

**Worcester Controls AW44  
3-Piece Steam Isolation Valve**

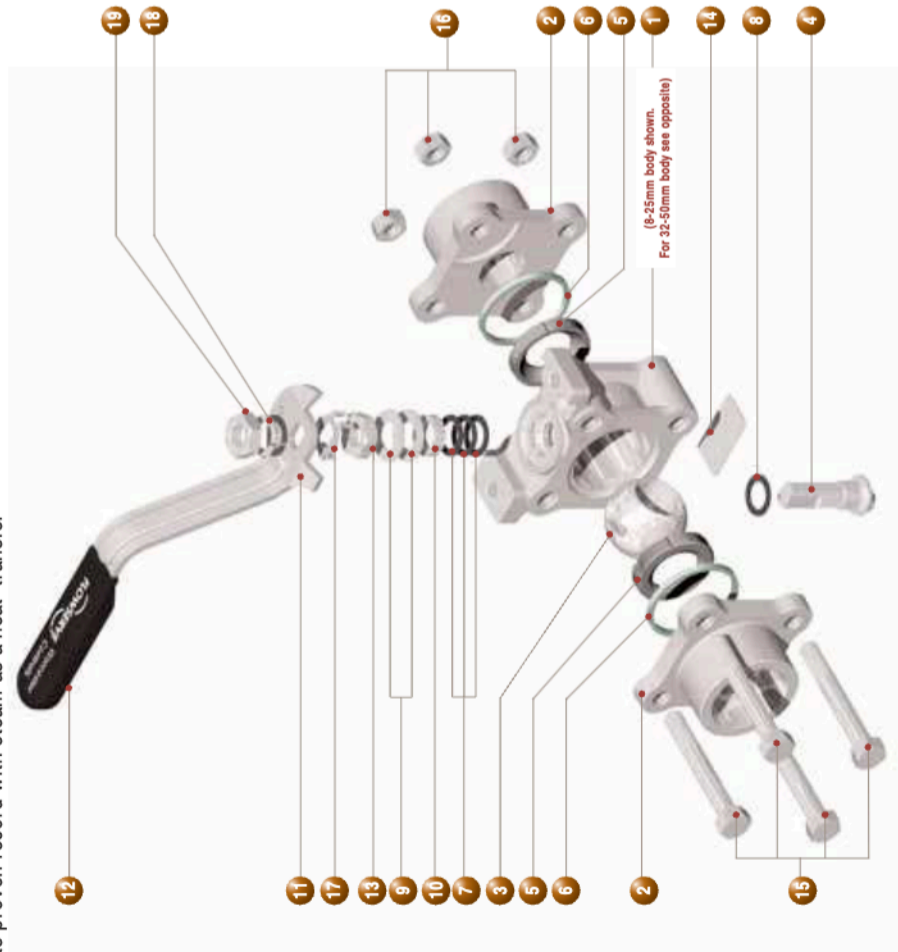


*Experience In Motion*

In the AW44, Flowserve Worcester has recognised the need for a 3-piece ball valve specifically designed for the isolation of steam. With energy costs already high and still rising, the AW44 has proved itself to be cost effective in minimising the loss of process steam.

Using its unique Fluorofill seat material, Worcester guarantees the AW44 on continuous saturated steam service up to 250 psi. (17 bar) whilst other Worcester high performance seat materials provide even higher temperature/pressure capabilities. In addition to its proven record with steam as a heat transfer

medium, the AW44 can accommodate other thermal fluids/hot oils up to 250°C (Fluorofill), or up to 280°C where required with other seat materials. The AW44 features a mounting platform on the body for ease of ancillary mounting while retaining valve integrity. For these demanding duties, Worcester incorporates its unique PTFE-coated metal body seal which maintains its sealing capability during thermal cycling. Available in sizes 8-50 mm, the AW44 is manufactured in carbon steel and stainless steel with a range of end connections.



### Parts/Materials List

| ITEM | DESCRIPTION            | MATERIAL   | ITEM | DESCRIPTION            | MATERIAL   |
|------|------------------------|--|------|------------------------|--|
| 1.   | Body                   | Carbon Steel ASTM A216WCB<br>Stainless Steel ASTM A351 CF8M UNS J92900 | 11.  | Wrench                 | Carbon Steel Rustproofed /<br>Stainless Steel 304                      |
| 2.   | Body Connector         | Carbon Steel ASTM A216WCB / A105<br>Stainless Steel ASTM A351 CF8M     | 12.  | Wrench Sleeve          | Vinyl Plastisol  |
| 3.   | Ball (See Note 7)      | Stainless Steel ASTM A351 CF8M UNS J92900                              | 13.  | Gland Nut              | Stainless Steel 316  |
| 4.   | Stem                   | Stainless Steel AISI Type 316  | 14.  | Identification Plate   | Stainless Steel 304  |
| 5.*  | Seat Ring (See Note 5) | Fluorofill / PEEK  | 15.  | Body Connector Bolt    | Carbon Steel BS3692 Gr. 8.8 /<br>Stainless Steel B6105/ISO 3506 A40-80 |
| 6.*  | Body Connector Seal    | Stainless Steel PTFE Coated  | 16.  | Body Connector Nut     | Carbon Steel BS3692 Gr. 8.8 /<br>Stainless Steel B6105/ISO 3506 A40-80 |
| 7.*  | Gland Packing          | PTFE 35% Carbon Filled   | 17.  | Gland Nut Locking Clip | Coated Spring Steel  |
| 8.*  | Stem Thrust Seal       | PTFE 35% Carbon Filled   | 18.  | Spring Washer          | Stainless Steel 316  |
| 9.*  | Disc Spring            | Stainless Steel  | 19.  | Wrench Nut             | Stainless Steel 316  |
| 10.  | Gland                  | Stainless Steel 316  |      |                        |  |

\* Items marked thus denote component supplied in repair kit

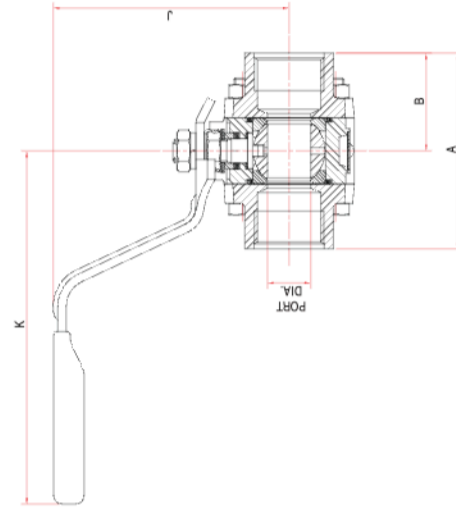
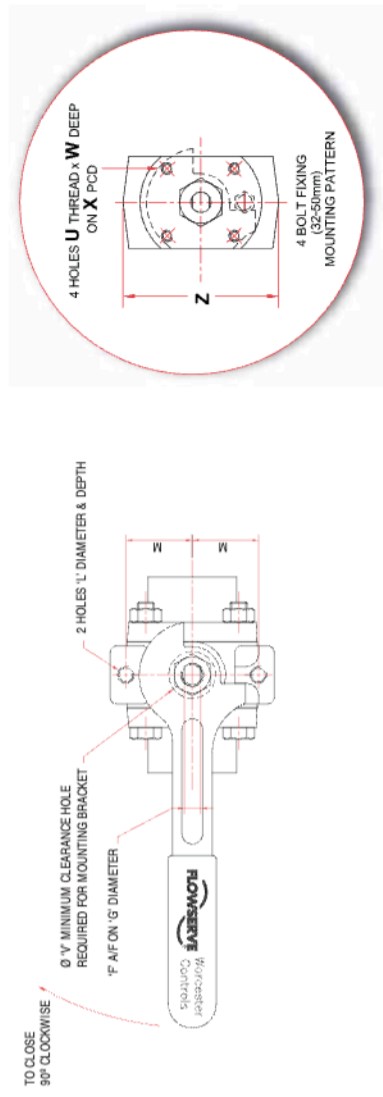
### Features

- Mounting platform on valve body.
- PTFE coated metal body seal.
- Carbon-filled PTFE stem seals.
- Black wrench sleeve.
- Compact size.
- Lightweight.
- 3-piece design.
- High cranked handle
- Live loaded Gland

### Benefits

- Improved stem cycle life.
- Optimum performance during thermal cycling.
- Leak tight high cycling capability.
- Clear visual indication of AW44.
- Takes less space.
- Minimises need for pipe supports.
- Ease of maintenance.
- Enables pipeline insulation without the need for stem extension
- Reduced maintenance, increasing safety & line integrity.

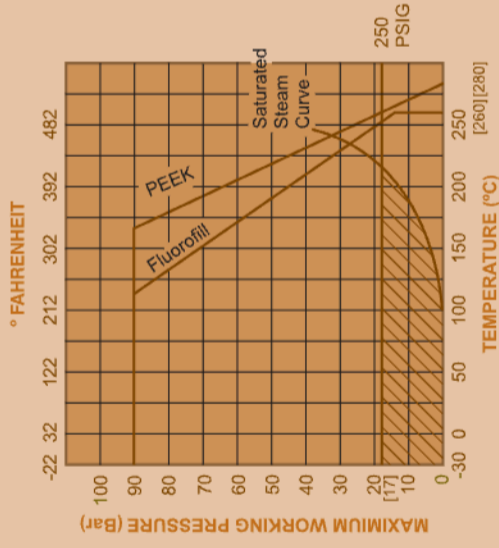
Note: Main drawings below show 8-25mm body.  
See inset drawing for 32-50mm



### Valve Dimensions (mm)

| Valve Size (mm) | Port Dia. | A      | B    | C     | D     | E     | F    | G            | H     | I     | J     | K     | L        | M     | N    | O    | P    | Q    | R   | S                              | T                                | U | V | W | X | Y | Z | ISO SIZE | APPROX WEIGHT KG |
|-----------------|-----------|--------|------|-------|-------|-------|------|--------------|-------|-------|-------|-------|----------|-------|------|------|------|------|-----|--------------------------------|----------------------------------|---|---|---|---|---|---|----------|------------------|
| 8, 10, 15       | 10.9      | 66.25  | 10.9 | 26.7  | 11.68 | 10.69 | 5.54 | 3/8"-24 UNF  | 156.0 | 97.9  | 156.0 | 156.0 | 9.5 MIN. | 24.0  | 23.8 | 30.4 | 23.8 | 19.5 | -   | -                              | -                                | - | - | - | - | - | - | -        | 0.7              |
| 20              | 14.0      | 71.81  | 14.0 | 32.69 | 11.04 | 10.19 | 5.46 | 3/8"-24 UNF  | 156.0 | 100.3 | 156.0 | 156.0 | 9.5 MIN. | 27.0  | 27.2 | 33.4 | 27.2 | 19.5 | -   | -                              | -                                | - | - | - | - | - | - | -        | 0.9              |
| 25              | 20.4      | 94.55  | 20.4 | 46.84 | 17.94 | 15.19 | 7.54 | 7/16"-20 UNF | 169.0 | 112.8 | 169.0 | 169.0 | 9.7 MIN. | 31.75 | 32.7 | 40.5 | 32.7 | 22.5 | -   | -                              | -                                | - | - | - | - | - | - | -        | 1.6              |
| 32              | 25.1      | 106.90 | 25.1 | 53.02 | 17.16 | 14.69 | 7.47 | 7/16"-20 UNF | 189.0 | 176.6 | 189.0 | 189.0 | 6.0 MIN. | 19.5  | 36.3 | -    | 36.3 | 22.5 | F04 | 4 OFF M5 x 0.8p ON 42.0 P.C.D. | 30.15 / 30.02 x 4.29 / 3.52 DEEP | - | - | - | - | - | - | 2.2      |                  |
| 40              | 31.3      | 115.41 | 31.3 | 57.26 | 18.39 | 17.89 | 7.89 | 9/16"-18 UNF | 193.0 | 128.9 | 193.0 | 193.0 | 7.5 MIN. | 23.0  | 42.3 | -    | 42.3 | 29.5 | F05 | 4 OFF M6 x 1.0p ON 50.0 P.C.D. | 35.15 / 35.02 x 4.01 / 3.26 DEEP | - | - | - | - | - | - | 3.2      |                  |
| 50              | 37.7      | 127.94 | 37.7 | 65.54 | 18.39 | 17.89 | 7.89 | 9/16"-18 UNF | 193.0 | 133.6 | 193.0 | 193.0 | 8.7 MIN. | 23.0  | 47.4 | -    | 47.4 | 29.5 | F05 | 4 OFF M6 x 1.0p ON 50.0 P.C.D. | 35.15 / 35.02 x 4.01 / 3.26 DEEP | - | - | - | - | - | - | 4.3      |                  |

### Pressure Temperature Ratings



### Notes

1. Screwed butt weld and socket weld end variations are available
2. Limiting stem input torque figures are based on random practical laboratory tests. For critical applications where a guaranteed figure is essential consult Worcester Controls.
3. When wrench not fitted flats on stem, when parallel to pipeline axis, denote ball open.
4. All weld end valves are assembled with Buna 'O' ring body connector seals with body seals attached loose. This provides for the valve to be tested by Worcester Controls, disassembled by the customer to weld in line, and reassembled. Instructions will be supplied for fitting body seals.
5. Other seat variations are available.
6. All valves have stainless steel trim as standard.
7. Installation, Operating and Maintenance Instructions are available on request.
8. Specially prepared versions of this valve are available which comply to NACE-MR-01-75.

### Flow Coefficients

| Valve Size | Flow Coefficients |      | Equivalent Length of Pipe |        |
|------------|-------------------|------|---------------------------|--------|
|            | mm                | in   | Feet                      | Metres |
| 8-15       | 1/4-1/2           | 8.3  | 1.9                       | 0.58   |
| 20         | 3/4               | 13.6 | 5.5                       | 1.67   |
| 25         | 1                 | 37.5 | 3.0                       | 0.91   |
| 32         | 1 1/4             | 37.7 | 4.6                       | 1.4    |
| 40         | 1 1/2             | 79.5 | 3.9                       | 1.19   |
| 50         | 2                 | 106  | 9.0                       | 2.74   |

### Standards of Compliance

|                           |   |
|---------------------------|---|
| <b>Butt Weld Valves</b>   | Weld Preparation: SCH 40 & 10: BS 2633 suitable for Schedule Pipe to BS 1600  |
| <b>Socket Weld Valves</b> | Prepared for assembly to plain end pipe in accordance with BS 1600  |
| <b>Screwed Valves</b>     | Thread Specification:<br>BSP Taper - ISO/7 BS 21<br>BSP Parallel - BS 2779/ISO 228/1<br>ISO/7 (BS 21 DIN 2999)<br>NPT- ANSI B1.20.1 |
| <b>Test Rating</b>        | Valves are tested to the pressures and durations as defined in BS 6755 Part 1   |

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To find your local Flowserve representative:

For more information about Flowserve Corporation, visit [www.flowserve.com](http://www.flowserve.com) or call +44 (0) 1444 314400

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### Options



Critical in applications such as steam isolation, the Worcester Lockable Wrench is a standard option for the AW44 in any size. If you need to ensure valve position integrity, this option provides the perfect solution.

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