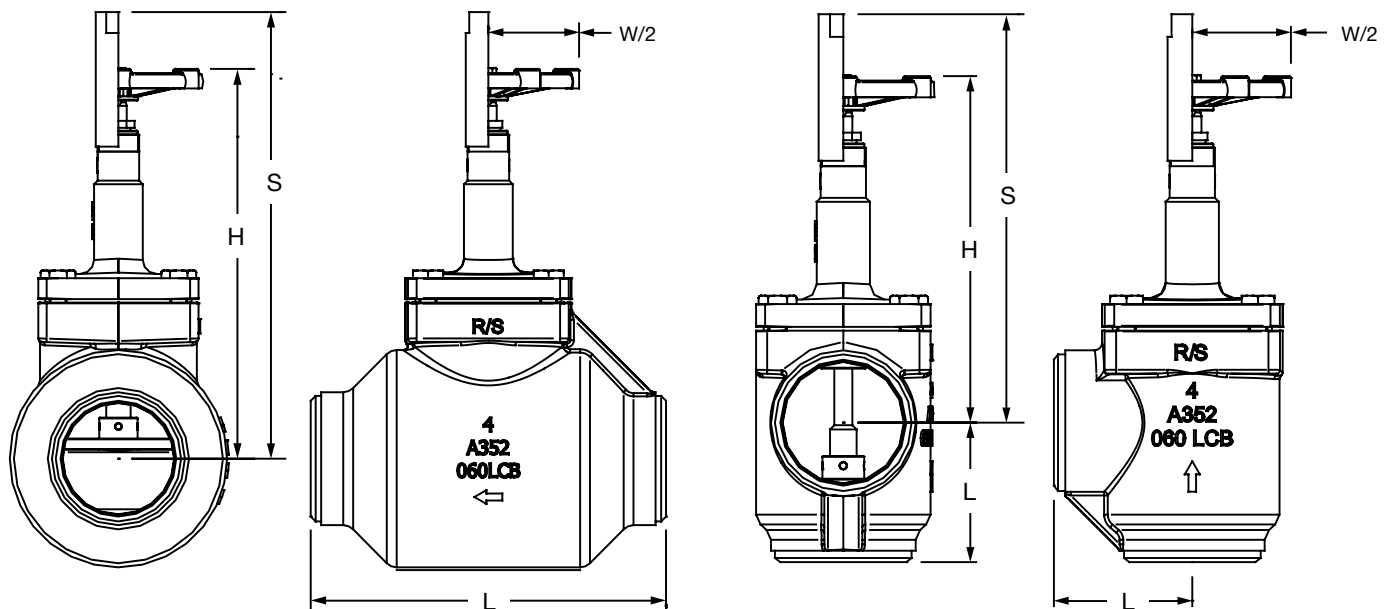
| Weld Neck (WN) Extended Bonnet Parts List | | | |
|---|-----------------------------------|-------------------|-----|
| No. | Description | Material | Qty |
| 1 | Screw, Hex 1/4" - 20 | S.S. | 1 |
| 2 | Washer, Ext - Star 1/4" ID | S.S. | 1 |
| 3 | Washer, Flat | S.S. | 1 |
| 4 | Name Plate | Aluminum | 1 |
| 5 | Handwheel | Ductile Iron | 1 |
| 6 | Seal Cap | Aluminum 2011-T3 | 1 |
| 7 | Gasket, Seal Cap | Nylon | 1 |
| 8 | Nut, Packing | 303 S.S. | 1 |
| 9 | O-ring | Neoprene | 1 |
| 10 | Gland, O-ring | Carbon, PTFE | 1 |
| 11 | O-ring | Neoprene | 1 |
| 12 | Washer, Packing | Teflon, Carbon | 2 |
| 13 | Packing, Stem | Crane Foil | 1 |
| 14 | Bonnet: 32 - 100 mm (1 1/4" - 4") | A105 | 1 |
| Bolts: | | | |
| 32 mm (1 1/4") | | | |
| 3/8" - 16 x 1" | | | |
| 40 - 50 mm (1 1/2" - 2") | | | |
| 15 | 7/8" - 14 x 1 1/4" | 304 S.S. | 4 |
| 65 - 75 mm (2-1/2" - 3") | | | |
| 1/2" - 13 x 1 1/2" | | | |
| 100 mm (4") | | | |
| 3/4" - 11 x 1 1/2" | | | |
| 16 | Sticker, Warning | - | 1 |
| 17 | Stem: 32 - 100 mm (1 1/4" - 4") | 303 S.S. | 1 |
| 18 | Seat Disc | Ebolon 48, Carbon | 1 |
| 19 | Washer, Retaining | Zinc - Chromate | 1 |
| 20 | Ring, Retaining | Carbon - Steel | 1 |
| 21 | Gasket | Garlock 2930 | 1 |
| 22 | Globe-T Body | LCB ASTM A352 | 1 |
| 23 | Angle Body | LCB ASTM A352 | 1 |
| 24 | Globe-Y Body | LCB ASTM A352 | 1 |



Explosion View: Weld Neck (WN) Extended Bonnet Valves

| Weld Neck (WN) Extended Bonnet Replacement Part Kits | | | | | | | |
|--|------------------|----------------|--------------------|---------------|----------------|---------------|----------------|
| Item | Kit Description | Port Size | | | | | |
| | | 32 mm (1¼") | 40 mm (1½") | 50 mm (2") | 65 mm (2½") | 75 mm (3") | 100 mm (4") |
| 1, 2, 3, 5 | Hand Wheel | 204269 | 204269 | 204269 | 204269 | 204270 | 204270 |
| 6, 7 | Cap, Seal | 204274 | 204274 | 204274 | 204274 | 204275 | 204275 |
| 8 - 13 | Packing | 204472 | 204472 | 204472 | 204472 | 204473 | 204473 |
| 18 - 21 | Disc | 204322 | 204322 | 204323 | 204324 | 204325 | — |
| 8 - 13, 17 - 21 | Disc | — | — | — | — | — | 204304 |
| 8 - 21 | Bonnet Assembly | 205977 | 205977 * 205678 | 205978 | 205979 | 205980 | 205981 |
| 22 | Gasket, Bonnet | 204283 | 204283 | 204284 | 204285 | 204286 | 204287 |
| 7 | Gasket, Seal Cap | 204292 | 204292 | 204292 | 204292 | 204293 | 204293 |

* 1½" Globe "T" valve body only



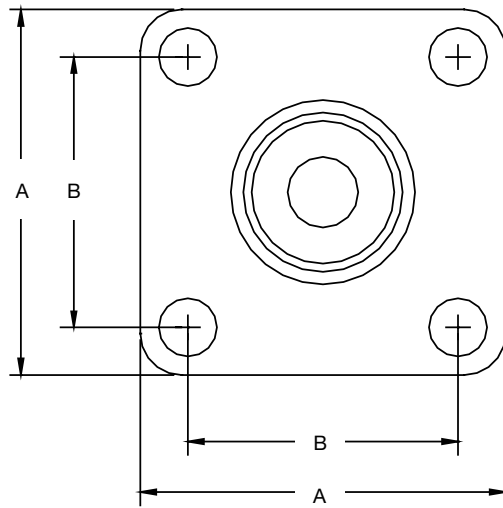
| Port Size | L | H | S | W |
|----------------|-----------------------|----------------------|----------------------|---------------------|
| 75 mm (3") | 282.6 mm (11.125") | 336.6 mm (13.25") | 346.1 mm (13.63") | 158.8 mm (6.25") |
| 100 mm (4") | 323.9 mm (12.75") | 387.4 mm (15.25") | 425.5 mm (16.75") | 158.8 mm (6.25") |

Dimensional Data: Weld Neck (WN) Globe "T" Extended Bonnet Valves

| Port Size | L | H | S | W |
|----------------|---------------------|----------------------|----------------------|---------------------|
| 32 mm (1¼") | 67.6 mm (2.66") | 206.4 mm (8.13") | 228.6 mm (9.00") | 136.5 mm (5.38") |
| 40 mm (1½") | 66.3 mm (2.61") | 209.6 mm (8.25") | 244.5 mm (9.63") | 136.5 mm (5.38") |
| 50 mm (2") | 78.1 mm (3.08") | 219.1 mm (8.63") | 254.0 mm (10.00") | 136.5 mm (5.38") |
| 65 mm (2½") | 92.1 mm (3.63") | 231.8 mm (9.13") | 266.7 mm (10.50") | 136.5 mm (5.38") |
| 75 mm (3") | 92.7 mm (3.65") | 295.3 mm (11.63") | 282.6 mm (11.13") | 158.8 mm (6.25") |
| 100 mm (4") | 112.0 mm (4.41") | 308.0 mm (12.13") | 327.0 mm (12.88") | 158.8 mm (6.25") |

Dimensional Data: Weld Neck (WN) Angle Extended Bonnet Valves

| Hand Shut-Off Bonnet Hole Dimensions | | |
|--------------------------------------|------------------|------------------|
| Port Size | A | B |
| 6 mm (¼") | | |
| 10 mm (⅜") | 44.5 mm (1.75") | 31.5 mm (1.24") |
| 13 mm (½") | | |
| 20 mm (¾") | 56.9 mm (2.24") | 42.7 mm (1.68") |
| 25 mm (1") | | |
| 32 mm (1¼") | 69.9 mm (2.75") | 51.6 mm (2.03") |
| 40 mm (1½") | | |
| 50 mm (2") | 88.9 mm (3.50") | 65.0 mm (2.56") |
| 65 mm (2½") | 104.9 mm (4.13") | 76.2 mm (3.00") |
| 75 mm (3") | 120.7 mm (4.75") | 91.9 mm (3.62") |
| 100 mm (4") | 146.1 mm (5.75") | 110.0 mm (4.33") |



| Handwheel Kit for Hubbel Valves | | | | |
|---------------------------------|----------------|----------------|--------|----------------|
| Hubbell Valve | O.D. Reference | R/S Valve Size | Kit | Stem Dimension |
| 0080025900 | 2½" | ¼" to ½" | 204267 | 5/16" Square |
| 0080100900 | 3½" | ¾" to 1" | 204268 | 5/16" Square |
| 0080150900 | 4¾" | 1¼" to 2½" | 204269 | 3/8" Square |
| 0080300900 | 6" | 3" to 4" | 204270 | 1/2" Square |
| 0080500900 | 12" | 5" to 8" | 204271 | 3/4" Square |
| 0081000900 | 16 | 10" | 204272 | 3/4" Square |
| 0080200900 | 4-3/4" | 1¼" to 2½" | 204475 | 3/8" Square |

Safe Operation (See Bulletin RSBHV)

People doing any work on a refrigeration system must be qualified and completely familiar with the system and the Refrigerating Specialties Division valves involved, or all other precautions will be meaningless. This includes reading and understanding pertinent Refrigerating Specialties Division Product Bulletins and Safety Bulletin RSB prior to installation or servicing work.

Where cold refrigerant liquid lines are used, it is necessary that certain precautions be taken to avoid damage which could result from liquid expansion. Temperature increase in a piping section full of solid liquid will cause high pressure due to the expanding liquid which can possibly rupture a gasket, pipe or valve. All hand valves isolating such sections should be marked, warning against accidental closing, and must not be closed until the liquid is removed. Check valves must never be installed upstream of solenoid valves, or regulators with electric shut-off, nor should hand valves upstream of solenoid valves or downstream of check valves be closed until the liquid has been removed.

It is advisable to properly install relief devices in any section where liquid expansion could take place. Avoid all piping or control arrangements which might produce thermal or pressure shock.

For the protection of people and products, all refrigerant must be removed from the section to be worked on before a valve, strainer, or other device is opened or removed. Flanges with ODS connections are not suitable for ammonia service.

Warranty

All Refrigerating Specialties products are under warranty against defects in workmanship and materials for a period of one year from date of shipment from factory. This warranty is in force only when products are properly installed, field assembled, maintained, and operated in use and service as specifically stated in Refrigerating Specialties Catalogs or Bulletins for normal refrigeration applications, unless otherwise approved in writing by the Refrigerating Specialties Division. Defective products, or parts thereof returned to the

factory with transportation charges prepaid and found to be defective by factory inspection, will be replaced or repaired at Refrigerating Specialties option, free of charge, F.O.B. factory. Warranty does not cover products which have been altered, or repaired in the field, damaged in transit, or have suffered accidents, misuse, or abuse. Products disabled by dirt or other foreign substances will not be considered defective.

The express warranty set forth above constitutes the only warranty applicable to Refrigerating Specialties products, and is in lieu of all other warranties, expressed or implied, written including any warranty of merchantability, or fitness for a particular purpose. In no event is Refrigerating Specialties responsible for any consequential damages of any nature whatsoever. No employee, agent, dealer or other person is authorized to give any warranties on behalf of Refrigerating Specialties, nor to assume, for Refrigerating Specialties, any other liability in connection with any of its products.

