# CS FORGED 3PC BALL VALVE CL800

3-Piece Forged Steel Ball Valve · ASTM A105N · NPT Threaded · Fire Safe Design

BRAND: GM VALVES | SKU: P-0005 | SIZE 1/2" TO 2" | CLASS 800




FIG. 1 | CS FORGED 3-PIECE BALL VALVE CLASS 800, LEVER OPERATED

## PRODUCT OVERVIEW

The GM Valves Class 800 forged steel ball valve is a quarter-turn shut-off valve with a three-piece bolted body in ASTM A105N. The centre section can be swung out of the line for seat and seal replacement without disturbing the pipe connections, which keeps maintenance time short on high pressure service.

A stainless steel ball and stem run in PTFE seats with graphite gland packing and spiral wound body gaskets. The valve is built to ISO 17292 / API 608 with a fire safe design to API 607, an anti-static device, an anti-blowout stem and an inbuilt locking arrangement on the lever.

| | |
|---|---|
| Valve type | **3-piece ball valve, bolted body** |
| Operation | **Manual, 90° quarter-turn lever** |
| Body material | **Forged carbon steel ASTM A105N** |
| End connection | **Female NPT threaded** |
| Pressure class | **Class 800** |
| Size range | **1/2" to 2" (DN15 to DN50)** |

## TECHNICAL SPECIFICATION

| | | | |
|---|---|---|---|
| Design standard | **ISO 17292 / API 608** | Shell hydro test | **211 kg/cm² (207 bar), 15 s** |
| Testing standard | **API 598** | Seat hydro test | **78 kg/cm² (76 bar), 15 s** |
| Fire safe standard | **API 607** | Seat pneumatic test | **7 kg/cm² (6.9 bar), 15 s** |
| Face to face | **Manufacturer standard** | Seat | **PTFE** |
| Thread standard | **NPT to ASME B1.20.1** | Stem | **Anti-blowout, anti-static** |
| Ball and stem | **ASTM A276 SS 304/L** | Country of origin | **India** |

## BILL OF MATERIALS

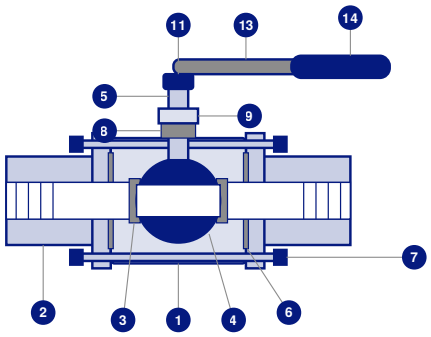



FIG. 2 | SECTIONAL ARRANGEMENT

| # | COMPONENT | MATERIAL |
|---|---|---|
| 1 | Body | ASTM A105N |
| 2 | Side piece (2 nos.) | ASTM A105N |
| 3 | Seat ring (2 nos.) | PTFE |
| 4 | Ball | ASTM A276 SS 304/L |
| 5 | Stem | ASTM A276 SS 304/L |
| 6 | Gasket (2 nos.) | SS 316L spiral wound + graphite |
| 7 | Collar bolt (8 nos.) | ASTM A193 Gr. B7 |
| 8 | Gland packing | Grafoil (flexible graphite) |
| 9 | Gland bush | ASTM A276 SS 304/L |
| 10 | Dish washer | EN41 spring steel |
| 11 | Stem nut | ASTM A194 Gr. 2H |
| 12 | Locking plate | Mild steel |
| 13 | Handle | Mild steel |
| 14 | Sleeve | PVC |
| 15 | Thrust washer | Glass filled PTFE |
| 16 | Locking washer | Mild steel |

Items 10, 12, 15 and 16 are not shown in Fig. 2. Bill of materials as per manufacturer drawing GMV-BLV-01.

## DIMENSIONS AND WEIGHTS

| SIZE | DN | F/F (MM) | ØP BORE (MM) | C THREAD (MM) | L LEVER (MM) | H (MM) | WEIGHT (KG) |
|---|---|---|---|---|---|---|---|
| **1/2"** | 15 | 68 | 11 | 14.5 | 128 | 38 | 0.8 |
| **3/4"** | 20 | 67 | 12.5 | 14.5 | 128 | 39 | 1.0 |
| **1"** | 25 | 85 | 19 | 19 | 151 | 53 | 1.8 |
| **1.1/4"** | 32 | 95 | 25.5 | 19.5 | 165 | 56 | 2.6 |
| **1.1/2"** | 40 | 110 | 31 | 19.5 | 202 | 70 | 3.8 |
| **2"** | 50 | 120 | 37.8 | 21 | 202 | 74 | 5.0 |

F/F = face to face, tolerance ±3 mm. ØP = minimum bore. C = minimum thread engagement. L and H are approximate. Figures are taken from the manufacturer drawing, are nominal and are given for guidance only. Certified drawings are issued on request.

## ORDERING INFORMATION

| FIELD | OPTIONS |
|---|---|
| Product code | P-0005 |
| Size | 1/2", 3/4", 1", 1.1/4", 1.1/2", 2" |
| End connection | Female NPT |
| Body / trim | A105N body, SS 304/L ball and stem, PTFE seats |
| Operation | Lever with locking arrangement |
| Order example | **P-0005 / 1" / NPT / A105N / PTFE** |

Stock held in Dubai for fast despatch across the UAE and GCC. Contact our sales desk for pricing, availability, project quantities and certification requirements.

## PRESSURE AND TEMPERATURE

| | |
|---|---|
| Pressure class | **Class 800** |
| Shell hydro test | **211 kg/cm² (207 bar)** |
| Seat hydro test | **78 kg/cm² (76 bar)** |
| Seat pneumatic test | **7 kg/cm² (6.9 bar)** |
| Pressure and temperature rating | **As per ISO 17292 / API 608** |

The working pressure and temperature of a soft seated ball valve are limited by the PTFE seat rating in ISO 17292, which is lower than the Class 800 shell rating. Confirm the allowable pressure at your operating temperature with SWBM before ordering.

## TYPICAL APPLICATIONS

- Oil and gas production and process piping
- Refinery and petrochemical utility lines
- Power generation, steam and condensate service
- Instrument, drain, vent and bypass connections
- High pressure water, oil and gas lines
- General industrial process piping

## COMPLIANCE AND QUALITY

- Design to ISO 17292 / API 608
- Fire safe design to API 607
- Pressure tested to API 598
- NPT threads to ASME B1.20.1
- Anti-static device and anti-blowout stem
- Inbuilt locking arrangement, open and close position indicator
- ISO mounting pad on the body
- Material test certificate EN 10204 3.1 on request

## INSTALLATION AND OPERATION

- Flush the line before installation to clear weld slag, scale and debris
- Check the body marking for size, class and material against the line specification
- Apply PTFE tape or an approved thread sealant to the male pipe thread only
- Tighten with a wrench on the valve end nearest the joint. Never lever on the bonnet, handle or handwheel
- The valve is open when the lever is in line with the pipe and closed at 90°
- Use fully open or fully closed. Do not use for throttling
- To service the seats, remove the body bolts, leaving one as a pivot, and swing the centre section out

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