

**McSYS**®

## Forged Steel Valves



McSYS Co., Ltd

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MCSYS CO.,LTD

## FORGED STEEL VALVE SERIES

### FORGED STEEL VALVE SERIES





**INTRODUCTION**

With over 20 years of experience in the power plant and semiconductor sectors, McSYS specializes in high-quality engineering and design solutions for mechanical and fluid control systems, boasting strong expertise in high-pressure/high-temperature, wastewater treatment, toxic gas handling, and other key systems. Its valve offerings cover diverse needs—including Mega valves for rapid actuation, Teflon-lined valves for harsh conditions, and conventional products like ball valves and butterfly valves, with a focus on forged steel ball valves, forged steel gate valves, forged steel globe valves, and forged steel check valves—alongside flow control accessories such as pneumatic actuators. It serves industries like oil and gas, power generation, chemicals, and nuclear power, while collaborating with leading firms to drive product innovation.

**OUR PHILOSOPHY & COMMITMENTS**

Guided by its motto “Be the Highest of Standards,” McSYS upholds innovation, top-tier performance, and reliability as core principles. It maintains a strict quality management system, with 100% factory-tested products that meet or exceed international standards, backed by warranty. Dedicated to global service, McSYS understands regional industry needs and strives for leadership in the fluid control sector, delivering trusted solutions to clients worldwide.

**FORGED STEEL GATE VALVE SERIES**

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## FORGED STEEL GATE VALVES SERIES



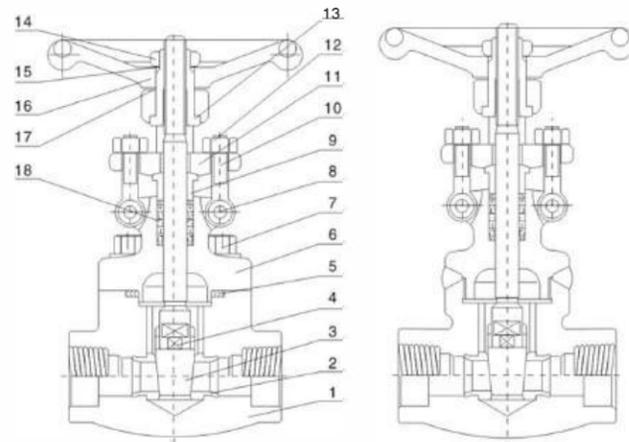
Female Threaded And Socket Welded Gate Valves



Overall forging flange gate valve



Pressure sealing gate valves



**Application standards**

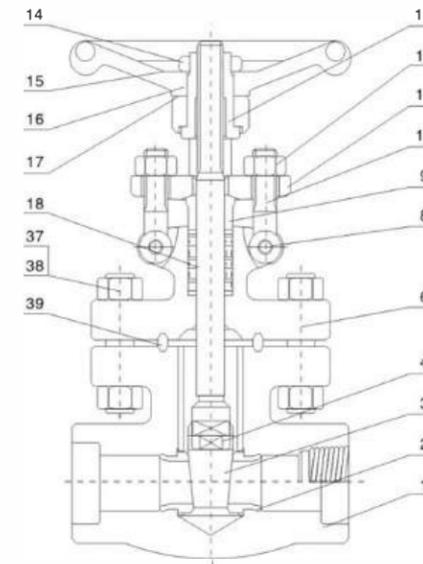
1. Design and manufacture conform to:  
API 602, BS5352, ANSI B16.34;
2. Connection ends conform to:  
1) Socket welded dimension conform to ANSI B16.11, JB/T1751  
2) Screw ends dimension conform to ANSI B1.20.1, JB/T7306  
3) Butt-welded conform to ANSI B16.25, JB/T12224  
4) Flanged ends conform to ANSI B16.5, JB79
3. Test and inspection conform to:  
API 598, GB/T13927, JB/T9092
4. Structure features:  
Bolted bonnet, outside screw and yoke  
Welded bonnet, outside screw and yoke  
Materials conform to ANSI/ASTM  
Main materials:  
5. A105; LF2; F5; F11; F22; 304(L); 316(L),  
6. F347; F321; F51; Monel; 20 Alloy.

**Carbon steel temperature–pressure rate**

CL150-285 PSI @ 100°F    CL300-740 PSI @ 100°F  
 CL 600-1480 PSI @ 100°F    CL 800-1975 PSI @ 100°F  
 CL 1500-3705 PSI @ 100°F

**Main part materials list**

| NO. | Part name          | A105/F6a                  | A105/F6aHFS               | LF2/304                   | F11/F6aHF                 | F304(L)/304(L)<br>F316(L)/316(L) | F51/F51                   |                           |
|-----|--------------------|---------------------------|---------------------------|---------------------------|---------------------------|----------------------------------|---------------------------|---------------------------|
| 1   | Body               | A105                      | A105                      | LF2                       | F11                       | F304(L)                          | F316(L)                   | F51                       |
| 2   | Seat               | 410                       | 410HF                     | 304                       | 410HF                     | 304(L)                           | 316(L)                    | F51                       |
| 3   | Wedge              | F6a                       | F6a                       | F304                      | F6aHF                     | F304(L)                          | F316(L)                   | F51                       |
| 4   | Stem               | 410                       | 410                       | 304                       | 410                       | 304(L)                           | 316(L)                    | F51                       |
| 5   | Gasket             | 304+<br>Flexible graphite        | 316+<br>Flexible graphite | 316+<br>Flexible graphite |
| 6   | Bonnet             | A105                      | A105                      | LF2                       | F11                       | F304(L)                          | F316(L)                   | F51                       |
| 7   | Bolt               | B7                        | B7                        | L7                        | B16                       | B8(M)                            | B8(M)                     | B8M                       |
| 8   | Pin                | 410                       | 410                       | 410                       | 410                       | 304                              | 304                       | 304                       |
| 9   | Gland              | 410                       | 410                       | 304                       | 410                       | 304                              | 316                       | F51                       |
| 10  | Gland eyebolt      | B7                        | B7                        | L7                        | B16                       | B8(M)                            | B8(M)                     | B8M                       |
| 11  | Gland flange       | A105                      | A105                      | LF2                       | F11                       | F304                             | F304                      | F304                      |
| 12  | Hex nut            | 2H                        | 2H                        | 2H                        | 2H                        | 8(M)                             | 8(M)                      | 8M                        |
| 13  | Stem nut           | 410                       | 410                       | 410                       | 410                       | 410                              | 410                       | 410                       |
| 14  | Locking nut        | 35                        | 35                        | 35                        | 35                        | 35                               | 35                        | 35                        |
| 15  | Nameplate          | AL                        | AL                        | AL                        | AL                        | AL                               | AL                        | AL                        |
| 16  | Handwheel          | A197                      | A197                      | A197                      | A197                      | A197                             | A197                      | A197                      |
| 17  | Lubricating gasket | 410                       | 410                       | 410                       | 410                       | 410                              | 410                       | 410                       |
| 18  | Packing            | Graphite                  | Graphite                  | Graphite                  | Graphite                  | Graphite                         | Graphite                  | Graphite                  |



**Application standards**

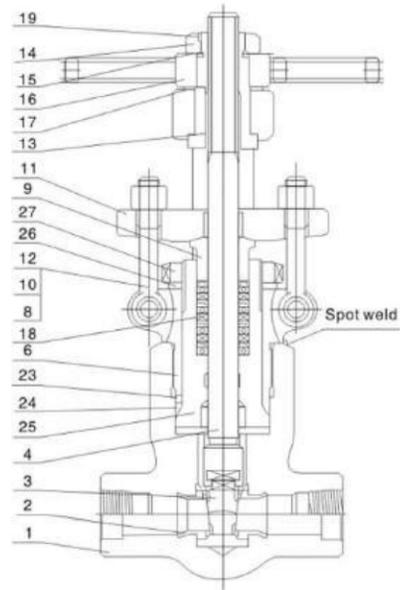
1. Design and manufacture conform to:  
API 602, BS5352, ANSI B16.34;
2. Connection ends conform to:  
1) Socket welded dimension conform to ANSI B16.11, JB/T1751  
2) Screw ends dimension conform to ANSI B1.20.1, JB/T7306  
3) Butt-welded conform to ANSI B16.25, JB/T12224  
4) Flanged ends conform to ANSI B16.5, JB79
3. Test and inspection conform to:  
API 598, GB/T13927, JB/T9092
4. Structure features:  
Bolted bonnet, outside screw and yoke  
Welded bonnet, outside screw and yoke  
Materials conform to ANSI/ASTM  
Main materials:  
5. A105; LF2; F5; F11; F22; 304(L); 316(L);  
6. F347; F321; F51; Monel; 20 Alloy.

**Carbon steel temperature–pressure rate**

CL150-285 PSI @ 100°F    CL300-740 PSI @ 100°F    CL 600-1480 PSI @ 100°F CL  
 800-1975 PSI @ 100°F    CL 1500-3705 PSI @ 100°F

**Main part materials list**

| NO. | Part name          | A105/F6a | A105/F6aHFS | LF2/304  | F11/F6aHF | L304(L)/304(L) | L316(L)/316(L) | F51/F51  |
|-----|--------------------|----------|-------------|----------|-----------|----------------|----------------|----------|
| 1   | Body               | A105     | A105        | LF2      | F11       | F304(L)        | F316(L)        | F51      |
| 2   | Seat               | 410      | 410HF       | 304      | 410HF     | 304(L)         | 316(L)         | F51      |
| 3   | Wedge              | F6a      | F6a         | F304     | F6aHF     | F304(L)        | F316(L)        | F51      |
| 4   | Stem               | 410      | 410         | 304      | 410       | 304(L)         | 316(L)         | F51      |
| 6   | Bonnet             | A105     | A105        | LF2      | F11       | F304(L)        | F316(L)        | F51      |
| 8   | Pin                | 410      | 410         | 410      | 410       | 304            | 304            | 304      |
| 9   | Gland              | 410      | 410         | 304      | 410       | 304            | 316            | F51      |
| 10  | Gland eyebolt      | B7       | B7          | L7       | B16       | B8(M)          | B8(M)          | B8M      |
| 11  | Gland flange       | A105     | A105        | LF2      | F11       | F304           | F304           | F304     |
| 12  | Hex nut            | 2H       | 2H          | 2H       | 2H        | 8(M)           | 8(M)           | 8M       |
| 13  | Stem nut           | 410      | 410         | 410      | 410       | 410            | 410            | 410      |
| 14  | Locking nut        | 35       | 35          | 35       | 35        | 35             | 35             | 35       |
| 15  | Nameplate          | AL       | AL          | AL       | AL        | AL             | AL             | AL       |
| 16  | Handwheel          | A197     | A197        | A197     | A197      | A197           | A197           | A197     |
| 17  | Lubricating gasket | 410      | 410         | 410      | 410       | 410            | 410            | 410      |
| 18  | Packing            | Graphite | Graphite    | Graphite | Graphite  | Graphite       | Graphite       | Graphite |
| 37  | Screwed stud       | B7       | B7          | L7       | B16       | B8(M)          | B8(M)          | B8(M)    |
| 38  | Nut                | 2H       | 2H          | 8        | 8         | 8(M)           | 8(M)           | 8(M)     |
| 39  | Metal ring         | 304      | 304         | 304      | 304       | 304(L)         | 316(L)         | F51      |



**Application standards**

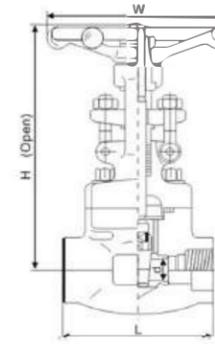
1. Design and manufacture conform to:
  - API 602, BS5352, ANSI B16.34;
  - 2. Connection ends conform to:
    - 1) Socket welded dimension conform to ANSI B16.11, JB/T1751
    - 2) Screw ends dimension conform to ANSI B1.20.1, JB/T7306
    - 3) Butt-welded conform to ANSI B16.25, JB/T12224
    - 4) Flanged ends conform to ANSI B16.5, JB79
3. Test and inspection conform to:
  - API 598, GB/T 13927, JB/T9092
4. Structure features:
  - A threaded and pressure seal bonnet
5. Materials conform to ANSI/ASTM,
6. Main materials:
  - A105; LF2; F5; F11; F22; 304(L); 316(L);
  - F347; F321; F91; Monel; 20 Alloy.

**Carbon steel temperature-pressure rate**

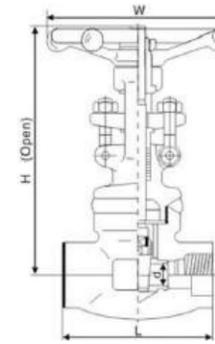
CL 1500-3705 PSI @ 100°F CL 2500-6170 PSI @ 100°F

**Main part materials list**

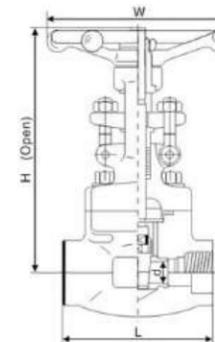
| NO. | Part name         | A105/F6a   | A105/F6aHFS | LF2/304    | F11/F6aHF  | F304(L)/304(L) | F316(L)/316(L)  | F91/410HF  |
|-----|-------------------|------------|-------------|------------|------------|----------------|-----------------|------------|
| 1   | Body              | A105       | A105        | LF2        | F11        | F304(L)        | F316(L)         | F91        |
| 2   | Seat              | 410        | 410HF       | 304        | 410HF      | 304(L)         | 316(L)          | 410HF      |
| 3   | Wedge             | F6a        | F6a         | F304       | F3aHF      | F304(L)        | F316(L)         | F6aHF      |
| 4   | Stem              | 410        | 410         | 304        | 410        | 304(L)         | 316(L)          | 410        |
| 6   | Bonnet            | A105       | A105        | LF2        | F11        | F304(L)        | F316(L)         | F91        |
| 8   | Pin               | 410        | 410         | 410        | 410        | 304            | 304             | 410        |
| 9   | Gland             | 410        | 410         | 304        | 410        | 304            | 316             | 410        |
| 10  | Gland eyebolt     | B7         | B7          | L7         | B16        | B8(M)          | B8(M)           | B8         |
| 11  | Gland flange      | A105       | A105        | LF2        | F11        | F304           | F304            | F91        |
| 12  | Hex nut           | 2H         | 2H          | 2H         | 2H         | 8(M)           | 8(M)            | 8          |
| 13  | Stem nut          | 410        | 410         | 410        | 410        | 410            | 410             | 410        |
| 14  | Locking nut       | 35         | 35          | 35         | 35         | 35             | 35              | 35         |
| 15  | Nameplate         | AL         | AL          | AL         | AL         | AL             | AL              | AL         |
| 16  | Handwheel         | A197       | A197        | A197       | A197       | A197           | A197            | A190       |
| 17  | Lubricating gaske | 410        | 410         | 410        | 410        | 410            | 410             | 410        |
| 18  | Packing           | Graphite   | Graphite    | Graphite   | Graphite   | Graphite       | Graphite        | Graphite   |
| 19  | Stop nut          | 35         | 35          | 35         | 35         | 35             | 35              | 35         |
| 23  | Seal gasket       | 420        | 420         | 304        | 304        | 304(L)         | 316(L)          | 420        |
| 24  | P.S. ring         | 304        | 304         | 304        | 304        | 304            | 316             | 316        |
| 25  | P.S. sea          | 420        | 420         | 304        | 304        | 304(L)         | 316(L)          | F91        |
| 26  | Nut pad           | 410        | 410         | 410        | 410        | 410            | 410             | 410        |
| 27  | Draw-in stud      | Cast steel | Cast steel  | Cast steel | Cast steel | tainless steel | Stainless steel | Cast steel |



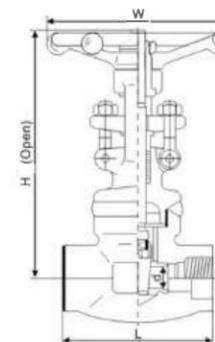
Bolted bonnet, full port reducing port outside screw and yoke(OS&Y)  
Threaded, butt-welded or socket welded ends; desing to API602



Welded bonnet, full port reducing port outside screw and yoke(OS&Y)  
Threaded, butt-welded or socket welded ends; desing to API602



Bolted bonnet, full port reducing port outside screw and yoke(OS&Y)  
Threaded, butt-welded or socket welded ends; desing to API602



Welded bonnet, full port reducing port outside screw and yoke(OS&Y)  
Threaded, butt-welded or socket welded ends; desing to API602

**CL800**

| Specification (NPS)      | R.P | -    | 1/2  | 3/4  | 1    | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     |
|--------------------------|-----|------|------|------|------|-------|-------|-------|-------|-------|
|                          | F.P | 1/4  | 3/8  | 1/2  | 3/4  | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
| Face to face (mm)        | L   | 79   | 79   | 92   | 111  | 120   | 120   | 140   | 160   | 180   |
| Hand wheel diameter (mm) | W   | 100  | 100  | 100  | 125  | 160   | 160   | 180   | 200   | 220   |
| Height of center (mm)    | H   | 161  | 161  | 163  | 196  | 223   | 251   | 290   | 333   | 370   |
| Flow port dimension(mm)  | d   | 8    | 10.5 | 13.5 | 18   | 24    | 29    | 36.5  | 45    | 51    |
| (Kg)/Weight              |     | 2.22 | 2.3  | 2.39 | 4.24 | 5.7   | 7.05  | 10.9  | 16.8  | 24    |

**CL800**

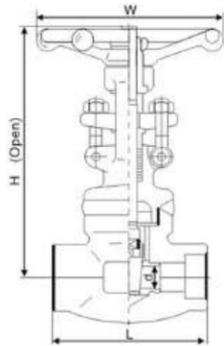
| Specification (NPS)      | R.P | -   | 1/2  | 3/4  | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     |
|--------------------------|-----|-----|------|------|-----|-------|-------|-------|-------|-------|
|                          | F.P | 1/4 | 3/8  | 1/2  | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
| Face to face (mm)        | L   | 79  | 79   | 92   | 111 | 120   | 120   | 140   | 160   | 180   |
| Hand wheel diameter (mm) | W   | 100 | 100  | 100  | 125 | 160   | 160   | 180   | 200   | 220   |
| Height (mm)              | H   | 161 | 161  | 163  | 196 | 223   | 251   | 290   | 333   | 370   |
| Flow port dimension(mm)  | d   | 8   | 10.5 | 13.5 | 18  | 24    | 29    | 36.5  | 45    | 51    |
| (Kg)/Weight              |     | 1.9 | 1.9  | 2.1  | 3.2 | 5.2   | 6.9   | 10.4  | 15.8  | 22    |

**CL900-1500**

| Specification (NPS)      | R.P | -   | 1/2  | 3/4  | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     |
|--------------------------|-----|-----|------|------|-----|-------|-------|-------|-------|-------|
|                          | F.P | 1/4 | 3/8  | 1/2  | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
| Face to face (mm)        | L   | 92  | 111  | 111  | 120 | 120   | 140   | 160   | 180   | -     |
| Hand wheel diameter (mm) | W   | 100 | 125  | 125  | 160 | 160   | 180   | 200   | 220   | -     |
| Height (mm)              | H   | 191 | 192  | 192  | 219 | 243   | 296   | 316   | 370   | -     |
| Flow port dimension(mm)  | d   | 8   | 13.5 | 13.5 | 18  | 24    | 29    | 36.5  | 45    | -     |
| (Kg)/Weight              |     | 2.4 | 4.3  | 4.4  | 6   | 7.2   | 11.4  | 16    | 23    | -     |

**CL900-1500**

| Specification (NPS)      | R.P | -   | 1/2  | 3/4  | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     |
|--------------------------|-----|-----|------|------|-----|-------|-------|-------|-------|-------|
|                          | F.P | 1/4 | 3/8  | 1/2  | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
| Face to face (mm)        | L   | 92  | 111  | 111  | 120 | 120   | 140   | 160   | 180   | -     |
| Hand wheel diameter (mm) | W   | 100 | 125  | 125  | 160 | 160   | 180   | 200   | 220   | -     |
| Height (mm)              | H   | 191 | 192  | 192  | 240 | 258   | 330   | 355   | 370   | -     |
| Flow port dimension(mm)  | d   | 8   | 13.5 | 13.5 | 18  | 24    | 29    | 36.5  | 45    | -     |
| (Kg)/Weight              |     | 2.4 | 4    | 4    | 4.8 | 7.1   | 11    | 16    | 22.8  | -     |

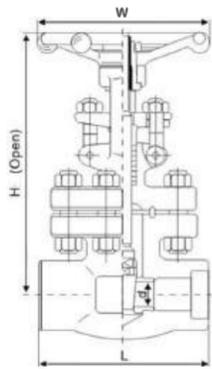


Welded bonnet, full port reducing port outside screw and yoke(OS&Y)

Socket welded ends, design conform to ASME B16.34

**CL2500**

| Specification (NPS)      | 1/4 | 3/8 | 1/2 | 3/4 | 1    | 1 1/4 | 2 |
|--------------------------|-----|-----|-----|-----|------|-------|---|
| Face to face (mm)        | -   | 111 | 120 | 120 | 120  | 140   | - |
| Hand wheel diameter (mm) | -   | 125 | 160 | 160 | 180  | 220   | - |
| Height (mm)              | -   | 215 | 218 | 220 | 238  | 281   | - |
| Flow port dimension(mm)  | -   | 14  | 14  | 14  | 19   | 25    | - |
| Weight (Kg)              | -   | 7   | 8.5 | 8.7 | 11.7 | 17    | - |



Bolted bonnet, full port reducing port outside screw and yoke(OS&Y)

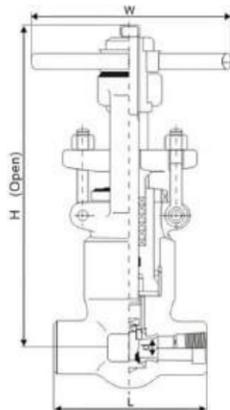
Threaded, butt-welded or socket welded ends; desing to API602

**CL1500-2500**

| Specification            | F.P | -      | 1/2 | 3/4  | 1    | 1 1/4 | 1 1/2 | 2   | 2 1/2 |
|--------------------------|-----|--------|-----|------|------|-------|-------|-----|-------|
| Face to face (mm)        | L   | CL1500 | 110 | 150  | 150  | -     | 210   | 235 | -     |
|                          |     | CL2500 | 150 | 150  | 210  | -     | 235   | 235 | -     |
| Handwheel diameter (mm)  | W   | CL1500 | 110 | 130  | 130  | -     | 180   | 250 | -     |
|                          |     | CL2500 | 130 | 130  | 250  | -     | 300   | 300 | -     |
| Height (mm)              | H   | CL1500 | 277 | 300  | 390  | -     | 400   | 435 | -     |
|                          |     | CL2500 | 293 | 300  | 390  | -     | 435   | 435 | -     |
| Flow port dimension (mm) | d   | CL1500 | 14  | 17   | 22   | -     | 35    | 37  | -     |
|                          |     | CL2500 | 14  | 14   | 14   | -     | 25    | 30  | -     |
| Weight (kg)              |     | CL1500 | 5.1 | 11   | 12.1 | -     | 22    | 37  | -     |
|                          |     | CL2500 | 11  | 11.3 | 22.4 | -     | 38    | 38  | -     |

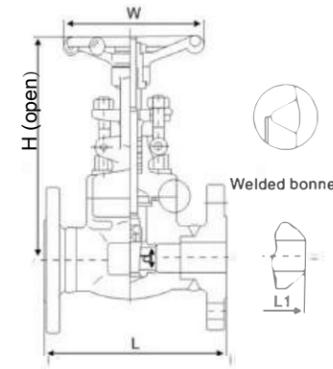
**CL1500-2500**

| Specification            | F.P | -          | 3/8  | 1/2  | 3/4  | 1    | 1 1/4 | 1 1/2 | 2    |
|--------------------------|-----|------------|------|------|------|------|-------|-------|------|
| Face to face (mm)        | L   | CL900-1500 | 140  | 140  | 140  | 140  | 140   | 178   | 216  |
|                          |     | CL2500     | 186  | 186  | 186  | 186  | 216   | 216   | 279  |
| Handwheel diameter (mm)  | W   | CL900-1500 | 200  | 200  | 200  | 200  | 280   | 280   | 300  |
|                          |     | CL2500     | 200  | 200  | 200  | 280  | 280   | 280   | 300  |
| Height (mm)              | H   | CL900-1500 | 318  | 318  | 318  | 322  | 467   | 468   | 540  |
|                          |     | CL2500     | 325  | 325  | 325  | 327  | 467   | 468   | 540  |
| Flow port dimension (mm) | d   | CL900-1500 | 14   | 14   | 14   | 19   | 25    | 30    | 36.5 |
|                          |     | CL2500     | 14   | 14   | 14   | 19   | 25    | 30    | 36.5 |
| Weight (kg)              |     | CL900-1500 | 11.5 | 11.5 | 10.8 | 10.5 | 19.6  | 21    | 55.4 |
|                          |     | CL2500     | 10.8 | 11.6 | 12.3 | 12.3 | 26.0  | 28.4  | 60.0 |



Pressure seal bonnet, full port outside screw and yoke(OS&Y)

Socket welded ends; desing conform to ASME B16.34

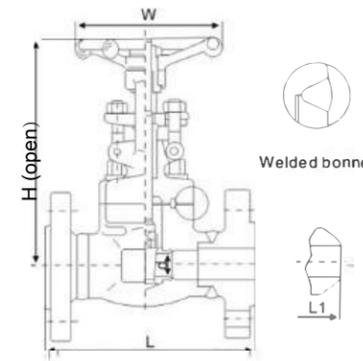


**CL150-300-600**

Bolted bonnet, full port reducing port outside screw and yoke(OS&Y) flange-welded or butt-welded ends; design to API602, BSS352

| Specification            |              | 1/4     | 3/8 | 1/2 | 3/4  | 1    | 1 1/4 | 1 1/2 | 2     | 2 1/2 |      |
|--------------------------|--------------|---------|-----|-----|------|------|-------|-------|-------|-------|------|
| Face to face (mm)        | CL150        | L (RF/) | -   | -   | 108  | 117  | 127   | 140   | 165   | 178   | 190  |
|                          | CL1300       | L1      | -   | -   | 140  | 152  | 165   | 178   | 190   | 216   | 241  |
|                          | CL600        | ( BW )  | -   | -   | 165  | 190  | 216   | 229   | 241   | 292   | 330  |
| Handwheel diameter (mm)  | W            | -       | -   | 100 | 100  | 125  | 160   | 160   | 180   | 200   |      |
| Height (mm)              | CL150        | H       | -   | -   | 176  | 184  | 217   | 226   | 250   | 290   | 357  |
|                          | CL300, CL600 | H       | -   | -   | 161  | 163  | 196   | 226   | 250   | 290   | 357  |
| Flow port dimension (mm) | d            | -       | -   | 10  | 13.5 | 18   | 24    | 29    | 36.5  | 45    |      |
| Weight (kg)              | CL150        | RF      | -   | -   | 3.4  | 3.98 | 6.1   | 7.2   | 10.4  | 15.5  | 24.5 |
|                          |              | BW      | -   | -   | 2.8  | 3.3  | 5.4   | 6.5   | 8.2   | 12.5  | 20   |
|                          | CL300        | RF      | -   | -   | 3.77 | 4.89 | 7.23  | 9.6   | 12.64 | 18.0  | 26.2 |
|                          |              | BW      | -   | -   | 3.5  | 4.4  | 6.8   | 8.1   | 9.2   | 15.4  | 22   |
|                          | CL600        | RF      | -   | -   | 4.2  | 5.8  | 8.8   | 12.1  | 15.6  | 19.5  | 32   |
|                          |              | BW      | -   | -   | 4.5  | 5.1  | 8.2   | 10.5  | 12.4  | 20.1  | 28   |

Flange Integrity Forged Steel Valve enquiry please contact sales department.

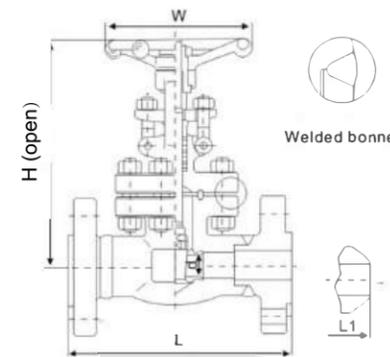


**CL900-1500**

Welded bonnet, full port outside screw and yoke(OS&Y)

Flange-welded or butt-welded ends; design to BSS352

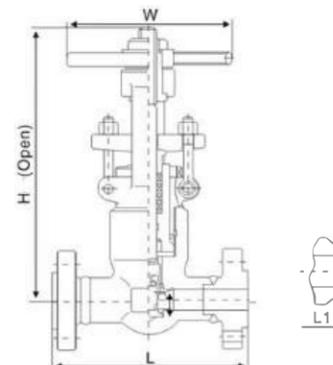
| Specification       |                 | 1/4 | 3/8 | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2   |
|---------------------|-----------------|-----|-----|-----|-----|-----|-------|-------|-----|
| Face to face (mm)   | L (RF/L1 ( BW ) | -   | -   | 216 | 229 | 254 | 279   | 305   | 368 |
|                     | L(RTJ)          | -   | -   | 216 | 229 | 254 | 279   | 305   | 371 |
| Handwheel diameter  | W               | -   | -   | 125 | 125 | 160 | 180   | 200   | 220 |
| Height (mm)         | H               | -   | -   | 191 | 192 | 219 | 257   | 296   | 316 |
| Flow port dimension | d               | -   | -   | 14  | 18  | 24  | 29    | 36.5  | 45  |
| Weight (kg)         |                 | -   | -   | 7.2 | 12  | 16  | 16.2  | 22.6  | 28  |



**CL2500**

Bolted bonnet, full port outside screw and yoke(OS&Y) flange-welded or butt-welded ends; design to ASME B16.34

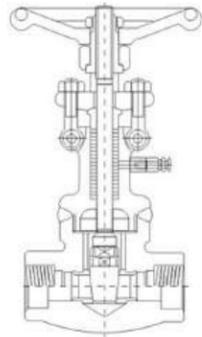
| Specification       |                 | 1/4 | 3/8 | 1/2  | 3/4  | 1   | 1 1/4 | 1 1/2 | 2    |
|---------------------|-----------------|-----|-----|------|------|-----|-------|-------|------|
| Face to face (mm)   | L (RF/L1 ( BW ) | -   | -   | 264  | 273  | 308 | -     | 384   | 451  |
|                     | L(RTJ)          | -   | -   | 264  | 273  | 308 | -     | 387   | 454  |
| Handwheel diameter  | W               | -   | -   | 125  | 160  | 160 | -     | 200   | 240  |
| Height (mm)         | H               | -   | -   | 207  | 240  | 258 | -     | 355   | 370  |
| Flow port dimension | d               | -   | -   | 13.5 | 13.5 | 19  | -     | 30    | 36.5 |
| Weight (kg)         |                 | -   | -   | 19.5 | 21.5 | 42  | -     | 65    | 95   |



**CL2500**

Pressure seal gate valves, full port outside screw and yoke(OS&Y) flange-welded or butt-welded ends; design to ASME B16.34

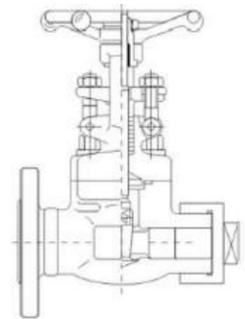
| Specification       |                 | 1/4 | 3/8 | 1/2  | 3/4  | 1    | 1 1/4 | 1 1/2 | 2    |
|---------------------|-----------------|-----|-----|------|------|------|-------|-------|------|
| Face to face (mm)   | L (RF/L1 ( BW ) | -   | -   | 264  | 273  | 308  | -     | 384   | 451  |
|                     | L(RTJ)          | -   | -   | 264  | 273  | 308  | -     | 387   | 454  |
| Handwheel diameter  | W               | -   | -   | 200  | 200  | 200  | -     | 280   | 300  |
| Height (mm)         | H               | -   | -   | 325  | 325  | 327  | -     | 478   | 540  |
| Flow port dimension | d               | -   | -   | 13.5 | 13.5 | 19   | -     | 30    | 36.5 |
| Weight (kg)         |                 | -   | -   | 14.6 | 16.8 | 17.6 | -     | 25    | 31.9 |



Welded bonnet  
OS&Y  
Pasking  
Distance ring  
Injector sealing gum valves  
Solid wedge

**Vacuum gate valves**

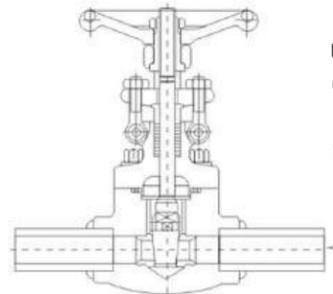
|  |                           |             |      |      |
|--|---------------------------|-------------|------|------|
| CLASS 800<br>API 602 - BS 5352<br>Reduced port&full port | Temperature pressure rate | Materials   |      |      |
|  | 1975 psi @ 100° F         | Body/Bonnet | Trim | Bolt |
|  |                           | Cast steel  | 13Cr | B7   |



Bolted  
OS&Y  
Cap fitting connection  
Solidwedge

**For venting and/or releasing media**

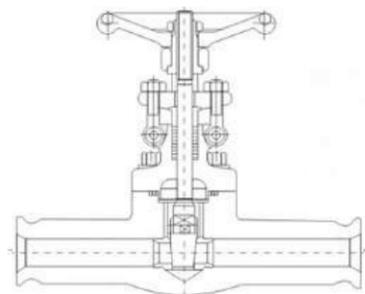
|  |                           |             |      |      |
|--|---------------------------|-------------|------|------|
| CLASS 800<br>API 602 - BS 5352<br>Reduced port&full port | Temperature pressure rate | Materials   |      |      |
|  | 1975 psi @ 100° F         | Body/Bonnet | Trim | Bolt |
|  |                           | Cast steel  | 13Cr | B7   |



Bolted bonnet  
OS&Y  
Double end pipe connection  
Solid wedge

**Coupling pipe valves**

|  |                           |             |      |      |
|--|---------------------------|-------------|------|------|
| CLASS 800<br>API 602 - BS 5352<br>Reduced port&full port | Temperature pressure rate | Materials   |      |      |
|  | 1975 psi @ 100° F         | Body/Bonnet | Trim | Bolt |
|  |                           | Cast steel  | 13Cr | B7   |



Bolted bonnet  
OS&Y  
Hoop connection  
Solid wedge

**Hoop gate valves**

|  |                           |             |      |      |
|--|---------------------------|-------------|------|------|
| CLASS 800<br>API 602 - BS 5352<br>Reduced port&full port | Temperature pressure rate | Materials   |      |      |
|  | 1975 psi @ 100° F         | Body/Bonnet | Trim | Bolt |
|  |                           | Cast steel  | 13Cr | B7   |

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**FORGED STEEL  
GLOBE VALVES  
SERIES**



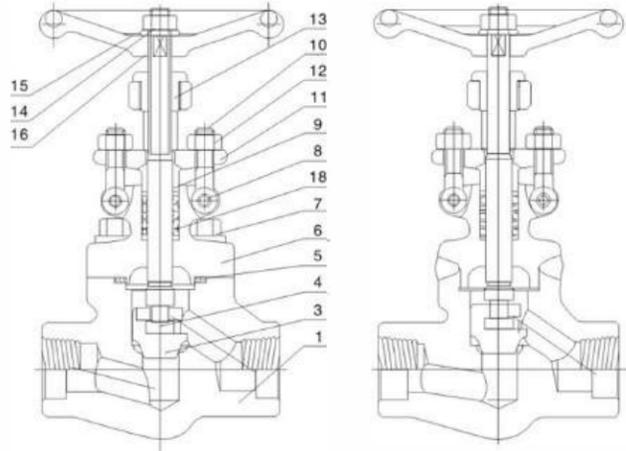
**Female threaded and socket welded globe valves**



**Y type globe valves**



**Pressure sealing globe valves**



**Application standards**

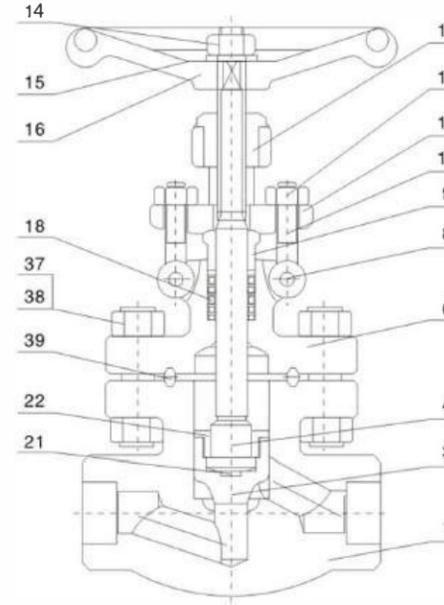
1. Design and manufacture conform to:  
BS 5352, MSS SP-118;
2. Connection ends conform to:
  - 1) Socket welded dimension conform to ANSI B16.11, JB/T1751
  - 2) Screw ends dimension conform to ANSI B1.20.1, JB/T7306
  - 3) Butt-welded conform to ANSI B16.25, JB/T12224
  - 4) Flanged ends conform to ANSI B16.5, JB79
3. Test and inspection conform to:  
API 598, GB/T13927, JB/T9092
4. Structure features:  
Bolted bonnet, outside screw and yoke  
Welded bonnet, outside screw and yoke
5. Materials conform to ANSI/ASTM.
6. Main materials:  
A105; LF2; F5; F11; F22; 304(L); 316(L);  
F347; F321; F51; Monel; 20Alloy.

**Carbon steel temperature-pressure rate**

CL150-285 P.S.I @ 100°F    CL300-740 P.S.I @ 100°F  
 CL 600-1480 P.S.I @ 100°F    CL 800-1975 P.S.I @ 100°F  
 CL 1500-3705 P.S.I @ 100°F

**Main part materials list**

| NO. | Part Name    | A105/F6a     | A105/F6aHFS  | LF2/304      | F11/F6aHF    | F304(L)/304(L) | F316(L)/316(L) | F51/F51      |
|-----|--------------|--------------|--------------|--------------|--------------|----------------|----------------|--------------|
| 1   | Body         | A105         | A105+HF      | LF2          | F11+HF       | F304(L)        | F316(L)        | F51          |
| 3   | Disc         | F6a          | F6a          | F304         | F6aHF        | F304(L)        | F316(L)        | F51          |
| 4   | Stem         | 410          | 410          | 304          | 410          | 304(L)         | 316(L)         | F51          |
| 5   | Gasket       | 304+Graphite | 304+Graphite | 304+Graphite | 304+Graphite | 304+Graphite   | 304+Graphite   | 304+Graphite |
| 6   | Bonnet       | A105         | A105         | LF2          | F11          | F304(L)        | F316(L)        | F51          |
| 7   | Bolt         | B7           | B7           | L7           | B16          | B8(M)          | B8(M)          | B8(M)        |
| 8   | Pin          | 410          | 410          | 410          | 410          | 304            | 304            | 304          |
| 9   | Gland        | 410          | 410          | 304          | 410          | 304            | 316            | F51          |
| 10  | Glandeyebolt | B7           | B7           | L7           | B16          | B8(M)          | B8(M)          | B8(M)        |
| 11  | Gland flange | A105         | A105         | LF2          | F11          | F304           | F304           | F304         |
| 12  | Hex nut      | 2H           | 2H           | 2H           | 2H           | 8(M)           | 8(M)           | 8M           |
| 13  | Stem nut     | 410          | 410          | 410          | 410          | 410            | 410            | 410          |
| 14  | Locking nut  | 35           | 35           | 35           | 35           | 35             | 35             | 35           |
| 15  | Nameplate    | AL           | AL           | AL           | AL           | AL             | AL             | AL           |
| 16  | Handwheel    | A197         | A197         | A197         | A197         | A197           | A197           | A197         |
| 18  | Packing      | Graphite     | Graphite     | Graphite     | Graphite     | Graphite       | Graphite       | Graphite     |



**Application standards**

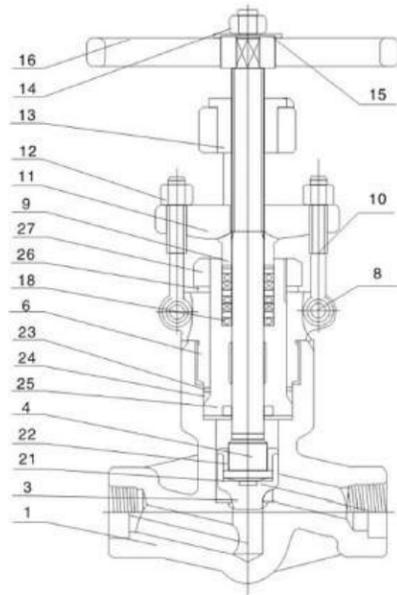
1. Design and manufacture conform to:  
MSS SP-118;
2. Connection ends conform to:
  - 1) Socket welded dimension conform to ANSI B16.11, JB/T1751
  - 2) Screw ends dimension conform to ANSI B1.20.1, JB/T7306
  - 3) Butt-welded conform to ANSI B16.25, ANSI B16.25, JB/T12224
  - 4) Flanged ends conform to ANSI B16.5, JB79
3. Test and inspection conform to:  
API 598, GB/T13927, JB/T9092
4. Structure features:  
Bolted bonnet, outside screw and yoke  
Welded bonnet, outside screw and yoke
5. Materials conform to ANSI/ASTM
6. Main materials:  
A105; LF2; F5; F11; F22; 304(L); 316(L);  
F347; F321; F51; Monel; 20Alloy.

**Carbon steel temperature-pressure rate**

CL150-285 P.S.I @ 100°F    CL300-740 P.S.I @ 100°F    CL 600-1480 P.S.I @ 100°F  
 CL 800-1975 P.S.I @ 100°F    CL 1500-3705 P.S.I @ 100°F

**Main part materials list**

| NO. | Part Name    | A105/F6a | A105/F6aHFS | LF2/304  | F11/F6aHF | F304(L)/304(L) | F316(L)/316(L) | F51/F51  |
|-----|--------------|----------|-------------|----------|-----------|----------------|----------------|----------|
| 1   | Body         | A105     | A105+HF     | LF2      | F11+HF    | F304(L)        | F316(L)        | F51      |
| 3   | Disc         | F6a      | F6a         | F304     | F6aHF     | F304(L)        | F316(L)        | F51      |
| 4   | Stem         | 410      | 410         | 304      | 410       | 304(L)         | 316(L)         | F51      |
| 6   | Bonnet       | A105     | A105        | LF2      | F11       | F304(L)        | F316(L)        | F51      |
| 8   | Pin          | 410      | 410         | 410      | 410       | 304            | 304            | 304      |
| 9   | Gland        | 410      | 410         | 304      | 410       | 304            | 316            | F51      |
| 10  | Glandeyebolt | B7       | B7          | L7       | B16       | B8(M)          | B8(M)          | B8M      |
| 11  | Gland flange | A105     | A105        | LF2      | F11       | F304           | F304           | F304     |
| 12  | Hex nut      | 2H       | 2H          | 2H       | 2H        | 8(M)           | 8(M)           | 8M       |
| 13  | Stem nut     | 410      | 410         | 410      | 410       | 410            | 410            | 410      |
| 14  | Locking nut  | 35       | 35          | 35       | 35        | 35             | 35             | 35       |
| 15  | Nameplate    | AL       | AL          | AL       | AL        | AL             | AL             | AL       |
| 16  | Handwheel    | A197     | A197        | A197     | A197      | A197           | A197           | A197     |
| 18  | Packing      | Graphite | Graphite    | Graphite | Graphite  | Graphite       | Graphite       | Graphite |
| 21  | Stem pad     | 420      | 420         | 420      | 420       | 316SH          | 316SH          | 316SH    |
| 22  | Disc nut     | 410      | 410         | 410      | 410       | 410            | 410            | 410      |
| 37  | Screwed stud | B7       | B7          | L7       | B16       | B8(M)          | B8(M)          | B8(M)    |
| 38  | Nut          | 2H       | 2H          | 8        | 8         | 8(M)           | 8(M)           | 8(M)     |
| 39  | Metal ring   | 304      | 304         | 304      | 304       | 316(L)         | 316(L)         | F51      |



**Application standards**

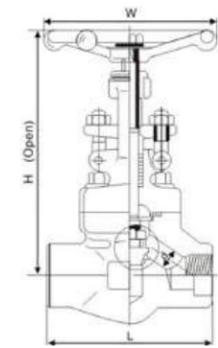
- Design and manufacture conform to: MSS SP-118;
- Connection ends conform to:
  - Socket welded dimension conform to ANSI B16.11, JB/T1751
  - Screw ends dimension conform to ANSI B1.20.1, JB/T7306
  - Butt-welded conform to ANSI B16.25, JB/T12224
  - Flanged ends conform to ANSI B16.5, JB79
- Test and inspection conform to: API 598, GB/T13927, JB/T9092
- Structure features:
  - A threaded and pressure seal bonnet; Y type and T type
  - Materials conform to ANSI/ASTM
- Main materials:
  - A105; LF2; F5; F11; F22; 304(L); 316(L); F347; F321; F51; Monel; 20Alloy.

**Carbon steel temperature-pressure rate**

CL 1500-3705 PSI @ 100 °F CL 2500-6170 PSI @ 100 °F

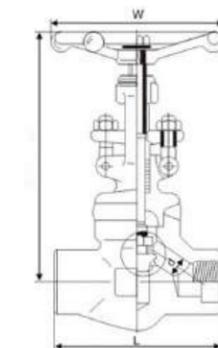
**Main part materials list**

| NO. | Part name     | A105/F6a   | A105/F6aHFS | LF2/304    | F11/F6aHF  | F304(L)/304(L) | F316(L)/316(L) | F91/410HF  |
|-----|---------------|------------|-------------|------------|------------|----------------|----------------|------------|
| 1   | Body          | A105       | A105+HF     | LF2        | F11+HF     | F304(L)        | F316(L)        | F91+HF     |
| 3   | Disc          | 410        | 410         | 304        | 410        | 304(L)         | 316(L)         | 410+HF     |
| 4   | Stem          | 410        | 410         | 304        | 410        | 304(L)         | 316(L)         | 410        |
| 6   | Bonnet        | A105       | A105        | LF2        | F11        | F304(L)        | F316(L)        | F91        |
| 8   | Pin           | 410        | 410         | 410        | 410        | 304            | 304            | 410        |
| 9   | Gland         | 410        | 410         | 304        | 410        | 304            | 316            | 410        |
| 10  | Gland eyebolt | B7         | B7          | L7         | B16        | B8(M)          | B8(M)          | B8         |
| 11  | Gland flange  | A105       | A105        | LF2        | F11        | F304           | F304           | F91        |
| 12  | Hexnut        | 2H         | 2H          | 2H         | 2H         | 8(M)           | 8(M)           | 8          |
| 13  | Stemnut       | 410        | 410         | 410        | 410        | 410            | 410            | 410        |
| 14  | Lockingnut    | 35         | 35          | 35         | 35         | 35             | 35             | 35         |
| 15  | Nameplate     | AL         | AL          | AL         | AL         | AL             | AL             | AL         |
| 16  | Handwheel     | A197       | A197        | A197       | A197       | A197           | A197           | A197       |
| 18  | Packing       | Graphite   | Graphite    | Graphite   | Graphite   | Graphite       | Graphite       | Graphite   |
| 21  | Stem pad      | 420        | 420         | 420        | 420        | 316SH          | 316SH          | 420        |
| 22  | Disc nut      | 410        | 410         | 410        | 410        | 304(L)         | 316(L)         | 410        |
| 23  | Sealgasket    | 420        | 420         | 304        | 304        | 304(L)         | 316(L)         | 316(L)     |
| 24  | P.S.ring      | 304        | 304         | 304        | 304        | 304            | 316            | 304        |
| 25  | P.S.sea       | 420        | 420         | 304        | 304        | 304(L)         | 316(L)         | F91        |
| 26  | Nut pad       | 410        | 410         | 410        | 410        | 410            | 410            | 410        |
| 27  | Draw-in stud  | Cast steel | Cast steel  | Cast steel | Cast steel | Cast steel     | Cast steel     | Cast steel |



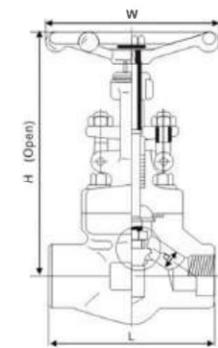
Bolted bonnet, full port reducing port outside screw and yoke(OS&Y)

Threaded, butt-welded or socket welded ends; desing to Bs5352



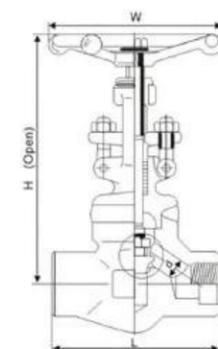
Welded bonnet, full port reducing portoutside screw and yoke(OS&Y)

Threaded, butt-welded or socket welded ends; desing to BS5352



Bolted bonnet, full port reducing port outside screw and yoke(OS&Y)

Threaded, butt-welded or socket welded ends; desing to BS5352



Welded bonnet, full port reducing port outside screw and yoke(OS&Y)

Threaded, butt-welded or socket welded ends; desing to BS5352

**CL800**

| Specification (NPS)      | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     |
|--------------------------|-----|-----|-----|-----|-----|-------|-------|-------|-------|-------|
|                          | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
| Face to face (mm)        | L   | 79  | 79  | 92  | 111 | 120   | 120   | 172   | 220   | -     |
| Hand wheel diameter (mm) | W   | 100 | 100 | 100 | 125 | 160   | 160   | 180   | 200   | -     |
| Height (mm)              | H   | 164 | 164 | 164 | 203 | 224   | 260   | 300   | 355   | -     |
| Flow port dimension(mm)  | d   | 7   | 9   | 13  | 18  | 23    | 30    | 35    | 46    | -     |
| (Kg)/Weight              |     | 1.9 | 2.3 | 2.4 | 4.3 | 5.8   | 7.8   | 13    | 18    | -     |

**CL800**

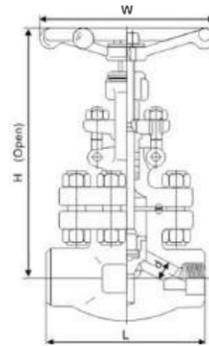
| Specification (NPS)      | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     |
|--------------------------|-----|-----|-----|-----|-----|-------|-------|-------|-------|-------|
|                          | F.P |     | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
| Face to face (mm)        | L   | 79  | 79  | 92  | 111 | 120   | 152   | 172   | 220   | -     |
| Hand wheel diameter (mm) | W   | 100 | 100 | 100 | 125 | 160   | 160   | 180   | 200   | -     |
| Height (mm)              | H   | 164 | 164 | 164 | 203 | 224   | 260   | 300   | 355   | -     |
| Flow port dimension(mm)  | d   | 7   | 9   | 13  | 18  | 23    | 30    | 35    | 46    | -     |
| (Kg)/Weight              |     | 1.7 | 1.7 | 1.9 | 3.3 | 5.2   | 6.8   | 11    | 14    | -     |

**CL900-1500**

| Specification (NPS)      | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     |
|--------------------------|-----|-----|-----|-----|-----|-------|-------|-------|-------|-------|
|                          | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
| Face to face (mm)        | L   | 92  | 111 | 111 | 120 | 152   | 172   | 220   | 230   | -     |
| Hand wheel diameter (mm) | W   | 100 | 125 | 125 | 160 | 160   | 180   | 200   | 240   | -     |
| Height (mm)              | H   | 171 | 207 | 207 | 240 | 258   | 330   | 355   | 370   | -     |
| Flow port dimension(mm)  | d   | 7   | 15  | 15  | 20  | 28    | 32    | 40    | 45    | -     |
| (Kg)/Weight              |     | 2.3 | 3.7 | 3.7 | 6.8 | 7.6   | 12    | 15    | 22    | -     |

**CL900-1500**

| Specification (NPS)      | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     |
|--------------------------|-----|-----|-----|-----|-----|-------|-------|-------|-------|-------|
|                          | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
| Face to face (mm)        | L   | 92  | 111 | 111 | 120 | 152   | 172   | 220   | 230   | -     |
| Hand wheel diameter (mm) | W   | 100 | 125 | 125 | 160 | 160   | 180   | 200   | 240   | -     |
| Height (mm)              | H   | 171 | 207 | 207 | 240 | 258   | 330   | 355   | 370   | -     |
| Flow port dimension(mm)  | d   | 7   | 15  | 15  | 20  | 28    | 32    | 40    | 45    | -     |
| (Kg)/Weight              |     | 2.2 | 3.4 | 3.4 | 5.6 | 6     | 10.3  | 14    | 18.0  | -     |

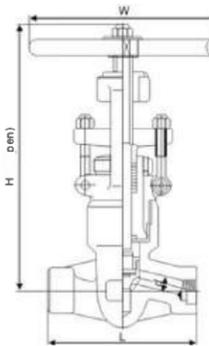


Bolted bonnet, full port outside screw and yoke(OS&Y)

BSS5352 Threaded, butt-welded or socket welded ends; desing to BS5352

CL900-1500

| Specification (NPS)      | F.P | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2   | 2 1/2 |
|--------------------------|-----|-----|-----|-----|-------|-------|-----|-------|
| Face to face (mm)        | L   | 111 | 111 | 152 | -     | 172   | 220 | 235   |
| Hand wheel diameter (mm) | W   | 110 | 110 | 130 | -     | 180   | 210 | 250   |
| Height (mm)              | H   | 227 | 227 | 300 | -     | 307   | 400 | 448   |
| Flow port dimension(mm)  | d   | 9   | 12  | 15  | -     | 20    | 32  | 40    |
| (Kg)/Weight              |     | 5   | 5   | 10  | -     | 11.5  | 22  | 37    |

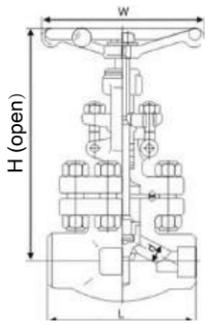


Pressure seal bonnet, full port outside screw and yoke(OS&Y)

Threaded, butt-welded or socket welded ends; desing to BS5352

CL900-1500

| Specification (NPS)      | F.P | 1/2  | 3/4  | 1    | 1 1/4 | 1 1/2 | 2    | 2 1/2 |
|--------------------------|-----|------|------|------|-------|-------|------|-------|
| Face to face (mm)        | L   | 140  | 140  | 140  | 178   | 178   | 216  | -     |
| Hand wheel diameter (mm) | W   | 200  | 200  | 200  | 280   | 280   | 300  | -     |
| Height (mm)              | H   | 320  | 320  | 320  | 440   | 440   | 490  | -     |
| Flow port dimension(mm)  | d   | 12   | 15   | 20   | 28    | 32    | 40   | -     |
| (Kg)/Weight              |     | 10.8 | 10.5 | 11.5 | 19.6  | 21.1  | 55.4 | -     |

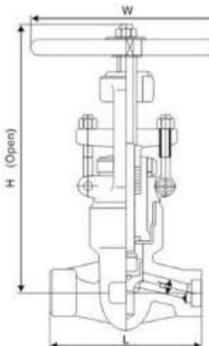


Bolted bonnet, full port outside screw and yoke(OS&Y)

Threaded, welded ends; desing conform to ASME B16.34

CL2500

| Specification (NPS)      | F.P | 1/2 | 3/4  | 1    | 1 1/4 | 1 1/2 | 2   | 2 1/2 |
|--------------------------|-----|-----|------|------|-------|-------|-----|-------|
| Face to face (mm)        | L   | 150 | 150  | 210  | -     | 235   | 235 | -     |
| Hand wheel diameter (mm) | W   | 130 | 130  | 250  | -     | 300   | 300 | -     |
| Height (mm)              | H   | 293 | 300  | 390  | -     | 435   | 435 | -     |
| Flow port dimension(mm)  | d   | 11  | 14   | 19   | -     | 28    | 35  | -     |
| (Kg)/Weight              |     | 10  | 10.3 | 22.4 | -     | 37.5  | 38  | -     |

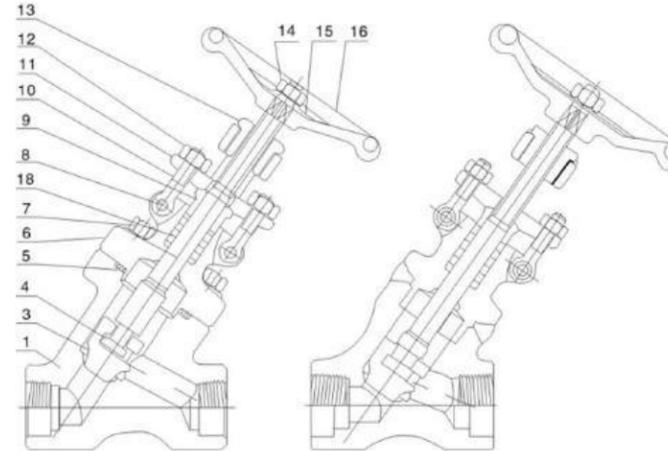


Pressure seal bonnet, full port outside screw and yoke(OS&Y)

d ends; desing conform to ASME B16.34

CL2500

| Specification (NPS)      | F.P | 1/2  | 3/4  | 1    | 1 1/4 | 1 1/2 | 2   | 2 1/2 |
|--------------------------|-----|------|------|------|-------|-------|-----|-------|
| Face to face (mm)        | L   | 186  | 186  | 186  | 232   | 232   | 279 | -     |
| Hand wheel diameter (mm) | W   | 200  | 200  | 200  | 280   | 280   | 300 | -     |
| Height (mm)              | H   | 375  | 378  | 380  | 490   | 490   | 540 | -     |
| Flow port dimension(mm)  | d   | 11   | 14   | 19   | 25    | 28    | 35  | -     |
| (Kg)/Weight              |     | 10.8 | 11.6 | 12.3 | 26    | 28.4  | 60  | -     |



Application standards

- Design and manufacture conform to: BS5352 MSS SP-118;
- Connection ends conform to:
  - Socket welded dimension conform to ANSI B16.11, JB/T1751
  - Screw ends dimension conform to ANSI B1.20.1, JB/T7306
  - Butt-welded conform to ANSI B16.25, JB/T12224
  - Flanged ends conform to ANSI B16.5, JB79
- Test and inspection conform to: API 598, GB/T13927, JB/T9092
- Structure features:

Bolted bonnet, outside screw and yoke (OS&Y)

Welded bonnet, outside screw and yoke

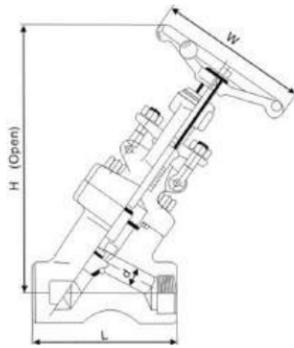
- Materials conform to ANSI/ASTM,
- Main materials: A105; LF2; F5; F11; F22; 304(L); 316(L); F347; F321; F51; Monel; 20Alloy. Hastelloy.

Carbon steel temperature-pressure rate

CL150-285 P.S.I @ 100°F    CL300-740 P.S.I @ 100°F  
 CL 600-1480 P.S.I @ 100°F    CL 800-1975 P.S.I @ 100°F  
 CL 1500-3705 P.S.I @ 100°F

Main part materials list

| NO. | Part name     | A105/F6a               | A105/F6aHFS            | LF2/304                | F11/F6aHF              | F304(L)/304(L)         | F316(L)/316(L)         | F51/F51                |
|-----|---------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 1   | Body          | A105                   | A105+HF                | LF2                    | F11+HF                 | F304(L)                | F316(L)                | F51                    |
| 3   | Disc          | F6a                    | F6a                    | F304                   | F6aHF                  | F304(L)                | 316(L)                 | F51                    |
| 4   | Stem          | 410                    | 410                    | 304                    | 410                    | 304(L)                 | F316(L)                | F51                    |
| 5   | Gasket        | 304+ Flexible graphite | 316+ Flexible graphite | 316+ Flexible graphite |
| 6   | Bonnet        | A105                   | A105                   | LF2                    | F11                    | F304(L)                | F316(L)                | F51                    |
| 7   | Bolt          | B7                     | B7                     | L7                     | B16                    | B8(M)                  | B8(M)                  | B8M                    |
| 8   | Pin           | 410                    | 410                    | 410                    | 410                    | 304                    | 304                    | 304                    |
| 9   | Gland         | 410                    | 410                    | 304                    | 410                    | 304                    | 316                    | F51                    |
| 10  | Gland eyebolt | B7                     | B7                     | L7                     | B16                    | B8(M)                  | B8(M)                  | B8M                    |
| 11  | Gland flange  | A105                   | A105                   | LF2                    | F11                    | F304                   | F304                   | F304                   |
| 12  | Hex nut       | 2H                     | 2H                     | 2H                     | 2H                     | 8(M)                   | 8(M)                   | 8M                     |
| 13  | Stem nut      | 410                    | 410                    | 410                    | 410                    | 410                    | 410                    | 410                    |
| 14  | Locking nut   | 35                     | 35                     | 35                     | 35                     | 35                     | 35                     | 35                     |
| 15  | Nameplate     | AL                     |
| 16  | Handwheel     | A197                   |
| 18  | Packing       | Graphite               |

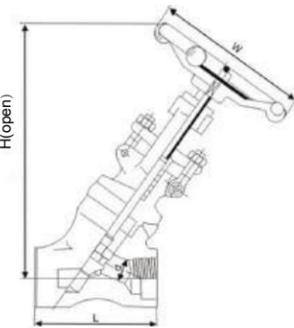


Bolted bonnet, full port reducing port outside screw and yoke(OS&Y)

Threaded, butt-welded or socket welded ends; desing to BS5352

CL800

| Specification (NPS)      | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     |
|--------------------------|-----|-----|-----|-----|-----|-------|-------|-------|-------|-------|
|                          | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
| Face to face (mm)        | L   | 98  | 98  | 98  | 120 | 140   | 140   | 170   | 200   | -     |
| Hand wheel diameter (mm) | W   | 100 | 100 | 100 | 125 | 160   | 160   | 180   | 200   | -     |
| Height (mm)              | H   | 180 | 180 | 180 | 188 | 280   | 280   | 295   | 350   | -     |
| Flow port dimension(mm)  | d   | 7   | 9   | 13  | 18  | 23    | 30    | 35    | 46    | -     |
| (Kg)/Weight              |     | 2.6 | 2.6 | 3.8 | 4.6 | 9.3   | 9.3   | 14    | 19.6  | -     |

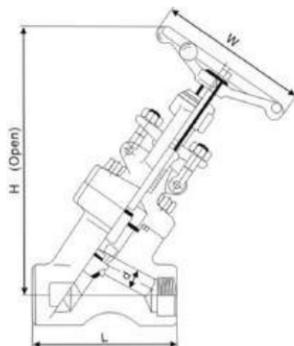


Bolted bonnet, full port reducing port outside screw and yoke(OS&Y)

Threaded, butt-welded or socket welded ends; desing to BS5352

CL800

| Specification (NPS)      | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     |
|--------------------------|-----|-----|-----|-----|-----|-------|-------|-------|-------|-------|
|                          | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
| Face to face (mm)        | L   | 98  | 98  | 98  | 120 | 140   | 140   | 170   | 200   | -     |
| Hand wheel diameter (mm) | W   | 100 | 100 | 100 | 125 | 160   | 160   | 180   | 200   | -     |
| Height (mm)              | H   | 198 | 198 | 198 | 207 | 280   | 280   | 295   | 350   | -     |
| Flow port dimension(mm)  | d   | 7   | 9   | 13  | 18  | 23    | 30    | 35    | 46    | -     |
| (Kg)/Weight              |     | 1.8 | 1.8 | 2   | 3.5 | 8     | 8     | 12    | 16    | -     |

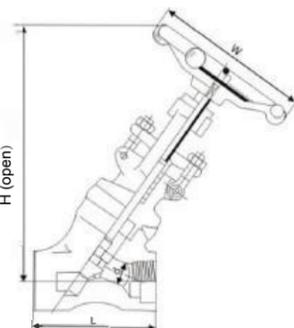


Bolted bonnet, full port reducing port outside screw and yoke(OS&Y)

Threaded, butt-welded or socket welded ends; desing to BS5352

CL900-1500

| Specification (NPS)      | F.P | 3/8 | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2    | 2 1/2 |
|--------------------------|-----|-----|-----|-----|-----|-------|-------|------|-------|
| Face to face (mm)        | L   | 98  | 120 | 120 | 140 | 140   | 170   | 200  | -     |
| Hand wheel diameter (mm) | W   | 100 | 125 | 125 | 160 | 160   | 180   | 200  | -     |
| Height (mm)              | H   | 175 | 175 | 215 | 215 | 254   | 305   | 350  | -     |
| Flow port dimension(mm)  | d   | 9   | 12  | 15  | 20  | 26    | 32    | 40   | -     |
| (Kg)/Weight              |     | 2.6 | 4.6 | 4.6 | 9.3 | 9.3   | 14    | 19.6 | -     |

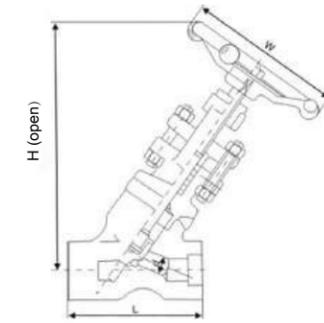


Bolted bonnet, full port reducing port outside screw and yoke(OS&Y)

Threaded, butt-welded or socket welded ends; desing to BS5352

CL900-1500

| Specification (NPS)      | F.P | 3/8 | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2   | 2 1/2 |
|--------------------------|-----|-----|-----|-----|-----|-------|-------|-----|-------|
| Face to face (mm)        | L   | 98  | 120 | 120 | 140 | 140   | 170   | 200 | -     |
| Hand wheel diameter (mm) | W   | 100 | 125 | 125 | 160 | 160   | 180   | 200 | -     |
| Height (mm)              | H   | 175 | 207 | 207 | 280 | 280   | 295   | 350 | -     |
| Flow port dimension(mm)  | d   | 9   | 12  | 15  | 20  | 28    | 32    | 40  | -     |
| (Kg)/Weight              |     | 1.8 | 3.5 | 3.5 | 8   | 8     | 12    | 16  | -     |

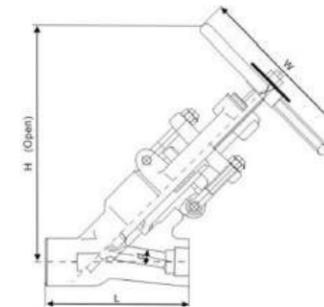


Welded bonnet, full port outside screw and yoke(OS&Y)

Socket welded, design conform to ASME 16.34

CL2500

| Specification (NPS)      | F.P | 3/8  | 1/2  | 3/4  | 1    | 1 1/4 | 1 1/2 | 2    |
|--------------------------|-----|------|------|------|------|-------|-------|------|
| Face to face (mm)        | L   | 186  | 186  | 186  | 186  | 232   | 232   | 310  |
| Hand wheel diameter (mm) | W   | 200  | 200  | 200  | 200  | 280   | 280   | 300  |
| Height (mm)              | H   | 329  | 329  | 329  | 329  | 350   | 350   | 383  |
| Flow port dimension(mm)  | d   | 9    | 11   | 14   | 19   | 25    | 28    | 35   |
| (Kg)/Weight              |     | 10.8 | 11.6 | 12.3 | 12.3 | 28    | 26.4  | 43.8 |

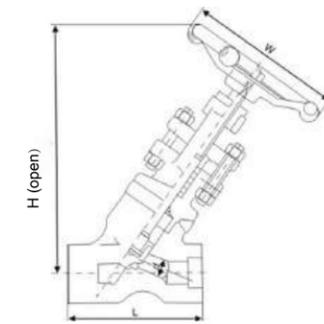


Pressure seal bonnet, full port outside screw and yoke(OS&Y)

Socket welded, desing conform to ASME 16.34

CL2500

| Specification (NPS)      | F.P | 3/8  | 1/2  | 3/4  | 1    | 1 1/4 | 1 1/2 | 2    |
|--------------------------|-----|------|------|------|------|-------|-------|------|
| Face to face (mm)        | L   | 186  | 186  | 186  | 186  | 232   | 232   | 310  |
| Hand wheel diameter (mm) | W   | 200  | 200  | 200  | 200  | 280   | 280   | 300  |
| Height (mm)              | H   | 333  | 333  | 333  | 333  | 406   | 406   | 524  |
| Flow port dimension(mm)  | d   | 9    | 11   | 14   | 19   | 25    | 28    | 35   |
| (Kg)/Weight              |     | 10.8 | 11.6 | 12.3 | 12.3 | 28    | 26.4  | 43.8 |

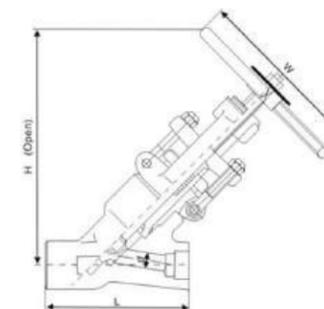


Welded seal bonnet, full port outside screw and yoke(OS&Y)

Socket welded, desing conform to ASME 16.34

CL4500

| Specification (NPS)      | F.P | 3/8 | 1/2 | 3/4 | 1    | 1 1/4 | 1 1/2 | 2   |
|--------------------------|-----|-----|-----|-----|------|-------|-------|-----|
| Face to face (mm)        | L   | 155 | 155 | 155 | 155  | -     | 225   | 330 |
| Hand wheel diameter (mm) | W   | 220 | 220 | 220 | 220  | -     | 300   | 320 |
| Height (mm)              | H   | 350 | 350 | 350 | 380  | -     | 453   | 453 |
| Flow port dimension(mm)  | d   | 9   | 11  | 11  | 15   | -     | 26    | 28  |
| (Kg)/Weight              |     | 9.4 | 9.6 | 9.6 | 10.5 | -     | 34    | 36  |

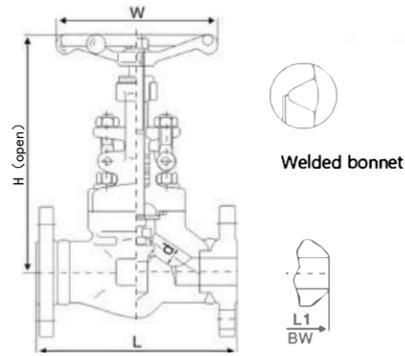


Pressure seal bonnet, full port outside screw and yoke(OS&Y)

Socket welded, desing conform to ASME 16.34

CL4500

| Specification (NPS)      | F.P | 3/8 | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2   |
|--------------------------|-----|-----|-----|-----|-----|-------|-------|-----|
| Face to face (mm)        | L   | 200 | 200 | 200 | 200 | 250   | 250   | 230 |
| Hand wheel diameter (mm) | W   | 280 | 280 | 280 | 280 | 300   | 300   | 320 |
| Height (mm)              | H   | 400 | 400 | 400 | 400 | 460   | 460   | 540 |
| Flow port dimension(mm)  | d   | 9   | 11  | 11  | 15  | 20    | 26    | 28  |
| (Kg)/Weight              |     | 30  | 30  | 30  | 30  | 30    | 36    | 58  |



**CL150-300-600**

Bolted bonnet full port reducing port outside screw yoke(OS&Y) BS5352  
Flange or butt-welded design to BS5352

| Specification            |             |           | 1/4 | 3/8 | 1/2  | 3/4  | 1    | 1 1/4 | 1 1/2 | 2    |
|--------------------------|-------------|-----------|-----|-----|------|------|------|-------|-------|------|
| Face to face (mm)        | CL150       | L (RF/)   | -   | -   | 108  | 117  | 127  | 140   | 165   | 203  |
|                          | CL1300      | L1 ( BW ) | -   | -   | 152  | 178  | 203  | 216   | 229   | 267  |
|                          | CL600       |           | -   | -   | 165  | 190  | 216  | 229   | 241   | 292  |
| Handwheel diameter (mm)  | W           |           | -   | -   | 100  | 100  | 125  | 160   | 160   | 180  |
| Height (mm)              | CL150,CL300 | H         | -   | -   | 180  | 184  | 217  | 224   | 260   | 300  |
|                          | CL600       |           | -   | -   | 164  | 164  | 203  | 224   | 260   | 300  |
| Flow port dimension (mm) | d           |           | -   | -   | 9    | 13   | 17.5 | 23    | 30    | 35   |
| Weight (kg)              | CL150       | RF        | -   | -   | 3.5  | 4.00 | 6.2  | 9.6   | 10.5  | 17.0 |
|                          |             | BW        | -   | -   | 2.3  | 3.6  | 7.8  | 8.2   | 12    | 15   |
|                          | CL300       | RF        | -   | -   | 3.80 | 5.10 | 7.20 | 12.0  | 13.5  | 19.7 |
|                          |             | BW        | -   | -   | 2.8  | 4    | 8.5  | 9.2   | 12.6  | 16.8 |
|                          | CL600       | RF        | -   | -   | 5.6  | 7.8  | 12.5 | 17.0  | 23.5  | 38.8 |
|                          |             | BW        | -   | -   | 3.4  | 4.7  | 9.2  | 10.5  | 13.3  | 18.9 |

Flange Integrity Forged Steel Valve enquiry please contact sales department.

**CL900-1500**

Bolted bonnet full port reducing port outside screw yoke(OS&Y) BS5352 Flange or butt-welded design to BS5352

| Specification (NPS)   | E.P                  | 1/4 | 3/8 | 1/2 | 3/4  | 1    | 1 1/4 | 1 1/2 | 2   |
|-----------------------|----------------------|-----|-----|-----|------|------|-------|-------|-----|
| Face to face (mm)     | L ( RF ) , L1 ( BW ) | -   | -   | 216 | 229  | 254  | 279   | 305   | 368 |
|                       | L ( RTJ )            | -   | -   | 216 | 229  | 254  | 279   | 305   | 371 |
| Hand wheel            | W                    | -   | -   | 125 | 125  | 160  | 160   | 180   | 200 |
| Height (mm)           | H                    | -   | -   | 207 | 207  | 230  | 160   | 300   | 355 |
| Flow port (Kg)/Weight | d                    | -   | -   | 12  | 15   | 20   | 28    | 32    | 40  |
|                       |                      | -   | -   | 11  | 13.2 | 17.4 | 19    | 24.5  | 31  |

**CL2500**

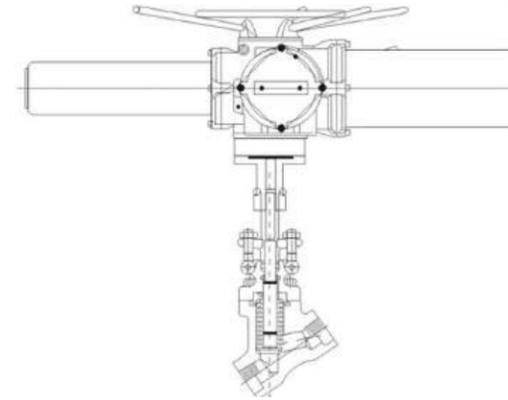
Bolted bonnet,full port reducing port outside screw and yoke(OS&Y)  
Flange or butt-welded design conform to ASME B16.34

| Specification (NPS)   | E.P                  | 1/4 | 3/8 | 1/2  | 3/4  | 1   | 1 1/4 | 1 1/2 | 2   |
|-----------------------|----------------------|-----|-----|------|------|-----|-------|-------|-----|
| Face to face (mm)     | L ( RF ) , L1 ( BW ) | -   | -   | 264  | 273  | 308 | -     | 384   | 451 |
|                       | L ( RTJ )            | -   | -   | 264  | 273  | 308 | -     | 387   | 454 |
| Hand wheel            | W                    | -   | -   | 125  | 160  | 200 | -     | 250   | 240 |
| Height (mm)           | H                    | -   | -   | 207  | 240  | 258 | -     | 355   | 300 |
| Flow port (Kg)/Weight | d                    | -   | -   | 11   | 14   | 19  | -     | 28    | 35  |
|                       |                      | -   | -   | 19.5 | 21.5 | 42  | -     | 65    | 95  |

**CL2500**

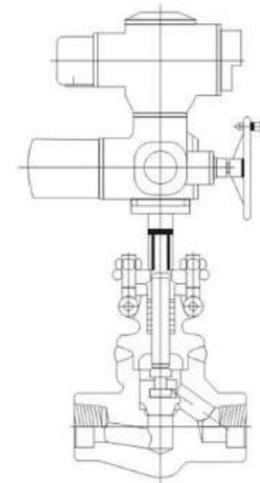
Pressure seal bonnet,full port outside screw and yoke(OS&Y)  
Welding flange or butt-welded design conform to ASME B16.34

| Specification (NPS)   | E.P                  | 1/4 | 3/8 | 1/2  | 3/4  | 1   | 1 1/4 | 1 1/2 | 2   |
|-----------------------|----------------------|-----|-----|------|------|-----|-------|-------|-----|
| Face to face (mm)     | L ( RF ) , L1 ( BW ) | -   | -   | 264  | 273  | 308 | -     | 384   | 451 |
|                       | L ( RTJ )            | -   | -   | 264  | 273  | 308 | -     | 387   | 454 |
| Hand wheel            | W                    | -   | -   | 125  | 160  | 200 | -     | 250   | 240 |
| Height (mm)           | H                    | -   | -   | 207  | 240  | 258 | -     | 355   | 300 |
| Flow port (Kg)/Weight | d                    | -   | -   | 11   | 14   | 19  | -     | 28    | 35  |
|                       |                      | -   | -   | 19.5 | 21.5 | 42  | -     | 65    | 95  |



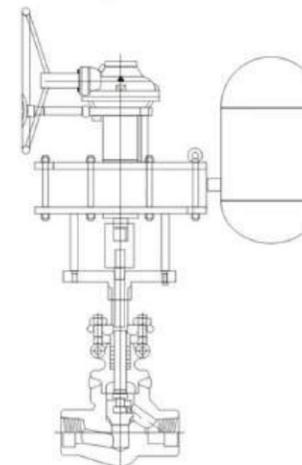
Electric acutator

| CLASS    | Material        |
|----------|-----------------|
| 150~2500 | Carbon steel    |
|          | Stainless steel |



Electric acutator

| CLASS    | Material        |
|----------|-----------------|
| 150~2500 | Carbon steel    |
|          | Stainless steel |



Pneumatic acutator

| CLASS    | Material        |
|----------|-----------------|
| 150~2500 | Carbon steel    |
|          | Stainless steel |

**FORGED STEEL  
CHECK VALVES  
SERIES**



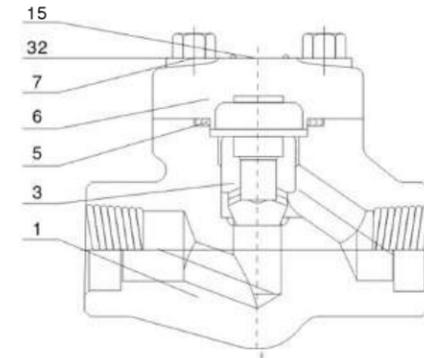
**Female Threaded And Socket Welded Check Valves**



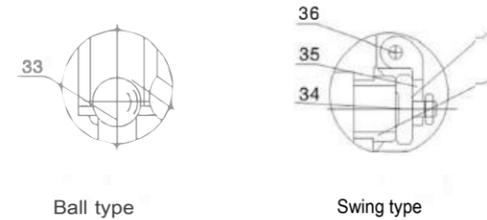
**Y Type Check Valves**



**Y type pressure sealed check valves**



Please mark in you offer if you need load spring



**Carbon steel temperature-pressure rate**

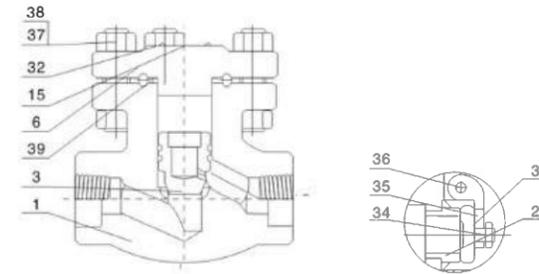
CL150-285 P.S.I @ 100°F CL300-740 P.S.I @ 100°F CL 600-1480 P.S.I @ 100°F CL 800-1975 P.S.I @ 100°F CL 1500-3705 P.S.I @ 100°F

**Application standards**

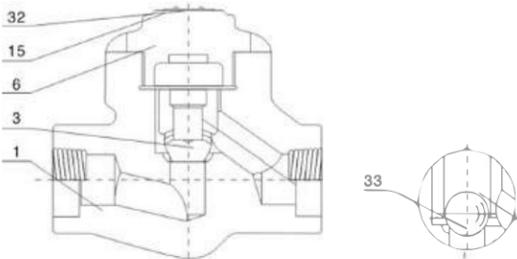
1. Design and manufacture conform to: BS5352, MSS SP-118;
2. Connection ends conform to:
  - 1)Socket welded dimension conform to ANSI B16.11,JB/T1751
  - 2)Screw ends dimension conform to ANSI B1.20.1,JB/T7306
  - 3)Butt-welded conform to ANSI B16.25, JB/T12224
  - 4)Flanged ends conform to ANSI B16.5, JB79
3. Test and inspection conform to: API 598, GB/T13927, JB/T9092
4. Structure features: (B.B) Bolted bonnet
5. Materials conform to ANSI/ASTM.
6. Main materials: A105; LF2; F5; F11; F22; 304(L); 316(L); F347; F321; F51; Monel; 20Alloy.

**Main part materials list**

| NO. | Part name  | A105/F6a               | A105/F6aHFS            | LF2/304                | F11/F6aHF              | F304(L)/304(L)         | F316(L)/316(L)         | F51/F51                |
|-----|------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 1   | Body       | A105                   | A105                   | LF2                    | F11                    | F304(L)                | F316(L)                | F51                    |
| 2   | Seat       | 410                    | 410HF                  | 304                    | 410HF                  | 304(L)                 | 316(L)                 | F51                    |
| 3   | Disc       | F6a                    | F6a                    | F304                   | F6aHF                  | F304(L)                | F316(L)                | F51                    |
| 5   | Gasket     | 304+ Flexible graphite |
| 6   | Bonnet     | A105                   | A105                   | LF2                    | F11                    | F304(L)                | F316(L)                | F51                    |
| 7   | Bolt       | B7                     | B7                     | L7                     | B16                    | B8(M)                  | B8(M)                  | BBM                    |
| 15  | Name plate | AL                     |
| 32  | Revit      | AL                     |
| 33  | Steel ball | 430                    | 430                    | 304                    | STL                    | 316(L)                 | 316(L)                 | STL                    |
| 34  | Disc nut   | 2H                     | 2H                     | 8                      | 8                      | B(M)                   | 8(M)                   | BM                     |
| 35  | Hinge      | 410                    | 410                    | 304                    | 410                    | 316(L)                 | 316(L)                 | F51                    |
| 36  | Pin        | 410                    | 410                    | 304                    | 410                    | 304(L)                 | 316(L)                 | F51                    |



Please mark in you offer if you need load spring



Please mark in you offer if you need load spring

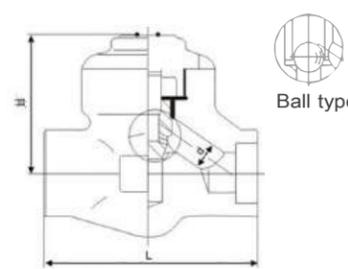
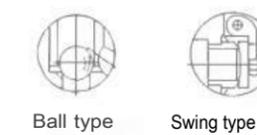
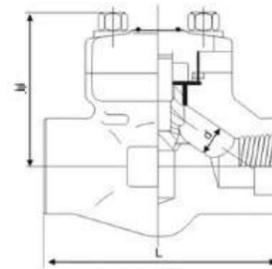
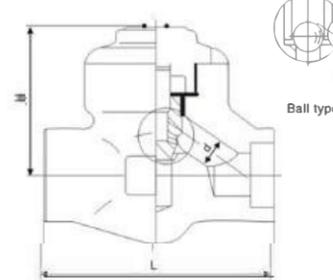
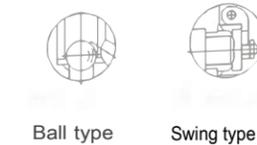
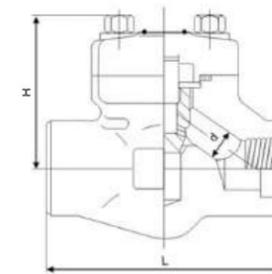
**Application standards**

- Design and manufacture conform to: BSS5352 MSS SP-118;
- Connection ends conform to:
  - Socket welded dimension conform to ANSI B16.11, JB/T1751
  - Screw ends dimension conform to ANSI B1.20.1, JB/T7306
  - Butt-welded conform to ANSI B16.25 JB/T12224
  - Flanged ends conform to ANSI B16.5, JB79
- Test and inspection conform to: API 598, GB/T13927, JB/T9092
- Structure features:
  - Gasket for bonnet connect adopt metal ring
  - Bolted bonnet, Welded bonnet
- Materials conform to ANSI/ASTM,
- Main materials: A105; LF2; F5; F11; F22; 304(L); 316(L); F347; F321; F51; Monel; 20Alloy.

**Carbon steel temperature-pressure rate** CL150-285 PS.I @ 100°F  
 CL300-740 PS.I @ 100°F CL 600-1480 PS.I @ 100°F CL 800-1975 PS.I @ 100°F CL 1500-3705 PS.I @ 100°F CL 2500-6170 PS.I @ 100°F

**Main part materials list**

| NO. | Part name    | A105/F6a | A105/F6aHFS | LF2/304 | F11/F6aHF | F304(L)/304(L) | F316(L)/316(L) | F51/F51 |
|-----|--------------|----------|-------------|---------|-----------|----------------|----------------|---------|
| 1   | Body         | A105     | A105        | LF2     | F11       | F304(L)        | F316(L)        | F51     |
| 2   | Seat         | 410      | 410HF       | 304     | 410HF     | 304(L)         | 316(L)         | F51     |
| 3   | Disc         | F6a      | F6a         | F304    | F6aHF     | F304(L)        | F316(L)        | F51     |
| 6   | Bonnet       | A105     | A105        | LF2     | F11       | F304(L)        | F316(L)        | F51     |
| 15  | Nameplate    | AL       | AL          | AL      | AL        | AL             | AL             | AL      |
| 32  | Revit        | AL       | AL          | AL      | AL        | AL             | AL             | AL      |
| 33  | Steel ball   | 430      | 430         | 304     | STL       | 316(L)         | 316(L)         | STL     |
| 34  | Disc nut     | 2H       | 2H          | 8       | 8         | 8(M)           | 8(M)           | 8M      |
| 35  | Hinge        | 410      | 410         | 304     | 410       | 316(L)         | 316(L)         | F51     |
| 36  | Pin          | 410      | 410         | 304     | 410       | 304(L)         | 316(L)         | F51     |
| 37  | Screwed stud | B7       | B7          | L7      | B16       | B8(M)          | B8(M)          | B8(M)   |
| 38  | nut          | 2H       | 2H          | 8       | 8         | 8(M)           | 8(M)           | 8(M)    |
| 39  | Metal ring   | 304      | 304         | 304     | 304       | 304(L)         | 316(L)         | F51     |



Bolted bonnet, full port and reducing port  
 Threaded, butt-welded socket welded ends; desing to BSS5352

Welded bonnet, full port and reducing port  
 Threaded, butt-welded socket welded ends; desing to BSS5352

Bolted bonnet, full port and yoke(OS&Y)  
 Threaded, butt-welded socket welded ends; desing to BSS5352

Welded bonnet, full port and reducing port  
 Threaded, butt-welded socket welded ends; desing to BSS5352

**CL800**

| Specification (NPS)     | R.P | -     | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 |      |
|-------------------------|-----|-------|-----|-----|-----|-------|-------|-------|-------|------|
|                         | F.P | -     | 1/4 | 3/8 | 1/2 | 3/4   | 1     | 1 1/4 | 1 1/2 |      |
| Face to face (mm)       | L   | Lift  | 79  | 79  | 92  | 111   | 120   | 152   | 172   | 220  |
|                         |     | Swing | 79  | 79  | 92  | 111   | 120   | 120   | 140   | 160  |
| Height (mm)             | H   | Lift  | 61  | 61  | 61  | 78    | 84    | 84    | 118   | 132  |
|                         |     | Swing | 61  | 61  | 61  | 78    | 84    | 84    | 120   | 133  |
| Flow port dimension(mm) | d   | Lift  | 7   | 9   | 13  | 18    | 23    | 30    | 35    | 46   |
|                         |     | Swing | 8   | 11  | 14  | 18    | 24    | 29    | 36    | 45   |
| (Kg)/Weight             |     | Lift  | 1.2 | 1.5 | 1.7 | 3.3   | 4.2   | 4.2   | 11    | 12.5 |
|                         |     | Swing | 1.4 | 1.5 | 1.7 | 3.3   | 4.2   | 4.2   | 8.5   | 10.9 |

**CL800**

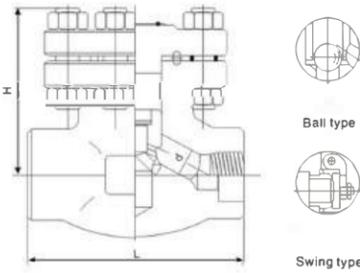
| Specification (NPS) | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
|---------------------|-----|-----|-----|-----|-----|-------|-------|-------|-------|
|                     | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     |
| Face to face (mm)   | L   | 79  | 79  | 92  | 111 | 120   | 152   | 172   | 220   |
| Height (mm)         | H   | 61  | 61  | 61  | 78  | 84    | 103   | 118   | 132   |
| Flow port           | d   | 7   | 9   | 13  | 18  | 23    | 30    | 35    | 46    |
| (Kg)/Weight         |     | 1.2 | 1.3 | 1.5 | 3   | 3.9   | 6     | 10    | 12    |

**CL900-1500**

| Specification (NPS)     | R.P | -     | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 |     |
|-------------------------|-----|-------|-----|-----|-----|-------|-------|-------|-------|-----|
|                         | F.P | -     | 1/4 | 3/8 | 1/2 | 3/4   | 1     | 1 1/4 | 1 1/2 |     |
| Face to face (mm)       | L   | Lift  | 92  | 111 | 111 | 120   | 152   | 172   | 220   | 230 |
|                         |     | Swing | 92  | 111 | 111 | 120   | 120   | 140   | 160   | 180 |
| Height (mm)             | H   | Lift  | 61  | 78  | 78  | 84    | 101   | 120   | 132   | -   |
|                         |     | Swing | 61  | 78  | 78  | 84    | 101   | 120   | 133   | -   |
| Flow port dimension(mm) | d   | Lift  | 7   | 12  | 15  | 20    | 28    | 32    | 40    | -   |
|                         |     | Swing | 8   | 11  | 14  | 18    | 24    | 29    | 45    | -   |
| (Kg)/Weight             |     | Lift  | 1.5 | 3.4 | 3.3 | 4.2   | 6.3   | 10.5  | 12.5  | -   |
|                         |     | Swing | 1.5 | 3.3 | 3.4 | 4.2   | 5     | 8.5   | 10.9  | -   |

**CL900-1500**

| Specification (NPS) | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
|---------------------|-----|-----|-----|-----|-----|-------|-------|-------|-------|
|                     | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     |
| Face to face (mm)   | L   | 92  | 111 | 111 | 120 | 152   | 172   | 220   | 230   |
| Height (mm)         | H   | 61  | 78  | 78  | 84  | 103   | 118   | 132   | -     |
| Flow port           | d   | 7   | 12  | 15  | 20  | 28    | 32    | 40    | -     |
| (Kg)/Weight         |     | 1.3 | 3.1 | 3.1 | 3.9 | 5.8   | 10    | 11.5  | -     |



Ball type

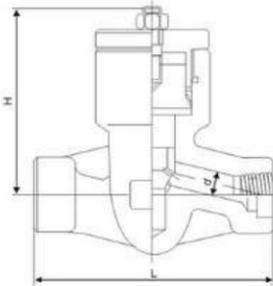


Swing type

**CL900~1500**

Bolted bonnet, full port and reducing port  
Threaded, butt-welded or socket welded ends; design to BS5352

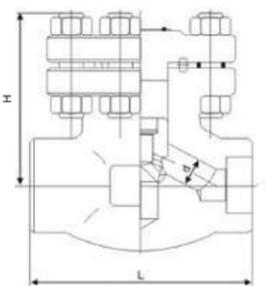
| Specification (NPS)      | R.P | -     | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 |      |
|--------------------------|-----|-------|-----|-----|-----|-------|-------|-------|-------|------|
|                          | F.P | -     | 1/4 | 3/8 | 1/2 | 3/4   | 1     | 1 1/4 | 1 1/2 | 2    |
| Face to face (mm)        | L   | -     | 110 | 110 | 110 | 110   | 150   | 150   | 210   | 235  |
| Height (mm)              | H   | -     | 166 | 166 | 171 | 207   | 240   | 258   | 330   | 355  |
| Flow port dimension (mm) | d   | Lift  | 9   | 10  | 12  | 15    | 20    | 28    | 32    | 40   |
|                          |     | Swing | 8   | 11  | 14  | 18    | 24    | 29    | 36.5  | 45   |
| (Kg)/Weight              |     | Lift  | 2   | 2.1 | 1.9 | 4     | 5.1   | 7.2   | 12.1  | 14   |
|                          |     | Swing | 1.9 | 2.3 | 2.3 | 4.4   | 5.25  | 7.8   | 12.5  | 14.6 |



**CL900~1500**

Pressure seal bonnet, full port and reducing port  
Threaded, butt-welded socket welded ends; design to BS5352

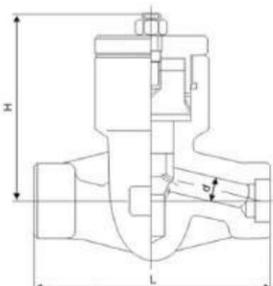
| Specification (NPS) | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     |
|---------------------|-----|-----|-----|-----|-----|-------|-------|-------|-------|-------|
|                     | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
| Face to face (mm)   | L   | -   | 140 | 140 | 140 | 178   | 216   | 216   | 279   | -     |
| Height (mm)         | H   | -   | 117 | 117 | 117 | 152   | 195   | 195   | 195   | -     |
| Flow port           | d   | -   | 12  | 15  | 20  | 28    | 32    | 40    | 45    | -     |
| (Kg)/Weight         |     | -   | 6.8 | 7   | 7.5 | 18.5  | 20.3  | 22    | 39    | -     |



**CL2500**

Bolted bonnet, full port  
Threaded, butt-welded or socket welded ends; design to ASME B16.34

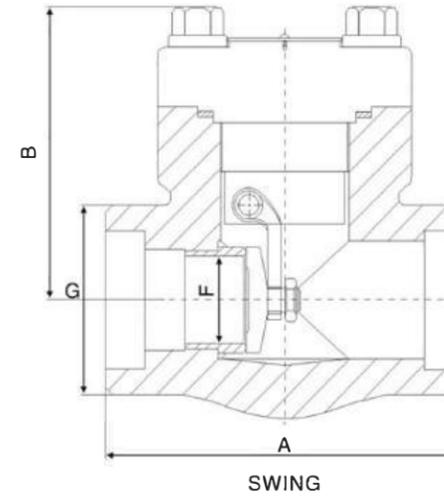
| Specification (NPS) | F.P               | 1/4  | 3/8  | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2   |
|---------------------|-------------------|------|------|-----|-----|-----|-------|-------|-----|
|                     | Face to face (mm) | L    | 150  | 150 | 150 | 150 | 210   | 235   | 235 |
| Height (mm)         | H                 | 166  | 166  | 171 | 207 | 240 | 258   | 330   | 355 |
| Flow port           | d                 | 7.5  | 10.5 | 11  | 14  | 19  | 25    | 28    | 35  |
| (Kg)/Weight         |                   | 11.9 | 12.3 | 17  | 46  | 62  | 73    | 58    | 85  |



**CL2500**

Pressure seal bonnet, full port  
Threaded, butt-welded or socket welded ends; design to ASME B16.34

| Specification (NPS) | F.P               | 1/4 | 3/8 | 1/2  | 3/4 | 1    | 1 1/4 | 1 1/2 | 2   |
|---------------------|-------------------|-----|-----|------|-----|------|-------|-------|-----|
|                     | Face to face (mm) | L   | -   | -    | 186 | 186  | 186   | 232   | 232 |
| Height (mm)         | H                 | -   | -   | 117  | 117 | 117  | 152   | 152   | 195 |
| Flow port           | d                 | -   | -   | 11   | 14  | 19   | 25    | 28    | 35  |
| (Kg)/Weight         |                   | -   | -   | 10.5 | 11  | 11.8 | 23    | 26.4  | 39  |



**Application standards**

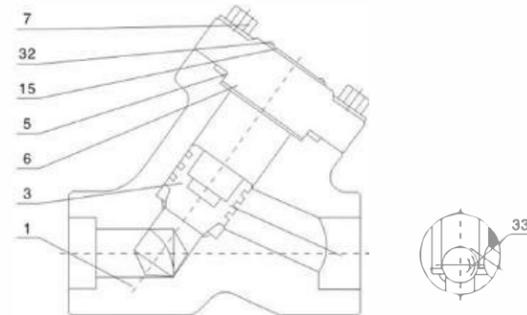
- Design and manufacture conform to: API 602;
- Connection ends conform to:
  - Socket welded dimension conform to ANSI B16.11
  - Screw ends dimension conform to ANSI B1.20.1
- Test and inspection conform to: API 598
- Structure features:
  - Bolted bonnet
- Materials conform to ANSI/ASTM:
- Main materials:
  - A105; F5; F9; F11; F22; F91; F304; F304L; F316; F316L; F321; LF2 ect.

**CLASS-800**

| CLASS 800    |      |      |      |      |     |        |        |      |             |      |      |     |        |        |      |
|--------------|------|------|------|------|-----|--------|--------|------|-------------|------|------|-----|--------|--------|------|
| REDUCED NORE |      |      |      |      |     |        |        |      | FULL BORE   |      |      |     |        |        |      |
| Size         | 1/4" | 3/8" | 1/2" | 3/4" | 1"  | 1 1/4" | 1 1/2" | 2"   | Size        | 1/2" | 3/4" | 1"  | 1 1/4" | 1 1/2" | 2"   |
| A            | 79   | 79   | 79   | 92   | 111 | 120    | 120    | 140  | A           | 92   | 111  | 120 | 120    | 140    | 160  |
| B            | 54.5 | 54.5 | 54.5 | 54.5 | 72  | 81     | 94     | 112  | B           | 54.5 | 72   | 81  | 94     | 112    | 132  |
| F            | 8    | 13   | 13   | 13   | 18  | 24     | 29     | 36.8 | F           | 13   | 18   | 24  | 29     | 36.8   | 48   |
| G            | 34   | 34   | 34   | 40   | 49  | 58     | 64     | 78   | G           | 40   | 49   | 58  | 64     | 78     | 78   |
| Weight (kg)  | 1.3  | 1.3  | 1.2  | 1.7  | 2.4 | 4.0    | 5.1    | 8.8  | Weight (kg) | 1.7  | 2.3  | 3.9 | 5.0    | 8.7    | 15.3 |

**CLASS -1500**

| CLASS 1500   |      |      |      |      |     |        |        |      |             |      |      |     |        |        |      |
|--------------|------|------|------|------|-----|--------|--------|------|-------------|------|------|-----|--------|--------|------|
| REDUCED NORE |      |      |      |      |     |        |        |      | FULL BORE   |      |      |     |        |        |      |
| Size         | 1/4" | 3/8" | 1/2" | 3/4" | 1"  | 1 1/4" | 1 1/2" | 2"   | Size        | 1/2" | 3/4" | 1"  | 1 1/4" | 1 1/2" | 2"   |
| A            | 79   | 79   | 92   | 111  | 120 | 120    | 140    | 160  | A           | 111  | 120  | 120 | 140    | 160    | 220  |
| B            | 73   | 73   | 73   | 73   | 84  | 97     | 115    | 132  | B           | 73   | 84   | 97  | 115    | 132    | 132  |
| F            | 6.8  | 10   | 13   | 13   | 18  | 24     | 29     | 36.8 | F           | 13   | 18   | 24  | 29     | 36.8   | 48   |
| G            | 34   | 34   | 34   | 40   | 49  | 58     | 64     | 78   | G           | 40   | 49   | 58  | 64     | 78     | 88   |
| Weight (kg)  | 2.2  | 2.0  | 2.2  | 2.7  | 4.4 | 6.3    | 10.3   | 15.3 | Weight (kg) | 2.7  | 4.3  | 6.2 | 10.2   | 15.3   | 16.7 |



Please mark in you offer if you need load spring

Ball type

**Application standards**

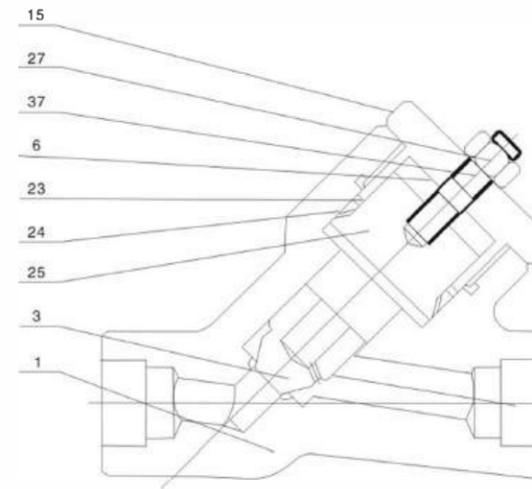
1. Design and manufacture conform to: BS5352, MSS SP-118;
2. Connection ends conform to:
  - 1)Socket welded dimension conform to ANSI B16.11,JB/T1751
  - 2)Screw ends dimension conform to ANSI B1.20.1,JB/T7306
  - 3)Butt-welded conform to ANSI B16.25, JB/T12224
  - 4)Flanged ends conform to ANSI B16.5, JB79
3. Test and inspection conform to: API 598, GB/T13927, JB/T9092
4. Structure features:
  - Bolted bonnet, Welded bonnet
5. Materials conform to ANSI/ASTM.
6. Main materials: A105; LF2; F5; F11; F22; 304(L); 316(L); F347; F321; F51; Monel; 20Alloy.

**Carbon steel temperature–pressure rate**

CL 1500-3705 PSI @ 100°F CL 2500-6170 PSI @ 100°F CL 4500-1111 PSI @ 100°F

**Main part materials list**

| NO. | Part name  | A105/F6a               | A105/F6aHFS            | LF2/304                | F11/F6aHF              | F304(L)/304(L)         | F316(L)/316(L)         | F51/F51                |
|-----|------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 1   | Body       | A105                   | A105                   | LF2                    | F11                    | F304(L)                | F316(L)                | F51                    |
| 3   | Disc       | 410                    | 410HF                  | 304                    | 410HF                  | 304(L)                 | 316(L)                 | F51                    |
| 5   | Gasket     | 304+ Flexible graphite | 316+ Flexible graphite | 316+ Flexible graphite |
| 6   | Bonnet     | A105                   | A105                   | LF2                    | F11                    | F304(L)                | F316(L)                | F51                    |
| 7   | Bolt       | B7                     | B7                     | L7                     | B16                    | B8(M)                  | B8(M)                  | B8M                    |
| 15  | Nameplate  | AL                     |
| 32  | Revit      | AL                     |
| 33  | Steel ball | 430                    | 430                    | 304                    | STL                    | 316(L)                 | 316(L)                 | STL                    |



**Application standards**

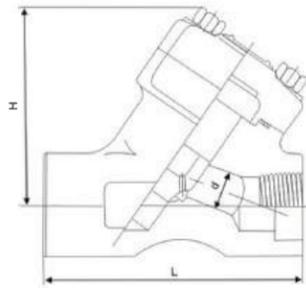
1. Design and manufacture conform to: ASME B16.34, MSS SP-118;
2. Connection ends conform to:
  - 1)Socket welded dimension conform to ANSI B16.11,JB/T1751
  - 2)Screw ends dimension conform to ANSI B1.20.1,JB/T7306
  - 3)Butt-welded conform to ANSI B16.25, JB/T12224
  - 4)Flanged ends conform to ANSI B16.5, JB79
3. Test and inspection conform to: API 598, GB/T13927, JB/T9092
4. Structure features:
  - A threaded and pressure seal bonnet; Y type and T type
5. Materials conform to ANSI/ASTM.
6. Main materials: A105; LF2; F5; F11; F22; 304(L); 316(L); F347; F321; F51; Monel; 20Alloy.

**Carbon steel temperature–pressure rate**

CL 1500-3705 PSI @ 100°F CL 2500-6170 PSI @ 100°F  
CL 4500-1111 PSI @ 100°F

**Main part materials list**

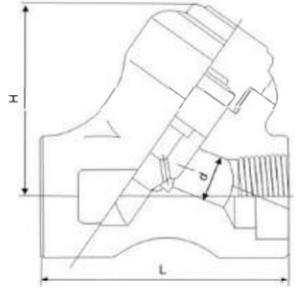
| NO | Part name        | A105/F6a | A105/F6aHFS | LF2/304 | F11/F6aHF | F304(L)/304(L) | F316(L)/316(L) | F51/F51 |
|----|------------------|----------|-------------|---------|-----------|----------------|----------------|---------|
| 1  | Body             | A105     | A105+HF     | LF2     | F11+HF    | F304(L)        | F316(L)        | F51     |
| 3  | Disc             | F6a      | F6a         | F304    | F6aHF     | F304(L)        | F316(L)        | F51     |
| 6  | Bonnet           | A105     | A105        | LF2     | F11       | F304(L)        | F316(L)        | F51     |
| 15 | Nameplate        | AL       | AL          | AL      | AL        | AL             | AL             | AL      |
| 23 | Seal ring gasket | 420      | 420         | 304     | 304       | 304(L)         | 316(L)         | 410     |
| 24 | P.S. ring        | 304      | 304         | 304     | 304       | 316L           | 316L           | 316L    |
| 25 | P.S. seat        | F410     | F410        | F304    | F410      | F304           | F316           | F51     |
| 27 | Lift nut         | 2H       | 2H          | 8       | 8         | 8(M)           | 8(M)           | 8M      |
| 37 | Lift stud        | B7       | B7          | L7      | B16       | B8(M)          | B8(M)          | B8M     |



Bolted bonnet, full port and reducing port  
Threaded, butt-welded or socket welded ends  
designing to BS5352

CL800

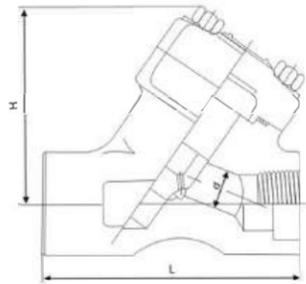
| Specification (NPS) | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     |
|---------------------|-----|-----|-----|-----|-----|-------|-------|-------|-------|-------|
|                     | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
| Face to face (mm)   | L   | 98  | 98  | 98  | 120 | 140   | 140   | 170   | 200   | -     |
| Height (mm)         | H   | 70  | 70  | 7   | 100 | 110   | 120   | 120   | 150   | -     |
| Flow port           | d   | 7   | 10  | 13  | 18  | 23    | 30    | 35    | 46    | -     |
| (Kg)/Weight         |     | 2.1 | 2.2 | 2.2 | 4.2 | 8.9   | 9     | 10    | 18.6  | -     |



Welded bonnet, full port and reducing port  
Threaded, butt-welded or socket welded ends  
designing to BS5352

CL800

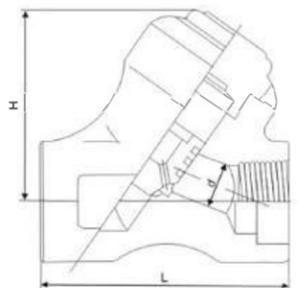
| Specification (NPS) | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     |
|---------------------|-----|-----|-----|-----|-----|-------|-------|-------|-------|-------|
|                     | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
| Face to face (mm)   | L   | 98  | 98  | 98  | 120 | 140   | 140   | 170   | 200   | -     |
| Height (mm)         | H   | 65  | 65  | 65  | 95  | 105   | 110   | 110   | 140   | -     |
| Flow port           | d   | 7   | 10  | 13  | 18  | 23    | 30    | 35    | 46    | -     |
| (Kg)/Weight         |     | 1.8 | 1.8 | 2   | 3.5 | 8     | 8     | 12    | 16    | -     |



Bolted bonnet, full port  
Threaded, butt-welded or socket welded ends  
designing to BS5352

CL900-1500

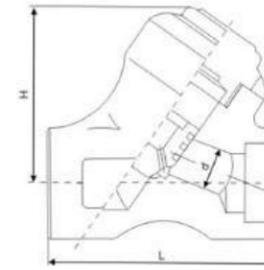
| Specification (NPS) | F.P | 3/8 | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2   |
|---------------------|-----|-----|-----|-----|-----|-------|-------|-----|
| Face to face (mm)   | L   | 98  | 120 | 120 | 140 | 140   | 170   | 200 |
| Height (mm)         | H   | 70  | 70  | 100 | 110 | 110   | 120   | 150 |
| Flow port           | d   | 9   | 12  | 15  | 20  | 18    | 32    | 40  |
| (Kg)/Weight         |     | 2.1 | 4.2 | 8.9 | 9   | 10    | 18.6  | 20  |



Welded bonnet, full port and reducing port  
Threaded, butt-welded socket welded ends  
designing to BS5352

CL900-1500

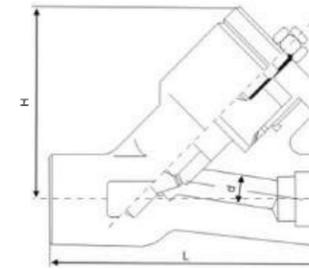
| Specification (NPS) | F.P | 3/8 | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2   |
|---------------------|-----|-----|-----|-----|-----|-------|-------|-----|
| Face to face (mm)   | L   | 98  | 120 | 120 | 140 | 140   | 170   | 200 |
| Height (mm)         | H   | 65  | 65  | 65  | 105 | 110   | 110   | 140 |
| Flow port           | d   | 9   | 12  | 15  | 20  | 32    | 28    | 40  |
| (Kg)/Weight         |     | 2   | 3.5 | 3.5 | 8   | 12    | 12    | 18  |



Welded bonnet, full port  
Threaded, butt-welded socket welded ends; designing to ASME B16.34

CL2500

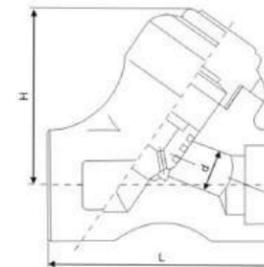
| Specification (NPS) | F.P | 3/8  | 1/2  | 3/4  | 1    | 1 1/4 | 1 1/2 | 2   |
|---------------------|-----|------|------|------|------|-------|-------|-----|
| Face to face (mm)   | L   | 186  | 186  | 186  | 186  | 232   | 232   | 310 |
| Height (mm)         | H   | 115  | 115  | 120  | 150  | 150   | 150   | 160 |
| Flow port           | d   | 9    | 11   | 14   | 19   | 25    | 28    | 35  |
| (Kg)/Weight         |     | 10.6 | 10.8 | 11.2 | 11.5 | 25    | 22    | 39  |



Pressure seal, bolted bonnet, full port  
Threaded, butt-welded socket welded ends; designing to ASME B16.34

CL2500

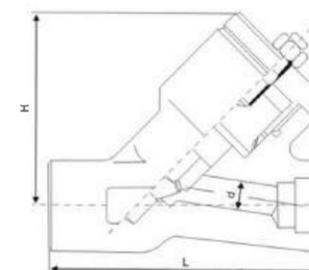
| Specification (NPS) | F.P | 3/8  | 1/2  | 3/4  | 1    | 1 1/4 | 1 1/2 | 2   |
|---------------------|-----|------|------|------|------|-------|-------|-----|
| Face to face (mm)   | L   | 186  | 186  | 186  | 186  | 232   | 232   | 310 |
| Height (mm)         | H   | 233  | 233  | 233  | 233  | 256   | 256   | 330 |
| Flow port           | d   | 9    | 11   | 14   | 19   | 25    | 28    | 35  |
| (Kg)/Weight         |     | 10.6 | 10.8 | 11.2 | 11.5 | 25    | 22    | 39  |



Welded bonnet, full port  
Threaded, butt-welded socket welded ends; designing to ASME B16.34

CL4500

| Specification (NPS) | F.P | 3/8 | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2   |
|---------------------|-----|-----|-----|-----|-----|-------|-------|-----|
| Face to face (mm)   | L   | 155 | 155 | 155 | 155 | -     | 225   | 225 |
| Height (mm)         | H   | 120 | 120 | 120 | 145 | -     | 160   | 160 |
| Flow port           | d   | 9   | 11  | 11  | 15  | -     | 26    | 28  |
| (Kg)/Weight         |     | 8   | 8.7 | 8.7 | 8.7 | -     | 16.5  | 16  |



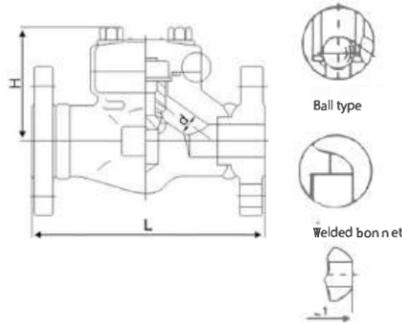
Pressure seal, bolted bonnet, full port  
Threaded, butt-welded socket welded ends; designing to ASME B16.34

CL4500

| Specification (NPS) | F.P | 3/8 | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2   |
|---------------------|-----|-----|-----|-----|-----|-------|-------|-----|
| Face to face (mm)   | L   | 200 | 200 | 200 | 200 | 250   | 250   | 330 |
| Height (mm)         | H   | 140 | 140 | 140 | 140 | 160   | 160   | 180 |
| Flow port           | d   | 9   | 11  | 11  | 15  | 20    | 26    | 28  |
| (Kg)/Weight         |     | 20  | 20  | 20  | 20  | 28    | 28    | 45  |

**CL150-300-600**

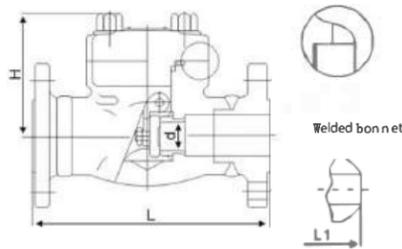
Bolted bonnet, full port  
Flange-welded or butt-welded ends; design to BS5352



| Specification            |             | R.P       | 1/4 | 3/8 | 1/2  | 3/4  | 1    | 1 1/4 | 1 1/2 | 2    |
|--------------------------|-------------|-----------|-----|-----|------|------|------|-------|-------|------|
| Face to face (mm)        | CL150       | L (RF/)   | -   | -   | 108  | 117  | 127  | 140   | 165   | 203  |
|                          | CL300       | L1 ( BW ) | -   | -   | 152  | 178  | 203  | 216   | 229   | 267  |
|                          | CL600       |           | -   | -   | 165  | 190  | 216  | 229   | 241   | 292  |
| Height (mm)              | CL150       | H         | -   | -   | 180  | 184  | 217  | 224   | 260   | 300  |
|                          | CL300,CL600 |           | -   | -   | 164  | 164  | 203  | 224   | 260   | 300  |
| Flow port dimension (mm) |             | d         | -   | -   | 9    | 13   | 17.5 | 23    | 30    | 35   |
| Weight (kg)              | CL150       | RF        | -   | -   | 3.5  | 4.00 | 6.2  | 9.6   | 10.5  | 17.0 |
|                          |             | BW        | -   | -   | 2.3  | 3.6  | 7.8  | 8.2   | 12    | 15   |
|                          | CL300       | RF        | -   | -   | 3.80 | 5.10 | 7.20 | 12.0  | 13.5  | 19.7 |
|                          |             | BW        | -   | -   | 2.8  | 4    | 8.5  | 9.2   | 12.6  | 16.8 |
|                          | CL600       | RF        | -   | -   | 5.6  | 7.8  | 12.5 | 17.0  | 23.5  | 38.8 |
|                          |             | BW        | -   | -   | 3.4  | 4.7  | 9.2  | 10.5  | 13.3  | 18.9 |

**CL150-300-600**

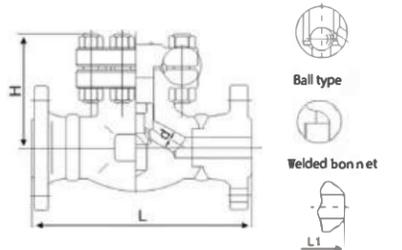
Bolted bonnet, full port  
Flange-welded or butt-welded ends; design to BS5352



| Specification            |             | R.P       | 1/4 | 3/8 | 1/2  | 3/4  | 1   | 1 1/4 | 1 1/2 | 2    |
|--------------------------|-------------|-----------|-----|-----|------|------|-----|-------|-------|------|
| Face to face (mm)        | CL150       | L (RF/)   | -   | -   | 108  | 117  | 127 | 140   | 165   | 203  |
|                          | CL300       | L1 ( BW ) | -   | -   | 152  | 178  | 203 | 216   | 229   | 267  |
|                          | CL600       |           | -   | -   | 165  | 190  | 216 | 229   | 241   | 292  |
| Height (mm)              | CL150       | H         | -   | -   | 77   | 81   | 93  | 95    | 103   | 118  |
|                          | CL300,CL600 |           | -   | -   | 61   | 78   | 84  | 101   | 120   | 133  |
| Flow port dimension (mm) |             | d         | -   | -   | 10.5 | 13.5 | 18  | 24    | 29    | 36.5 |
| Weight (kg)              | CL150       | RF        | -   | -   | 3.6  | 4.60 | 8.5 | 9.2   | 12.5  | 14.8 |
|                          |             | BW        | -   | -   | 3    | 3.6  | 7.6 | 8.5   | 11.3  | 13.6 |
|                          | CL300       | RF        | -   | -   | 3.7  | 4.8  | 8.8 | 9.6   | 13.7  | 17.8 |
|                          |             | BW        | -   | -   | 3.2  | 4.3  | 8   | 8.6   | 12.7  | 16.2 |
|                          | CL600       | RF        | -   | -   | 4    | 5.8  | 9.5 | 10.4  | 15.8  | 24.5 |
|                          |             | BW        | -   | -   | 3.4  | 5.1  | 8.8 | 9.2   | 14.8  | 22.5 |

**CL150-300-600**

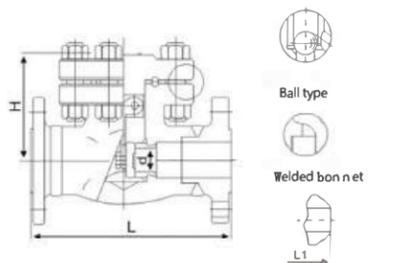
Bolted bonnet, full port  
Flange-welded or butt-welded ends; design to BS5352



| Specification            |             | R.P       | 1/4 | 3/8 | 1/2 | 3/4  | 1    | 1 1/4 | 1 1/2 | 2    |
|--------------------------|-------------|-----------|-----|-----|-----|------|------|-------|-------|------|
| Face to face (mm)        | CL150       | L (RF/)   | -   | -   | 108 | 117  | 127  | 140   | 165   | 203  |
|                          | CL300       | L1 ( BW ) | -   | -   | 152 | 178  | 203  | 216   | 229   | 267  |
|                          | CL600       |           | -   | -   | 165 | 190  | 216  | 216   | 241   | 292  |
| Height (mm)              | CL150       | H         | -   | -   | 77  | 81   | 93   | 95    | 103   | 118  |
|                          | CL300,CL600 |           | -   | -   | 61  | 78   | 84   | 101   | 120   | 133  |
| Flow port dimension (mm) |             | d         | -   | -   | 10  | 13   | 17.5 | 23    | 30    | 35   |
| Weight (kg)              | CL150       | RF        | -   | -   | 3.2 | 3.50 | 4.6  | 5.2   | 7.0   | 16.0 |
|                          |             | BW        | -   | -   | 2.8 | 3    | 4    | 4.6   | 6.3   | 15   |
|                          | CL300       | RF        | -   | -   | 4.6 | 6.1  | 9.1  | 12.0  | 16.0  | 21.0 |
|                          |             | BW        | -   | -   | 4.1 | 6.7  | 8.4  | 11.2  | 14.5  | 19.5 |
|                          | CL600       | RF        | -   | -   | 4.8 | 6.3  | 9.3  | 13.0  | 16.5  | 22   |
|                          |             | BW        | -   | -   | 4.4 | 5.9  | 8.7  | 12.1  | 15.8  | 20.8 |

**CL150-300-600**

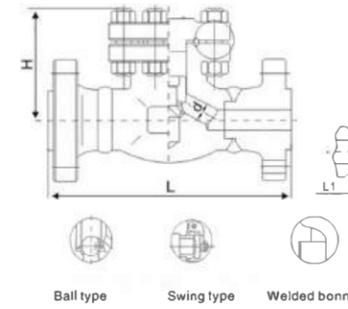
Bolted bonnet, full port  
Flange-welded or butt-welded ends; design to BS5352



| Specification            |             | R.P       | 1/4 | 3/8 | 1/2  | 3/4  | 1   | 1 1/4 | 1 1/2 | 2    |
|--------------------------|-------------|-----------|-----|-----|------|------|-----|-------|-------|------|
| Face to face (mm)        | CL150       | L (RF/)   | -   | -   | 108  | 117  | 127 | 140   | 165   | 203  |
|                          | CL300       | L1 ( BW ) | -   | -   | 152  | 178  | 203 | 216   | 229   | 267  |
|                          | CL600       |           | -   | -   | 165  | 190  | 216 | 229   | 241   | 292  |
| Height (mm)              | CL150       | H         | -   | -   | 77   | 81   | 93  | 95    | 103   | 118  |
|                          | CL300,CL600 |           | -   | -   | 61   | 78   | 84  | 101   | 120   | 133  |
| Flow port dimension (mm) |             | d         | -   | -   | 10.5 | 13.5 | 18  | 24    | 29    | 36.5 |
| Weight (kg)              | CL150       | RF        | -   | -   | 3.6  | 4.60 | 8.5 | 9.2   | 12.5  | 14.8 |
|                          |             | BW        | -   | -   | 3    | 3.6  | 7.6 | 8.5   | 11.3  | 13.6 |
|                          | CL300       | RF        | -   | -   | 3.7  | 4.8  | 8.8 | 9.6   | 13.7  | 17.8 |
|                          |             | BW        | -   | -   | 3.2  | 4.3  | 8   | 8.6   | 12.7  | 16.2 |
|                          | CL600       | RF        | -   | -   | 4    | 5.8  | 9.5 | 10.4  | 15.6  | 24.5 |
|                          |             | BW        | -   | -   | 3.4  | 5.1  | 8.8 | 9.2   | 14.8  | 22.5 |

**CL900-1500**

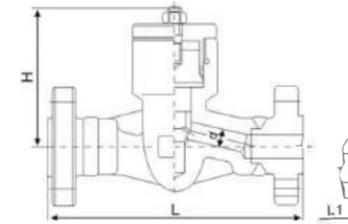
Bolted bonnet, full port  
Flange-welded or butt-welded ends; design to BS5352



| Specification (NPS)      |                      | F.P   | 1/2  | 3/4 | 1    | 1 1/4 | 1 1/2 | 2   |
|--------------------------|----------------------|-------|------|-----|------|-------|-------|-----|
| Face to face (mm)        | L ( RF ) , L1 ( BW ) |       | 216  | 229 | 254  | 279   | 305   | 368 |
| Height (mm)              | H                    |       | 81   | 93  | 95   | 101   | 118   | 130 |
| Flow port dimension (mm) | d                    | Lift  | 12   | 15  | 20   | 28    | 32    | 40  |
|                          |                      | Swing | 13.5 | 18  | 24   | 29    | 36.5  | 45  |
| (Kg)/Weight              |                      | Lift  | 5.2  | 6.8 | 10.5 | 28    | 18    | 24  |
|                          |                      | Swing | 5    | 6.1 | 10.8 | 29    | 17.6  | 27  |

**CL900-1500**

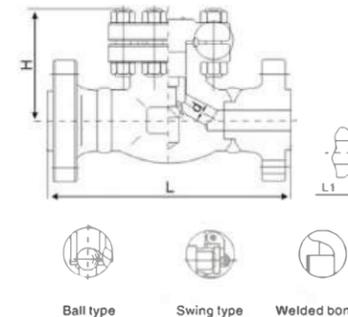
Pressure seal, bolted bonnet, full port and reduced port  
Flange-welded or butt-welded ends; design to BS5352



| Specification (NPS)      |                      | F.P | 3/8 | 1/2  | 3/4  | 1    | 1 1/4 | 1 1/2 | 2    |
|--------------------------|----------------------|-----|-----|------|------|------|-------|-------|------|
| Face to face (mm)        | L ( RF ) , L1 ( BW ) |     | -   | 216  | 229  | 254  | 279   | 305   | 368  |
|                          | L ( RTJ )            |     | -   | 216  | 229  | 254  | 280   | 305   | 371  |
| Height (mm)              | H                    |     | -   | 117  | 117  | 117  | 152   | 152   | 195  |
| Flow port dimension (mm) | d                    |     | -   | 12   | 15   | 20   | 28    | 32    | 40   |
| (Kg)/Weight              |                      |     | -   | 10.5 | 11.9 | 13.9 | 19.9  | 26.9  | 32.5 |

**CL2500**

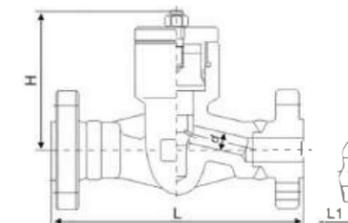
Bolted bonnet, full port  
Flange-welded or butt-welded ends; design to BS5352



| Specification (NPS)      |                      | F.P   | 1/2  | 3/4  | 1    | 1 1/4 | 1 1/2 | 2    |
|--------------------------|----------------------|-------|------|------|------|-------|-------|------|
| Face to face (mm)        | L ( RF ) , L1 ( BW ) |       | 264  | 273  | 308  | 349   | 384   | 451  |
|                          | L ( RTJ )            |       | 264  | 273  | 308  | 352   | 387   | 454  |
| Height (mm)              | H                    |       | 81   | 93   | 95   | 101   | 118   | 130  |
| Flow port dimension (mm) | d                    | Lift  | 12   | 15   | 20   | 28    | 32    | 40   |
|                          |                      | Swing | 10.5 | 13.5 | 18   | 24    | 29    | 36.5 |
| (Kg)/Weight              |                      | Lift  | 17   | 21   | 28   | 14.5  | 58    | 85   |
|                          |                      | Swing | 5    | 6.1  | 10.8 | 11.2  | 17.6  | 27   |

**CL2500**

Pressure seal, bolted bonnet, full port  
Flange-welded or butt-welded ends; design to BS5352



| Specification (NPS)      |                      | F.P | 3/8 | 1/2  | 3/4  | 1    | 1 1/4 | 1 1/2 | 2   |
|--------------------------|----------------------|-----|-----|------|------|------|-------|-------|-----|
| Face to face (mm)        | L ( RF ) , L1 ( BW ) |     | -   | 264  | 273  | 308  | 349   | 384   | 451 |
|                          | L ( RTJ )            |     | -   | 264  | 273  | 308  | 352   | 387   | 454 |
| Height (mm)              | H                    |     | -   | 117  | 117  | 117  | 152   | 152   | 195 |
| Flow port dimension (mm) | d                    |     | -   | 12   | 15   | 20   | 32    | 28    | 40  |
| (Kg)/Weight              |                      |     | -   | 12.6 | 14.9 | 16.5 | 24.8  | 30    | 35  |

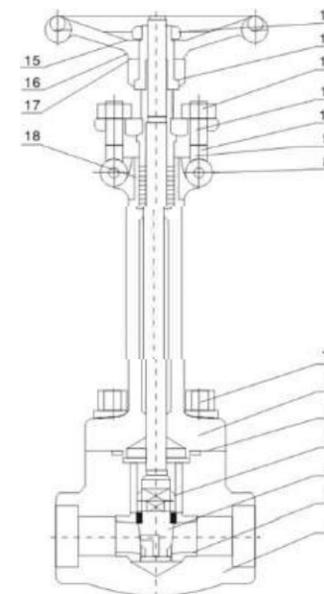
**FORGED STEEL  
CRYOGENIC  
VALVES SERIES**



Cryogenic gate valves



Cryogenic Globe Valves



**Carbon steel temperature–pressure rate** CL150-285  
 PSI @ 100°F CL300-740 PSI @ 100°F CL 600-1480 PSI @ 100°F CL  
 800-1975 PSI @ 100°F CL 1500-3705 PSI @ 100°F

**Application standards**

1. Design and manufacture conform to:  
BS5352, MSS SP-118;
2. Connection ends conform to:  
1)Socket welded dimension conform to ANSI B16.11,JB/T1751  
2)Screw ends dimension conform to ANSI B1.20.1,JB/T7306  
3)Butt-welded conform to ANSI B16.25,JB/T12224  
4)Flanged ends conform to ANSI B16.5,JB79
3. Test and inspection conform to:  
API 598, GB/T13927, JB/T9092
4. Structure features:

Gasket for bonnet connect adopt metal ring

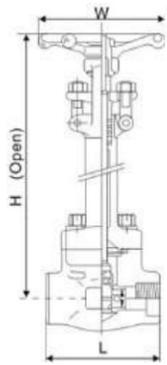
Bolted bonnet,Welded bonnet

5. Materials conform to ANSI/ASTM,

6 Main materials : LF2; LF3; 304(L); 316(L); F34 7; F321; F51

**Main part materials list**

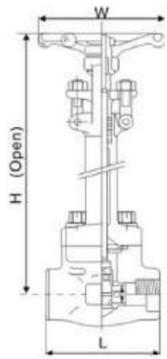
| NO. | Components name | A105/F6a | A105 F6aHFS | LF2/304                | LF3/304                | F304(L) 304(L)         | F316(L) 316(L)         | F511/F51               |
|-----|-----------------|----------|-------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 1   | Body            | -        | -           | LF2                    | LF3                    | F304(L)                | F316(L)                | F51                    |
| 2   | Race            | -        | -           | 304                    | 304                    | 304(L)                 | 316(L)                 | F51                    |
| 3   | Damper plate    | -        | -           | F304                   | F304                   | F304(L)                | F316(L)                | F51                    |
| 4   | Valve lever     | -        | -           | 304                    | F304                   | 304(L)                 | 316(L)                 | F51                    |
| 5   | Gasket          | -        | -           | 304+ Flexible graphite | 304+ Flexible graphite | 304+ Flexible graphite | 316+ Flexible graphite | 316+ Flexible graphite |
| 6   | Valve cover     | -        | -           | LF2                    | LF3                    | F304(L)                | F316(L)                | F51                    |
| 7   | Bolt            | -        | -           | L7                     | L7                     | B8                     | B8                     | B8                     |
| 8   | Sells           | -        | -           | 410                    | 410                    | 304                    | 304                    | 304                    |
| 9   | Gland           | -        | -           | 304                    | 304                    | 304                    | 316                    | F51                    |
| 10  | Gland Eyebolt   | -        | -           | L7                     | L7                     | B8(M)                  | B8(M)                  | B8M                    |
| 11  | Gland Flange    | -        | -           | LF2                    | LF3                    | F304                   | F304                   | F304                   |
| 12  | Hexagonal Nut   | -        | -           | 2H                     | 2H                     | 8(M)                   | B(M)                   | 8M                     |
| 13  | Yoke Nut        | -        | -           | 410                    | 410                    | 410                    | 410                    | 410                    |
| 14  | Lock Nut        | -        | -           | 35                     | 35                     | 35                     | 35                     | 35                     |
| 15  | Name plate      | -        | -           | AL                     | AL                     | AL                     | AL                     | AL                     |
| 16  | Handwheel       | -        | -           | A197                   | A197                   | A197                   | A197                   | A197                   |
| 17  | Filling piece   | -        | -           | 410                    | 410                    | 410                    | 410                    | 410                    |
| 18  | Gland           | -        | -           | Graphite               | Graphite               | Graphite               | Graphite               | Graphite               |



Bolted bonnet cryogenic extended bonnet full port & reduced port, OS&Y  
Threaded, butt-welded or socket welded ends; design to API602

**CL800**

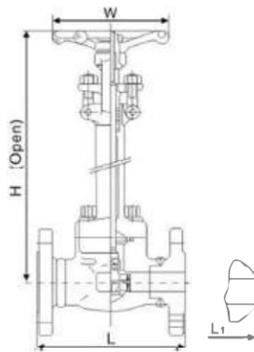
| Specification (NPS) | R.P | -    | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     |
|---------------------|-----|------|-----|-----|-----|-------|-------|-------|-------|-------|
|                     | F.P | 1/4  | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
| Face to face (mm)   | L   | 79   | 79  | 92  | 111 | 120   | 120   | 140   | 160   | 180   |
| Handwheel diameter  | W   | 100  | 100 | 100 | 125 | 160   | 160   | 180   | 200   | 220   |
| Height (mm)         | H   | -196 | 291 | 291 | 293 | 340   | 375   | 400   | 450   | 560   |
|                     |     | -46  | 255 | 255 | 258 | 290   | 325   | 265   | 395   | 440   |
| Flow port           | d   | 7.5  | 11  | 14  | 18  | 24    | 29    | 36.5  | 45    | 51    |
| (Kg)/Weight         |     | 3.5  | 3.5 | 4.3 | 6.7 | 10.9  | 12    | 14.8  | 28    | 36    |



Bolted bonnet cryogenic extended bonnet full port & reduced port, OS&Y  
Threaded, butt-welded or socket welded ends; design to API602

**CL1500**

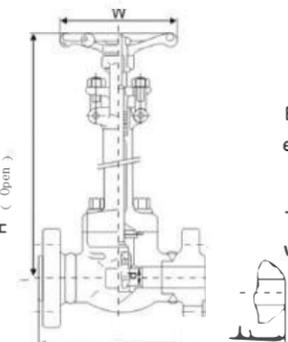
| Specification (NPS) | R.P | -    | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 |     |
|---------------------|-----|------|-----|-----|-----|-------|-------|-------|-------|-----|
|                     | F.P | 1/4  | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     |     |
| Face to face (mm)   | L   | 79   | 111 | 111 | 120 | 120   | 140   | 160   | 180   |     |
| Handwheel diameter  | W   | 100  | 125 | 125 | 160 | 160   | 180   | 200   | 220   |     |
| Height (mm)         | H   | -196 | 321 | 321 | 322 | 359   | 399   | 446   | 480   | 550 |
|                     |     | -46  | 285 | 285 | 287 | 309   | 343   | 396   | 420   | 480 |
| Flow port           | d   | 7.5  | 11  | 14  | 18  | 24    | 29    | 36.5  | 45    |     |
| (Kg)/Weight         |     | 3.5  | 6.7 | 6.7 | 11  | 12.3  | 15.8  | 28    | 45    |     |



Bolted bonnet cryogenic extended bonnet reduced port, OS&Y  
Threaded, butt-welded or socket welded ends; design to API602

**CL150-300-600**

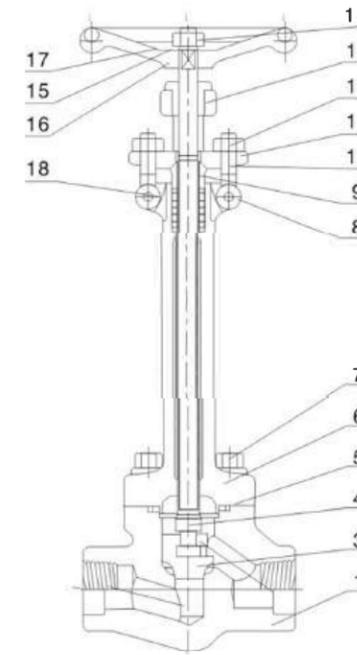
| Specification            |       | -         | 1/2  | 3/4 | 1   | 1 1/4 | 1 1/2 | 2    |      |
|--------------------------|-------|-----------|------|-----|-----|-------|-------|------|------|
| Face to face (mm)        | CL150 | L (RF)    | 108  | 117 | 127 | 140   | 165   | 178  |      |
|                          | CL300 | L1 ( BW ) | 140  | 152 | 165 | 178   | 190   | 216  |      |
|                          | CL600 |           | 165  | 190 | 216 | 229   | 241   | 292  |      |
| Handwheel diameter(mm)   | W     | 100       | 100  | 125 | 160 | 160   | 180   |      |      |
| Height (mm)              | H     | -196      | 321  | 322 | 359 | 399   | 446   | 480  |      |
|                          |       | -46       | 285  | 287 | 309 | 343   | 396   | 420  |      |
| Flow port dimension (mm) | d     | 10.5      | 13.5 | 18  | 24  | 29    | 36.5  |      |      |
| Weight (kg)              | CL150 | RF        | -    | 5   | 5.5 | 8.8   | 13.5  | 15   | 20.3 |
|                          |       | BW        | -    | -   | -   | -     | -     | -    | -    |
|                          | CL300 | RF        | -    | 5.8 | 7.6 | 9.7   | 12.5  | 19.5 | 22.3 |
|                          |       | BW        | -    | -   | -   | -     | -     | -    | -    |
|                          | CL600 | RF        | -    | 6.0 | 8.0 | 11.2  | 13.5  | 21.5 | 24.8 |
|                          |       | BW        | -    | -   | -   | -     | -     | -    | -    |



Bolted bonnet cryogenic extended bonnet full port, OS&Y  
Threaded, butt-welded or socket welded ends; design to API602

**CL1500**

| Specification (NPS) | R.P | 1/2  | 3/4  | 1    | 1 1/4 | 1 1/2 | 2    |     |
|---------------------|-----|------|------|------|-------|-------|------|-----|
| Face to face (mm)   | L   | 216  | 229  | 254  | 279   | 305   | 366  |     |
| Handwheel diameter  | W   | 125  | 125  | 160  | 160   | 180   | 200  |     |
| Height (mm)         | H   | -196 | 321  | 322  | 359   | 399   | 446  | 480 |
|                     |     | -46  | 285  | 287  | 309   | 343   | 396  | 420 |
| Flow port           | d   | 10.5 | 13.5 | 18   | 24    | 29    | 36.5 |     |
| (Kg)/Weight         |     | 14   | 23   | 25.3 | 35.7  | 47    | 72   |     |



**Application standards**

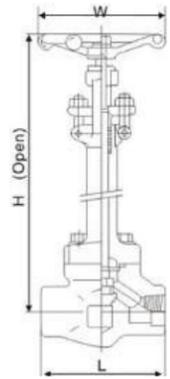
- Design and manufacture conform to API 602, BS5352, ANSI B16.34;
- Connection ends conform to:
  - Socket welded dimension conform to ANSI B16.11, JB/T1751
  - Screw ends dimension conform to ANSI B1.20.1, JB/T7306
  - Butt-welded conform to ANSI B16.25, JB/T12224
  - Flanged ends conform to ANSI B16.5, JB79
- Test and inspection conform to: API598, GB/T13927, JB/T9092
- Structure features:
  - Bolted bonnet, outside screw and yoke
  - Welded bonnet, outside screw and yoke
- Materials conform to ANSI/ASTM.
- Main materials: LF2; LF3; 304(L); 316(L); F347; F321; F51; Monel; 20Alloy.

**Carbon steel temperature-pressure rate**

CL150-285 P.S.I @ 100°F CL300-740 P.S.I @ 100°F CL600-1480 P.S.I @ 100°F  
CL800-1975 P.S.I @ 100°F CL1500-3705 P.S.I @ 100°F

**Main part materials list**

| NO. | Part name          | A105/F6a | A105/F6aHFS | LF2/304                | LF3/304                | F304(L)/304(L)         | F316(L)/316(L)         | F51/F51                |
|-----|--------------------|----------|-------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 1   | Body               | -        | -           | LF2                    | LF3                    | F304(L)                | F316(L)                | F51                    |
| 2   | Seat               | -        | -           | 304                    | 304                    | 304(L)                 | 316(L)                 | F51                    |
| 3   | Wedge              | -        | -           | F304                   | F304                   | F304(L)                | F316(L)                | F51                    |
| 4   | Stern              | -        | -           | 304                    | 304                    | 304(L)                 | 316(L)                 | F51                    |
| 5   | Gasket             | -        | -           | 304+ Flexible graphite | 304+ Flexible graphite | 304+ Flexible graphite | 316+ Flexible graphite | 316+ Flexible graphite |
| 6   | Bonnet             | -        | -           | LF2                    | LF3                    | F304(L)                | F316(L)                | F51                    |
| 7   | Bolt               | -        | -           | F7                     | F7                     | B8                     | BB                     | B8                     |
| 8   | Pin                | -        | -           | 410                    | 410                    | 304                    | 304                    | 304                    |
| 9   | Gland              | -        | -           | 304                    | 304                    | 304                    | 316                    | F21                    |
| 10  | g landeyebot       | -        | -           | F7                     | F7                     | B8(M)                  | B8(M)                  | B8M                    |
| 11  | Gland flange       | -        | -           | LF2                    | LF3                    | F304                   | F304                   | F304                   |
| 12  | Hex nut            | -        | -           | 2H                     | 2H                     | 8(M)                   | 8(M)                   | 8M                     |
| 13  | Stern nut          | -        | -           | 410                    | 410                    | 410                    | 410                    | 410                    |
| 14  | Locking nut        | -        | -           | 35                     | 35                     | 35                     | 35                     | 35                     |
| 15  | Nameplate          | -        | -           | AL                     | AL                     | AL                     | AL                     | AL                     |
| 16  | Handwheel          | -        | -           | A197                   | A197                   | A197                   | A197                   | A197                   |
| 17  | Lubricating gasket | -        | -           | 410                    | 410                    | 410                    | 410                    | 410                    |
| 18  | Packing            | -        | -           | Graphite               | Graphite               | Graphite               | Graphite               | Graphite               |

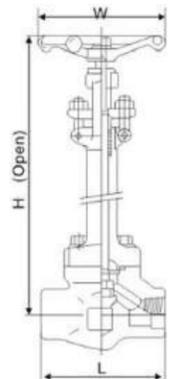


Bolted bonnet cryogenic extended bonnet full port & reduced port, OS&Y

Threaded or socket welded ends; design to Bs5352

**CL800**

| Specification (NPS) | R.P | -    | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 |     |
|---------------------|-----|------|-----|-----|-----|-------|-------|-------|-------|-----|
|                     | F.P | 1/4  | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     |     |
| Face to face (mm)   | L   | 79   | 79  | 92  | 111 | 120   | 152   | 172   | 220   |     |
| Handwheel diameter  | W   | 100  | 100 | 100 | 125 | 160   | 160   | 180   | 200   |     |
| Height (mm)         | H   | -196 | 390 | 390 | 415 | 430   | 460   | 490   | 505   | 570 |
|                     |     | -101 |     |     |     |       |       |       |       |     |
|                     |     | -46  | 350 | 350 | 400 | 410   | 425   | 450   | 480   | 540 |
| Flow port           | d   | 7    | 9   | 13  | 18  | 23    | 30    | 35    | 46    |     |
| (Kg)/Weight         |     | 7.2  | 7.2 | 7.2 | 9.5 | 10.8  | 13.5  | 19.8  | 29    |     |

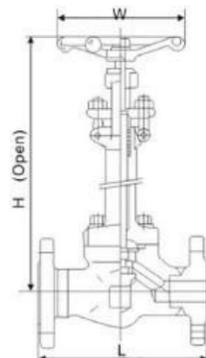


Bolted bonnet cryogenic extended bonnet full port & reduced port, OS&Y

Threaded or socket welded ends; design to BS5352

**CL1500**

| Specification (NPS) | R.P | -    | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 |   |
|---------------------|-----|------|-----|-----|-----|-------|-------|-------|-------|---|
|                     | F.P | 1/4  | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     |   |
| Face to face (mm)   | L   | 92   | 111 | 111 | 120 | 152   | 172   | 220   | 230   |   |
| Handwheel diameter  | W   | 100  | 125 | 125 | 160 | 160   | 180   | 200   | -     |   |
| Height (mm)         | H   | -196 | 370 | 370 | 370 | 410   | 410   | 474   | 546   | - |
|                     |     | -101 |     |     |     |       |       |       |       |   |
|                     |     | -46  | 350 | 350 | 400 | 410   | 425   | 450   | 480   | - |
| Flow port           | d   | 9    | 12  | 15  | 20  | 28    | 32    | 40    | -     |   |
| (Kg)/Weight         |     | 7.2  | 9.5 | 9.5 | 11  | 13.5  | 19.8  | 29    | -     |   |

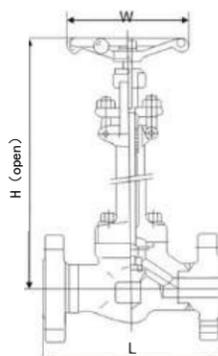


Bolted bonnet cryogenic extended bonnet reduced port, OS&Y

Threaded or socket welded ends; design to BS5352

**CL150-300-600**

| Specification            |           | R.P   | 1/4 | 3/8 | 1/2 | 3/4  | 1    | 1 1/4 | 1 1/2 | 2    |
|--------------------------|-----------|-------|-----|-----|-----|------|------|-------|-------|------|
| Face to face (mm)        | L (RF/)   | CL150 | -   | -   | 108 | 118  | 127  | -     | 165   | 203  |
|                          | L1 ( BW ) | CL300 | -   | -   | 152 | 178  | 203  | -     | 229   | 267  |
|                          |           | CL600 | -   | -   | 165 | 190  | 216  | -     | 241   | 292  |
| Handwheel diameter(mm)   | W         |       |     |     | 100 | 100  | 125  | -     | 160   | 180  |
| Height (mm)              | H         | -196  | -   | -   | 390 | 415  | 430  | -     | 490   | 505  |
|                          |           | -100  |     |     |     |      |      |       |       |      |
|                          |           | -46   | -   | -   | 350 | 400  | 410  | -     | 450   | 480  |
| Flow port dimension (mm) | d         |       |     |     | 9   | 13   | 17.5 | -     | 30    | 35   |
| Weight (kg)              |           | CL150 | -   | -   | 5   | 5.8  | 8.6  | -     | 13.8  | 24.3 |
|                          |           | CL300 | -   | -   | 5.8 | 6.80 | 10.3 | -     | 19.3  | 25.8 |
|                          |           | CL600 | -   | -   | 6.3 | 7.3  | 10.6 | -     | 20.3  | 26.8 |



Bolted bonnet cryogenic extended bonnet reduced port, OS&Y

Threaded or socket welded ends; design to BS5352

**CL1500**

| Specification (NPS) | F.P      | 1/4  | 3/8 | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2   |     |
|---------------------|----------|------|-----|-----|-----|-----|-------|-------|-----|-----|
| Face to face (mm)   | L ( RF ) | -    | -   | 216 | 229 | 254 | 279   | 305   | 368 |     |
| Handwheel diameter  | W        | -    | -   | 125 | 125 | 160 | 160   | 180   | 200 |     |
| Height (mm)         | H        | -196 | -   | -   | 370 | 370 | 410   | 410   | 474 | 546 |
|                     |          | -100 |     |     |     |     |       |       |     |     |
|                     |          | -46  | -   | -   | 350 | 400 | 410   | 425   | 450 | 480 |
| Flow port           | d        | -    | -   | 12  | 15  | 20  | 28    | 32    | 40  |     |

Flange Integrity Forged Steel Valve enquiry please contact sales department.

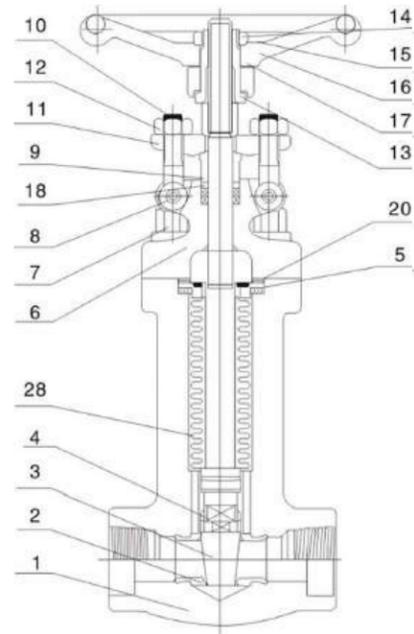
**FORGED STEEL BELLOW VALVES SERIES**



Bellow Sealed Gate Valves



Bellow Sealed Globe Valves



**Application standards**

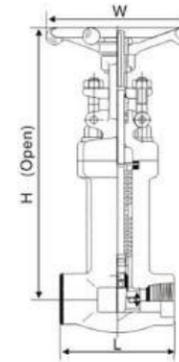
1. Design and manufacture conform to API602; MSS-SP-117;
2. Connection ends conform to:
  - 1) Socket welded ends conform to ANSIB16.11; JB/T1751
  - 2) Screw ends conform to ANSI B1.20.1; JB/T7306
  - 3) Butt-welded ends conform to ANSI B16.25; JB/T1224
  - 4) Flanged ends conform to ANSI B16.5; JB79
3. Test and inspection conform to: API598; GB/T13927; JB/T9092
4. Structure features:
  - Bolted bonnet, outside screw and yoke
  - Welded bonnet, outside screw and yoke
5. Materials conform to ANSI/ASTM.
6. Main materials: A105; 304(L); 316(L); F347; F321
7. Bellow materials: 304, 321, 316, Inconel625, Hastelloy, C276, Monel

**Carbon steel temperature–pressure rate**

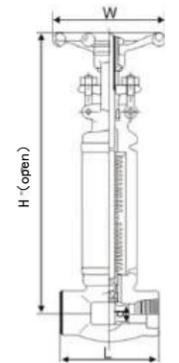
CL150-285 PS | @100°F    CL300-740 PS | @100°F  
 CL600-1480 PS | @100°F    CL800-1975 PS | @100°F  
 CL1500-3705 PS | @100°F

**Main part materials list**

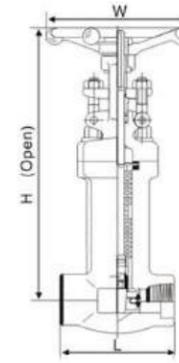
| NO. | Part name          | A105/F6a              | A105/F6aHFS | A105/F6aHF | F304(L)/304(L) | F316(L)/316(L) |
|-----|--------------------|-----------------------|-------------|------------|----------------|----------------|
| 1   | Body               | A105                  | A105        | A105       | F304(L)        | F316(L)        |
| 2   | Seat               | 410                   | 410HF       | 410HF      | 304(L)         | 316(L)         |
| 3   | Wedge              | F6a                   | F6a         | F6aHF      | F304(L)        | F316(L)        |
| 4   | Stem               | 410                   | 410         | 410        | 304(L)         | 316(L)         |
| 5   | Gasket             | 304+Flexible graphite |             |            |                |                |
| 6   | Bonnet             | A105                  | A105        | A105       | F304(L)        | F316(L)        |
| 7   | Bolt               | B7                    | B7          | B7         | B8             | B8             |
| 8   | Pin                | 410                   | 410         | 410        | 304            | 304            |
| 9   | Gland              | 410                   | 410         | 410        | 304            | 316            |
| 10  | Gland eyebolt      | B7                    | B7          | B7         | B8(M)          | B8(M)          |
| 11  | Gland flange       | A105                  | A105        | A105       | F304           | F304           |
| 12  | Hex nut            | 2H                    | 2H          | 2H         | 8(M)           | 8(M)           |
| 13  | Stem nut           | 410                   | 410         | 410        | 410            | 410            |
| 14  | Locking nut        | 35                    | 35          | 35         | 35             | 35             |
| 15  | Name plate         | AL                    | AL          | AL         | AL             | AL             |
| 16  | Hand wheel         | A197                  | A197        | A197       | A197           | A197           |
| 17  | Lubricating gasket | 410                   | 410         | 410        | 410            | 410            |
| 18  | Packing            | Graphite              | Graphite    | Graphite   | Graphite       | Graphite       |
| 20  | Gasket             | 304+Flexible graphite |             |            |                |                |
| 28  | Bellow             | F321                  | F321        | F321       | F316L          | F316L          |



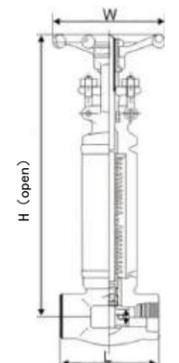
Bolted bonnet, full port & reducing port outside screw and yoke (OS&Y)  
 Threaded, butt-welded or socket welded ends; design to API602\MSS-SP-117



Welded bonnet, full port & reducing port outside screw and yoke (OS&Y)  
 Threaded, butt-welded or socket welded ends; design to API602\MSS-SP-117



Bolted bonnet, full port & reducing port outside screw and yoke (OS&Y)  
 Threaded, butt-welded or socket welded ends; design to API602\MSS-SP-117



Welded bonnet, full port & reducing port outside screw and yoke (OS&Y)  
 Threaded, butt-welded or socket welded ends; design to API602\MSS-SP-117

**CL800**

| Specification (NPS) | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     |
|---------------------|-----|-----|-----|-----|-----|-------|-------|-------|
|                     | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 |
| Face to face (mm)   | L   | 79  | 79  | 92  | 111 | 120   | 120   | 140   |
| Handwheel diameter  | W   | 100 | 100 | 100 | 125 | 160   | 160   | 180   |
| Height (mm)         | H   | 255 | 255 | 285 | 345 | 445   | 545   | 594   |
| Flow port           | d   | 7.5 | 11  | 14  | 18  | 24    | 29    | 36.5  |
| (Kg)/Weight         |     | 3   | 3   | 3.3 | 5.9 | 8.7   | 10.2  | 16.2  |

**CL800**

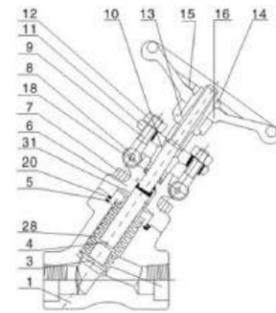
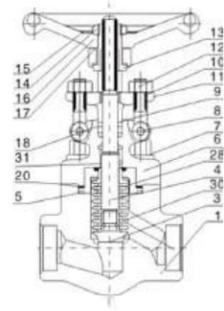
| Specification (NPS) | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     |
|---------------------|-----|-----|-----|-----|-----|-------|-------|-------|
|                     | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 |
| Face to face (mm)   | L   | 79  | 79  | 92  | 111 | 120   | 120   | 140   |
| Handwheel diameter  | W   | 100 | 100 | 100 | 125 | 160   | 160   | 480   |
| Height (mm)         | H   | 248 | 548 | 777 | 335 | 437   | 537   | 585   |
| Flow port           | d   | 7.5 | 11  | 14  | 18  | 24    | 29    | 36.5  |
| (Kg)/Weight         |     | 2.9 | 2.9 | 3.2 | 4.6 | 7.2   | 8.9   | 15.5  |

**CL1500**

| Specification (NPS) | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     |
|---------------------|-----|-----|-----|-----|-----|-------|-------|-------|
|                     | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 |
| Face to face (mm)   | L   | 79  | 111 | 111 | 120 | 120   | 140   | 178   |
| Handwheel diameter  | W   | 100 | 125 | 125 | 160 | 160   | 180   | 180   |
| Height (mm)         | H   | 294 | 264 | 320 | 379 | 478   | 607   | 636   |
| Flow port           | d   | 7.5 | 11  | 14  | 18  | 24    | 29    | 36.5  |
| (Kg)/Weight         |     | 3.1 | 5.1 | 5.1 | 9   | 10.5  | 16.7  | 21    |

**CL1500**

| Specification (NPS) | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     |
|---------------------|-----|-----|-----|-----|-----|-------|-------|-------|
|                     | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 |
| Face to face (mm)   | L   | 79  | 111 | 111 | 120 | 120   | 140   | 178   |
| Handwheel diameter  | W   | 100 | 125 | 125 | 160 | 160   | 180   | 180   |
| Height (mm)         | H   | 287 | 287 | 312 | 368 | 465   | 595   | 627   |
| Flow port           | d   | 7.5 | 11  | 14  | 18  | 24    | 29    | 36.5  |
| (Kg)/Weight         |     | 2.9 | 4.7 | 4.7 | 5.7 | 7.4   | 16    | 19    |



**Application standards**

1) Design and manufacture conform to BS5352; MSS-SP-117;

2. Connection ends conform to

- 1) Socket welded ends conform to ANSI B16.11; JB/T1751
- 2) Screw ends conform to ANSI B1.20.1; JB/T7306
- 3) Butt-welded ends conform to ANSI B16.25; JB/T12224
- 4) Flanged ends conform to ANSI B16.5; JB79

3. Test and inspection conform to API598; GB/T13927; JB/T9092

4. Structure features:

- Bolted bonnet, outside screw and yoke
- Welded bonnet, outside screw and yoke

5. Materials conform to ANSI/ASTM.

6. Main materials: A105; LF2; F5; F11; F22; 304(L); 316(L);

F347; F321; F51; Monel; 20Alloy.

7. Bellow materials: 304, 321, 316, Inconel625, Hastelloy C 276, Monel.

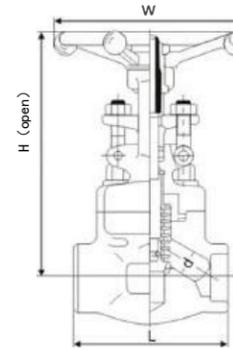
**Carbon steel temperature-pressure rate**

CL150-285 PS | @100°F    CL300-740 PS | @100°F    CL600-1480 PS | @100°F

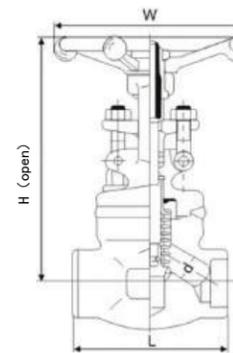
CL800-1975 PS | @100°F    CL1500-3705 PS | @100°F

**Main part materials list**

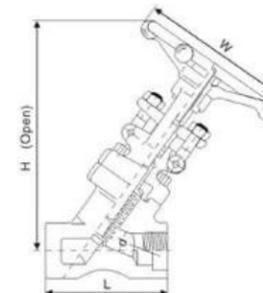
| NO. | Part name          | A105/F6a              | A105/F6aHFS           | A105/F6aHF            | F304(L)/304(L)        | F316(L)/316(L)        |
|-----|--------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1   | Body               | A105                  | A105+HF               | A105+HF               | F304(L)               | F316(L)               |
| 3   | Disc               | F6a                   | F6a                   | F6aHF                 | F304(L)               | F316(L)               |
| 4   | Stem               | 410                   | 410                   | 410                   | 304(L)                | 316(L)                |
| 5   | Gasket             | 304+Flexible graphite |
| 6   | Bonnet             | A105                  | A105                  | A105                  | F304(L)               | F316(L)               |
| 7   | Bolt               | B7                    | B7                    | B7                    | B8(M)                 | EB8(M)                |
| 8   | Pin                | 410                   | 410                   | 410                   | 304                   | 304                   |
| 9   | Packing bushing    | 410                   | 410                   | 410                   | 304                   | 316                   |
| 10  | Eyelet bolt        | B7                    | B7                    | B7                    | B8(M)                 | B8(M)                 |
| 11  | Packing gland      | A105                  | A105                  | A105                  | F304                  | F304                  |
| 12  | Hex nut            | 2H                    | 2H                    | 2H                    | 8(M)                  | 8(M)                  |
| 13  | Stem nut           | 410                   | 410                   | 410                   | 410                   | 410                   |
| 14  | Locking nut        | 35                    | 35                    | 35                    | 35                    | 35                    |
| 15  | Nameplate          | AL                    | AL                    | AL                    | AL                    | AL                    |
| 16  | Hand wheel         | A197                  | A197                  | A197                  | A197                  | A197                  |
| 17  | Lubricating gasket | 410                   | 410                   | 410                   | 410                   | 410                   |
| 18  | Packing            | Graphite              | Graphite              | Graphite              | Graphite              | Graphite              |
| 20  | Gasket             | 304+Flexible graphite |
| 28  | Bellow             | F321                  | F321                  | F321                  | F321/304L             | F316/316L             |
| 30  | Steel wire         | 304                   | 304                   | 304                   | 304                   | 316                   |
| 31  | Pin                | 304                   | 304                   | 304                   | 304                   | 316                   |



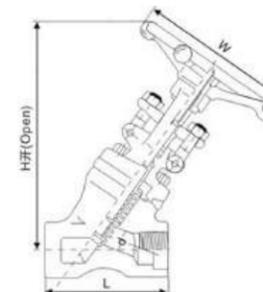
Bolted bonnet, full port & reducing port outside screw and yoke (OS&Y)  
Threaded, butt-welded or socket welded ends; design to BS5352\MSS-SP-117



Welded bonnet, full port & reducing port outside screw and yoke (OS&Y)  
Threaded, butt-welded or socket welded ends; design to BS5352\MSS-SP-117



Bolted bonnet, full port & reducing port outside screw and yoke (OS&Y)  
Threaded, butt-welded or socket welded ends; design to BS5352\MSS-SP-117



Welded bonnet, full port & reducing port outside screw and yoke (OS&Y)  
Threaded, butt-welded or socket welded ends; design to BS5352\MSS-SP-117

**CL800**

| Specification (NPS)     | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     |
|-------------------------|-----|-----|-----|-----|-----|-------|-------|-------|-------|-------|
|                         | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
| Face to face (mm)       | L   | 79  | 79  | 92  | 111 | 120   | 152   | 172   | 220   | 230   |
| Handwheel diameter (mm) | W   | 100 | 100 | 100 | 125 | 160   | 160   | 180   | 200   | -     |
| Height (mm)             | H   | 162 | 162 | 164 | 200 | 22    | 257   | 295   | 350   | -     |
| Flow port               | d   | 7   | 9   | 13  | 18  | 23    | 30    | 35    | 46    | -     |
| (Kg)/Weight             |     | 2.3 | 2.4 | 2.5 | 4.4 | 5.75  | 7.8   | 12.5  | 17.5  | -     |

**CL800**

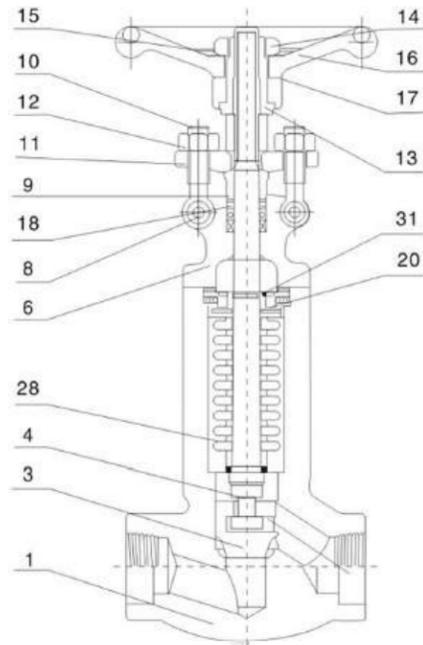
| Specification (NPS)     | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     |
|-------------------------|-----|-----|-----|-----|-----|-------|-------|-------|-------|-------|
|                         | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
| Face to face (mm)       | L   | 79  | 79  | 92  | 111 | 120   | 152   | 172   | 220   | 230   |
| Handwheel diameter (mm) | W   | 100 | 100 | 100 | 125 | 160   | 160   | 180   | 200   | -     |
| Height (mm)             | H   | 162 | 162 | 164 | 200 | 220   | 257   | 295   | 350   | -     |
| Flow port               | d   | 7   | 9   | 13  | 18  | 23    | 30    | 35    | 46    | -     |
| (Kg)/Weight             |     | 1.7 | 1.8 | 1.9 | 3.3 | 5.2   | 6.8   | 10.6  | 13.8  | -     |

**CL800**

| Specification (NPS)     | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     |
|-------------------------|-----|-----|-----|-----|-----|-------|-------|-------|-------|-------|
|                         | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
| Face to face (mm)       | L   | 98  | 98  | 98  | 120 | 140   | 140   | 170   | 200   | -     |
| Handwheel diameter (mm) | W   | 100 | 100 | 100 | 125 | 160   | 160   | 180   | 200   | -     |
| Height (mm)             | H   | 180 | 180 | 180 | 188 | 280   | 280   | 295   | 350   | -     |
| Flow port               | d   | 7   | 9   | 13  | 18  | 23    | 30    | 35    | 46    | -     |
| (Kg)/Weight             |     | 2.6 | 2.6 | 3.8 | 4.6 | 9.3   | 9.3   | 14    | 19.6  | -     |

**CL800**

| Specification (NPS)     | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     |
|-------------------------|-----|-----|-----|-----|-----|-------|-------|-------|-------|-------|
|                         | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
| Face to face (mm)       | L   | 98  | 98  | 98  | 120 | 140   | 140   | 170   | 200   | -     |
| Handwheel diameter (mm) | W   | 100 | 100 | 100 | 125 | 160   | 160   | 180   | 200   | -     |
| Height (mm)             | H   | 198 | 198 | 198 | 207 | 280   | 280   | 295   | 350   | -     |
| Flow port               | d   | 7   | 9   | 13  | 18  | 23    | 30    | 35    | 46    | -     |
| (Kg)/Weight             |     | 1.8 | 1.8 | 2   | 3.5 | 8     | 8     | 12    | 16    | -     |



**Application standards**

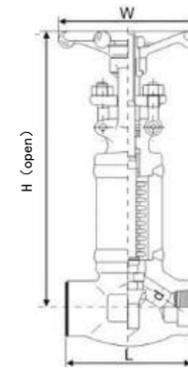
- Design and manufacture conform to B55352; MSS-SP-117;
- Connection ends conform to:
  - Socket welded ends conform to ANSI B16.11; JB/T1751
  - Screw ends conform to ANSI B1.20.1; JB/T7306
  - Butt-welded ends conform to ANSI B16.25; JB/T12224
  - Flanged ends conform to ANSI B16.5; JB79
- Test and inspection conform to API598; GB/T13927; JB/T9092
- Structure features:
  - Bolted bonnet, outside screw and yoke
  - Welded bonnet, outside screw and yoke
- Materials conform to ANSI/ASTM.
- Main materials: A105; 304(L); 316(L); F347; F321.
  - F347; F321; F51; Monel; 20Alloy.
- Bellow materials: 304, 321, 316, Inconel625, Hastelloy C 276, Monel

**Carbon steel temperature–pressure rate**

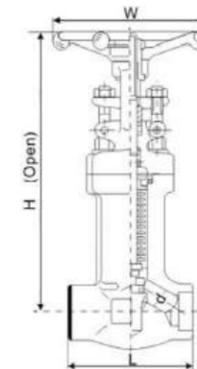
CL150-285 PS | @100°F    CL300-740 PS | @100°F  
 CL600-1480 PS | @100°F    CL800-1975 PS | @100°F  
 CL1500-3705 PS | @100°F

**Main part materials list**

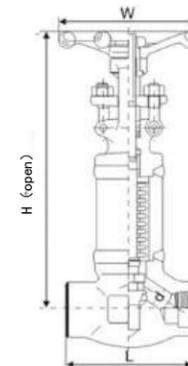
| NO. | Part name          | A105/F6a | A105/F6aHFS | A105/F6aHF | F304(L)/304(L) | F316(L)/316(L) |
|-----|--------------------|----------|-------------|------------|----------------|----------------|
| 1   | Body               | A105     | A105+HF     | A105+HF    | F304(L)        | F316(L)        |
| 3   | Disc               | F6a      | F6a         | F6aHF      | F304(L)        | F316(L)        |
| 4   | Gasket             | 410      | 410         | 410        | 304(L)         | 316(L)         |
| 6   | Bolt               | A105     | A105        | A105       | F304(L)        | F316(L)        |
| 8   | Pin                | 410      | 410         | 410        | 304            | 304            |
| 9   | Gland              | 410      | 410         | 410        | 304            | 316            |
| 10  | Gland bolt         | B7       | B7          | B7         | B8(M)          | B8(M)          |
| 11  | Packing gland      | A105     | A105        | A105       | F304           | F304           |
| 12  | Hex nut            | 2H       | 2H          | 2H         | 8(M)           | B8(M)          |
| 13  | Stem nut           | 410      | 410         | 410        | 410            | 410            |
| 14  | Locking nut        | 35       | 35          | 35         | 35             | 35             |
| 15  | Name plate         | AL       | AL          | AL         | AL             | AL             |
| 16  | Hand wheel         | A197     | A197        | A197       | A197           | A197           |
| 17  | Lubricating gasket | 410      | 410         | 410        | 410            | 410            |
| 18  | Packing            | Graphite | Graphite    | Graphite   | Graphite       | Graphite       |
| 28  | Bellow             | F321     | F321        | F321       | F316           | F316L          |
| 31  | Pin                | 304      | 304         | 304        | 304            | 316            |



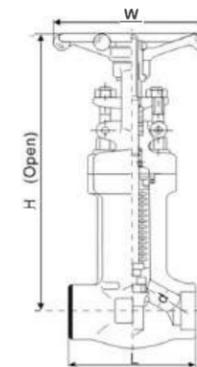
Welded bonnet, full port & reducing port outside screw and yoke (OS&Y) Threaded, butt-welded or socket welded ends; design to B55352\MSS-SP-117



Bolted bonnet, full port & reducing port outside screw and yoke (OS&Y) Threaded, butt-welded or socket welded ends; design to B55352\MSS-SP-117



Bolted bonnet, full port & reducing port outside screw and yoke (OS&Y) Threaded, butt-welded or socket welded ends; design to B55352\MSS-SP-117



Bolted bonnet, full port & reducing port outside screw and yoke (OS&Y) Threaded, butt-welded or socket welded ends; design to B55352\MSS-SP-117

**CL800**

| Specification (NPS)     | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     |
|-------------------------|-----|-----|-----|-----|-----|-------|-------|-------|-------|-------|
|                         | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
| Face to face (mm)       | L   | 79  | 79  | 92  | 111 | 120   | 152   | 172   | 220   | 230   |
| Handwheel diameter (mm) | W   | 100 | 100 | 100 | 125 | 160   | 160   | 180   | 200   | -     |
| Height (mm)             | H   | 237 | 237 | 239 | 270 | 298   | 340   | 295   | 470   | -     |
| Flow port dimension(mm) | d   | 7   | 9   | 13  | 18  | 23    | 30    | 35    | 46    | -     |
| (Kg)/Weight             |     | 2.5 | 2.6 | 2.7 | 4.4 | 6.7   | 8.8   | 15    | 18.8  | -     |

**CL800**

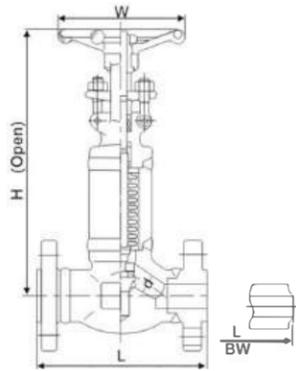
| Specification (NPS)     | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     | 2 1/2 |
|-------------------------|-----|-----|-----|-----|-----|-------|-------|-------|-------|
|                         | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 | 2     |
| Face to face (mm)       | L   | 79  | 79  | 92  | 111 | 120   | 152   | 172   | 220   |
| Handwheel diameter (mm) | W   | 100 | 100 | 100 | 125 | 160   | 160   | 180   | 200   |
| Height (mm)             | H   | 237 | 237 | 239 | 270 | 298   | 340   | 295   | 470   |
| Flow port dimension(mm) | d   | 7   | 9   | 13  | 18  | 23    | 30    | 35    | 46    |
| (Kg)/Weight             |     | 3.1 | 3.3 | 4.2 | 5.5 | 7.25  | 9.8   | 16    | 21    |

**CL1500**

| Specification (NPS)     | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     |
|-------------------------|-----|-----|-----|-----|-----|-------|-------|-------|
|                         | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 |
| Face to face (mm)       | L   | 79  | 111 | 111 | 120 | 152   | 172   | 220   |
| Handwheel diameter (mm) | W   | 100 | 125 | 125 | 160 | 160   | 180   | 200   |
| Height (mm)             | H   | 290 | 380 | 380 | 400 | 450   | 520   | 650   |
| Flow port dimension(mm) | d   | 7   | 12  | 15  | 20  | 28    | 32    | 40    |
| (Kg)/Weight             |     | 3.3 | 5   | 7.5 | 10  | 16    | 27    | 30    |

**CL1500**

| Specification (NPS)     | R.P | -   | 1/2 | 3/4 | 1   | 1 1/4 | 1 1/2 | 2     |
|-------------------------|-----|-----|-----|-----|-----|-------|-------|-------|
|                         | F.P | 1/4 | 3/8 | 1/2 | 3/4 | 1     | 1 1/4 | 1 1/2 |
| Face to face (mm)       | L   | 79  | 111 | 111 | 120 | 152   | 172   | 220   |
| Handwheel diameter (mm) | W   | 100 | 125 | 125 | 160 | 160   | 180   | 200   |
| Height (mm)             | H   | 290 | 380 | 380 | 400 | 450   | 520   | 650   |
| Flow port dimension(mm) | d   | 7   | 12  | 15  | 20  | 28    | 32    | 40    |
| (Kg)/Weight             |     | 3.3 | 5   | 7.5 | 10  | 16    | 27    | 30    |

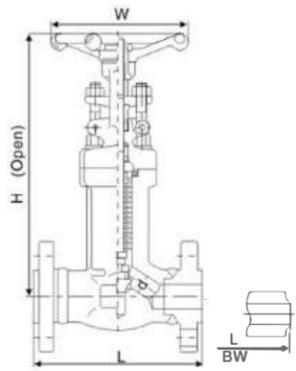


**CL150-300-600**

Welded bonnet, reducing port outside screw and yoke (OS&Y)

Flange-welded or butt-welded ends; design to BS5352\MSS-SP-117

| Specification ( NPS )    |               | R.P       | 1/4 | 3/8 | 1/2     | 3/4     | 1       | 1 1/4   | 1 1/2   | 2       |
|--------------------------|---------------|-----------|-----|-----|---------|---------|---------|---------|---------|---------|
| Face to face (mm)        | CL150         | L (RF/)   | -   | -   | 108     | 117     | 127     | 140     | 165     | 203     |
|                          | CL300         | L1 ( BW ) | -   | -   | 152     | 178     | 203     | 216     | 229     | 267     |
|                          | CL600         |           | -   | -   | 165     | 190     | 216     | 229     | 241     | 292     |
| Handwheel diameter(mm)   |               | W         | -   | -   | 100     | 100     | 125     | 160     | 160     | 180     |
| Height (mm)              | CL150 , CL300 | H         | -   | -   | 340/35  | 340/35  | 360/37  | 380/40  | 450/47  | 540/57  |
|                          | CL600         |           | -   | -   | 360     | 360     | 390     | 430     | 500     | 600     |
| Flow port dimension (mm) |               | d         | -   | -   | 9       | 13      | 17.5    | 23      | 30      | 35      |
| Weight (kg)              | CL150         | RF/BW     | -   | -   | 3.67/7  | 4.3/3.6 | 6.3/5.7 | 10.5/9. | 11.5/9. | 19.5/16 |
|                          | CL300         | RF/BW     | -   | -   | 4/3.2   | 4.8/4   | 7.3/6.7 | 13/11   | 14.5/12 | 22/18   |
|                          | CL600         | RF/BW     | -   | -   | 5.8/4.7 | 8.1/6   | 12.5/9  | 18/14   | 24.5/18 | 42/36   |

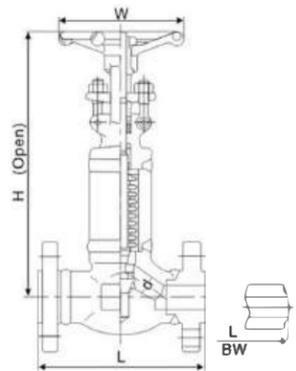


**CL150-300-600**

Bolted bonnet, reducing port outside screw and yoke (OS&Y)

Flange-welded or butt-welded ends; design to BS5352\MSS-SP-117

| Specification ( NPS )    |               | R.P       | 1/4 | 3/8 | 1/2     | 3/4     | 1       | 1 1/4    | 1 1/2   | 2       |
|--------------------------|---------------|-----------|-----|-----|---------|---------|---------|----------|---------|---------|
| Face to face (mm)        | CL150         | L (RF/)   | -   | -   | 108     | 117     | 127     | 140      | 165     | 203     |
|                          | CL300         | L1 ( BW ) | -   | -   | 152     | 178     | 203     | 216      | 229     | 267     |
|                          | CL600         |           | -   | -   | 165     | 190     | 216     | 229      | 241     | 292     |
| Handwheel diameter(mm)   |               | W         | -   | -   | 100     | 100     | 125     | 160      | 160     | 180     |
| Height (mm)              | CL150 , CL300 | H         | -   | -   | 340/35  | 340/35  | 360/37  | 380/400  | 450/47  | 540/57  |
|                          | CL600         |           | -   | -   | 360     | 360     | 390     | 430      | 500     | 600     |
| Flow port dimension (mm) |               | d         | -   | -   | 9       | 13      | 17.5    | 23       | 30      | 35      |
| Weight (kg)              | CL150         | RF/BW     | -   | -   | 1.17/3. | 4.8/4.1 | 7.1/6.7 | 12.5/11. | 14/11.5 | 21.5/18 |
|                          | CL300         | RF/BW     | -   | -   | 4.5/3.7 | 5.2/4.5 | 8.3/7.7 | 14.5/12. | 16/13.5 | 24/20   |
|                          | CL600         | RF/BW     | -   | -   | 6.3/5.2 | 8.6/6.5 | 13.5/10 | 19.5/15. | 26/19.5 | 44/38   |

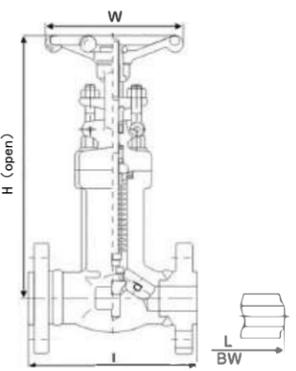


**CL1500**

Welded bonnet, full port outside screw and yoke (OS&Y)

Flange-welded or butt-welded ends; design to BS5352\MSS-SP-117

| Specification (NPS)      | F.P                  | 1/4 | 3/8 | 1/2  | 3/4  | 1    | 1 1/4 | 1 1/2 | 2    |
|--------------------------|----------------------|-----|-----|------|------|------|-------|-------|------|
| Face to face(mm)         | L ( RF ) , L1 ( BW ) | -   | -   | 216  | 229  | 254  | 279   | 305   | 368  |
|                          | L ( RTJ )            | -   | -   | 216  | 229  | 254  | 279   | 305   | 371  |
| Height (mm)              | H                    | -   | -   | 125  | 125  | 160  | 160   | 180   | 200  |
| Flow port dimension (mm) | d                    | -   | -   | 12   | 15   | 20   | 28    | 32    | 40   |
| (Kg)/Weight              |                      | -   | -   | 11.1 | 11.8 | 14.1 | 16.5  | 23.8  | 37.5 |



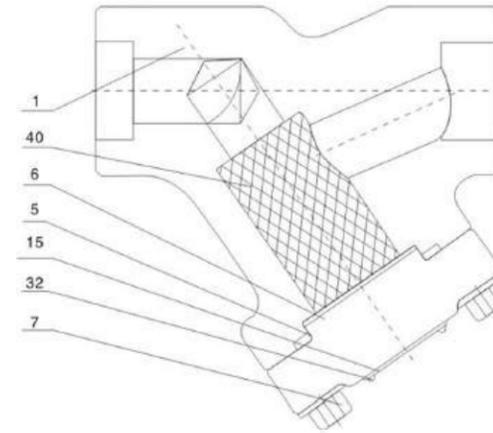
**CL1500**

Bolted bonnet, full port outside screw and yoke (OS&Y)

Flange-welded or butt-welded ends; design to BS5352\MSS-SP-117

| Specification (NPS)      | F.P                  | 1/4 | 3/8 | 1/2  | 3/4  | 1    | 1 1/4 | 1 1/2 | 2    |
|--------------------------|----------------------|-----|-----|------|------|------|-------|-------|------|
| Face to face(mm)         | L ( RF ) , L1 ( BW ) | -   | -   | 216  | 229  | 254  | 279   | 305   | 368  |
|                          | L ( RTJ )            | -   | -   | 216  | 229  | 254  | 279   | 305   | 371  |
| Height (mm)              | H                    | -   | -   | 380  | 380  | 400  | 450   | 520   | 650  |
| Flow port dimension (mm) | d                    | -   | -   | 12   | 15   | 20   | 28    | 32    | 40   |
| (Kg)/Weight              |                      | -   | -   | 11.6 | 12.3 | 15.0 | 17.5  | 25.0  | 38.3 |

Flange Integrity Forged Steel Valve enquiry please contact sales department.



**Application standards**

- Design and manufacture conform to: BS5352 MSS SP-118;
- Connection ends conform to:
  - Socket welded dimension conform to ANSI B16.11, JB/T1751
  - Screw ends dimension conform to ANSI B1 .20.1, JB/T7306
  - Butt-welded conform to ANSI B16.25/JB/T12224
  - Flanged ends conform to ANSI B16.5/JB79
- Test and inspection conform to: API 598, GB/T13927, JB/T9092
- Structure features: Bolted bonnet or Welded bonnet  
Materials conform to ANSI/ASTM.
- Main materials:
- A105; LF2; F5; F11; F22; 304(L); 316(L); F347; F321; F51; Monel; 20Alloy.

Carbon steel temperature-pressure rate

CL1 50-285 PS.I@100°F CL300-740 PS.I@ 100°F  
CL600-1480 PS.I@ 100°F CL800-1975 PS.I@100°F  
CL1 500-3705 PS.I@100°F CL2500-6170 PS.I@100°F

\*Please offer the mesh of strainer

\*If you want to equip with. you contract with our sale department

**Main part materials list**

| NO. | Part name     | A105/F6a               | A105/F6aHFS            | LF2/304                | F11/F6aHF              | F304(L)/304(L)         | F316(L)/316(L)         | F51/F51                |
|-----|---------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 1   | Body          | A105                   | A105                   | LF2                    | F11                    | F304(L)                | F316(L)                | F51                    |
| 5   | Gasket        | 304+ Flexible graphite | 316+ Flexible graphite | 316+ Flexible graphite |
| 6   | Bonnet        | A105                   | A105                   | LF2                    | F11                    | F304(L)                | F316(L)                | F51                    |
| 7   | Bolt          | B7                     | B7                     | L7                     | B16                    | B8(M)                  | B8(M)                  | B8M                    |
| 15  | Nameplate     | AL                     |
| 32  | Rivet         | H62                    |
| 40  | Filter screen | 304                    | 304                    | 304                    | 304                    | 304(L)                 | 316(L)                 | 316(L)                 |