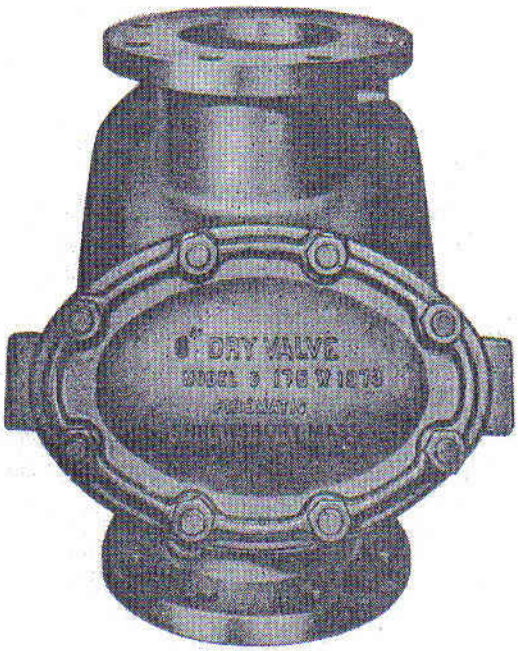
Model D
3, 3-1/2, 4 & 6 Inch
Dry Pipe Valve

OBSOLETE



Listed by: Underwriters Laboratories, Inc.
Approved by: Factory Mutual
B.S. & A. of New York City

FIREMATIC Sprinkler Devices, Inc.
900 BOSTON TURNPIKE, SHREWSBURY, MASSACHUSETTS 01545
Phone: (508) 845-2121 Outside Massachusetts: (800) 225-7288
In Massachusetts: (800) 245-2299 FAX: (508) 842-3523

SPARE PARTS

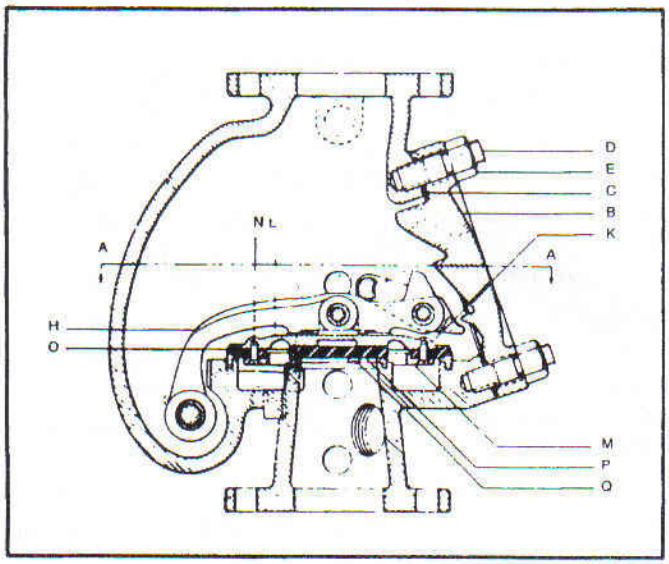
Replacement parts for 3", 3-1/2", 4" and 6" Model "D" Dry Pipe Valves

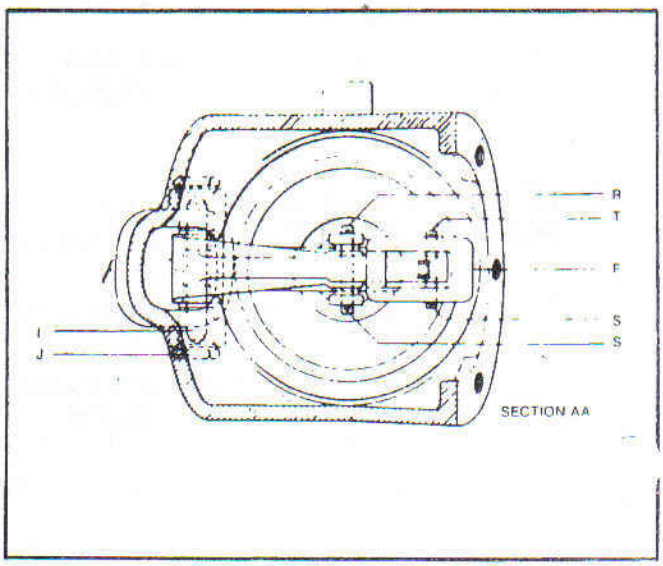
Symbol	# Req'd	3" - 4"	# Req'd	6"	Part Name
B	1	701-008	1	701-014	Cover Plate
C	1	301-084	1	301-115	Cover Plate Gasket
D	6	101-148	7	101-208	3/4-10 Cover Plate Stud
	---	--------	1	101-221	7/8-16 Cover Plate Stud
E	6	101-149	7	101-149	3/4-10 Hex Nuts
	---	---------	1	101-265	7/8-14 Hex Nut
F	1	301-083	1	301-083	Latch
H	1	501-045	1	301-118	Clapper Arm Assembly
I	1	101-144	1	101-144	Clapper Arm Hinge Pin Old Style
	1	101-624	1	101-624	Clapper Arm Hinge New Style
J	2	101-266	2	101-147	Hinge Pin Plug Old Style
	2	101-626	2	101-626	Hinge Pin Plug New Style
K	1	501-053	1	301-117	Clapper Assembly
L	1	501-043	1	501-055	Clapper
M	1	301-082	1	301-116	Clapper Ring
N	8	101-135	32	101-209	Machine Screw
O	1	301-081	1	101-196	Air Seat Gasket
P	1	101-136	1	101-193	Water Seat Gasket
Not Shown	1	101-288	1	101-213	Water Seat Gasket Retainer Disc
Q	1	101-138	4	101-135	Machine Screw
R	1	101-145	1	101-210	Clapper Pin
S	4	101-146	4	101-146	Cotter Pin
T	1	101-143	1	101-143	Latch Pin

Repair Kit

Note: The parts designated by symbols I thru Q are included in the clapper assembly designated by symbol K. However, each may be ordered as an individual part if necessary.

Face to Face Dimension 14-3/4" FOR 3"-3-1/2"-4"
Face to Face Dimensions 19-1/4" for 6"





Inspection & Maintenance

- At least two people should be familiar with the sprinkler system but one should be held responsible for its proper maintenance.
- Test main riser for water to make sure dry pipe valve is not water columned. Water should be up to but not above the level of Valve 6.
- Close main control valve. Open main drain valve 1.
- Close valve 6 - remove 7 - then open 6 and draw off any water above the level of this valve. Replace 7 and open 6. Check air pressure. Close drain valve 1 and then open main control valve.
- Air pressure must be maintained, and checked at least once a week, under normal conditions. During freezing weather it should be checked daily.
- Alarm Devices may be tested occasionally without tripping dry valve by opening valve 11 if weather permits.
- Drip Valves or Drum Drips should be drained before freezing weather set in and occasionally during the winter.
- Note: We also recommend at least an annual inspection by a qualified inspector of the complete fire protection system. Many times defects may be detected and repairs made before they develop into major troubles which might mean the protection would be off in your plant fro several days.

Resetting Firematic's Dry Pipe Valve

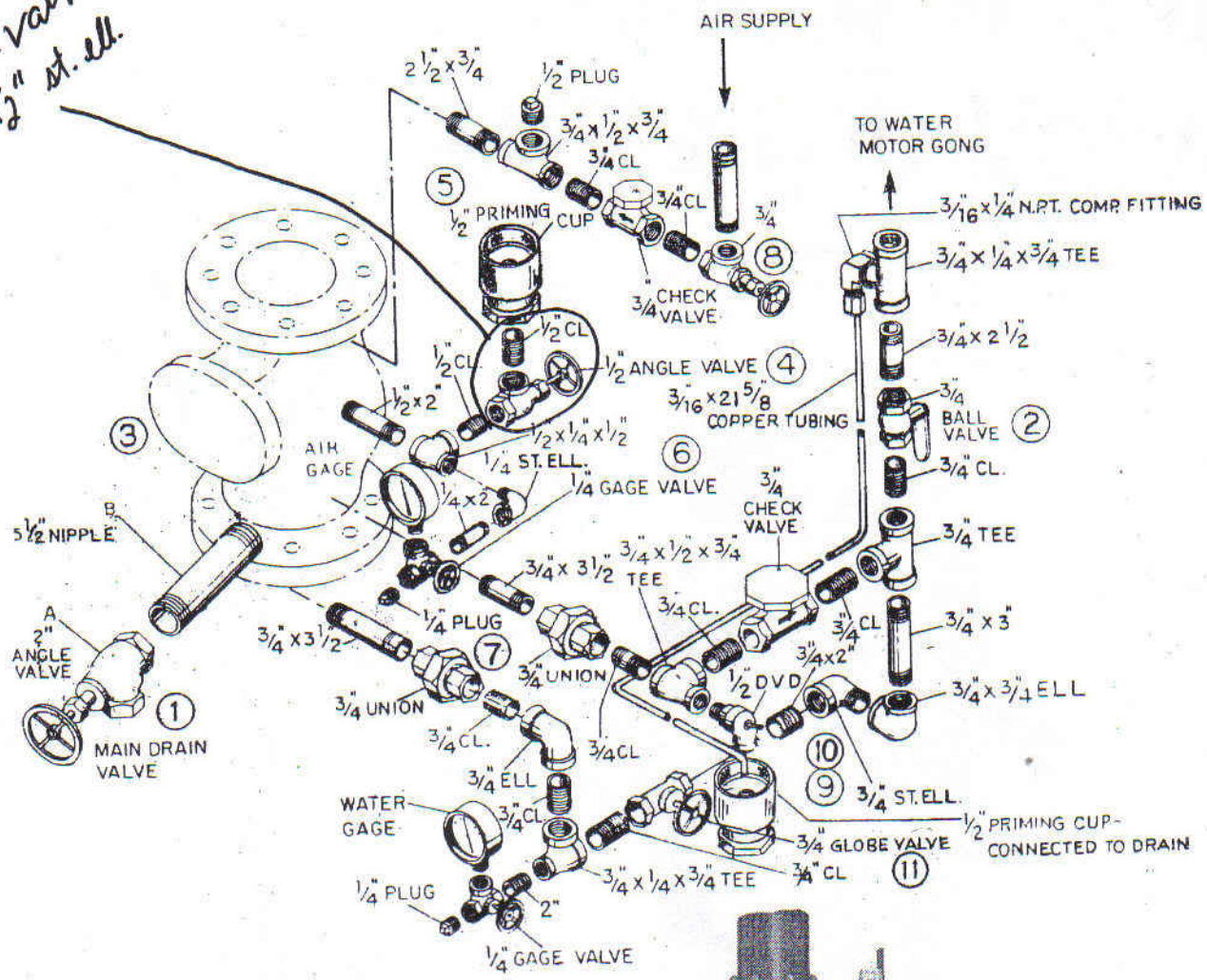
- Close Main Controlling Valve or Post indicator to shut off water supply to Sprinkler System.
- Open Valve 1 to drain Sprinkler System.
- Gong and electric bell may be shut off by closing valve 2.
- Vent sprinkler system by opening ¾" inspector's Test Valve which is normally located at the top of the system.
- After system is thoroughly drained, remove Cover Plate 3 for resetting Dry Valve.
- Raise clapper off seat and scoop out any scale or solid particles found in intermediate chamber, in the bottom of the valve, between the air and water seats. With a clean piece of cloth ***wipe the surface of the rubber seats*** on the swinging clapper, ***also the tin seats in the valve. Never apply grease, tallow, or any other substance to water or air seats.***
- Let bronze clapper down on its seat ***making sure the rubber air ring presses evenly all around the air seat.***
- Put on Cover Plate 3 making sure that gasket is in good condition. Replace nuts and tighten evenly, a little at a time, all around.
- Drip Valves are found at low points (if any) on sprinkler piping. They would not be drained by previous operations - open these valves for draining after removing plugs and close when water stops running.
- Close ¾" inspector's Test Valve, previously opened to vent system.
- ***Replace Sprinklers Fused by Fire.***
- Prime by opening valve 4 and slowly pour water into priming cup 5 until priming level is even with cup. Remove plug 7 in valve 6 which is normally open; after water stops running replace plug 7 and close valve 4 tightly. ***Water must not be allowed to stand above the priming water level.***
- Open Valve 8 and pump air pressure into system. When ten pounds pressure has been built up open drip valves again to force water from low points of system- then close drip valve tightly and plug.
- Pump the correct air pressure into the sprinkler system. ***Make sure there is no leakage of priming water by the rubber air seat into drip cup 10 by observing automatic drain valve 9. Note:*** Never allow air pressure to drop below minimum limit, to safeguard against accidental tripping of Dry Valve.
- **AIR PRESSURE** required for sprinkler systems should be calculated at approximately twenty P.S.I. above calculated air pressure per N.F.P.A.-13.

DESCRIPTION AND OPERATION

The Firematic Model "D" Dry Pipe Valve is essentially a differential check valve. The bronze clapper carries two rubber gaskets. The larger (air) gasket is rubber and seats against pure tin. The smaller (water) gasket is a specially designed rubber disc, which also seats on pure tin. These seats are so proportioned that one pound of air pressure will hold back approximately six pounds of water pressure.

When the air pressure on the surface of the priming water is relieved by the opening of a sprinkler, the upward pressure of the water underneath the water gasket causes the clapper to lift, the intermediate chamber instantly fills, sounds the alarm, and the water pressure, acting on the entire surface of the clapper, pushes it over to the wide open position and thus leaves a passage for the water to the Sprinkler System.

½" Ball valve
½" st. ell.



CLEARANCE NEEDED FOR TRIMMED D.P.V.		
FROM ℄ TO	4"	6"
FROMT	12 IN.	14 IN.
RIGHT	17 IN.	19 IN.
BACK	9 IN.	12 IN.
LEFT	13 IN.	15 IN.