Reliable®

Model TD Test and Drain Valve

300 psi (20.7 bar) pressure rated

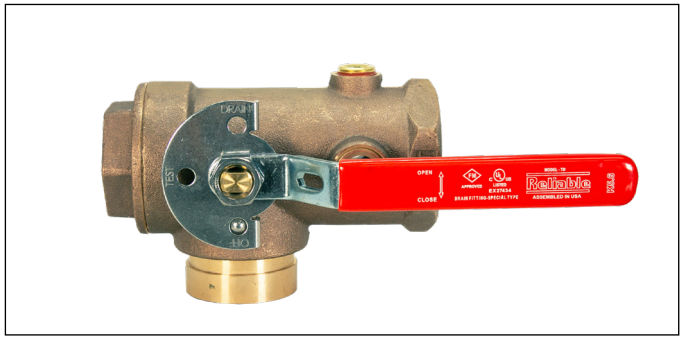
cULus Listed, FM Approved

Product Description

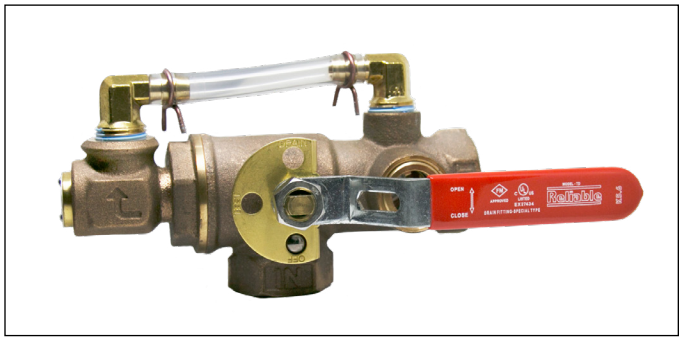
The Reliable Model TD Test and Drain Valve is a single-handle, tri-position ball valve allowing both testing of the waterflow alarm and draining of a wet-pipe fire protection system. The valves are cULus Listed and FM Approved. The Model TD Valve has a pressure rating of 300 psi (20.7 bar), and is factory tested at 600 psi (41.1 bar).

Model TD Test and Drain Valves have a restricted orifice with the available K-factors listed in Table A. Nominal valve sizes are 1", 1-1/4", and 2" with either NPT or ISO7-1 female threaded connections. 1-1/4" and 2" versions are also available with ANSI/AWWA C606 grooved inlet connections. Table C identifies the materials used in the Model TD valve.

The Model TD valve is available with either optional relief valve kits. One including our Model B Adjustable pressure relief valve and the other our Model A Fixed pressure relief valve. Both relief valves are UL Listed and FM Approved for use on fire protection systems. The Model A relief valve is available with a nominal pressure rating of 175 psi (12 bar), and the Model B adjustable relief valve is Listed/Approved for set pressures ranging from 100 psi (7 bar) minimum to 350 psi (24 bar) maximum. See Reliable Technical Bulletin 257 and 259 for additional information on the Model A and Model B relief valves respectively. An optional locking handle kit is available for use with customer supplied padlocks.



Model TD Test & Drain Valve 2"; grooved inlet



Model TD Test & Drain Valve 1" with optional relief valve kit; threaded inlet

Installation

Connect the "IN" port of the Model TD valve to the wet-pipe sprinkler system. Connect the "OUT" port to a properly sized drain. The optional relief valve kit is installed as shown in the photographs in this bulletin after removing the plugs in the cap and body of the Model TD valve. The relief valve is commonly installed after hydrostatic testing.

Operation

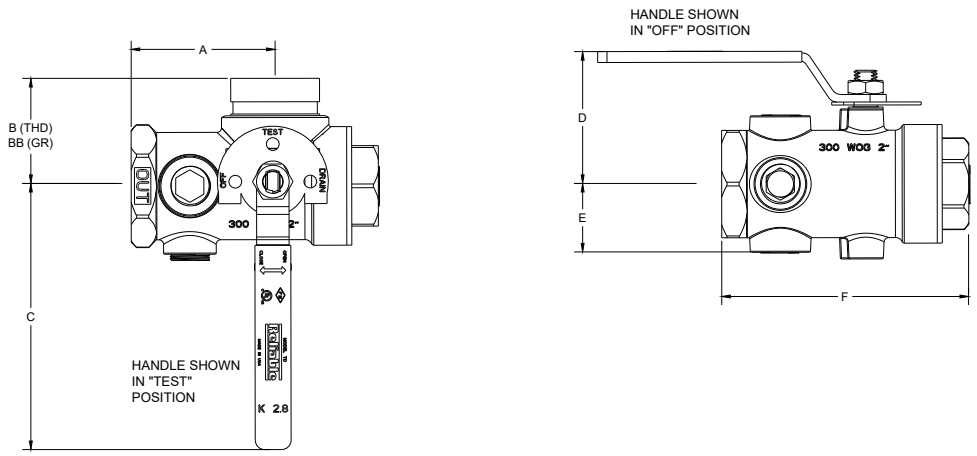
To run a test, rotate the handle counter-clockwise until the "Test" position is aligned with the ball detent. Note that rotating the valve to the "test" position is intended to operate the sprinkler system's waterflow alarm. To drain, rotate the handle further until the "Drain" position is aligned with the ball detent. Return the handle to the "Off" position when all testing and draining functions have been completed.

Table A

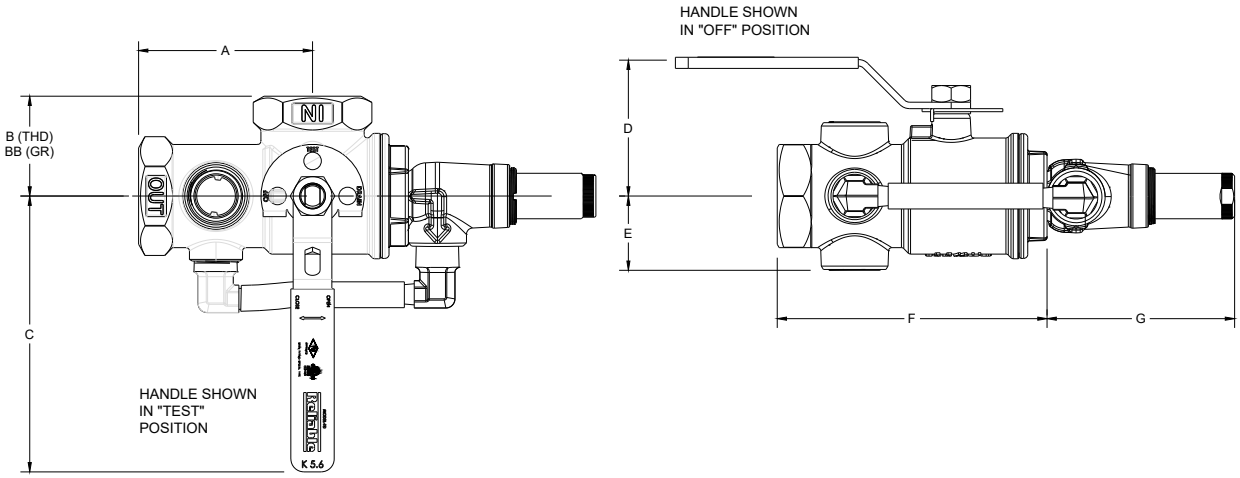
Nominal Valve Size	Available K-factors* gpm/psi$^{1/2}$ (L/min/bar$^{1/2}$)	Inlet Connection	Outlet Connection
1"	2.8 (40), 4.2 (60), 5.6 (80)	NPT, ISO7-1 Threaded	NPT, ISO7-1 Threaded
1 1/4"	2.8 (40), 4.2 (60), 5.6 (80), 8.0 (115), 11.2 (160)	NPT, ISO7-1 Threaded C606 Grooved	
2"	2.8 (40), 4.2 (60), 5.6 (80), 8.0 (115), 11.2 (160), 16.8 (240)		

***Note:** Valve K-factor must be equal to or less than the K-factor of the smallest K-factor sprinkler installed on the sprinkler system. For sprinkler systems where the smallest K-factor sprinkler on the system is greater than the largest available valve K-factor, use any valve K-factor that will provide a min. flow of 10 gpm (38 lpm) as required to operate a UL Listed Waterflow Switch.

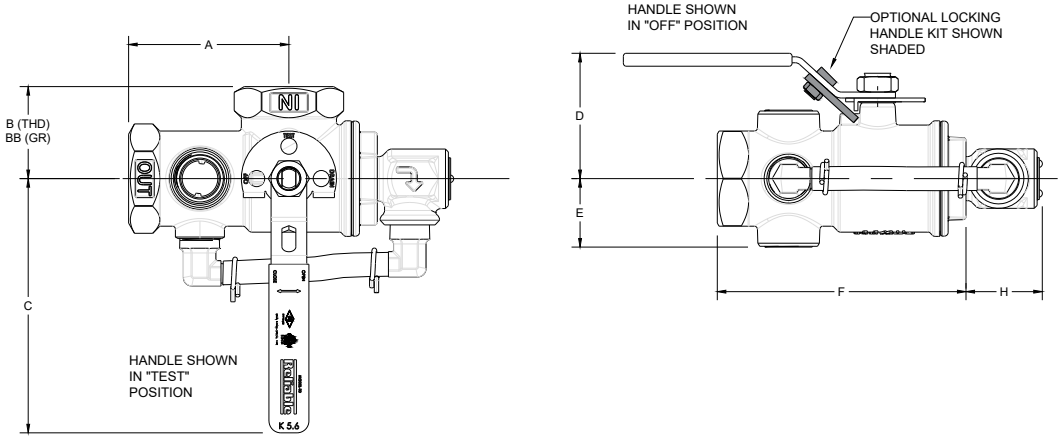
Model TD Test and Drain Valve (refer to Table B) **Figure 1**



Model TD Test and Drain Valve with Model B adjustable relief valve (refer to Table B) **Figure 2**



Model TD Test and Drain Valve with Model A fixed relief valve & locking handle kit (refer to Table B) **Figure 3**



Component Dimensions (refer to Figures 1, 2, & 3) **Table B**

Size	A	B	BB	C	D	E	F	G	H
1-1/4" (30mm)	3-3/8" (86mm)	1-2/3" (43mm)	NA	5-1/2" (140mm)	2-4/7" (65mm)	1-4/9" (37mm)	5-1/4" (133mm)	3-1/2" (89mm)	1-3/4" (44mm)
1-1/2" (50mm)	3-3/8" (86mm)	1-1/3" (287mm)	2-1/3" (59mm)	5-1/2" (140mm)	2-5/8" (67mm)	1-4/9" (37mm)	5-1/4" (133mm)	3-1/2" (89mm)	1-3/4" (44mm)
2" (50mm)	4" (103mm)	2-7/8" (73mm)	2-7/8" (73mm)	7-5/8" (194mm)	3-1/2" (89mm)	11-1/3" (287mm)	6-3/4" (171mm)	3-1/2" (89mm)	1-3/4" (44mm)

Materials **Table C**

Component	Material
Body	Brass alloy
Stem seal	Nitrile
End cap seal	Nitrile
Stem washer	PTFE
Nest	PTFE
Stem	Brass alloy
Ball	Chrome plated brass alloy
End cap	Brass alloy
Spring detent	Stainless steel
Ball detent	Stainless steel
Plate washer	Delrin
Function plate	Brass alloy
Handle	Plated carbon steel
Nut, handle	Stainless steel
Sight glass seal	EPDM
Sight glass	Glass
Sight glass gasket	PTFE
Sight glass retainer	Brass alloy
Pipe plug	Brass alloy

Maintenance

Reliable Model TD valve should be inspected and the sprinkler system maintained in accordance with NFPA 25, as well as the requirements of any Authorities Having Jurisdiction.

Guarantee

For the Reliable Automatic Sprinkler Co., Inc. guarantee, terms, and conditions, visit www.reliablesprinkler.com.

Ordering Information

Specify the following when ordering:

Model TD Test and Drain Valve

Valve Size (1", 1-1/4", 2")

K-factor (See Table A)

Inlet/Outlet Connection (Thd x Thd [all sizes], Gr x Thd [1-1/4" & 2" sizes only])

Threads (NPT, ISO7-1)

Optional Accessories:

Locking Handle Kit
1" & 1-1/4" Valve size P/N 6990021646
2" Valve size P/N 6990021647

Pressure Relief Valve Kit

Model A Fixed Pressure Relief Valve Kit 175 psi (12 bar) P/N 6501203550

Model B Adjustable Pressure Relief Valve Kit P/N 650120355R