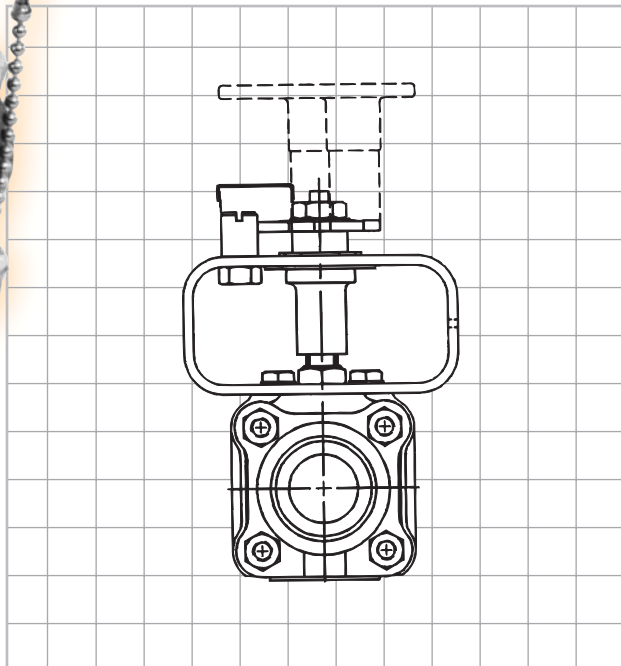


AN ISO 9001 REGISTERED COMPANY



*Handle Accessories and
Locking Mechanisms*

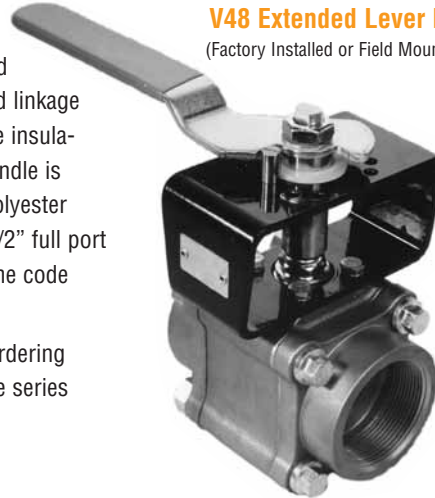
Flowserve Worcester Controls handle accessories make high temperature valve operation safe, position lockout secure and accidental operation unlikely.

High Temperature Extension Handles

New OSHA requirements demand handle temperatures below 150°F for operator safety. For high temperature applications, Worcester Controls has developed the V48 extended lever and V59 extended oval handles. The solidly supported bracket and linkage extends stem seal life and positions the handle well above the insulation. The lever handle is carbon steel, zinc-plated; the oval handle is stainless steel. The bracket is carbon steel, zinc plated and polyester coated. Available on all 1/4" - 2" reduced port and 1/4" – 1-1/2" full port 3-piece and flanged valves. To order factory installed, place the code V48 or V59 at the end of the valve model number.

Example: 1-1/2" 4466TSE V59. A field mounting kit has an ordering code that consists of the valve size, the letters "HK", the valve series number, and either V48 or V59.

Example: 1-1/2" HK44V48.



V48 Extended Lever Handle
(Factory Installed or Field Mounted Kit)**



V59 Extended Oval Handle
(Factory Installed or Field Mounted Kit)**



SR44 Spring Return Handle
(Factory Installed or Field Mounted Kit)**

Spring Return Handles

Worcester's Series SR44 spring return handles provide safe, powerful fail closed or open* operation. Mounting the handle to a ball valve creates a reliable filling, sampling or dispensing valve. They are available for use on 1/4" - 2" reduced port and 1/4" – 1-1/2" full port 3-piece and flanged valves.

SR44 handles come in two sizes. The single spring unit (10SR 44) is mounted to 1/4" - 1" valves; the double spring unit (20SR 44) is mounted to 1-1/4" – 2" valves. The non-waterproof housing is made of aluminum with carbon steel, zinc-plated parts. To order factory mounted, place the code letter "A" after the valve size in the valve model number. Order either a 10SR44 or 20SR44 spring return handle as a separate line item.

Example: Qty 1-1"A4446PMSE and Qty 1-10SR44 spring return handle. To order a kit for field mounting, specify either a 10SR44 or 20SR44. The appropriate mounting kit must also be ordered as a separate line item.

*Standard configuration is fail closed. Consult the Custom Products Department for fail open operation.

**A significant feature of the Worcester valve design is that handle accessories can be field mounted without disturbing pipe integrity. The only exception is the K/HL locking mechanism.

Safety Oval Handles



V32 Stainless Steel Oval Handle
(Factory Installed)

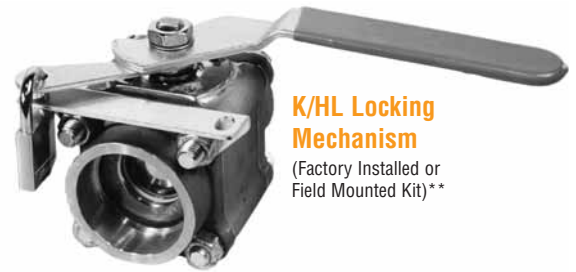
Worcester's oval handles provide a safe and reliable method of eliminating accidental operation of valves in such applications as steam service that have piping along walkways or near hose racks. Oval handles also allow the valves to be closed more slowly, reducing the chances of water hammer on liquids. V32 handles are of stainless steel. C0202 handles are of carbon steel. Available on all 1/4" - 2" reduced port and 1/4" - 1-1/2" full port 3-piece and flanged valves. To order, place the code V32 or C0202 at the end of the valve number.



C0202 Carbon Steel Oval Handle
(Factory Installed)

Valve Locking Mechanisms

Worcester's locking mechanisms provide a positive, tamperproof way to prevent accidental or unauthorized valve operation. They can be locked securely in either the open or closed position (lock not included). The basic locking mechanism is the Model K/HL. For factory mounting, place the code K after the valve size in the valve model number. Example: 1" K4466TSE. For a field mounting kit, the ordering code indicates the valve size, HL, the valve series number, and the revision number. Example: 2" HL44R2. To meet OSHA Rule 29, Worcester introduces the V60 tamper proof locking mechanism, available on standard and extended lever (V48) valves. To order, place V60 at the end of the valve model number. Locking mechanisms are also available for all oval handle operated Series 94 valves (1/2" - 2") and for valves with the V32 oval handle. Order through the Custom Product Department.



K/HL Locking Mechanism
(Factory Installed or Field Mounted Kit)**



V60 Locking Mechanism on standard lever handle
(Factory Installed or Field Mounted Kit)**



C0205 Locking Mechanism for Oval Handle Operated Series 94 Valves
(Factory Installed or Field Mounted Kit)**



C0204 Locking Mechanism for V32 Oval Handle Operated Valves
(Factory Installed or Field Mounted Kit)**

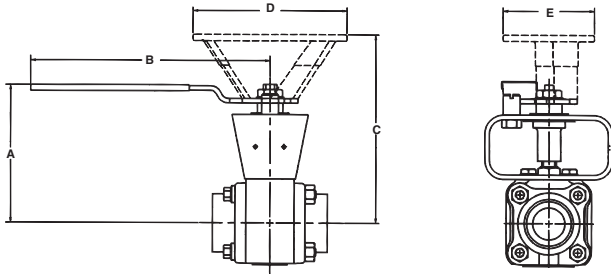


V60 Locking Mechanism on V48 Extended Lever Handle
(Factory Installed or Field Mounted Kit)**

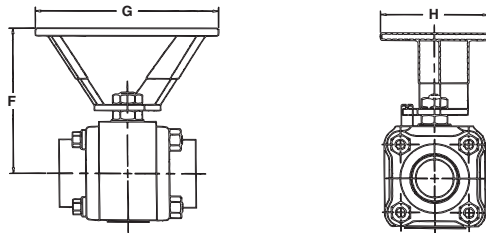
*Standard configuration is fail closed. Consult the Custom Products Department for fail open operation.

**A significant feature of the Worcester valve design is that handle accessories can be field mounted without disturbing pipe integrity. The only exception is the K/HL locking mechanism.

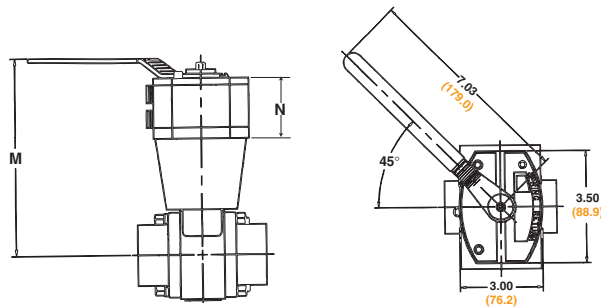
Dimensions Inches (mm)



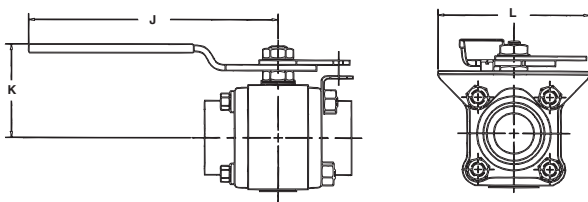
V48 Extended Lever Handle
V59 Extended Oval Handle



V32 Stainless Steel Oval Handle
C0202 Carbon Steel Oval Handle



SR44 Spring Return Handle



K/HL Locking Handle

High Temperature Extensions

3-Piece & Flanged		V48		V59		
Reduced Port	Full Port	A	B	C	D	E
1/4" - 1/2"	1/4", 3/8"	4.09 (103.9)	6.53 (165.9)	6.08 (154.4)	4.56 (115.8)	3.06 (77.7)
3/4"	1/2"	4.20 (106.7)	6.53 (165.9)	6.19 (157.2)	4.56 (115.8)	3.06 (77.7)
1"	3/4"	4.32 (109.7)	6.53 (165.9)	6.31 (160.3)	4.56 (115.8)	3.06 (77.7)
1-1/4"	1"	4.51 (114.5)	6.53 (165.9)	6.53 (165.9)	6.06 (153.9)	3.56 (90.4)
1-1/2"	1-1/4"	5.37 (136.4)	8.03 (203.9)	7.37 (187.2)	6.06 (153.9)	3.56 (90.4)
2"	1-1/2"	5.55 (140.9)	8.03 (203.9)	7.55 (191.8)	6.06 (153.9)	3.56 (90.4)

Oval Handles

3-Piece & Flanged		F		G		H	
Reduced Port	Full Port	V32	C0202	V32	C0202	V32	C0202
1/4" - 1/2"	1/4", 3/8"	3.76 (95.5)	3.25 (82.6)	4.56 (115.8)	3.56 (90.4)	3.06 (77.7)	2.36 (59.9)
3/4"	1/2"	3.86 (98.0)	3.31 (84.1)	4.56 (115.8)	3.56 (90.4)	3.06 (77.7)	2.36 (59.9)
1"	3/4"	4.29 (109.0)	3.78 (96.0)	4.56 (115.8)	3.56 (90.4)	3.06 (77.7)	2.36 (59.9)
1-1/4"	1"	4.50 (114.3)	3.97 (100.8)	6.06 (153.9)	3.56 (90.4)	3.56 (90.4)	2.36 (59.9)
1-1/2"	1-1/4"	4.83 (122.7)	4.38 (111.3)	6.06 (153.9)	5.06 (128.5)	3.56 (90.4)	3.06 (77.7)
2"	1-1/2"	5.03 (127.8)	4.56 (115.8)	6.06 (153.9)	5.06 (128.5)	3.56 (90.4)	3.06 (77.7)

Locking and Spring Return Handles

3-Piece & Flanged		K/HL Locking Handle			SR44 Spring Handle	
Reduced Port	Full Port	J	K	L	M	N
1/4" - 1/2"	1/4", 3/8"	5.53 (140.5)	1.76 (44.7)	3.12 (79.2)	5.32 (135.1)	1.43 (36.3)
3/4"	1/2"	5.53 (140.5)	1.86 (47.2)	3.12 (79.2)	5.41 (137.4)	1.43 (36.3)
1"	3/4"	6.53 (165.9)	2.28 (57.9)	3.75 (95.3)	5.65 (143.5)	1.43 (36.3)
1-1/4"	1"	6.53 (165.9)	2.47 (62.7)	3.75 (95.3)	6.64 (168.7)	2.25 (57.2)
1-1/2"	1-1/4"	8.03 (204.0)	2.83 (71.9)	4.75 (120.7)	7.41 (188.2)	2.25 (57.2)
2"	1-1/2"	8.03 (204.0)	3.02 (76.7)	4.75 (120.7)	7.60 (193.0)	2.25 (57.2)

CAUTION: Ball Valves can retain pressurized media in the body cavity when closed. Use care when disassembling. Always open valve to relieve pressure prior to disassembly. Due to continuous development of our product range, we reserve the right to alter the dimensions and information contained in this brochure as required.

Flowserve Corporation has established industry leadership in the design and manufacture of its products. When properly selected, this Flowserve product is designed to perform its intended function safely during its useful life. However, the purchaser or user of Flowserve products should be aware that Flowserve products might be used in numerous applications under a wide variety of industrial service conditions. Although Flowserve can (and often does) provide general guidelines, it cannot provide specific data and warnings for all possible applications. The purchaser/user must therefore assume the ultimate responsibility for the proper sizing and selection, installation, operation, and maintenance of Flowserve products. The purchaser/user should read and understand the Installation Operation Maintenance (IOM) instructions included with the product, and train its employees and contractors in the safe use of Flowserve products in connection with the specific application.

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