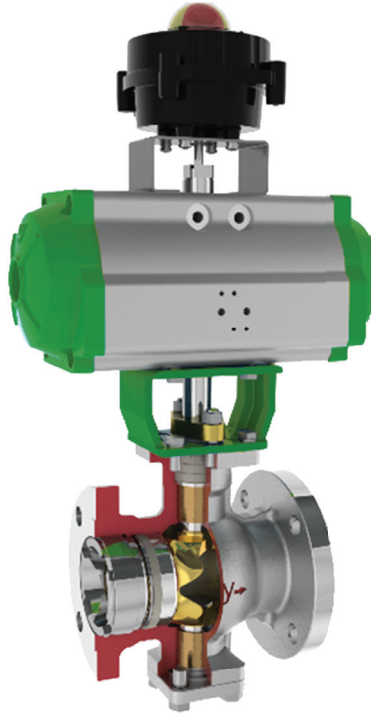


**VTX90 V-Notch Ball Valve**



**FEATURES**

- ▶ V-Notch Ball Sizes 1" (DN25) through 20" (DN500)
- ▶ Stem Guides are strategically positioned within the machined main valve body to guarantee precise alignment, minimize potential leakage points, and maintain that stem seals remain unaffected by operational loads.
- ▶ Seat rings are crafted from either 304 SS or 316 SS, incorporating PTFE for soft seating and Stellite for hard-facing purposes.
- ▶ Blowout-proof stems featuring a double guide to minimize torque requirements
- ▶ Tight Shutoff to ANSI/FCI 70-2 Class IV or Class V for Metal Sealing and Class VI for Soft Sealing
- ▶ Materials to NACE MR0103/MR0175 are available
- ▶ DIN and PN flanges available
- ▶ Bolted Packing Box designed for packing with high integrity

*Equipment training is available. Installation, operation, service, and maintenance should be performed by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising from the use of this material.*

## KEY COMPONENTS OF THE V-BALL VALVES

Figure 1. Key Components

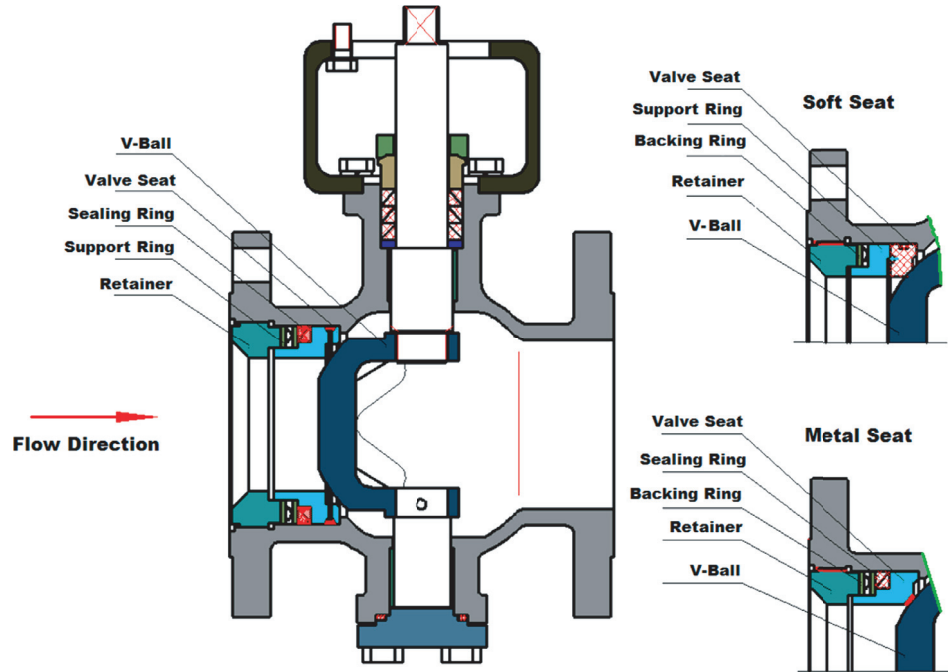


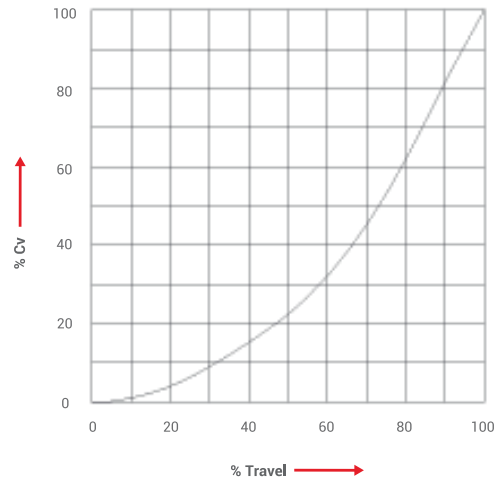
Table 1. Key Components

|                            |                                       |
|----------------------------|---------------------------------------|
| Type                       | Straight Through, V-Ball Valve        |
| Body Size                  | 1" to 20" (DN25 to DN500)             |
| Characteristics, Trim Form | Modified Equal Percentage             |
| Pressure Classes           | Class 150-300                         |
| Body Connections           | ASME B16.5, RF Flanged                |
| Face to Face Dimensions    | JIS 2002-2000 1" (DN25) to 6" (DN150) |
| Packing                    | PTFE V-RING, GRAPHITE RING            |

## PERFORMANCE DATA

### Flow Data

Figure 2. Flow Characteristics Curve



NOTES:  
For sizes and ratings not shown, contact the factory

### Cv Table

Table 2. Valve Cv's

| Valve Size<br>DN/Inches | 25/<br>1" | 40/<br>1.5" | 50/<br>2" | 65/<br>2.5" | 80/<br>3" | 100/<br>4" | 125<br>5" | 150/<br>6" | 200/<br>8" | 250/<br>10" | 300/<br>12" | 350/<br>14" | 400/<br>16" | 500/<br>20" |
|-------------------------|-----------|-------------|-----------|-------------|-----------|------------|-----------|------------|------------|-------------|-------------|-------------|-------------|-------------|
| Seat<br>Diameter<br>mm  | 15        | 33          | 40        | 53          | 66        | 85         | 104       | 128        | 170        | 212         | 255         | 300         | 340         | 400         |
| Cv                      | 19        | 57          | 105       | 164         | 263       | 430        | 700       | 1105       | 1800       | 2808        | 4563        | 7196        | 11,400      | 15,210      |

### Valve Torque Requirements

Table 3. Valve Torque Requirements - Soft Seat

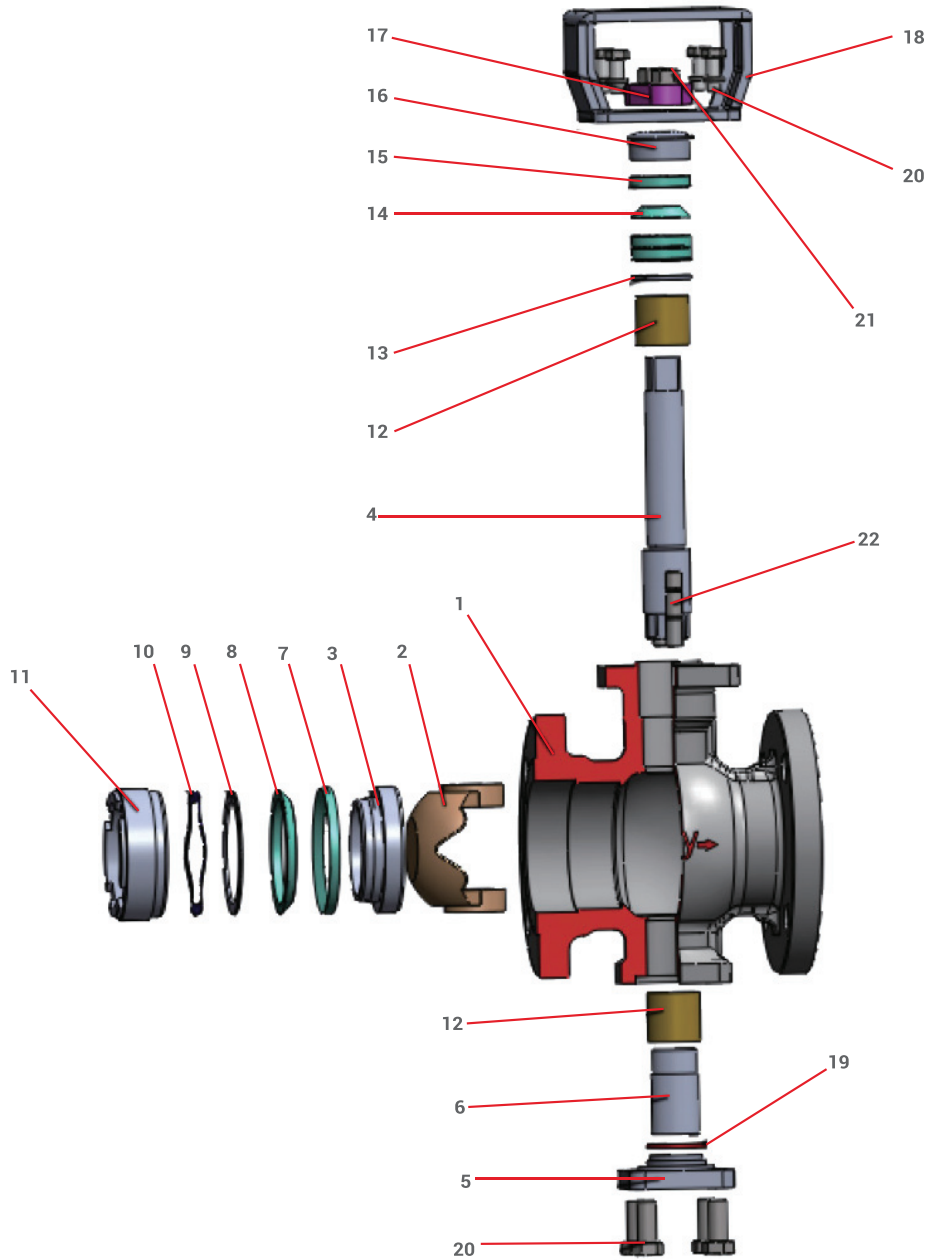
| DN (mm)<br>/Inches |       | 25/<br>1" | 40/<br>1.5" | 50/<br>2" | 65/<br>2.5" | 80/<br>3" | 100/<br>4" | 125<br>5" | 150/<br>6" | 200/<br>8" | 250/<br>10" | 300/<br>12" | 350/<br>14" | 400/<br>16" | 500/<br>20" |
|--------------------|-------|-----------|-------------|-----------|-------------|-----------|------------|-----------|------------|------------|-------------|-------------|-------------|-------------|-------------|
| Class<br>150       | N-m   | 12        | 20          | 36        | 58          | 100       | 176        | 289       | 360        | 460        | 660         | 1036        | 1500        | 2300        | 2800        |
|                    | in-lb | 106       | 177         | 318       | 513         | 885       | 1557       | 2556      | 3186       | 4071       | 5841        | 9169        | 13276       | 20356       | 24782       |
| Class<br>300       | N-m   | 19        | 38          | 58        | 120         | 180       | 297        | 510       | 560        | 1000       | 1250        | 2264        | 2884        | 3500        | 4200        |
|                    | in-lb | 168       | 336         | 513       | 1062        | 1593      | 2628       | 4513      | 4956       | 8850       | 11063       | 20038       | 25525       | 30977       | 37173       |

Table 3. Valve Torque Requirements - Hard Seat

| DN (mm)<br>/Inches |       | 25/<br>1" | 40/<br>1.5" | 50/<br>2" | 65/<br>2.5" | 80/<br>3" | 100/<br>4" | 125<br>5" | 150/<br>6" | 200/<br>8" | 250/<br>10" | 300/<br>12" | 350/<br>14" | 400/<br>16" | 500/<br>20" |
|--------------------|-------|-----------|-------------|-----------|-------------|-----------|------------|-----------|------------|------------|-------------|-------------|-------------|-------------|-------------|
| Class<br>150       | N-m   | 15        | 28          | 45        | 65          | 110       | 200        | 340       | 370        | 580        | 980         | 1300        | 2300        | 2700        | 3200        |
|                    | in-lb | 132       | 247         | 398       | 575         | 973       | 1770       | 3009      | 3274       | 5133       | 8673        | 11505       | 20356       | 23897       | 2832        |
| Class<br>300       | N-m   | 25        | 48          | 72        | 145         | 230       | 350        | 600       | 630        | 1300       | 1500        | 2600        | 3500        | 4049        | 5300        |
|                    | in-lb | 221       | 424         | 633       | 1283        | 2035      | 3097       | 5310      | 5575       | 11505      | 13276       | 23011       | 30977       | 29828       | 46908       |

VALVE ASSEMBLY  
Exploded View

Figure 3. Stainless Steel



## Valve Assembly Materials List

Table 4. Valve Materials

| Number  | Description        | Material                               |
|---|--------------------|--|
| 1   | Body               | See Table 5                            |
| 2   | Ball               | See Table 5                            |
| 3   | Seat Ring          | See Table 5                            |
| 4   | Main Shaft         | See Table 5                            |
| 5   | Valve Cover        | Equal to Body Material                 |
| 6   | Counter Shaft      | See "Dimensions and Weights" on page 7 |
| 7   | Inner Seal Ring    | Reinforced Rubber, PTFE, Graphite      |
| 8   | Outer Seal Ring    | Reinforced Rubber, PTFE, Graphite      |
| 9   | Seal Ring Retainer | 304 SS, 316 SS                         |
| 10  | Wave Spring        | 17-7PH                                 |
| 11  | Retainer           | 304 SS, 316 SS                         |
| 12  | Guide              | SF-1, High Nickel Cast Iron            |
| 13  | Packing Spacer     | 316 SS                                 |
| 14  | Lower Packing      | PTFE, Graphite                         |
| 15  | Upper Packing      | PTFE, Graphite                         |
| 16  | Packing Follower   | 316 SS                                 |
| 17  | Packing Gland      | 304 SS                                 |
| 18  | Bracket            | Carbon Steel                           |
| 19  | Spiral Gasket      | Grafoil®/316                           |
| 20  | Bolts              | B7, B8M                                |
| 21  | Packing Nuts       | 2H, 8M                                 |
| 22  | Packing Studs      | B7, B8M                                |
| <p><b>Notes:</b></p> <ol style="list-style-type: none"> <li>Optional materials are available. Consult factory.</li> <li>Pressure boundary components are provided to ASTM standards.</li> <li>Valve internal materials are supplied to ASTM/JIS/DIN/GB standards.</li> <li>Compliance to NACE is available to MR0103 or MR0175/ISO15156.</li> </ol> |                    |  |

**MATERIALS OF CONSTRUCTION**

**Valve Materials**

**Table 5. Valve Component Temperature Ratings**

|                     |                             |  |  |  |   |
|---------------------|-----------------------------|--|--|--|---|
| <b>Body</b>         | Material                    | WCB<br>-29°C ~ 427°C (-20°F ~ 800°F)       |  | CF8, CF8M<br>-29°C ~ 530°C (-20°F ~ 986°F) |   |
|                     | Material                    | CF8, CF8M<br>-29°C ~ 530°C (-20°F ~ 986°F) |  |  |   |
| <b>Ball</b>         | Treatment                   | Soft Seat, Solution Anneal                 |  | Hard Seat, Nitriding                       |   |
|                     | Material                    | 17-4pH (≤300°C/572°F)                      |  | 316 SS                                     |   |
| <b>Shaft</b>        | Treatment                   | Hardened                                   |  | Nitrided                                   |   |
|                     | Type                        | Soft Seat                                  | H <sub>1</sub> (Nor-Temp Hard Seat)<br>-29°C ~ 200°C (-20°F ~ 392°F) |  | H <sub>2</sub> (Hi-Temp Hard Seat)<br>200°C ~ 530°C (392°F ~ 986°F) |
| <b>Seat</b>         | Material Treatment          | PTFE<br>-29°C ~ 200°C (-20°F ~ 392°F)      | 304 SS, 316 SS, Stellite®<br>-29°C ~ 530°C (-20°F ~ 986°F)           |  |   |
|                     |                             |  | 304 SS+Nickel, 316 SS+Nickel HF<br>-29°C ~ 530°C (-20°F ~ 986°F)     |  |   |
| <b>Seating Ring</b> | Upper + Lower Pressure Ring | Reinforced Rubber                          | PTFE   |  | Graphite  |
|                     | Temperature Range           | -29°C ~ +150°C<br>-20°F ~ 302°F            | -29°C ~ +2000°C<br>-20°F ~ 392°F                                     |  | -29°C ~ +530°C<br>-20°F ~ 986°F                                     |
| <b>Guide</b>        | Material                    | SF-1<br>-29°C ~ 180°C (-20°F ~ 356°F)      | High nickel Iron<br>180°C ~ 5300°C (356°F ~ 986°F)                   |  |   |
| <b>Shut-Off</b>     | Soft Seat                   | ANSI/FCI 70-2 Class VI                     |  |  |   |
|                     | Metal Seat                  | ANSI/FCI 70-2 Class IV or Class V          |  |  |   |

**NOTES:**

The VTX90 is a segmented ball with a V-notch shaped on the ball to achieve an equal percentage characteristic and high rangeability control.

The V-shaped notch and seat provides a positive shearing action for services with fibers in suspend in process.

A variety of trim options varying from soft seat, hardened trim, or high temperature materials are available.

## DIMENSIONS AND WEIGHTS

### Sizes 1" - 20" (DN25-DN500), Class 150-300

Figure 4. Outline Dimensions for Sizes 1"-20" (DN25-DN500), Class 150-300

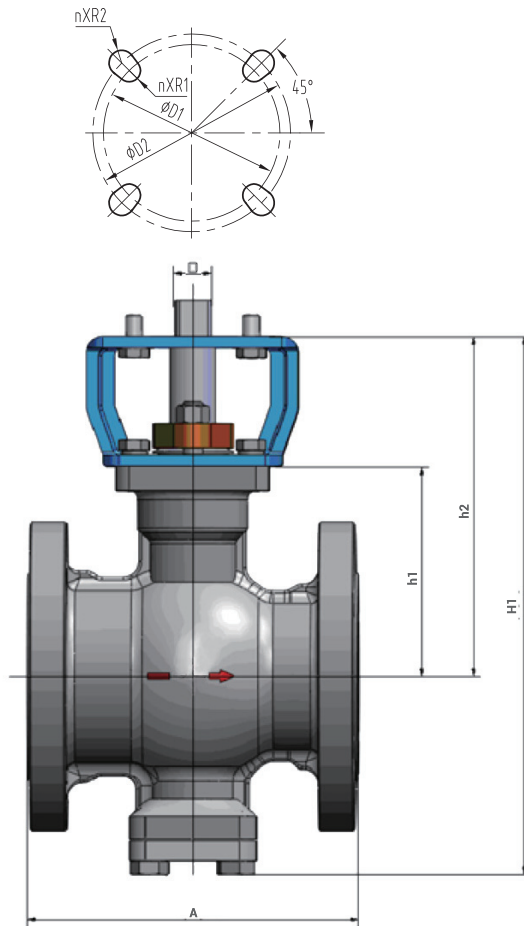


Table 6. Class 150 Valve Body Assembly and Actuator Interface

| Valve Size (a) |      | Outline Dimensions |       |     |      |     |      |     |      |    |      |      |      |       |      |      |       | Weight |     |
|----------------|------|--------------------|-------|-----|------|-----|------|-----|------|----|------|------|------|-------|------|------|-------|--------|-----|
|                |      | A                  |       | h1  |      | h2  |      | H1  |      | □  |      | Φ D1 |      | nXR1  | Φ D2 |      | nXR2  |        |     |
| DN mm          | inch | mm                 | inch  | mm  | inch | mm  | inch | mm  | inch | mm | inch | mm   | inch | mm    | mm   | inch | mm    | kg     | lb  |
| 25             | 1"   | 127                | 5.00  | 73  | 2.9  | 118 | 4.6  | 176 | 6.9  | 11 | 0.43 | 50   | 1.97 | 4XR4  | 70   | 2.76 | 4XR5  | 3.6    | 8   |
| 40             | 1.5" | 165                | 6.50  | 90  | 3.5  | 150 | 5.9  | 233 | 9.2  | 17 | 0.67 | 70   | 2.76 | 4XR5  | 102  | 4.02 | 4XR6  | 8      | 18  |
| 50             | 2"   | 178                | 7.00  | 100 | 3.9  | 160 | 6.3  | 254 | 10.0 | 17 | 0.67 | 70   | 2.76 | 4XR5  | 102  | 4.02 | 4XR6  | 10.5   | 23  |
| 65             | 2.5" | 190                | 7.50  | 120 | 4.7  | 200 | 7.9  | 320 | 12.6 | 22 | 0.87 | 102  | 4.02 | 4XR6  | 125  | 4.92 | 4XR7  | 16.5   | 36  |
| 80             | 3"   | 203                | 8.00  | 130 | 5.1  | 210 | 8.3  | 332 | 13.1 | 22 | 0.87 | 125  | 4.92 | 4XR7  | 140  | 5.51 | 4XR9  | 26.6   | 59  |
| 100            | 4"   | 229                | 9.00  | 138 | 5.4  | 228 | 9.0  | 369 | 14.5 | 22 | 0.87 | 125  | 4.92 | 4XR7  | 140  | 5.51 | 4XR9  | 41.7   | 92  |
| 125            | 5"   | 254                | 10.00 | 174 | 6.9  | 264 | 10.4 | 435 | 17.1 | 27 | 1.06 | 140  | 5.51 | 4XR9  | 165  | 6.50 | 4XR11 | 55     | 121 |
| 150            | 6"   | 267                | 10.50 | 190 | 7.5  | 280 | 11.0 | 465 | 18.3 | 27 | 1.06 | 140  | 5.51 | 4XR9  | 165  | 6.50 | 4XR11 | 94.4   | 208 |
| 200            | 8"   | 419                | 16.50 | 232 | 9.1  | 322 | 12.7 | 546 | 21.5 | 27 | 1.06 | 165  | 6.50 | 4XR11 | --   | --   | --    | 123    | 271 |
| 250            | 10"  | 457                | 18.00 | 305 | 12.0 | 415 | 16.3 | 705 | 27.8 | 42 | 1.65 | 165  | 6.50 | 4XR11 | --   | --   | --    | 145    | 319 |
| 300            | 12"  | 502                | 19.75 | 332 | 13.1 | 442 | 17.4 | 762 | 30.0 | 42 | 1.65 | 165  | 6.50 | 4XR11 | --   | --   | --    | 165    | 363 |
| 350            | 14"  | 572                | 22.50 | 393 | 15.5 | --  | --   | --  | --   | -- | --   | --   | --   | --    | --   | --   | --    | --     | --  |
| 400            | 16"  | 610                | 24.00 | 420 | 16.5 | --  | --   | --  | --   | -- | --   | --   | --   | --    | --   | --   | --    | --     | --  |
| 500            | 20"  | 711                | 28.00 | 540 | 21.3 | --  | --   | --  | --   | -- | --   | --   | --   | --    | --   | --   | --    | --     | --  |

a. For sizes and ratings not shown, consult Global Customer Support.

Table 7. Class 300 Valve Body Assembly and Actuator Interface

| Valve Size (a) |      | Outline Dimensions |       |     |      |     |      |     |      |    |      |      |      |       |      |      |       | Weight |     |
|----------------|------|--------------------|-------|-----|------|-----|------|-----|------|----|------|------|------|-------|------|------|-------|--------|-----|
|                |      | A                  |       | h1  |      | h2  |      | H1  |      | □  |      | Φ D1 |      | nXR1  | Φ D2 |      | nXR2  |        |     |
| DN mm          | inch | mm                 | inch  | mm  | inch | mm  | inch | mm  | inch | mm | inch | mm   | inch | mm    | mm   | inch | mm    | kg     | lb  |
| 25             | 1"   | 127                | 5.00  | 73  | 2.9  | 118 | 4.6  | 176 | 6.9  | 11 | 0.43 | 50   | 1.97 | 4XR4  | 70   | 2.76 | 4XR5  | 5      | 11  |
| 40             | 1.5" | 165                | 6.50  | 90  | 3.5  | 150 | 5.9  | 233 | 9.2  | 17 | 0.67 | 70   | 2.76 | 4XR5  | 102  | 4.02 | 4XR6  | 11     | 24  |
| 50             | 2"   | 178                | 7.00  | 100 | 3.9  | 160 | 6.3  | 254 | 10.0 | 17 | 0.67 | 70   | 2.76 | 4XR5  | 102  | 4.02 | 4XR6  | 15     | 33  |
| 65             | 2.5" | 190                | 7.50  | 120 | 4.7  | 200 | 7.9  | 320 | 12.6 | 22 | 0.87 | 102  | 4.02 | 4XR6  | 125  | 4.92 | 4XR7  | 21     | 46  |
| 80             | 3"   | 203                | 8.00  | 130 | 5.1  | 210 | 8.3  | 332 | 13.1 | 22 | 0.87 | 125  | 4.92 | 4XR7  | 140  | 5.51 | 4XR9  | 30     | 66  |
| 100            | 4"   | 229                | 9.00  | 138 | 5.4  | 228 | 9.0  | 369 | 14.5 | 22 | 0.87 | 125  | 4.92 | 4XR7  | 140  | 5.51 | 4XR9  | 45     | 99  |
| 125            | 5"   | 254                | 10.00 | 174 | 6.9  | 264 | 10.4 | 435 | 17.1 | 27 | 1.06 | 140  | 5.51 | 4XR9  | 165  | 6.50 | 4XR11 | 68     | 150 |
| 150            | 6"   | 267                | 10.50 | 190 | 7.5  | 280 | 11.0 | 465 | 18.3 | 27 | 1.06 | 140  | 5.51 | 4XR9  | 165  | 6.50 | 4XR11 | 105    | 231 |
| 200            | 8"   | 419                | 16.50 | 232 | 9.1  | 322 | 12.7 | 546 | 21.5 | 27 | 1.06 | 165  | 6.50 | 4XR11 | --   | --   | --    | 138    | 304 |
| 250            | 10"  | 457                | 18.00 | 305 | 12.0 | 415 | 16.3 | 705 | 27.8 | 42 | 1.65 | 165  | 6.50 | 4XR11 | --   | --   | --    | 160    | 352 |
| 300            | 12"  | 502                | 19.75 | 332 | 13.1 | 442 | 17.4 | 762 | 30.0 | 42 | 1.65 | 165  | 6.50 | 4XR11 | --   | --   | --    | 180    | 396 |
| 350            | 14"  | 572                | 22.50 | 393 | 15.5 | --  | --   | --  | --   | -- | --   | --   | --   | --    | --   | --   | --    | --     | --  |
| 400            | 16"  | 610                | 24.00 | 420 | 16.5 | --  | --   | --  | --   | -- | --   | --   | --   | --    | --   | --   | --    | --     | --  |
| 500            | 20"  | 711                | 28.00 | 540 | 21.3 | --  | --   | --  | --   | -- | --   | --   | --   | --    | --   | --   | --    | --     | --  |

a. For sizes and ratings not shown, consult Global Customer Support.

Figure 5. Outline Dimensions with APR Actuator only

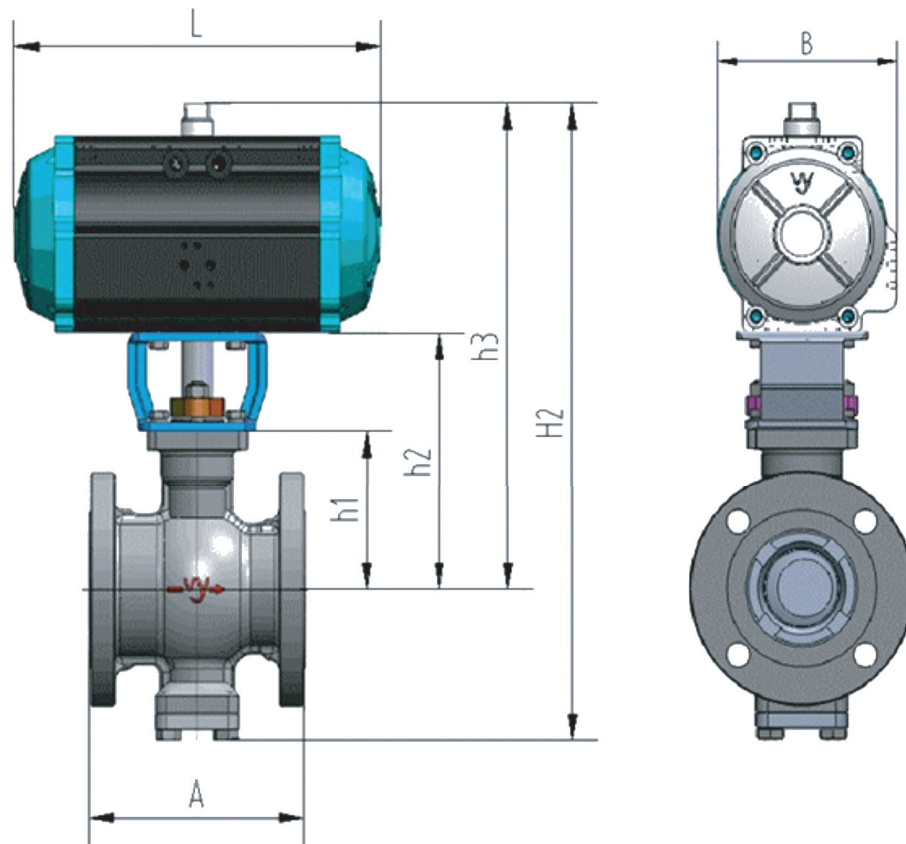


Table 8. Outline Dimensions for Valves and Pneumatic Actuator Without Handwheel, Class 150

| Valve Size (a) |      | Outline Dimensions |       |     |      |     |       |     |      |      |      |     |      |     |      | Actuator  |       | Weight |  |
|----------------|------|--------------------|-------|-----|------|-----|-------|-----|------|------|------|-----|------|-----|------|-----------|-------|--------|--|
|                |      | A                  |       | h1  |      | h2  |       | h3  |      | H2   |      | B   |      | L   |      |           |       |        |  |
| DN             | inch | mm                 | inch  | mm  | inch | mm  | inch  | mm  | inch | mm   | inch | mm  | inch | mm  | inch | kg        | lb    |        |  |
| 25             | 1"   | 127                | 5.00  | 73  | 2.9  | 118 | 4.6   | 253 | 10.0 | 306  | 12.0 | 102 | 4.0  | 236 | 9.3  | APR80-DA  | 8.1   | 18     |  |
|                |      |                    |       |     |      |     |       | 285 | 11.2 | 343  | 13.5 | 130 | 5.1  | 272 | 10.7 | APR100-SR | 10.8  | 24     |  |
| 40             | 1.5" | 165                | 6.50  | 90  | 3.5  | 150 | 5.9   | 317 | 12.5 | 403  | 15.9 | 130 | 5.1  | 272 | 10.7 | APR100-DA | 14.2  | 31     |  |
|                |      |                    |       |     |      |     |       | 338 | 13.3 | 421  | 16.6 | 150 | 5.9  | 340 | 13.4 | APR125-SR | 23.2  | 51     |  |
| 50             | 2"   | 178                | 7.00  | 100 | 3.9  | 160 | 6.3   | 328 | 12.9 | 422  | 16.6 | 130 | 5.1  | 272 | 10.7 | APR100-DA | 16.7  | 37     |  |
|                |      |                    |       |     |      |     |       | 348 | 13.7 | 442  | 17.4 | 150 | 5.9  | 340 | 13.4 | APR125-SR | 25.7  | 57     |  |
| 65             | 2.5" | 190                | 7.50  | 120 | 4.7  | 200 | 7.9   | 390 | 15.4 | 510  | 20.1 | 150 | 5.9  | 340 | 13.4 | APR125-DA | 28.8  | 63     |  |
|                |      |                    |       |     |      |     |       | 435 | 17.1 | 555  | 21.9 | 193 | 7.6  | 452 | 17.8 | APR160-SR | 42.8  | 94     |  |
| 80             | 3"   | 203                | 8.00  | 130 | 5.1  | 210 | 8.3   | 445 | 17.5 | 567  | 22.3 | 193 | 7.6  | 452 | 17.8 | APR160-DA | 49.1  | 108    |  |
|                |      |                    |       |     |      |     |       | 480 | 18.9 | 602  | 23.7 | 220 | 8.7  | 570 | 22.4 | APR200-SR | 83.6  | 184    |  |
| 100            | 4"   | 229                | 9.00  | 138 | 5.4  | 228 | 9.0   | 463 | 18.2 | 604  | 23.8 | 193 | 7.6  | 452 | 17.8 | APR160-DA | 64.2  | 141    |  |
|                |      |                    |       |     |      |     |       | 498 | 19.6 | 639  | 25.2 | 220 | 8.7  | 570 | 22.4 | APR200-SR | 98.7  | 217    |  |
| 125            | 5"   | 254                | 10.00 | 174 | 6.9  | 264 | 10.4  | 534 | 21.0 | 705  | 27.8 | 220 | 8.7  | 570 | 22.4 | APR200-DA | 103   | 227    |  |
|                |      |                    |       |     |      |     |       | 624 | 24.6 | 795  | 31.3 | 290 | 11.4 | 695 | 27.4 | APR254-SR | 156   | 343    |  |
| 150            | 6"   | 267                | 10.50 | 190 | 7.5  | 280 | 11.0  | 550 | 21.7 | 735  | 28.9 | 220 | 8.7  | 570 | 22.4 | APR200-DA | 142.4 | 313    |  |
|                |      |                    |       |     |      |     |       | 640 | 25.2 | 825  | 32.5 | 290 | 11.4 | 695 | 27.4 | APR254-DA | 180.4 | 397    |  |
|                |      |                    |       |     |      |     |       | 640 | 25.2 | 825  | 32.5 | 300 | 11.8 | 706 | 27.8 | APR280-SR | 189.4 | 417    |  |
| 200            | 8"   | 419                | 16.50 | 232 | 9.1  | 322 | 12.7" | 682 | 26.9 | 907  | 35.7 | 290 | 11.4 | 695 | 27.4 | APR254-DA | 209   | 460    |  |
|                |      |                    |       |     |      |     |       | 702 | 27.6 | 907  | 35.7 | 324 | 12.8 | 792 | 31.2 | APR300-SR | 238   | 524    |  |
| 250            | 10"  | 457                | 18.00 | 305 | 12.0 | 415 | 16.3  | 765 | 30.1 | 1055 | 41.5 | 324 | 12.8 | 792 | 31.2 | APR300-DA | 240   | 528    |  |
|                |      |                    |       |     |      |     |       | 825 | 32.5 | 1115 | 43.9 | 388 | 15.3 | 850 | 33.5 | APR350-SR | 295   | 649    |  |
| 300            | 12"  | 502                | 19.75 | 332 | 13.1 | 442 | 17.4  | 792 | 31.2 | 1112 | 43.8 | 324 | 12.8 | 792 | 31.2 | APR300-DA | 260   | 572    |  |
|                |      |                    |       |     |      |     |       | 852 | 33.5 | 1172 | 46.1 | 388 | 15.3 | 850 | 33.5 | APR350-SR | 315   | 693    |  |

a. For sizes and ratings not shown, consult Global Customer Support.

**Table 9. Outline Dimensions for Valves and Pneumatic Actuator Without Handwheel, Class 300**

| Valve Size (a) |      | Outline Dimensions |       |     |      |     |       |     |      |      |      |     |      |     |      | Actuator  | Weight |     |
|----------------|------|--------------------|-------|-----|------|-----|-------|-----|------|------|------|-----|------|-----|------|-----------|--------|-----|
|                |      | A                  |       | h1  |      | h2  |       | h3  |      | H2   |      | B   |      | L   |      |           |        |     |
| DN             | inch | mm                 | inch  | mm  | inch | mm  | inch  | mm  | inch | mm   | inch | mm  | inch | mm  | inch | kg        | lb     |     |
| 25             | 1"   | 127                | 5.00  | 73  | 2.9  | 118 | 4.6   | 253 | 10.0 | 306  | 12.0 | 102 | 4.0  | 236 | 9.3  | APR80-DA  | 9.5    | 21  |
|                |      | 285                |       |     |      |     |       | 285 | 11.2 | 343  | 13.5 | 130 | 5.1  | 272 | 10.7 | APR100-SR | 12.2   | 27  |
| 40             | 1.5" | 165                | 6.50  | 90  | 3.5  | 150 | 5.9   | 317 | 12.5 | 403  | 15.9 | 130 | 5.1  | 272 | 10.7 | APR100-DA | 17.2   | 38  |
|                |      | 338                |       |     |      |     |       | 338 | 13.3 | 421  | 16.6 | 150 | 5.9  | 340 | 13.4 | APR125-SR | 26.2   | 58  |
| 50             | 2"   | 178                | 7.00  | 100 | 3.9  | 160 | 6.3   | 328 | 12.9 | 422  | 16.6 | 130 | 5.1  | 272 | 10.7 | APR100-DA | 20.2   | 44  |
|                |      | 348                |       |     |      |     |       | 348 | 13.7 | 442  | 17.4 | 150 | 5.9  | 340 | 13.4 | APR125-SR | 29.2   | 64  |
| 65             | 2.5" | 190                | 7.50  | 120 | 4.7  | 200 | 7.9   | 390 | 15.4 | 510  | 20.1 | 150 | 5.9  | 340 | 13.4 | APR125-DA | 33.3   | 73  |
|                |      | 435                |       |     |      |     |       | 435 | 17.1 | 555  | 21.9 | 193 | 7.6  | 452 | 17.8 | APR160-SR | 47.3   | 104 |
| 80             | 3"   | 203                | 8.00  | 130 | 5.1  | 210 | 8.3   | 445 | 17.5 | 567  | 22.3 | 193 | 7.6  | 452 | 17.8 | APR160-DA | 52.5   | 116 |
|                |      | 480                |       |     |      |     |       | 480 | 18.9 | 602  | 23.7 | 220 | 8.7  | 570 | 22.4 | APR200-SR | 88     | 194 |
| 100            | 4"   | 229                | 9.00  | 138 | 5.4  | 228 | 9.0   | 463 | 18.2 | 604  | 23.8 | 193 | 7.6  | 452 | 17.8 | APR160-DA | 68.2   | 150 |
|                |      | 498                |       |     |      |     |       | 498 | 19.6 | 639  | 25.2 | 220 | 8.7  | 570 | 22.4 | APR200-SR | 102.7  | 226 |
| 125            | 5"   | 254                | 10.00 | 174 | 6.9  | 264 | 10.4  | 534 | 21.0 | 705  | 27.8 | 220 | 8.7  | 570 | 22.4 | APR200-DA | 116    | 255 |
|                |      | 624                |       |     |      |     |       | 624 | 24.6 | 795  | 31.3 | 290 | 11.4 | 695 | 27.4 | APR254-SR | 169    | 372 |
| 150            | 6"   | 267                | 10.50 | 190 | 7.5  | 280 | 11.0  | 550 | 21.7 | 735  | 28.9 | 220 | 8.7  | 570 | 22.4 | APR200-DA | 154.4  | 340 |
|                |      | 640                |       |     |      |     |       | 640 | 25.2 | 825  | 32.5 | 290 | 11.4 | 695 | 27.4 | APR254-DA | 192.4  | 423 |
|                |      | 640                |       |     |      |     |       | 640 | 25.2 | 825  | 32.5 | 300 | 11.8 | 706 | 27.8 | APR280-SR | 201.4  | 443 |
| 200            | 8"   | 419                | 16.50 | 232 | 9.1  | 322 | 12.7" | 682 | 26.9 | 907  | 35.7 | 290 | 11.4 | 695 | 27.4 | APR254-DA | 224    | 493 |
|                |      | 702                |       |     |      |     |       | 702 | 27.6 | 907  | 35.7 | 324 | 12.8 | 792 | 31.2 | APR300-SR | 253    | 557 |
| 250            | 10"  | 457                | 18.00 | 305 | 12.0 | 415 | 16.3  | 765 | 30.1 | 1055 | 41.5 | 324 | 12.8 | 792 | 31.2 | APR300-DA | 255    | 561 |
|                |      | 825                |       |     |      |     |       | 825 | 32.5 | 1115 | 43.9 | 388 | 15.3 | 850 | 33.5 | APR350-SR | 310    | 682 |
| 300            | 12"  | 502                | 19.75 | 332 | 13.1 | 442 | 17.4  | 792 | 31.2 | 1112 | 43.8 | 324 | 12.8 | 792 | 31.2 | APR300-DA | 275    | 605 |
|                |      | 852                |       |     |      |     |       | 852 | 33.5 | 1172 | 46.1 | 388 | 15.3 | 850 | 33.5 | APR350-SR | 330    | 726 |

a. For sizes and ratings not shown, consult Global Customer Support.

Figure 6. Outline Dimensions with APR Actuator and Handwheel

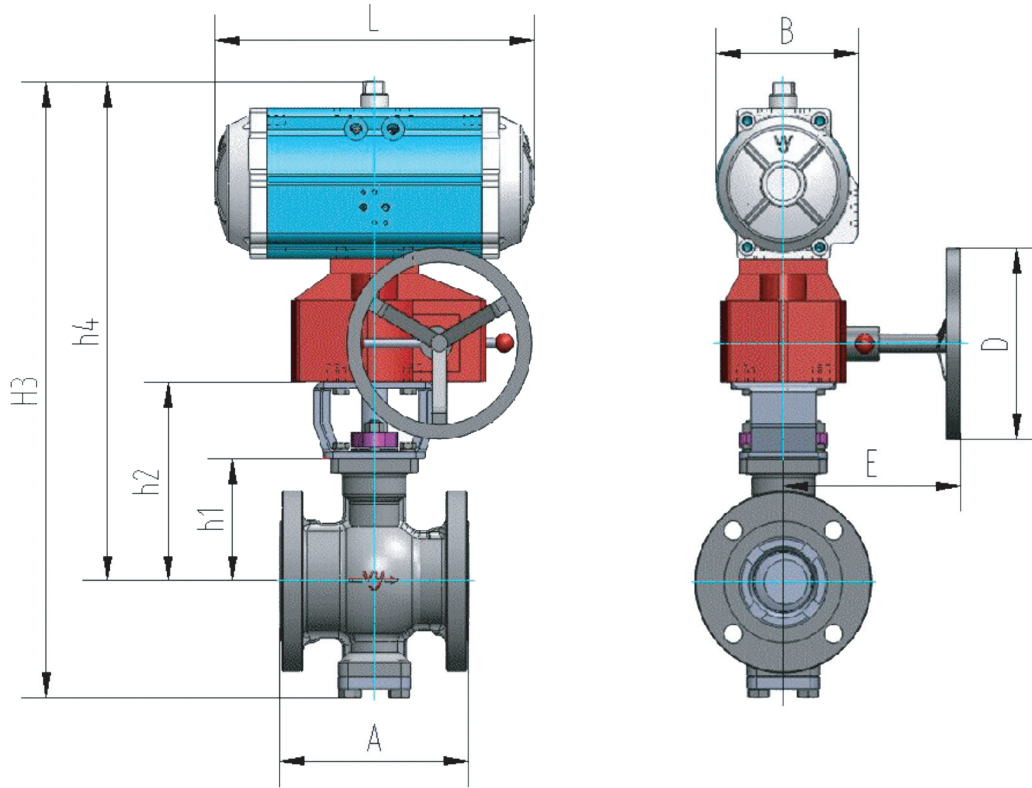


Table 10. Outline Dimensions for Valves and Pneumatic Actuator With Handwheel, Class 150

| Valve Size (a) |      | Outline Dimensions |       |     |      |     |       |      |      |      |      |     |      |     |      |     |      |     |      | Actuator  |     | Weight |  |
|----------------|------|--------------------|-------|-----|------|-----|-------|------|------|------|------|-----|------|-----|------|-----|------|-----|------|-----------|-----|--------|--|
|                |      | A                  |       | h1  |      | h2  |       | h4   |      | H3   |      | B   |      | L   |      | E   |      | D   |      |           |     |        |  |
| DN             | in   | mm                 | in    | mm  | in   | mm  | in    | mm   | in   | mm   | in   | mm  | in   | mm  | in   | mm  | in   | mm  | in   | kg        | lb  |        |  |
| 25             | 1"   | 127                | 5.00  | 73  | 2.9  | 118 | 4.6   | 361  | 14.2 | 414  | 16.3 | 102 | 4.0  | 236 | 9.3  | 155 | 6.1  | 160 | 6.3  | APR80-DA  | 13  | 28     |  |
|                |      |                    |       |     |      |     |       | 413  | 16.3 | 471  | 18.5 | 130 | 5.1  | 272 | 10.7 | 190 | 7.5  | 295 | 11.6 | APR100-SR | 19  | 41     |  |
| 40             | 1.5" | 165                | 6.50  | 90  | 3.5  | 150 | 5.9   | 445  | 17.5 | 531  | 20.9 | 130 | 5.1  | 272 | 10.7 | 190 | 7.5  | 295 | 11.6 | APR100-DA | 22  | 49     |  |
|                |      |                    |       |     |      |     |       | 466  | 18.3 | 549  | 21.6 | 150 | 5.9  | 340 | 13.4 | 190 | 7.5  | 295 | 11.6 | APR125-SR | 31  | 69     |  |
| 50             | 2"   | 178                | 7.00  | 100 | 3.9  | 160 | 6.3   | 456  | 18.0 | 550  | 21.7 | 130 | 5.1  | 272 | 10.7 | 190 | 7.5  | 295 | 11.6 | APR100-DA | 25  | 54     |  |
|                |      |                    |       |     |      |     |       | 476  | 18.7 | 570  | 22.4 | 150 | 5.9  | 340 | 13.4 | 190 | 7.5  | 295 | 11.6 | APR125-SR | 34  | 74     |  |
| 65             | 2.5" | 190                | 7.50  | 120 | 4.7  | 200 | 7.9   | 518  | 20.4 | 638  | 25.1 | 150 | 5.9  | 340 | 13.4 | 190 | 7.5  | 295 | 11.6 | APR125-DA | 37  | 81     |  |
|                |      |                    |       |     |      |     |       | 563  | 22.2 | 683  | 26.9 | 193 | 7.6  | 452 | 17.8 | 190 | 7.5  | 295 | 11.6 | APR160-SR | 51  | 112    |  |
| 80             | 3"   | 203                | 8.00  | 130 | 5.1  | 210 | 8.3   | 573  | 22.6 | 695  | 27.4 | 193 | 7.6  | 452 | 17.8 | 190 | 7.5  | 295 | 11.6 | APR160-DA | 57  | 126    |  |
|                |      |                    |       |     |      |     |       | 639  | 25.2 | 761  | 30.0 | 220 | 8.7  | 570 | 22.4 | 230 | 9.1  | 340 | 13.4 | APR200-SR | 99  | 217    |  |
| 100            | 4"   | 229                | 9.00  | 138 | 5.4  | 228 | 9.0   | 591  | 23.3 | 732  | 28.8 | 193 | 7.6  | 452 | 17.8 | 190 | 7.5  | 295 | 11.6 | APR160-DA | 72  | 159    |  |
|                |      |                    |       |     |      |     |       | 657  | 25.9 | 798  | 31.4 | 220 | 8.7  | 570 | 22.4 | 230 | 9.1  | 340 | 13.4 | APR200-SR | 114 | 250    |  |
| 125            | 5"   | 254                | 10.00 | 174 | 6.9  | 264 | 10.4  | 693  | 27.3 | 864  | 34.0 | 220 | 8.7  | 570 | 22.4 | 230 | 9.1  | 340 | 13.4 | APR200-DA | 118 | 260    |  |
|                |      |                    |       |     |      |     |       | 805  | 31.7 | 976  | 38.4 | 290 | 11.4 | 695 | 27.4 | 292 | 11.5 | 450 | 17.7 | APR254-SR | 205 | 451    |  |
| 150            | 6"   | 267                | 10.50 | 190 | 7.5  | 280 | 11.0  | 709  | 27.9 | 894  | 35.2 | 220 | 8.7  | 570 | 22.4 | 230 | 9.1  | 340 | 13.4 | APR200-DA | 157 | 346    |  |
|                |      |                    |       |     |      |     |       | 831  | 32.7 | 1006 | 39.6 | 290 | 11.4 | 695 | 27.4 | 292 | 11.5 | 450 | 17.7 | APR254-DA | 229 | 505    |  |
|                |      |                    |       |     |      |     |       | 831  | 32.7 | 1006 | 39.6 | 300 | 11.8 | 706 | 27.8 | 292 | 11.5 | 450 | 17.7 | APR280-SR | 238 | 524    |  |
| 200            | 8"   | 419                | 16.50 | 232 | 9.1  | 322 | 12.7" | 863  | 34.0 | 1088 | 42.8 | 290 | 11.4 | 695 | 27.4 | 292 | 11.5 | 450 | 17.7 | APR254-DA | 258 | 568    |  |
|                |      |                    |       |     |      |     |       | 863  | 34.8 | 1088 | 42.8 | 324 | 12.8 | 792 | 31.2 | 292 | 11.5 | 450 | 17.7 | APR300-SR | 287 | 631    |  |
| 250            | 10"  | 457                | 18.00 | 305 | 12.0 | 415 | 16.3  | 946  | 37.2 | 1236 | 48.7 | 324 | 12.8 | 792 | 31.2 | 292 | 11.5 | 450 | 17.7 | APR300-DA | 289 | 636    |  |
|                |      |                    |       |     |      |     |       | 1053 | 41.5 | 1343 | 52.9 | 388 | 15.3 | 850 | 33.5 | 400 | 15.7 | 450 | 17.7 | APR350-SR | 377 | 829    |  |
| 300            | 12"  | 502                | 19.75 | 332 | 13.1 | 442 | 17.4  | 973  | 38.3 | 1293 | 50.9 | 324 | 12.8 | 792 | 31.2 | 292 | 11.5 | 450 | 17.7 | APR300-DA | 309 | 680    |  |
|                |      |                    |       |     |      |     |       | 1080 | 42.5 | 1400 | 55.1 | 388 | 15.3 | 850 | 33.5 | 400 | 15.7 | 450 | 17.7 | APR350-SR | 397 | 873    |  |

a. For sizes and ratings not shown, consult Global Customer Support.

Table 11. Outline Dimensions for Valves and Pneumatic Actuator With Handwheel, Class 300

| Valve Size (a) |      | Outline Dimensions |       |     |      |     |       |      |      |      |      |     |      |     |      |     |      |     |      | Actuator  | Weight |     |
|----------------|------|--------------------|-------|-----|------|-----|-------|------|------|------|------|-----|------|-----|------|-----|------|-----|------|-----------|--------|-----|
|                |      | A                  |       | h1  |      | h2  |       | h4   |      | H3   |      | B   |      | L   |      | E   |      | D   |      |           | kg     | lb  |
| DN             | in   | mm                 | in    | mm  | in   | mm  | in    | mm   | in   | mm   | in   | mm  | in   | mm  | in   | mm  | in   | mm  | in   |           |        |     |
| 25             | 1"   | 127                | 5.00  | 73  | 2.9  | 118 | 4.6   | 361  | 14.2 | 414  | 16.3 | 102 | 4.0  | 236 | 9.3  | 155 | 6.1  | 160 | 6.3  | APR80-DA  | 14     | 31  |
|                |      |                    |       |     |      |     |       | 413  | 16.3 | 471  | 18.5 | 130 | 5.1  | 272 | 10.7 | 190 | 7.5  | 295 | 11.6 | APR100-SR | 20     | 44  |
| 40             | 1.5" | 165                | 6.50  | 90  | 3.5  | 150 | 5.9   | 445  | 17.5 | 531  | 20.9 | 130 | 5.1  | 272 | 10.7 | 190 | 7.5  | 295 | 11.6 | APR100-DA | 25     | 55  |
|                |      |                    |       |     |      |     |       | 466  | 18.3 | 549  | 21.6 | 150 | 5.9  | 340 | 13.4 | 190 | 7.5  | 295 | 11.6 | APR125-SR | 34     | 75  |
| 50             | 2"   | 178                | 7.00  | 100 | 3.9  | 160 | 6.3   | 456  | 18.0 | 550  | 21.7 | 130 | 5.1  | 272 | 10.7 | 190 | 7.5  | 295 | 11.6 | APR100-DA | 28     | 62  |
|                |      |                    |       |     |      |     |       | 476  | 18.7 | 570  | 22.4 | 150 | 5.9  | 340 | 13.4 | 190 | 7.5  | 295 | 11.6 | APR125-SR | 37     | 82  |
| 65             | 2.5" | 190                | 7.50  | 120 | 4.7  | 200 | 7.9   | 518  | 20.4 | 638  | 25.1 | 150 | 5.9  | 340 | 13.4 | 190 | 7.5  | 295 | 11.6 | APR125-DA | 41     | 91  |
|                |      |                    |       |     |      |     |       | 563  | 22.2 | 683  | 26.9 | 193 | 7.6  | 452 | 17.8 | 190 | 7.5  | 295 | 11.6 | APR160-SR | 55     | 122 |
| 80             | 3"   | 203                | 8.00  | 130 | 5.1  | 210 | 8.3   | 573  | 22.6 | 695  | 27.4 | 193 | 7.6  | 452 | 17.8 | 190 | 7.5  | 295 | 11.6 | APR160-DA | 61     | 133 |
|                |      |                    |       |     |      |     |       | 639  | 25.2 | 761  | 30.0 | 220 | 8.7  | 570 | 22.4 | 230 | 9.1  | 340 | 13.4 | APR200-SR | 102    | 224 |
| 100            | 4"   | 229                | 9.00  | 138 | 5.4  | 228 | 9.0   | 591  | 23.3 | 732  | 28.8 | 193 | 7.6  | 452 | 17.8 | 190 | 7.5  | 295 | 11.6 | APR160-DA | 76     | 168 |
|                |      |                    |       |     |      |     |       | 657  | 25.9 | 798  | 31.4 | 220 | 8.7  | 570 | 22.4 | 230 | 9.1  | 340 | 13.4 | APR200-SR | 118    | 259 |
| 125            | 5"   | 254                | 10.00 | 174 | 6.9  | 264 | 10.4  | 693  | 27.3 | 864  | 34.0 | 220 | 8.7  | 570 | 22.4 | 230 | 9.1  | 340 | 13.4 | APR200-DA | 131    | 288 |
|                |      |                    |       |     |      |     |       | 805  | 31.7 | 976  | 38.4 | 290 | 11.4 | 695 | 27.4 | 292 | 11.5 | 450 | 17.7 | APR254-SR | 218    | 480 |
| 150            | 6"   | 267                | 10.50 | 190 | 7.5  | 280 | 11.0  | 709  | 27.9 | 894  | 35.2 | 220 | 8.7  | 570 | 22.4 | 230 | 9.1  | 340 | 13.4 | APR200-DA | 169    | 373 |
|                |      |                    |       |     |      |     |       | 831  | 32.7 | 1006 | 39.6 | 290 | 11.4 | 695 | 27.4 | 292 | 11.5 | 450 | 17.7 | APR254-DA | 241    | 531 |
|                |      |                    |       |     |      |     |       | 831  | 32.7 | 1006 | 39.6 | 300 | 11.8 | 706 | 27.8 | 292 | 11.5 | 450 | 17.7 | APR280-SR | 241    | 531 |
| 200            | 8"   | 419                | 16.50 | 232 | 9.1  | 322 | 12.7" | 863  | 34.0 | 1088 | 42.8 | 290 | 11.4 | 695 | 27.4 | 292 | 11.5 | 450 | 17.7 | APR254-DA | 273    | 601 |
|                |      |                    |       |     |      |     |       | 863  | 34.8 | 1088 | 42.8 | 324 | 12.8 | 792 | 31.2 | 292 | 11.5 | 450 | 17.7 | APR300-SR | 302    | 664 |
| 250            | 10"  | 457                | 18.00 | 305 | 12.0 | 415 | 16.3  | 946  | 37.2 | 1236 | 48.7 | 324 | 12.8 | 792 | 31.2 | 292 | 11.5 | 450 | 17.7 | APR300-DA | 304    | 669 |
|                |      |                    |       |     |      |     |       | 1053 | 41.5 | 1343 | 52.9 | 388 | 15.3 | 850 | 33.5 | 400 | 15.7 | 450 | 17.7 | APR350-SR | 302    | 862 |
| 300            | 12"  | 502                | 19.75 | 332 | 13.1 | 442 | 17.4  | 973  | 38.3 | 1293 | 50.9 | 324 | 12.8 | 792 | 31.2 | 292 | 11.5 | 450 | 17.7 | APR300-DA | 324    | 713 |
|                |      |                    |       |     |      |     |       | 1080 | 42.5 | 1400 | 55.1 | 388 | 15.3 | 850 | 33.5 | 400 | 15.7 | 450 | 17.7 | APR350-SR | 412    | 906 |

a. For sizes and ratings not shown, consult Global Customer Support.

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