

## MODEL RCW FLOW CONTROL VALVE

### GENERAL DESCRIPTION

The Globe Model RCW\* Water Control Valve is a hydraulically operated external resetting differential latching style valve designed for use where quick-opening and total flooding of sprinkler system piping is desired. It is used as an automatic water control valve in Deluge, Dry Pipe, or Preaction systems, as well as foam-water sprinkler systems.

Setting of the Model RCW Valve requires water pressure in the diaphragm chamber provided via a connection from the main water supply from a point upstream of the system main control valve, through a restricted orifice. Water pressure on the diaphragm is transferred to the plunger rod which forces the roller arm mechanism against the clapper, preventing the supply water from entering the sprinkler system piping. Actuation (tripping) of the Model RCW Valve is accomplished by releasing water from downstream of the restricted orifice.

Water pressure release can be caused by a variety of types of actuation trim and devices. For example the supply can be fed to a line of wet pilot sprinklers for wet pilot type Deluge or Preaction systems. Other devices which can be used for valve actuation include a dry pilot actuator, or an electric solenoid valve with an associated releasing control panel.



## MODEL RCW FLOW CONTROL VALVE

### TECHNICAL DATA

#### Approvals

- cULus
- FM

*Note: When trimmed in accordance with Technical Literature:*

- <sup>1</sup> GFV-205- Deluge System Technical Data Sheet
- <sup>2</sup> GFV-305- Dry System Technical Data Sheet
- <sup>3</sup> GFV-400- Single Interlock Preaction Technical Data Sheet
- <sup>4</sup> GFV-410- Double Interlock Preaction Technical Data Sheet
- <sup>5</sup> GFV-420- Non Interlock Preaction Technical Data Sheet

#### Maximum System Working Pressure

- 300 psi (20.6 Bar)

#### Materials of Construction

- See Figure 1

#### Friction Loss Information

- See Figure 2 for Friction Loss Data

4" (DN100) Valve	13.13" (333,5mm)
4" (DN100) Valve w/ Model GLR300G	17.66" (448,5mm)
6" (DN150) Valve	14.47" (367,5mm)
6" (DN150) Valve w/ Model GLR300G	19.69" (500mm)

*Note: Take Out Dimensions (End to End)*

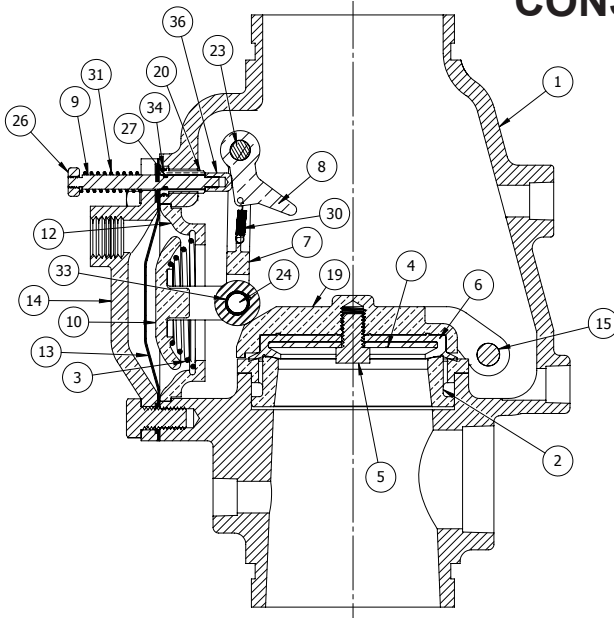
#### \*Patents Pending

### MAINTENANCE

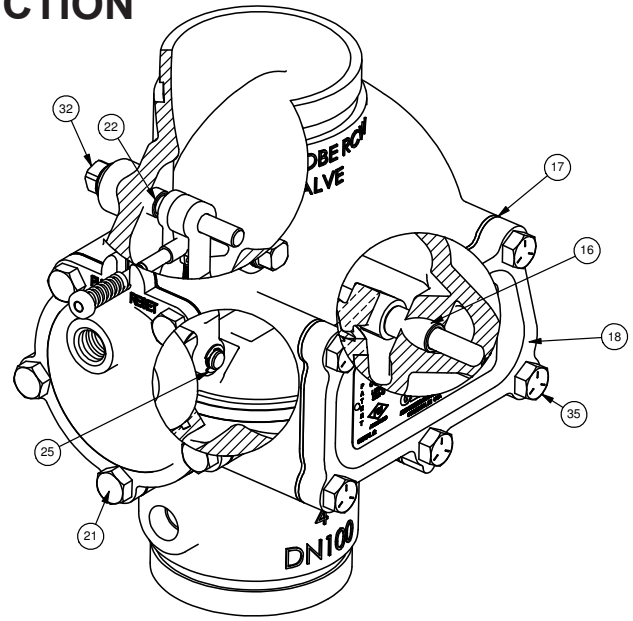
Note:

- All valves should be carefully inspected, tested, and maintained in accordance with NFPA 25 or other applicable Standard.
- It is important to ensure a clean water supply free of debris and solid particles such as sand, gravel, or mud.
- If, during an inspection of a water control valve, sediment or free particles of matter are noted, a further examination of internal valve parts is necessary.
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- All deposits should be removed from all operating parts and ports. Vent holes through intermediate chamber should be thoroughly cleaned and flushed with clean water.

**FIGURE 1: MODEL RCW MATERIALS OF CONSTRUCTION**



**SECTION VIEW**



**ISOMETRIC VIEW**

ITEM	DESCRIPTION	MAT'L.	4" [100mm] P/N	6" [150mm] P/N	ITEM	DESCRIPTION	MAT'L.	4" [100mm] P/N	6" [150mm] P/N
1	RCW BODY	DI	SEE ORDERING INFORMATION		19	CLAPPER	BRONZE	317403	317462
2	MACHINED SEAT RING	BRASS	317421	317467	20	RESET BUSHING	BRASS	317406	317469
3	DIAPHRAGM TAPER SPRING	STAINLESS	317432	317432	21	HEX HEAD CAP SCREW, 1/2-13	STEEL	317433 1 IN	317553 1.5 IN
4	CLAPPER RETAINER PLATE	STAINLESS	317417	317470	22	TOP ARM BUSHING	BRONZE	317411	317548
5	HEX HEAD CAP SCREW 1/2-13 X .75	STAINLESS	317552	317552	23	TOP ARM PIN	STAINLESS	317412	317472
6	CLAPPER GASKET	EPDM	317416	317547	24	ROLLER ARM PIN	STAINLESS	317409	317474
7	ROLLER ARM	BRONZE	317413	317466	25	ROLLER PIN E-CLIP	STAINLESS	317427	317479
8	RCW CLAPPER LATCH	BRONZE	317422	317422	26	RESET PLUNGER KNOB	BRONZE	317407	317407
9	RESET PLUNGER	BRONZE	317408-4	317408-6	27	PLUNGER O-RING	EPDM	317436	317436
10	PUSH ROD	BRONZE	317423	317468	28	NAME PLATE	STAINLESS	317428	317428
11	ROLLER	STAINLESS	317410	317478	29	DRIVE SCREW	STEEL	323420	323420
12	DIAPHRAGM RETAINER	BRONZE	317420	317465	30	LATCH RETURN SPRING	STAINLESS	317425	317425
13	DIAPHRAGM	EPDM	317404	317477	31	RESET PLUNGER SPRING	STAINLESS	317426	317426
14	DIAPHRAGM COVER	DI	317405	317463	32	1/2" NPT PIPE PLUG	STEEL	311003	311003
15	CLAPPER HINGE PIN	STAINLESS	317415	317475	33	ROLLER BUSHING	BRONZE	317424	317482
16	CLAPPER HINGE PIN BUSHING	BRONZE	317414	317414	34	PLUNGER BUSHING O-RING, #2-014	EPDM	317435	317435
17	COVER GASKET	EPDM	317419	317473	35	1/2-13 HEX HEAD CAP SCREW (COVER BOLTS)	STEEL	317564 1 IN	317551 1.25 IN
18	MACHINED HAND HOLE COVER	DI	317418	317464	36	RESET PLUNGER END	BRONZE	317378	317378

NOTE: SOME PARTS ARE NOT FIELD SERVICEABLE, CONTACT CUSTOMER SERVICE FOR AVAILABILITY

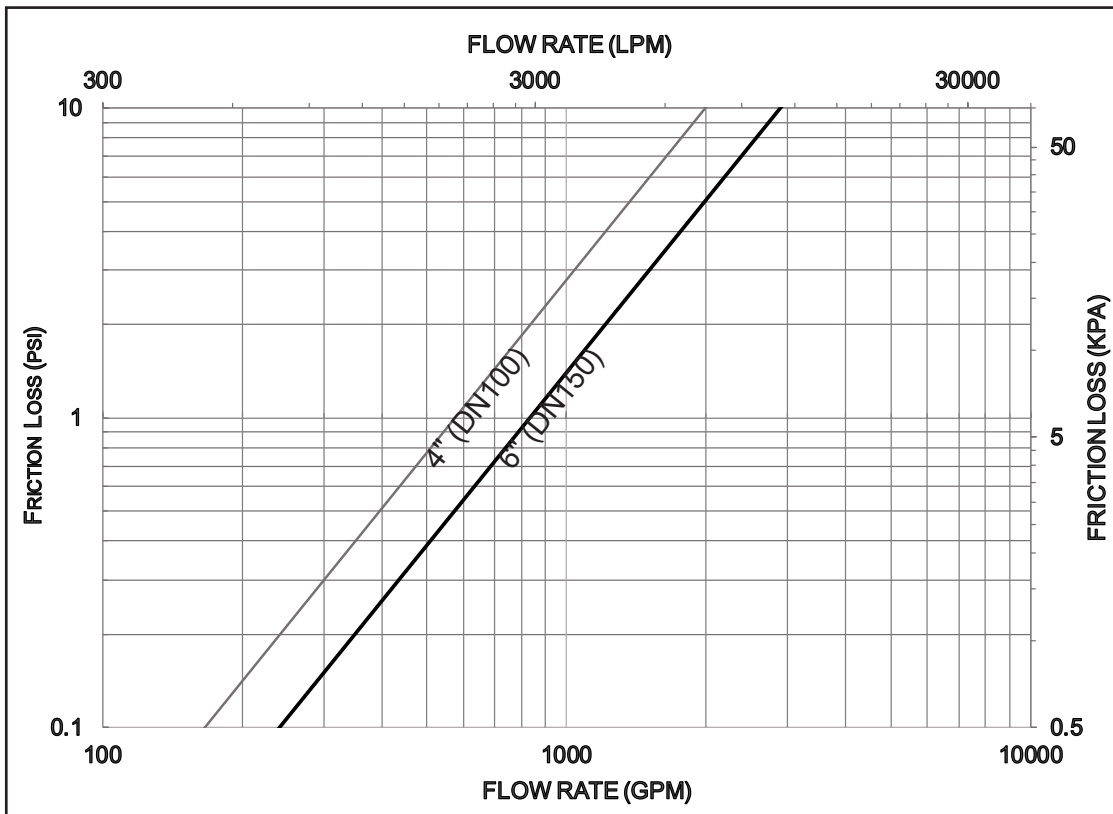
- Where difficulty in performance is experienced, the manufacturer or its authorized representative shall be contacted before any field adjustment is to be made.

**Clapper Facing.** The rubber clapper facing should be checked for wear or damage to determine that it is free of dirt and other foreign substances. If found to be worn or

damaged (e.g., foreign matter embedded in the surface), the facing should be replaced. If it is dirty, it should be cleaned. Compounds which could damage the rubber facing must never be used.

**Seat Ring.** The seat ring should be checked for nicks and for stones, dirt or other foreign matter lodged in the grooves or holes. It should be cleaned thoroughly. If the seat ring is found to be damaged, valve should be replaced.

**FIGURE 2: FRICTION LOSS CURVES**



The approximate friction loss, based on the hazen- williams formula; expressed in equivalent length of pipe with c=120, is as follows:

- 1 11 Ft (3,35 m) of equivalent length of schedule 40 4" (DN100) piping for 4" (DN100) valve
- 2 42 Ft (12,8 m) of equivalent length of schedule 40 6" (DN150) piping for 6" (DN150) valve

**Alarm Line Check Valve.** The 3/4" check valve connected to the intermediate chamber should be checked for clapper and seat condition.

**RCW Valve.** Main Drain Valve and all controlling valves which are normally closed when the deluge valve is in the set position should be checked to be sure that they are fully closed and not leaking.

**TESTING / INSTALLATION**

See appropriate system Technical Literature for Testing and Installation Instructions.

**ORDERING INFORMATION**

**RCW Water Control Valve (Groove X Groove)**

Specify: RCW-2 Valve Only (specify valve size), PN

- 4 inch RCW GxG . . . . . 317400
- 6 inch RCW GxG . . . . . 317550
- DN 150 (165,1 mm) RCW GXG . . . . 317550-D

**GLOBE® PRODUCT WARRANTY**

Globe agrees to repair or replace any of its own manufactured products found to be defective in material or workmanship for a period of one year from date of shipment.

For specific details of our warranty please refer to Price List Terms and Conditions of Sale (Our Price List).

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