



**GLOBE**  
FIRE SPRINKLER CORPORATION

**ZIGGIOTTO**



## **Valvola a secco scanalata**

*Articolo S91S*

*Campana di allarme  
modello WM*



*Valvola a secco Globe modello  
RCW completa di acceleratore e  
valvola a farfalla già collegata  
al trim*

*Set mantenimento  
di pressione modello H-1*



### **Valvola per impianti a secco modello RWC**

La valvola a secco Globe Model RCW è una valvola con differenziale a scatto ad attivazione idraulica. Viene utilizzata come valvola a controllo automatico dell'acqua negli impianti a secco. Funge da valvola di controllo principale installata tra la linea di approvvigionamento acqua e l'impianto sprinkler a secco dotato di sprinkler automatici e tubi riempiti ad aria compressa o azoto. Viene fornita completa di trim, acceleratore e valvola a farfalla UL/FM.

#### **Valvola a secco modello RWC**

**Manuale di installazione:** manuale valvola secco serie RCW EN rev 0

<b>Dimensione valvola</b>	4"	6"
<b>Codice prodotto</b>	<b>R317449-B</b>	<b>R317494-B</b>
<b>Prezzo di listino</b>	<b>5.100,00 €</b>	<b>5.850,00 €</b>
<b>Pagina manuale</b>	3-5-7	3-6-7
<b>Lunghezza complessiva valvola</b>	447,7mm	501,6mm
<b>Pressione (Psi)</b>	175(acqua) 45/50(aria)	175(acqua) 45/50(aria)

### **Campana idraulica di allarme Globe modello WM**

Le campane idrauliche d'allarme Globe modello WM possono essere utilizzate con valvole a umido, a secco, a diluvio e valvole a preazione per emettere un suono di allarme localizzato, senza un collegamento elettrico. Possono essere montate su qualsiasi tipo di muro fino a 40 cm.

#### **Campana idraulica di allarme Globe modello WM**

**Manuale di installazione:** manuale campana EN rev 0

<b>Codice prodotto:</b>	<b>R325500</b>
<b>Prezzo</b>	<b>385,00 €</b>

### **Mantenitore di pressione Globe modello H-1**

Il mantenitore di pressione Globe modello H-1 viene impiegato per il controllo della pressione di aria (o azoto) proveniente dal compressore negli impianti a secco, negli impianti di preazione, nell'impianto pilota di preazione a secco, o negli impianti a diluvio pilotati a secco.

#### **Mantenitore di pressione modello H-1**

**Manuale di installazione:** manuale set mantenimento pressione EN rev 0

<b>Codice prodotto:</b>	<b>R320585</b>
<b>Prezzo</b>	<b>605,00 €</b>

## MODEL RCW DRY SYSTEM VALVE

### GENERAL DESCRIPTION

The Globe Model RCW\* dry valve is a hydraulically operated external resetting differential latching style valve. The Model RCW dry valve is used as an automatic water control valve in dry applications. The Model RCW dry valve serves as the primary water control valve installed in the water supply to a dry sprinkler system incorporating automatic (closed) sprinklers with compressed air or nitrogen within the system piping.

Setting of the Model RCW dry valve requires water pressure in the pressure chamber being maintained on the plunger rod. The pressure on the plunger rod forces the lever arm/roller assembly against the clapper which in turn keeps the supply water from entering the sprinkler system piping. Water pressure is provided to the pressure chamber through a connection to the main water supply at a point upstream of the system main control valve. This connection also supplies water pressure up to the dry pilot actuator.

The dry pilot actuator is held closed when in the normal set condition by air pressure in the system piping. When system air pressure is relieved via one or more operated sprinklers, the dry pilot actuator will open, allowing the pressurized water to be evacuated from the pressure chamber.

In the standby condition, the valve is normally closed and will automatically activate (trip) upon the activation of an automatic sprinkler, as a result of a fire condition. The RCW valve may also be operated by means of a manual release, which is provided in the trim, to override the normal activation sequence described above.

When heat from a fire opens an automatic sprinkler, water pressure in the pressure chamber decays resulting in the movement of the push rod assembly, releasing the lever arm/roller assembly from the clapper. The system water supply pressure forces the valve clapper open resulting in water flow into the system piping. Upon system activation, fire alarm signaling is provided by means of flowing water through the alarm port/intermediate chamber and associated alarm line trim. The flow of water activates a pressure switch which in turn notifies local alarms and/or an alarm signaling monitoring service. After the main control valve has been shut, the system drained, and any operated sprinklers replaced, the RCW dry valve is easily set/reset by means of pushing the reset knob. The system is now ready for the introduction of compressed air back into the system piping.

If the speed of operation of the dry valve needs to be increased, an optional accelerator can be utilized to decrease the trip time of the valve from the operation of a sprinkler or the inspectors test connection.



### MODEL RCW DRY SYSTEM VALVE

### TECHNICAL DATA

#### Approvals

- cULus
- FM

#### Maximum System Working Pressure

- 300 psi (20.6 Bar)

#### End Connections

- Groove x Groove

#### Materials of Construction

- See Technical Datasheet H-1 for materials of construction for the Model RCW Valve

\*Patents Pending

## MODEL RCW DRY SYSTEM

The dry system trim is one optional trim arrangement for the Globe Model RCW valve. This arrangement is typically utilized when the system is subject to areas exposed to freezing or close to freezing temperatures. With this configuration, the detection system consists of automatic sprinklers spaced throughout the protection area. System air pressure is used to ensure the integrity of the system piping and used as the activation method for the valve.

Water pressure is maintained in the valve pressure chamber up to the dry pilot actuator through a restricted connection from the main water supply which is taken upstream of the system main control valve (The pressure chamber supply valve must remain in the open position at all times when the system is in service). The dry pilot actuator is normally held in the closed position by the system air pressure supplied through the automatic air or nitrogen maintenance device.

When an automatic sprinkler operates, the air flow rate through the open sprinkler is at a flow rate greater than that which can be supplied through the automatic air or nitrogen maintenance device. This causes a pressure drop in the system and the upper chamber of the dry pilot actuator. An optional accelerator can increase the rate at which the air decays on the dry pilot actuator, if a faster time to trip the Model RCW valve is required.

Once the pressure in the upper chamber of the dry pilot actuator drops sufficiently, the upper chamber can no longer hold the diaphragm in the closed position. The dry pilot actuator opens and allows water to flow from the pressure chamber to the drain at a flow rate greater than that which can be supplied through the restriction in the pressure chamber supply line. The opening of the dry pilot actuator results in a drop in pressure in the pressure chamber and the Model RCW valve operates (trips) allowing water to flow into the system piping. The automatic actuation of the feature of the valve can be bypassed by manually rotating the handle on the "Manual Control/ Emergency Release" valve located on the Model RCW trim to activate the Model RCW valve.

Note:

See recommended system air/nitrogen pressure and expected trip range below for the Model GDPA. More detailed information can be found about the Dry Pilot Actuator in Technical Data Sheet GFV550.

## GDPA vs GDPA-LP

When choosing the dry pilot actuator for your system there are many factors which influence the fluid delivery time. These factors range from system geometry, riser location, sprinkler orifice size, supply pressure, pump ramping time and more. In certain systems, higher system air pressure can be advantageous over lower system air pressure and the opposite can also be true. Some things to consider when choosing the GDPA vs the GDPA-LP are discussed below.

The initial air pressure in a system may vary. For example in one system the initial air pressure may be set for 15 psi (1 Bar) and 45 psi (3.1 Bar) for the other. The system air pressure will decay at a faster rate with the higher initial system pressure. For a fixed pressure drop (i.e. 5 psi drop) will be reached more quickly with the higher initial air pressure than lower initial air pressure.

Unfortunately fluid delivery time is not just dependent on tripping the control valve but also dependent on the fluid moving through the system. As the water fills the system piping it can create a high pressure pocket of air at the inspectors test connection. This higher air pressure can slow the progress of the water progressing towards the inspectors test connection. This phenomenon typically happens with smaller K-factor sprinklers. This scenario may lend itself to choosing to utilize lower system air pressure and the GDPA-LP actuator.

In other circumstances, systems are center fed, meaning roughly half of the volume of piping is on one side of the riser and half on the other. In these scenarios, higher system air pressure can be beneficial to system delivery time as the higher air pressure will actually impede or stop the propagation of water in the direction opposite the inspectors test connection (ITC) and force the majority of the available water flow towards the ITC.

It would be impossible to run through every scenario possible but there are a few generalities which can be used as guidance. Generally end fed systems will achieve faster fluid delivery times with lower air pressure. Generally center fed systems with moderate to better than moderate water supplies will have faster

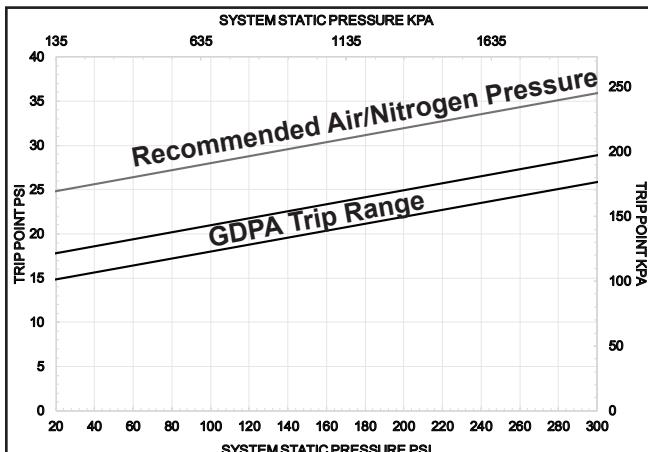


FIGURE 1: MODEL GDPA DRY PILOT TRIP RANGE

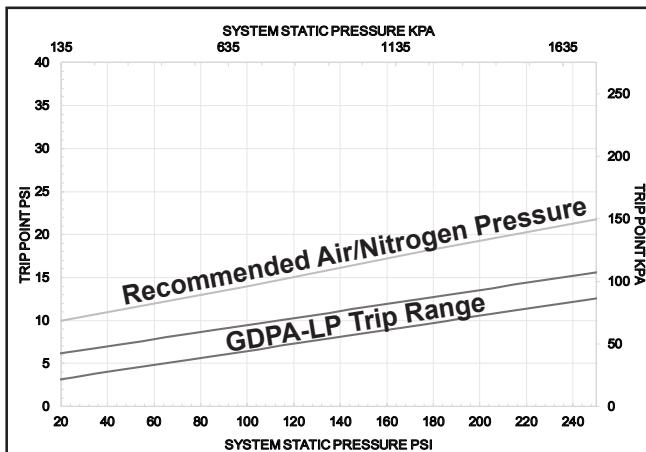


FIGURE 2: MODEL GDPA-LP DRY PILOT TRIP RANGE

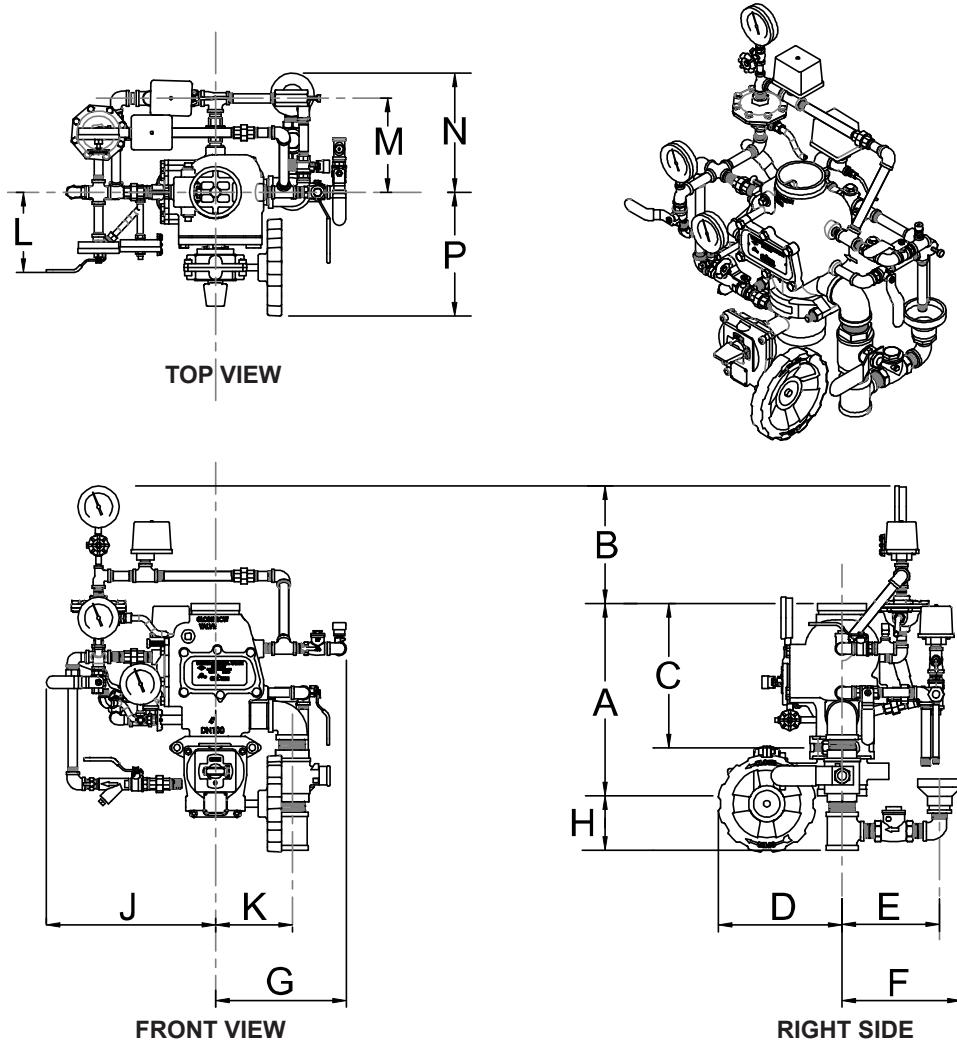
fluid delivery times with higher air pressure. This is meant to be general guidance, and should be in no way taken as a guarantee of fluid delivery time. All systems and configurations are different and there are always exceptions to the rule.

## GDPA-LP

The Model GDPA-LP is only recommended for system supply pressures up to 250 psi (17.2 Bar). The GDPA-LP is factory painted green to identify the low pressure version. The Model GDPA is the standard pressure actuator, while the GDPA-LP can be utilized for low system air pressures. The types of systems where the

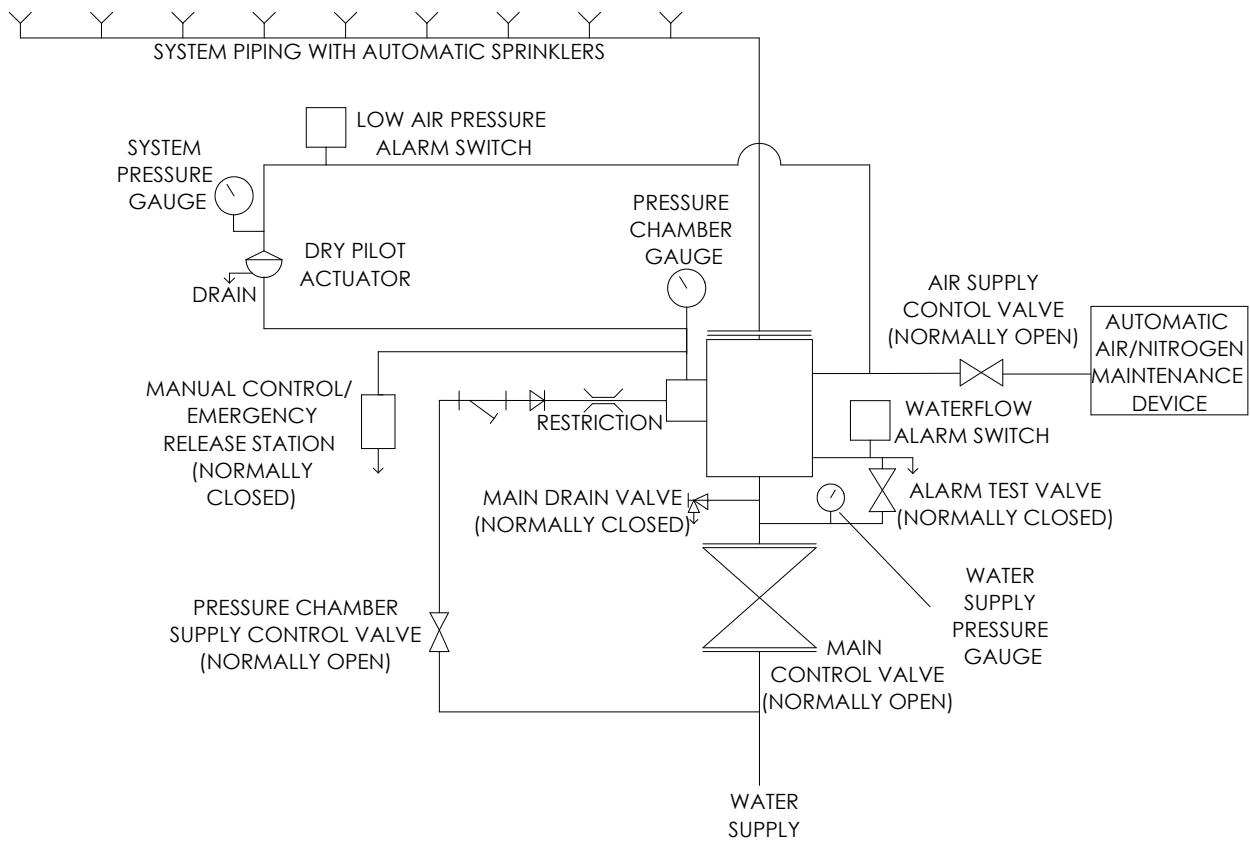
use of the GDPA-LP has the potential to be beneficial to system performance are: Dry Systems, and Double Interlock Electric/Pneumatic Systems. There is little to no advantage to utilizing the GDPA-LP in Single Interlock Dry Pilot, or Deluge Dry Pilot Systems, as the pilot lines generally have a very small volume and the valve trips very quickly no matter the pilot line pressure.

If you have any questions on the application of the GDPA vs the GDPA-LP contact Globe Sprinkler Technical Services.

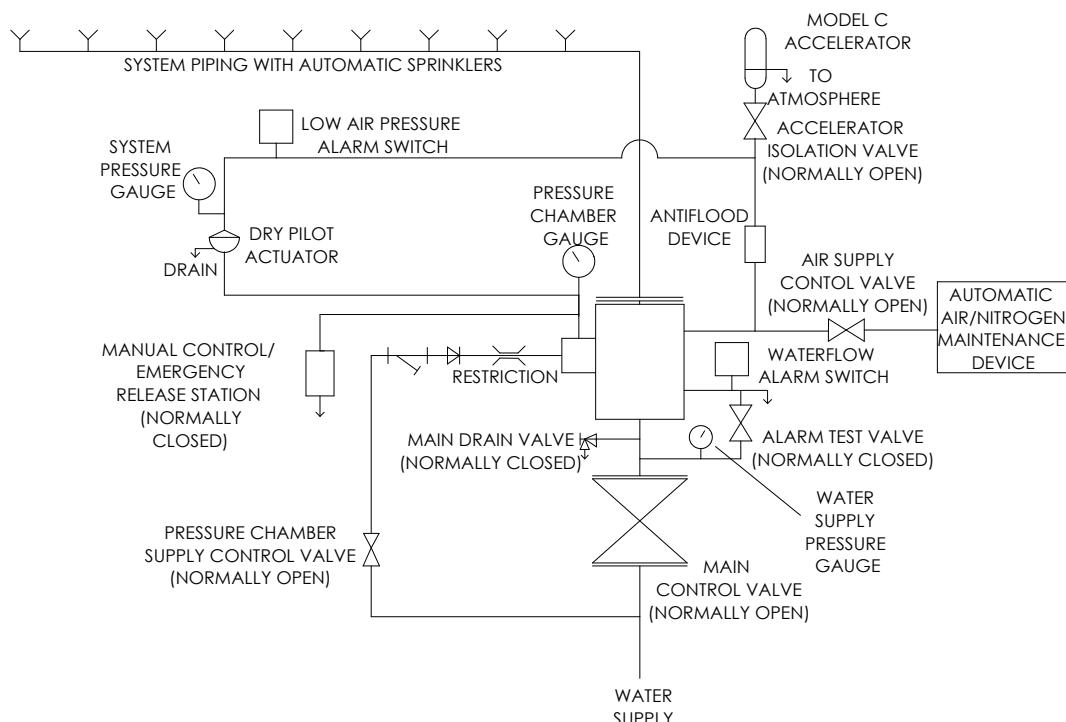


Valve Size	Nominal Installation Dimensions Inches (mm)													
	A END TO END	B	C	D	E	F	G	H	J	K	L	M	N	P
4" (DN100)	17.6 (447.7)	11 (279)	13.25 (336.5)	12 (304)	9.0 (228.6)	11.0 (279.4)	12.0 (304.8)	5 (127)	16 (406)	7.125 (181)	8 (203)	8.625 (219)	11.0 (279.4)	12 (304)
6" (DN150)	19.75 (501.6)	10 (254)	14.5 (368.3)	13 (330)	9.0 (228.6)	12 (304)	13 (330)	4.4 (111)	16 (406)	8.5 (216)	8 (203)	9.75 (247.6)	11.0 (279.4)	13 (330)

**FIGURE 3:DRY ACTUATION TRIM DIMENSIONS**

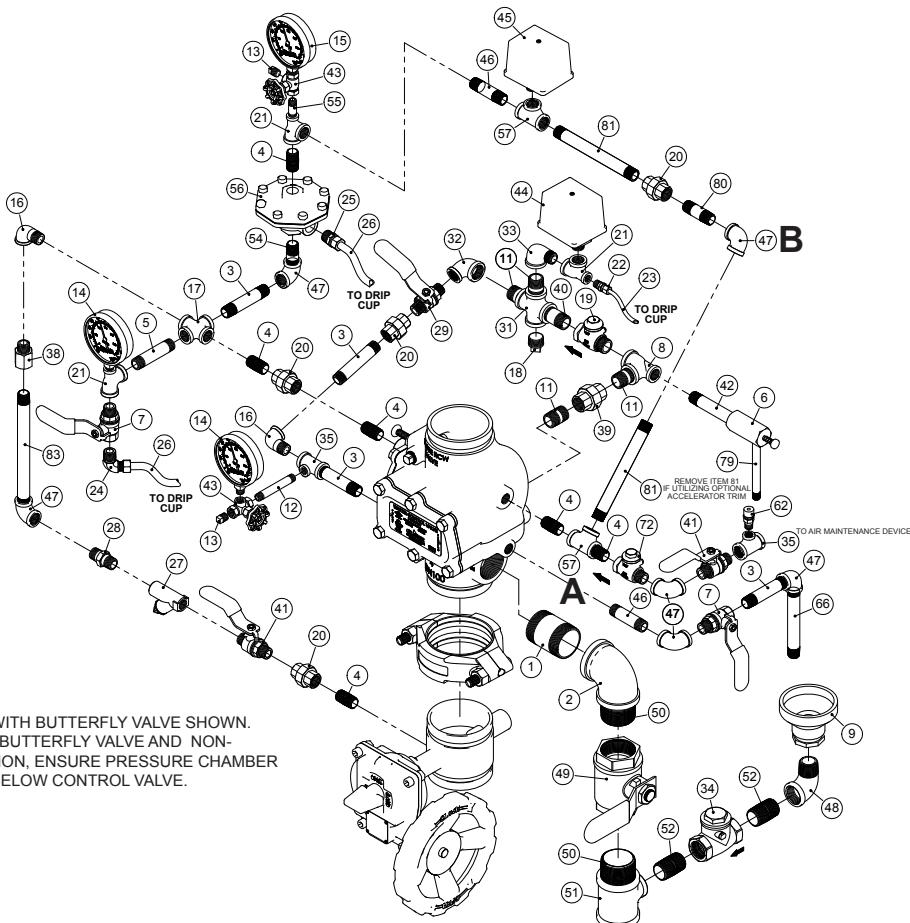


**FIGURE 4:DRY SCHEMATIC (NO ACCELERATOR)**



**FIGURE 5:DRY SCHEMATIC WITH ACCELERATOR**

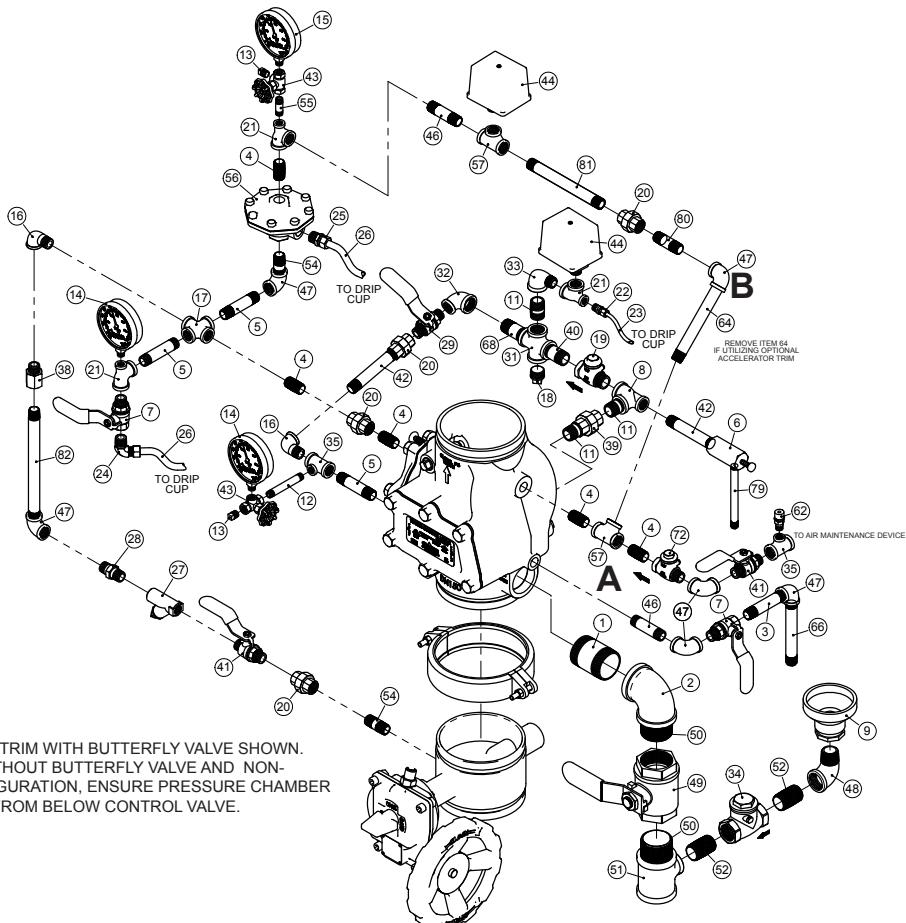
**FIGURE 6: 4" RCW DRY TRIM ARRANGEMENT**



• NOTE: PREASSEMBLED TRIM WITH BUTTERFLY VALVE SHOWN.  
FOR PREASSEMBLED WITHOUT BUTTERFLY VALVE AND NON-  
ASSEMBLED TRIM CONFIGURATION, ENSURE PRESSURE CHAMBER  
SUPPLY IS CONNECTED FROM BELOW CONTROL VALVE.

ITEM NO.	PART NO.	DESCRIPTION	QTY.	ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	310802-G	2" x 3" GALV. NIPPLE	1	33	311224-G	3/4" x 1/2" GALV. STREET ELBOW	1
2	311208-G	2" GALV. ELBOW	1	34	311801	1" CHECK VALVE (FxF)	1
3	310306-G	1/2" x 4" GALV. NIPPLE	4	35	311314-G	1/2" x 1/2" x 1/4" GALV. TEE	2
4	310301-G	1/2" x 1 1/2" GALV. NIPPLE	6	38	317395	1/2" RESTRICTOR	1
5	310305-G	1/2" x 3 1/2" GALV. NIPPLE	1	39	311404-G	3/4" GALV. UNION	1
6	323300	VELOCITY CHECK VALVE	1	40	310401-G	3/4" x 2" GALV. NIPPLE	1
7	311696-R	1/2" BALL VALVE (MxF) - RED HANDLE	2	41	311794-GR	1/2" BALL VALVE (MxM) - GREEN HANDLE	2
8	311313-G	3/4" x 1/2" x 3/4" GALV. TEE	1	42	310308-G	1/2" x 5" GALV. NIPPLE	1
9	317398	DRIP CUP ASSEMBLY	1	43	311683	1/4" 3-WAY VALVE	2
11	310413-G	3/4" x 1 1/2" GALV. NIPPLE	4	44	1340104	PS-10-2 ALARM SWITCH	1
12	310105-G	1/4" x 3 1/2" GALV. NIPPLE	1	45	1340404	PS-40-2 ALARM SWITCH	1
13	311001-G	1/4" GALV. PLUG	2	46	310304-G	1/2" x 3" GALV. NIPPLE	2
14	300119-D	3 1/2" WATER GAUGE (300PSI)	2	47	311203-G	1/2" GALV. ELBOW	6
15	300120-D	3 1/2" AIR GAUGE (250PSI)	1	48	311207-G	1" GALV. STREET ELBOW	1
16	311210-G	1/2" GALV. STREET ELBOW	2	49	311799-R	2" BALL VALVE (FxF) - RED HANDLE	1
17	300111-G	1/2" GALV. CROSS	1	50	310800-G	2" CLOSE GALV. NIPPLE	2
18	311004-G	3/4" GALV. PLUG	1	51	311338-G	2" x 2" x 1" GALV. TEE	1
19	311786	3/4" CHECK VALVE (MxF)	1	52	310501-G	1" x 2" GALV. NIPPLE	2
20	311403-G	1/2" GALV. UNION	4	54	310302-G	1/2" x 2" GALV. NIPPLE	1
21	311305-G	1/2" x 1/4" x 1/2" GALV. TEE	3	55	310101-G	1/4" x 1 1/2" GALV. NIPPLE	1
22	310161	1/4" TUBE CONNECTOR	1	56	317554	DRY PILOT ACTUATOR	1
23	M-320604	1/4" COPPER TUBE	-	57	311303-G	1/2" GALV. TEE	2
24	310346	1/2" ELBOW TUBE CONNECTOR	1	62	317445	1/4" PRESSURE RELIEF VALVE (ADJ. PSI) FACTORY SET @ 45PSI	1
25	310164	1/2" TUBE CONNECTOR	1	66	310310-G	1/2" x 6" GALV. NIPPLE	1
26	M-320591	1/2" COPPER TUBE	-	72	311802	1/2" CHECK VALVE (MxF)	1
27	317397	1/2" Y-STRAINER	1	79	310110-G	1/4" x 6" GALV. NIPPLE	1
28	317396	1/2" SPRING LOADED CHECK VALVE	1	80	310303-G	1/2" x 2 1/2" GALV. NIPPLE	1
29	311794-R	1/2" BALL VALVE (MxM) - RED HANDLE	1	81	310313-G	1/2" x 7 1/2" GALV. NIPPLE	2
31	300112-G	3/4" GALV. CROSS	1	83	310337-G	1/2" x 9 1/2" GALV. NIPPLE	1
32	311212-G	3/4" x 1/2" GALV. REDUCING ELBOW	1				

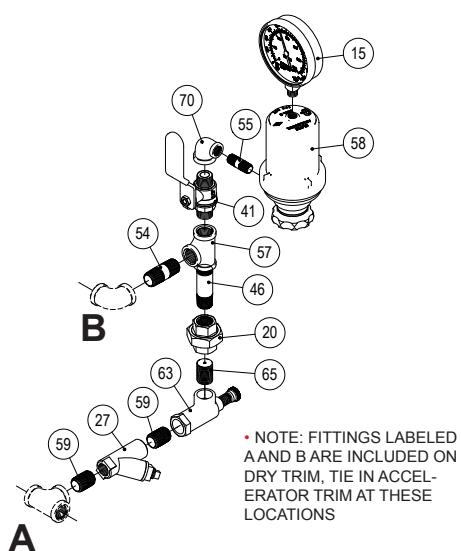
**FIGURE 7: 6" RCW DRY TRIM ARRANGEMENT**



ITEM NO.	PART NO.	DESCRIPTION	QTY.	ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	310802-G	2" x 3" GALV. NIPPLE	1	33	311224-G	3/4" x 1/2" GALV. STREET ELBOW	1
2	311208-G	2" 90° GALV. ELBOW	1	34	311801	1" CHECK VALVE (FxF)	1
3	310306-G	1/2" x 4" GALV. NIPPLE	1	35	311314-G	1/2" x 1/2" x 1/4" GALV. TEE	2
4	310301-G	1/2" x 1 1/2" GALV. NIPPLE	5	38	317395	1/2" RESTRICTOR	1
5	310305-G	1/2" x 3 1/2" GALV. NIPPLE	3	39	311404-G	3/4" GALV. UNION	1
6	323300	VELOCITY CHECK VALVE	1	40	310401-G	3/4" x 2" GALV. NIPPLE	1
7	311696-R	1/2" BALL VALVE MXF - RED HANDLE	2	41	311794-GR	1/2" BALL VALVE MXM - GREEN HANDLE	2
8	311313-G	3/4" x 1/2" x 3/4" GALV. TEE	1	42	310308-G	1/2" x 5" GALV. NIPPLE	2
9	317398	DRIP CUP ASSEMBLY	1	43	311683	1/4" 3-WAY VALVE	2
11	310413-G	3/4" x 1 1/2" GALV. NIPPLE	3	44	1340104	PS-10-2 ALARM SWITCH	1
12	310105-G	1/4" x 3 1/2" GALV. NIPPLE	1	45	1340404	PS-40-2 ALARM SWITCH	1
13	311001-G	1/4" GALV. PLUG	2	46	310304-G	1/2" x 3" GALV. NIPPLE	2
14	300119-D	3-1/2" WATER GAUGE (300PSI)	2	47	311203-G	1/2" GALV. ELBOW	5
15	300120-D	3-1/2" AIR GAUGE (250PSI)	1	48	311207-G	1" GALV. STREET ELBOW	1
16	311210-G	1/2" GALV. STREET ELBOW	4	49	311799-R	2" BALL VALVE (FxF) - RED HANDLE	1
17	300111-G	1/2" GALV. CROSS	1	50	310800-G	2" CLOSE GALV. NIPPLE	2
18	311004-G	3/4" GALV. PLUG	1	51	311338-G	2" x 2" x 1" GALV. TEE	1
19	311786	3/4" CHECK VALVE MxF	1	52	310501-G	1" x 2" GALV. NIPPLE	2
20	311403-G	1/2" GALV. UNION	4	54	310302-G	1/2" x 2" GALV. NIPPLE	1
21	311305-G	1/2" x 1/4" x 1/2" GALV. TEE	3	55	310101-G	1/4" x 1 1/2" GALV. NIPPLE	1
22	310161	1/4" TUBE CONNECTOR	1	56	317554	DRY PILOT ACTUATOR	1
23	M-320604	1/4" COPPER TUBE	-	57	311303-G	1/2" GALV. TEE	2
24	310346	1/2" ELBOW TUBE CONNECTOR	1	62	317445	1/4" PRESSURE RELIEF VALVE (ADJ. PSI) FACTORY SET @ 45PSI	1
25	310164	1/2" TUBE CONNECTOR	1	66	310310-G	1/2" x 6" GALV. NIPPLE	1
26	M-320591	1/2" COPPER TUBE	-	68	310402-G	3/4" x 2 1/2" GALV. NIPPLE	1
27	317397	1/2" Y-STRAINER	1	64	310336-G	1/2" x 7" GALV. NIPPLE	1
28	317396	1/2" SPRING LOADED CHECK VALVE	1	72	311802	1/2" CHECK VALVE MxF	1
29	311794-R	1/2" BALL VALVE MxM - RED HANDLE	1	79	310110-G	1/4" x 6" GALV. NIPPLE	1
31	300112-G	3/4" GALV. CROSS	1	80	310303-G	1/2" x 2 1/2" GALV. NIPPLE	1
32	311212-G	3/4" x 1/2" GALV. REDUCING ELBOW	1	81	310313-G	1/2" x 7 1/2" GALV. NIPPLE	1

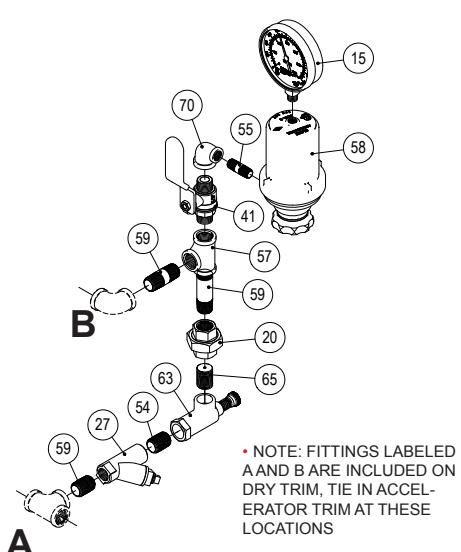
## FIGURE 8: OPTIONAL ACCELERATOR TRIM ARRANGEMENT

### 4" ACCELERATOR TRIM ARRANGEMENT



ITEM NO.	PART NO.	DESCRIPTION	QTY.
15	300120-D	3 1/2" AIR GAUGE (250PSI)	1
20	311403-G	1/2" GALV. UNION	1
27	317397	1/2" Y-STRAINER	1
41	311794-R	"1/2" BALL VALVE MxM - RED	1
46	310304-G	1/2" x 3" GALV. NIPPLE	1
54	310302-G	1/2" x 2" GALV. NIPPLE	1
55	310101-G	1/4" x 1 1/2" GALV. NIPPLE	1
57	311303-G	1/2" GALV. TEE	1
58	300400	GLOBE MODEL "C" ACCELERATOR	1
59	310300-G	1/2" CLOSE GALV. NIPPLE	2
63	323340	MODEL "D" ANTI-FLOODING DEVICE	1
65	320506	.125 RESTRICTED ORIFICE	1
70	311213-G	1/2" x 1/4" GALV. ELBOW	1

### 6" ACCELERATOR TRIM ARRANGEMENT



ITEM NO.	PART NO.	DESCRIPTION	QTY.
15	300120-D	3 1/2" AIR GAUGE (250PSI)	1
20	311403-G	1/2" GALV. UNION	1
27	317397	1/2" Y-STRAINER	1
41	311794-R	"1/2" BALL VALVE MxM - RED	1
54	310302-G	1/2" x 2" GALV. NIPPLE	1
55	310101-G	1/4" x 1 1/2" GALV. NIPPLE	1
57	311303-G	1/2" GALV. TEE	1
58	300400	GLOBE MODEL "C" ACCELERATOR	1
59	310300-G	1/2" CLOSE GALV. NIPPLE	3
63	323340	MODEL "D" ANTI-FLOODING DEVICE	1
65	320506	.125 RESTRICTED ORIFICE	1
70	311213-G	1/2" x 1/4" GALV. ELBOW	1

## ACCELERATOR TRIM

The accelerator trim comes in three different options. If the valve is ordered pre-assembled the appropriate trim configuration will be added to the dry valve trim according to Figure 4 or Figure 5 respectively. If the accelerator trim is ordered as a separate trim kit, the kit will include all of the necessary parts and pieces to construct either the 4" or 6" arrangement. Therefore there is only one part number for the 4" and 6" accelerator assembly trim kit.

The dry system trim is approved with the Model C mechanical accelerator. See Technical Datasheet H-8 for more information on the antiflood device and mechanical accelerator.

# INSTALLATION AND MAINTENANCE

## INSTALLATION

Proper operation of the RCW Valve (i.e., opening of the RCW Valve as during a fire condition) is highly dependent on the correct installation of the trim. It is necessary to install the trim components as described in the figures above for the valve to function properly. Failure to do so may prevent the valve from functioning and could void Listings, Approvals, and/or the manufacturer's warranty. All tubing directed to the "drip cup" must have smooth bends. Abrupt changes in direction or kinks in the tubing could result in a restriction of flow and an adverse effect on the functionality of the valve.

The Model RCW Valve must be installed in an accessible and visible location, which is maintained at or above a minimum temperature of 40°F (4°C). The RCW Valve must be installed in the vertical orientation.

All valves must be installed in accordance with the appropriate installation standard (i.e. NFPA 13, NFPA 15 or other). All electrical connections must be made per the applicable installation standard and/or the National Electric Code (i.e. NFPA 70, NFPA 72 or other).

Proper hydrostatic test procedure must be followed per NFPA 13. The velocity check valve must be replaced with a plug temporarily, the pressure chamber must be vented during the hydrostatic test procedure by opening the manual release valve and the clapper must be latched in the open position.

## DRY VALVE SETTING PROCEDURE

The following steps are to be followed for initial setting of the Model RCW dry system valve, after a trip test of the fire protection system or, after any system operation.

- STEP 1.** Close the main control valve.
- STEP 2.** Close the pressure chamber supply control valve and the system air supply valve.
- STEP 3.** Open the main drain valve, lower body (Aux) drain valve, all low point drain valves and auxiliary drain valves on the system. Open the manual emergency release control valve. Depress the plunger of the velocity check valve to verify that it is not under pressure and that the system piping is completely drained. After system is completely drained, close all low point and auxiliary drain valves that are open. The manual emergency release control valve and main drain valve should remain open until directed in the following steps.
- STEP 4.** Depress the reset plunger located at the top of the pressure chamber to reset the clapper of the RCW valve (the sound of the clapper falling into position should be heard). Close the manual emergency release control valve.
- STEP 5.** Replace any operated automatic sprinklers with the same type, i.e. orientation, orifice, temperature, and thermal sensitivity. Open the air supply valve to re-establish normal system pressure. Open the manual emergency release control valve and then the pressure chamber supply control valve. Slowly close the manual emergency release control valve and allow pressure to increase in the pressure chamber and also up to the dry pilot actuator.

**STEP 6.** Observe all drain tubing at the drip cup. If any leakage is observed, the source of the leakage must be identified and corrected.

**STEP 7.** Partially open the main control valve. Slowly close the main drain valve when water discharges from the drain connection. Observe the supply pressure gauge and the pressure chamber gauge. They should indicate the same pressure reading. Depress the plunger on the velocity check valve. If leakage is apparent, the cause of the leakage must be identified and corrected. If there are no leaks, open the system control valve fully and the system is set for service.

## MODEL C ACCELERATOR SETTING PROCEDURE

- STEP 1.** Close the accelerator shutoff valve
- STEP 2.** Follow the Dry Valve Setting Procedure
- STEP 3.** Upon completion of the Dry Valve Setting Procedure. Open the accelerator shutoff valve slowly. Watch the pressure gauge on the upper chamber of the Model C Accelerator for 30 seconds. The pressure should start to increase. If the pressure increases and the accelerator sets (no air coming from the discharge of the accelerator), wait for the upper chamber of the accelerator to reach the system air pressure and the system is set for service. If the pressure does not increase in 30 seconds continue to step 4.
- STEP 4.** Close the accelerator shutoff valve. Remove the lower hand wheel plug. The accelerator interior valve assembly should be removed. This complete assembly can be pulled out by hand (if it does not come out with the lower hand wheel plug when it is unscrewed). This will allow any water, that may have accumulated in the upper chamber, to drain out and permit thorough cleaning of the valve disc, seat assembly, and the orifice pin.
- STEP 5.** The valve assembly can then be replaced and the lower hand wheel plug screwed back into position. Open the accelerator shutoff valve slowly. The accelerator is set for service when the air pressure gauge on the top of the accelerator reads normal system air pressure. If air pressure does not rise in the upper chamber of the accelerator after 1 minute call Globe Technical Support for more detailed instruction.

## TESTING

Reference NFPA 25, Standard for the Inspection, Testing and Maintenance of Water-Based Fire Protection Systems. Before proceeding with any tests involving water flow, the following precautions need to be taken:

- STEP 1.** Check the location where the test connection discharges to make sure that all is clear and that there is no possibility of the water flow causing damage or injury.
- STEP 2.** Check the end of the test connection to make sure that it is unobstructed. To achieve a satisfactory test, there must be an unrestricted flow of water when the test valve is wide open.
- STEP 3.** Check for alarm connections to a central sta-

tion or fire department. If such connections are found, give proper notice to the signal receiving station before proceeding with the test.

*Note: A main drain test may also operate local fire alarms unless they are temporarily disabled.*

## **DRY SYSTEM TRIP TEST PROCEDURE**

Proper operation of the RCW Valve (i.e., opening of the RCW Valve as during a fire condition) must be verified, as described by the applicable Inspection Testing and Maintenance Standard (i.e. NFPA 25) or by the Local Authority Having Jurisdiction. Globe Sprinkler Corporation recommends performing a trip test annually. The steps to perform a trip test are as follows:

- STEP 1.** If a partial flow trip test is necessary, perform the following additional steps. If a normal flow test is being performed continue to Step 2:
1. Close the main control valve.
  2. Open the main drain valve.
  3. Open the main control valve one turn beyond the position at which water just begins to flow from the main drain valve.
  4. Close the main drain valve.

*Note: Be sure to close the main control valve quickly after the trip of the valve has been verified.*

**STEP 2.** Open the inspectors test valve at the end of the system.

**STEP 3.** Verify that the RCW Valve has tripped, as indicated by the flow of water into the system and activation of the water flow alarm.

**STEP 4.** Close the system's Main Control Valve.

**STEP 5.** Close the Diaphragm Chamber Supply Control Valve.

**STEP 6.** Reset the RCW Dry Valve in accordance with the Dry Valve Setting Procedure.

## **DRY SYSTEM WATERFLOW ALARM TEST PROCEDURE**

Testing of the system water flow alarms must be performed as described by the applicable inspection testing and maintenance standard (i.e. NFPA 25) or as described by the local AHJ. To test the water flow alarm, open the alarm test valve, which will allow a flow of water to the pressure alarm switch and/or water motor alarm. Upon satisfactory completion of the test, close the alarm test valve.

## **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.
- 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.

- 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.

**Alarm Line Check Valve.** The  $\frac{3}{4}$ " 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.

## **ORDERING INFORMATION**

The RCW Valve, Dry System configuration or Dry System with accelerator configuration can be ordered pre-trimmed or non-assembled as separate items. All trim comes standard with galvanized nipples and fittings (Standard galvanized trim is not domestic). For non-assembled the following items must be ordered separately:

- RCW Water Control Valve
- Dry System Trim Kit
- Optional Accelerator Trim Kit
- Automatic Air Supply (Air Maintenance Device)
- Accessories (as needed)

## **PRE-TRIMMED WITH MODEL GLR300G CONTROL VALVE**

### **RCW Dry Pre-Trimmmed (No Accelerator)**

Specify: RCW Dry Pre-trimmed w/BFV Control Valve (specify valve size),

4 inch GxG.....	317448-B
4 inch GxG.....	317448-B-LP
6 inch GxG.....	317493-B
6 inch GxG.....	317493-B-LP
DN 150 (165,1 mm) GXG .....	317493-D-B
DN 150 (165,1 mm) GXG .....	317493-D-B-LP

### **RCW Dry Pre-Trimmmed with Accelerator**

Specify: RCW Dry Pre-trimmed (specify valve size), PN (see Part Number Below)

4 inch GxG.....	317449-B
4 inch GxG.....	317449-B-LP
6 inch GxG.....	317494-B
6 inch GxG.....	317494-B-LP
DN 150 (165,1 mm) GXG .....	317494-D-B
DN 150 (165,1 mm) GXG .....	317494-D-B-LP

*Note:*

-LP denotes version with GDPA-LP actuator (Lower System Pressure)

## **PRE-TRIMMED WITHOUT BFV CONTROL VALVE**

### **RCW Dry Pre-Trimmmed (No Accelerator)**

Specify: RCW Dry Pre-trimmed (specify valve size),

4 inch GxG.....	317448
4 inch GxG.....	317448-LP
6 inch GxG.....	317493
6 inch GxG.....	317493-LP
DN 150 (165,1 mm) GXG.....	317493-D
DN 150 (165,1 mm) GXG.....	317493-D-LP

### **RCW Dry Pre-Trimmmed with Accelerator**

Specify: RCW Dry Pre-trimmed (specify valve size), PN (see Part Number Below)

4 inch GxG.....	317449
4 inch GxG.....	317449-LP

6 inch GxG.....	317494
6 inch GxG.....	317494-LP
DN 150 (165,1 mm) GXG .....	317494-D
DN 150 (165,1 mm) GXG .....	317494-D-LP

*Note:*

-LP denotes version with GDPA-LP actuator (Lower System Pressure)

## **NON-ASSEMBLED**

- Valve body ordered separately
- Accelerator Trim Kit ordered separately
- Trim Kit includes extra pieces to accommodate different size valves

### **RCW Water Control Valve**

Specify: RCW Valve Only (specify valve size),

4 inch RCW-2 GxG .....	317400
6 inch RCW-2 GxG .....	317550
DN 150 (165,1 mm) RCW-2 GXG.....	317550-D

### **RCW Dry Trim 4 inch or 6 inch or DN 150**

Specify: RCW Dry Trim Kit,

Dry Trim Kit .....	317340
Dry Trim Kit .....	317340-LP

*Note:*

-LP denotes version with GDPA-LP actuator (Lower System Pressure)

### **Model C Accelerator Trim Kit 4 inch or 6 inch**

Specify: RCW Dry Model C Accelerator Trim Kit, PN .....

*Note:*

Trim Kit includes extra pieces to accommodate different size valves

See Technical Data Sheet H-8 for more information on the Model C Accelerator and Antiflood Device

### **Model H-1, H-2 or H-3 Air Maintenance Device**

Specify: Model (Specify Model) Air Maintenance Device (see Part Number below)

H-1.....	320585
H-2.....	320595
H-3.....	320600

See Technical Literature G-1 and G-2 for more information on Air Maintenance Devices

*Note:*

300 psi (20.6 Bars) Pressure Gauges Standard (600 psi (41.2 Bars) Ordered Separately)

PN.....300121-D

See trim drawings for trim replacement part numbers

See Technical Data Sheet GFV200 for RCW Valve replacement part numbers

## **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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4077 Airpark Dr.  
Standish, MI 48658  
Ph. 989-846-4583

Technical Support  
1-800-248-0278  
[techservice@globesprinkler.com](mailto:techservice@globesprinkler.com)

[www.globesprinkler.com](http://www.globesprinkler.com)



## **DISPOSITIVO DI MANTENIMENTO PRESSIONE ARIA MODELLO H-1**

### **DESCRIZIONE GENERALE**

Il mantenitore di pressione aria Globe Modello H-1 è un dispositivo automatico, regolabile sul campo, della famiglia dei riduttori di pressione. È pensato per controllare la pressione dell'aria negli impianti sprinkler a secco, nei sistemi di preazione, o nella linea pilota di impianti a secco di una valvola a diluvio o valvola a preazione per sprinkler pilota a secco. L'H-1 è utilizzato nei casi in cui si ha una fonte di aria (o azoto) compressa ad una pressione superiore rispetto a quella desiderata per l'impianto. Per fonti di aria in pressione si intendono impianti dotati di compressori automatici, o impianti ad azoto dotati di regolatori di pressione con cilindro monostadio.

La valvola Globe da 1/2" viene aperta per permettere un veloce ingresso nei tubi dell'impianto a secco, operazione anche chiamata "Fast Fill". Rimarrà chiusa una volta raggiunta la pressione desiderata.

Quando la pressione si riduce da un lato della valvola di controllo da 1/4", l'orifizio di regolazione e misurazione si apre e compensa le piccole perdite di aria che periodicamente avvengono nel sistema a causa della variazione di temperatura o di altre variabili dell'impianto. L'orifizio di regolazione e misurazione limita il volume di aria introdotta per assicurare che la quantità di aria reintrodotta sia minore di quella che potrebbe fuoriuscire da uno sprinkler attivato.

### **DATI TECNICI**

Approvato secondo le norme:

cULus

FM

NYC-DOB MEA 335-91-M

#### **Pressione Massima**

175 psi (12.3 kg/cm<sup>2</sup>)

#### **Intervallo di pressione in uscita**

15-50 psi (1.05-3.51 kg/cm<sup>2</sup>)

#### **Differenziale di pressione richiesto**

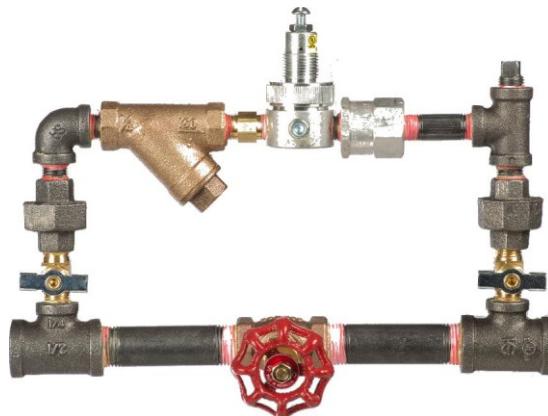
- 2 1/2 psi (0.176 kg/cm<sup>2</sup>)

#### **Connessioni terminali**

- 1/2" Female NPT

#### **Dimensioni fisiche**

9 11/16" X 7 3/4" (246 mm X 197 mm)



**MODELLO H-1**

### **DISPOSITIVO MANTENIMENTO ARIA**

### **INSTALLAZIONE**

Il dispositivo di mantenimento pressione automatico Globe Modello H-1 deve essere installato secondo le seguenti istruzioni.

#### *NOTA:*

*La presenza di umidità durante il montaggio può ridurre le prestazioni. Assicurarsi che il mantenitore di pressione Modello H-1 sia installato in maniera da permettere l'accumulo di acqua nel dispositivo. Potrebbe rendersi necessario provvedere alla riduzione dell'umidità dell'aria in ingresso.*

**FASE 1.** Predisporre le connessioni con tubi da almeno 1/2" (DN15) tra l'ingresso aria e il Dispositivo Modello H-1 e tra il Dispositivo Modello H-1 ed il sistema da pressurizzare.

**FASE 2.** Installare una valvola di controllo da 1/2"(DN15), non a molla, rivestita in gomma, di tipo swing tra il Dispositivo Modello H-1 ed il sistema da pressurizzare. Una valvola di controllo di questo tipo è necessaria nel trim di ingresso aria delle valvole GLOBE per tubi a secco, valvole di preazione, e trim pilota a secco.

## **PROCEDURA DI REGOLAZIONE**

Il dispositivo di mantenimento pressione aria automatico GLOBE Modello H-1 deve essere regolato secondo le seguenti istruzioni:

- FASE 1.** Determinare la pressione che incontra i requisiti minimi dell'impianto in base all'appropriata scheda tecnica.
- FASE 2.** Chiudere la valvola di by-pass del modello H-1 e la valvola di controllo ingresso aria Modello H-1.
- FASE 3.** Aprire la valvola di controllo sul trim ingresso aria del sistema per pressurizzare, poi ridurre la pressione aria dell'impianto a 0 psi.
- FASE 4.** Chiudere la valvola di controllo nel trim di ingresso aria del sistema per mettere in pressione.
- FASE 5.** Rimuovere il manometro impianto dalla sua sede e temporaneamente installarlo nella porta per manometro di prova da 1/4".

### **ATTENZIONE:**

*Prima di rimuovere il tappo, accertarsi che la tubazione a cui è connessa la porta per il manometro di prova del Modello H-1 sia a 0 psi. In caso contrario si corre il rischio di infortunio e danni alla proprietà.*

- FASE 6.** Aprire la valvola di controllo ingresso aria sul dispositivo H-1.
- FASE 7.** Osservando il manometro nella sua nuova posizione, regolare la pressione di uscita del regolatore di pressione. Allentare il dado sotto la vite di regolazione della pressione. Ruotare la vite in senso orario, guardandola dall'alto del regolatore di pressione per aumentare la pressione, o in senso opposto per ridurla.

### **NOTA:**

*Quando si va a ridurre la pressione, questa deve essere rilasciata a valle del regolatore di pressione aprendo temporaneamente la valvola di controllo nel trim di ingresso aria dell'impianto di pressurizzazione, controllando che l'impianto si vada a depresso.*

- FASE 8.** Dopo che il regolatore di pressione è stato impostato, stringere il bullone sotto la vite di regolazione per bloccarla in posizione.
- FASE 9.** Chiudere la valvola di controllo ingresso aria nel dispositivo Modello H-1.

### **ATTENZIONE:**

*Prima di rimuovere il tappo, accertarsi che la tubazione a cui è connessa la porta per il manometro di prova del Modello H-1 sia a 0 psi. In caso contrario si corre il rischio di infortunio e danni alla proprietà.*

- FASE 10.** Rimettere il manometro aria nella sua posizione originaria. Installare nuovamente il tappo da 1/4" nella porta per manometro di prova del Modello H-1. Applicare solo ai tappi e con parsimonia il sigillatore per filettature.

- FASE 11.** Aprire la valvola di controllo nel trim d'ingresso aria dell'impianto da pressurizzare.

- FASE 12.** Aprire la valvola di controllo ingresso aria del dispositivo Modello H-1.

- FASE 13.** Aprire la valvola by-pass del dispositivo Modello H-1.

- FASE 14.** Chiudere la valvola by-pass dopo che il sistema sarà a circa 5 psi (0,4 bar) sotto al minimo richiesto per la pressione impianto di cui allo Step 1.

- FASE 15.** Dopo che la pressione impianto si sarà stabilizzata, annotare il valore della pressione aria e compararlo con quello richiesto. Se necessario, reimpostare la pressione.

### **NOTA:**

*Se l'impianto è in sovrappressione durante il riempimento manuale, aprire una connessione all'impianto adatta e riducete manualmente la pressione fino al valore richiesto. Il dispositivo di mantenimento pressione automatico Modello*

*H-1 manterrà automaticamente la pressione pre-impostata. La valvola di controllo evita che il regolatore di pressione faccia lentamente ridurre la pressione di sistema.*

- FASE 16.** Al fine di minimizzare il tempo per l'attivazione impianto in caso di attivazione di uno sprinkler, impostate la pressione di sistema al più basso valore richiesto.

## **CURA E MANUTENZIONE**

Il dispositivo automatico di mantenimento pressione GLOBE Modello H-1 deve essere oggetto di manutenzione secondo le seguenti indicazioni, oltre che secondo le norme NFPA. Ogni eventuale danneggiamento deve essere immediatamente riparato.

### **NOTA:**

*Prima di chiudere una valvola principale di impianto antincendio per lavori di manutenzione sull'impianto che si sta controllando, bisogna ottenere dalle giuste autorità un'autorizzazione per spegnimento impianto, oltre che avvisare il personale che potrebbe essere interessato da detto intervento.*

Si raccomanda la rimozione di umidità dall'aria in impianto attraverso un dispositivo di filtraggio umidità almeno trimestralmente. Ispezioni più frequenti potrebbero essere necessarie in caso di ambienti molto umidi.

Dopo aver messo in funzione l'impianto antincendio, darne notizia alle autorità ed avvertire gli incaricati per il monitoraggio e/o la centrale di allarme. La responsabilità per l'ispezione, il collaudo e la manutenzione dell'impianto di protezione antincendio e dei relativi dispositivi spetta ai proprietari in accordo con questo documento e con le norme del "National Fire Protection Association" (per esempio, NFPA 25), in aggiunta alle norme di qualsiasi altro ente avente giurisdizione. Contattare l'azienda installatrice o il produttore sprinkler per qualsiasi domanda.

Si raccomanda di far ispezionare, testare e mantenere gli impianti a sprinkler automatici da un'azienda specializzata, come richiesto dai regolamenti locali o dalla legge nazionale.

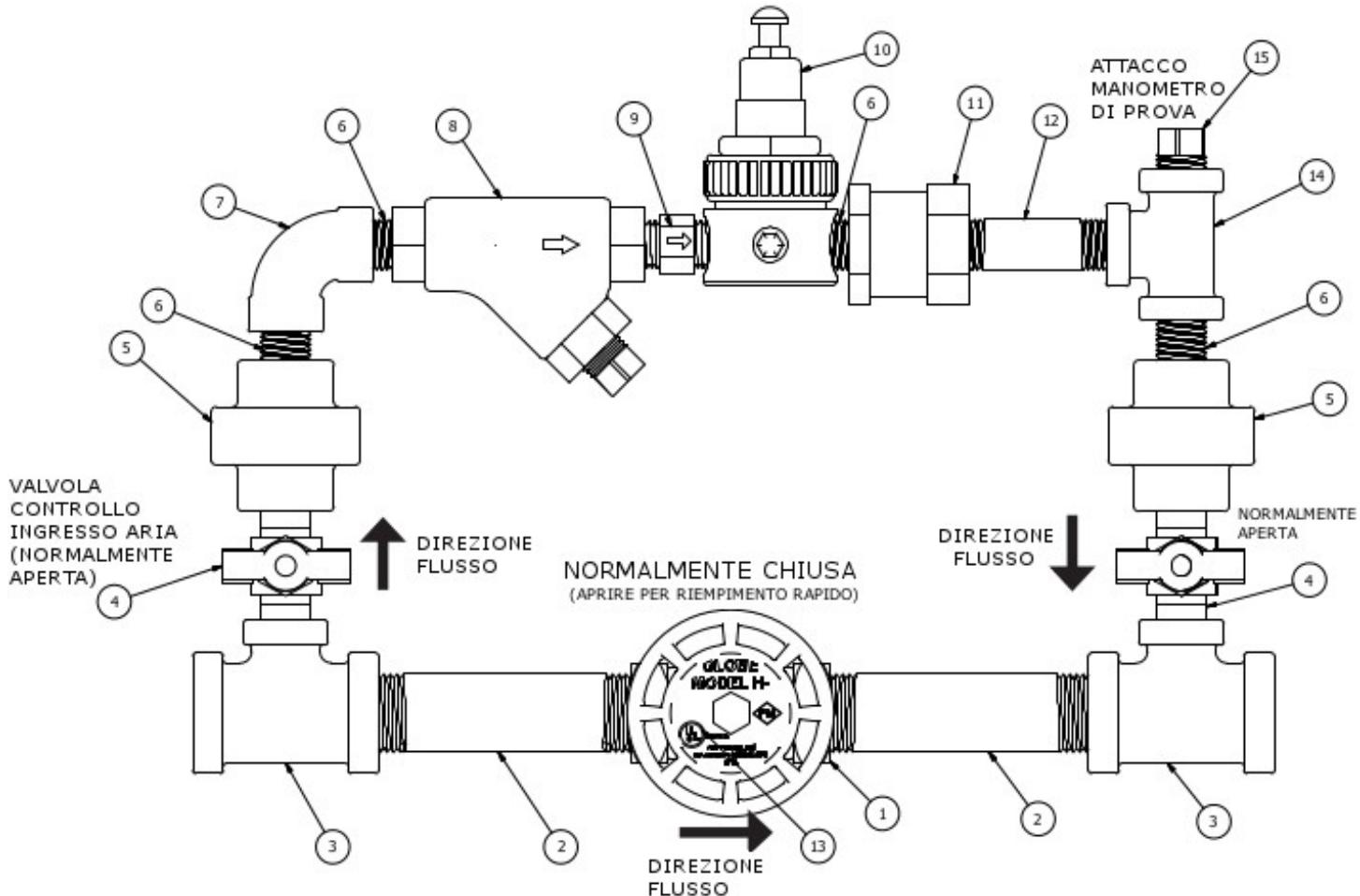
Il dispositivo H-1 deve essere ispezionato trimestralmente secondo le seguenti istruzioni.

- FASE 1.** Controllare che la valvola by-pass sia chiusa.

- FASE 2.** Chiudere la valvola di controllo ingresso aria del dispositivo H-1 e pulire il filtro da 1/4" posto all'ingresso del restrittore. Assicurarsi di reinstallare il filtro e stringere cuffia.

- FASE 3.** Aprire la valvola di controllo ingresso aria del dispositivo H-1 e verificare che la valvola di controllo nel trim ingresso aria del sistema da pressurizzare sia aperta.

- FASE 4.** Verificare che la pressione di sistema sia la stessa già in precedenza stabilita in base a quanto richiesto.



n. rif.	DESCRIZIONE	Quant.	n. rif.	DESCRIZIONE	Quant.
1	Valvola GLOBE 1/2"	1	9	Orifizio misurazione	1
2	Niplo 1/2" X 3 1/2"	2	10	Regolatore aria	1
3	Tee 1/2" X 1/2" X 1/4"	2	11	Valvola di controllo 1/4"	1
4	Valvola a spillo 1/4"	2	12	Niplo 1/4" X 2"	1
5	Bocchettone 1/4"	2	13	Targhetta per "H" A.M.D.	1
6	Niplo ridotto 1/4"	4	14	Tee 1/4"	1
7	Curva 1/4"	1	15	Tappo 1/4"	1
8	Filtro 1/4"	1			

## IMMAGINE 1:DISPOSITIVO MANTENIMENTO ARIA H-1

### INFORMAZIONI PER L'ORDINE

#### DISPOSITIVO DI MANTENIMENTO ARIA H1

SPECIFICA: Model H-1, P.N.:

DISPOSITIVO MANTENIMENTO ARIA H1... 320585

### RICAMBI

- Valvola a spillo 1/4" ..... 320586
- Filtro 1/4" ..... 320587
- Regolatore aria ..... 320590
- Valvola controllo 1/4" ..... 320589
- Orifizio misurazione ..... 320588

### GARANZIA PRODOTTO GLOBE®

La Globe accetta di riparare o sostituire qualsiasi suo prodotto risultante difettoso nei materiali o nelle lavorazioni per un periodo pari a un anno dalla data di spedizione.

Per dettagli specifici riguardo alla garanzia si rimanda ai termini di listino e condizioni di vendita (riportati sul listino).



## MODEL H-1 AIR MAINTENANCE DEVICE

### GENERAL DESCRIPTION

Globe's Model H-1 Air Pressure Maintenance Device is an automatic, field-adjustable device of the pressure reducing type. It is used to control the supervisory air pressure in a dry pipe sprinkler system, preaction system, or dry pilot line system of a dry pilot sprinkler actuated deluge or preaction valve. The H-1 is utilized in applications where there is a compressed air (or nitrogen) source which is at a higher pressure than the desired system pressure. Pressure sources include plant air supplies having their own automatic compressor controls, or nitrogen supplies having single stage cylinder mounted pressure regulators.

The 1/2" globe valve is opened to admit air speedily to the dry pipe system, also known as the "Fast Fill". It is closed once the desired system air pressure has been established. As pressure drops on the system side of the 1/4" check valve, the regulator and metering orifice operate automatically to replace small losses of air which periodically occur in the system due to temperature or other system variations. The regulator and metering orifice limit the volume of air introduced to assure that the rate of air replacement is less than that from a operated sprinkler so that system activation may take place.

### TECHNICAL DATA

#### Approvals

- cULus
- FM
- NYC-DOB MEA 335-91-M

#### Maximum Pressure

- 175 psi (12.3 kg/cm<sup>2</sup>)

#### Pressure Range Output

- 15-50 psi (1.05-3.51 kg/cm<sup>2</sup>)

#### Required Pressure Differential

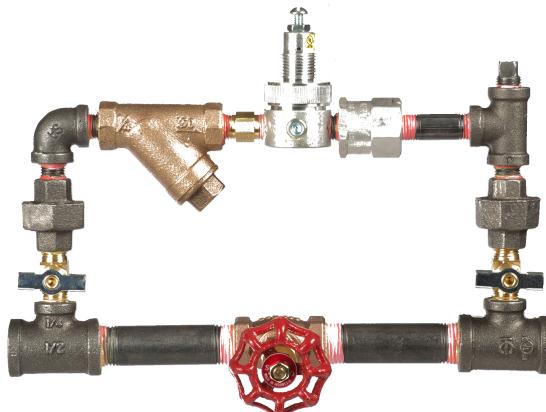
- 2 1/2 psi (0.176 kg/cm<sup>2</sup>)

#### End Connections

- 1/2" Female NPT

#### Physical Dimensions

- 9 11/16" X 7 3/4" (246 mm X 197 mm)



### MODEL H-1 AIR MAINTENANCE DEVICE

### INSTALLATION

The Globe Model H-1 Automatic Air Pressure Maintenance Device must be installed in accordance with the following instructions.

#### NOTE:

*Moisture build-up can adversely affect performance. Ensure the Model H-1 Air Maintenance Device is installed in such a manner as to avoid the collection of water in the regulator device. Suitable consideration must be given to the removal of excessive moisture from the compressed air supply.*

**STEP 1.** Make connections a minimum of 1/2 inch (DN15) pipe size between the inlet air supply and the Model H-1 Device, as well as between the Model H-1 Device and the system to pressurize.

**STEP 2.** Install a 1/2 inch (DN15), non-spring loaded, rubber-faced, swing-type check valve between the Model H-1 Device and the system to pressurize. A check valve of this type is provided in the air supply trim of GLOBE dry pipe valves, preaction valves, and dry pilot trim.

# SETTING PROCEDURE

The GLOBE Model H-1 Automatic Air Maintenance Device must be set in accordance with the following instructions:

- STEP 1.** Determine the pressure that meets the minimum requirements of the system from the appropriate system technical literature.
- STEP 2.** Close the Model H-1 By-Pass Valve, and close the Model H-1 Air Supply Control Valve.
- STEP 3.** Open the control valve in the air supply trim of the system to pressurize and then reduce the system air pressure to 0 psi.
- STEP 4.** Close the control valve in the air supply trim of the system to pressurize.
- STEP 5.** Remove the system pressure gauge from its connection and temporarily install it in the 1/4 inch NPT Gauge Test Port.

**CAUTION:**

*Before removing the plug, make certain that the piping to which the Model H-1 Gauge Test Port is connected is at 0 psi. Failure to do so may result in personal injury or property damage.*

- STEP 6.** Open the Air Supply Control Valve in the Model H-1 Device.
- STEP 7.** While observing the relocated pressure gauge, adjust the output pressure of the Pressure Regulator. Loosen the lock nut below the pressure setting screw. Rotate the screw clockwise, as viewed from the top end of the Pressure Regulator, to increase pressure, and counter-clockwise to decrease pressure.

**NOTE:**

*When decreasing pressure, the air pressure must be relieved downstream of the Pressure Regulator by temporarily opening the control valve in the air supply trim of the system to pressurize, assuming that the system to depressurized.*

- STEP 8.** After the Pressure Regulator is set, tighten the lock nut below the pressure setting screw to secure the regulator in place.
- STEP 9.** Close the Air Supply Control Valve in the Model H-1 Device.

**CAUTION:**

*Before removing the pressure gauge, make certain that the piping to which the Model H-1 Gauge Test Port is connected is at 0 psi. Failure to do so may result in personal injury or property damage.*

- STEP 10.** Return the system air pressure gauge to its normal location. Re-install the 1/4 inch pipe plug in the Model H-1 Gauge Test Port. Apply pipe-thread sealant sparingly to the plug threads only.
- STEP 11.** Open the control valve in the air supply trim to the system to pressurize.
- STEP 12.** Open the Air Supply Control Valve in the Model H-1 Device.
- STEP 13.** Open the By-Pass Valve in the Model H-1 Device.
- STEP 14.** Close the By-Pass Valve after the system is pressurized to approximately 5 psi (0,4 bar) less than the minimum required system pressure determined in Step 1.
- STEP 15.** After the system pressure stabilizes, note the air pressure value and compare with the requirement. Re-adjust the Pressure Regulator, as required.

**NOTE:**

*If the system was over-pressurized during manual fill, open a suitable connection to the system and manually reduce the pressure to the desired value. The*

*Model H-1 Automatic Air Maintenance Device then automatically maintains the preset system pressure. The Check Valve prevents the Pressure Regulator from bleeding down the system pressure.*

- STEP 16.** In order to minimize the time for system trip in the event of a sprinkler operation, set the system pressure at the minimum required value.

## CARE AND MAINTENANCE

The GLOBE Model H-1 Automatic Air Maintenance Device must be maintained and serviced in accordance with the following instructions, in addition to any specific requirements of the NFPA Standards. Any impairment must be immediately corrected.

**NOTE:**

*Before closing a fire protection system main control valve for maintenance work on the fire protection system that it controls, obtain permission to shut down the affected fire protection system from the proper authorities and notify all personnel who may be affected by this action.*

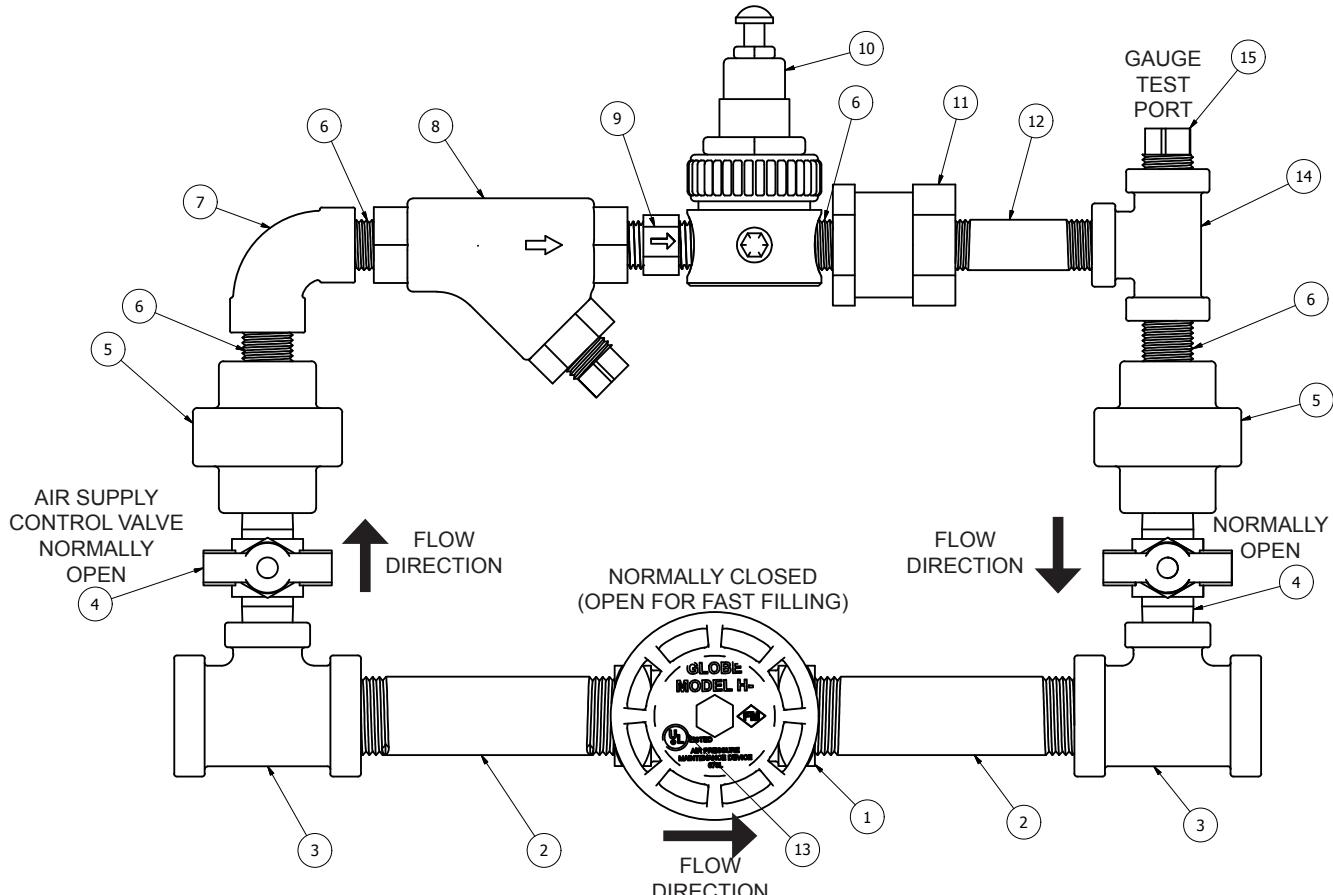
- It is recommended that accumulated moisture be removed from air supply moisture filtration equipment at least quarterly. More frequent inspections may be necessary in particularly humid environments.
- After placing a fire protection system in service, notify the proper authorities and advise those responsible for monitoring proprietary and/or central station alarms.
- Responsibility lies with owners for the inspection, testing, and maintenance of their fire protection system and devices in compliance with this document, as well as with the applicable standards of the National Fire Protection Association (for example, NFPA 25), in addition to the standards of any other authorities having jurisdiction. Contact the installing contractor or sprinkler manufacturer regarding any questions.
- Automatic sprinkler systems are recommended to be inspected, tested, and maintained by a qualified Inspection Service in accordance with local requirements and/or national code.
- The Model H-1 Device must be inspected quarterly in accordance with the following instructions.

- STEP 1.** Verify that the By-Pass Valve is closed.

- STEP 2.** Close the Model H-1 Air Supply Control Valve and clean out the 1/4 inch Strainer located at the inlet to the Restrictor. Be sure to reinstall the strainer screen and tighten the cap securely.

- STEP 3.** Open the Model H-1 Air Supply Valve and verify that the control valve in the air supply trim to the system to pressurize is open.

- STEP 4.** Verify that the system pressure is essentially the same as the previously established requirement.



ITEM	DESCRIPTION	QTY.	ITEM	DESCRIPTION	QTY.
1	1/2" GLOBE VALVE	1	9	METERING ORIFICE	1
2	1/2" X 3 1/2" NIPPLE	2	10	AIR REGULATOR	1
3	1/2" X 1/2" X 1/4" TEE	2	11	1/4" CHECK VALVE	1
4	1/4 NEEDLE VALVE	2	12	1/4" X 2" NIPPLE	1
5	1/4" UNION	2	13	NAMEPLATE FOR "H" A.M.D.	1
6	1/4" X CLOSE NIPPLE	4	14	1/4" TEE	1
7	1/4" ELBOW	1	15	1/4" PLUG	1
8	1/4" STRAINER	1			

**FIGURE 1:H-1 AIR MAINTENANCE DEVICE**

## ORDERING INFORMATION

### MODEL H-1 AIR MAINTENANCE DEVICE

SPECIFY: Model H-1, PN:

H-1 AIR MAINTENANCE DEVICE . . . 320585

## REPLACEMENT PARTS

1/4 NEEDLE VALVE . . . . .	320586
1/4 STRAINER . . . . .	320587
AIR REGULATOR . . . . .	320590
1/4 CHECK VALVE . . . . .	320589
METERING ORIFICE . . . . .	320588

## 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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## WATER MOTOR ALARM MODEL WM

### GENERAL DESCRIPTION

Globe's Model WM Water Motor Alarm is a hydraulically operated outdoor alarm for use with fire protection systems. It is light weight yet durable, and can be used in conjunction with alarm check, dry pipe, deluge, and preaction valves to sound a local alarm. This water-powered system eliminates the need for an electrical alarm and will operate even if electrical power is lost.

Globe's Model WM Water Motor Alarm features a one-gong system which sounds an alarm outside the building.

The Water Motor Alarm is suitable for mounting to any type of rigid wall and with the standard offering can accommodate a wall thickness up to 16" (406.4 mm). It is provided with a listed and approved strainer for use in the alarm line. The Gong, Gong Mount, and Water Motor Housing are fabricated from corrosion resistant cast aluminum. The polymer drive bearings do not require lubrication.

The WM utilizes a lightweight, impeller design which can produce a very high decibel sound level. As water passes through the water motor, the impeller turns and the shaft rotates. The rotating shaft drives a striker assembly which rings the gong, sounding a continuous alarm as long as the water flow continues.



**WATER MOTOR ALARM  
MODEL WM**

### TECHNICAL DATA

#### Approvals

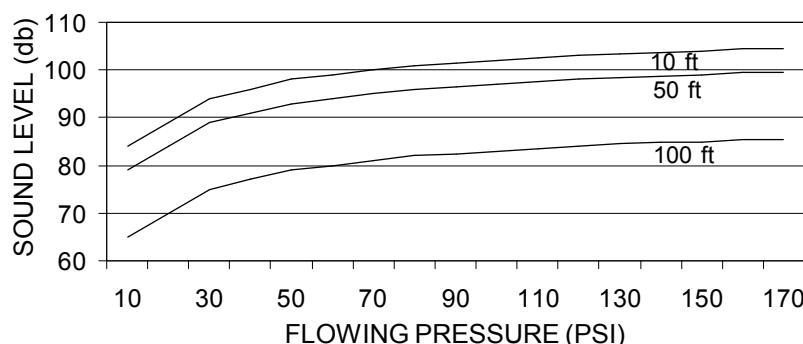
- cULus
- FM
- LPCB Approved
- NYC-DOB MEA 326-91-M

#### Maximum System Working Pressure

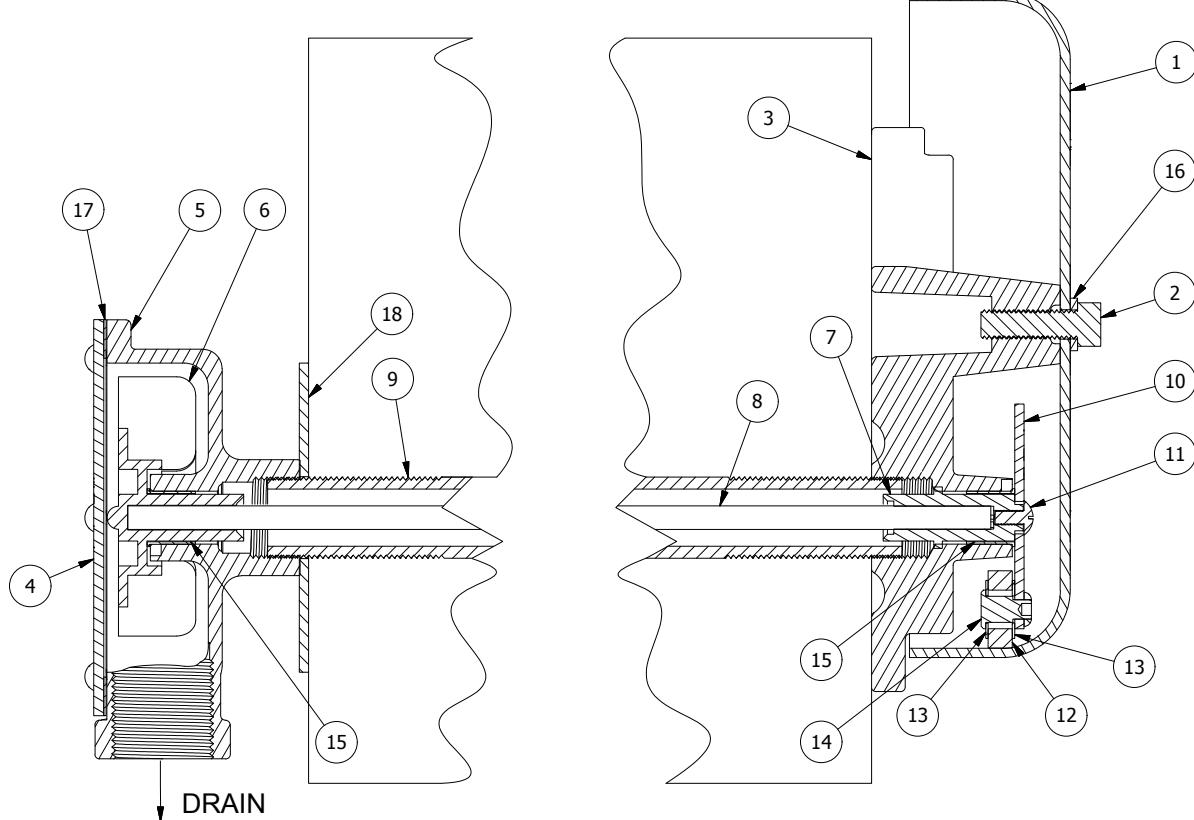
- Working Pressure Rating - 175 psi (12 bars).

#### Materials of Construction

- See Figure 2



**FIGURE 1:SOUND LEVEL VS FLOWING PRESSURE**



ITEM	DESCRIPTION	MAT'L	P/N	ITEM	DESCRIPTION	MAT'L	P/N
1	Gong Shell	Aluminum	325506	10	Striker Arm	Mild Steel	325510
2	Hex Head Cap Screw	Zinc	325521	11	Cap Screw	Zinc Plated	325520
3	Gong Mounting Bracket	Aluminum	325504	12	Knocker	Phenolic	325513
4	Motor Cover	Aluminum	325509	13	Knocker Retaining Washer	Stainless Steel	325516
5	Impeller Housing	Aluminum	325502	14	Knocker Retaining Rivet	Stainless Steel	325514
6	Impeller	Delrin	325507	15	Bearing-Thompson	Type 6 Nylon	325518
7	Striker Shaft	Delrin	325508	16	3/8 Helical Spring Lock Washer	Steel	325522
8	Drive Shaft	Aluminum	325515	17	Backing Plate Gasket	Velumoid	325511
9	Threaded Pipe	Galvanized Pipe	325517	18	Wall Plate	Mild Steel	325528

**FIGURE 2:WATER MOTOR ALARM MODEL WM**

## INSTALLATION

- STEP 1.** Locate and cut a hole in the wall to accommodate a 3/4" pipe through which the impeller driven shaft will pass.
- STEP 2.** Cut 3/4" pipe (Item 9) to 2" longer than wall thickness. Thread both ends with 3/4"NPT.
- STEP 3.** Cut drive shaft (Item 8) to 2" longer than pipe length.
- STEP 4.** Attach 3/4" pipe (Item 9) to gong bracket (Item 3) without detaching gong. Position this assembly on outside wall, sliding 3/4" pipe through pre-drilled hole. (Note: In some cases, the gong must be removed and holes in the gong bracket (Item 3) must be used to secure gong bracket to wall to prevent unwanted rotation.) On the inside wall, slide 4" x 4" wall plate (Item 18) over protruding 3/4" pipe and secure with 3/4" jam nut. Pipe and gong assembly are now attached securely through wall.
- STEP 5.** From impeller housing (Item 5) remove six cover screws, cover (Item 4), backing plate gasket (Item 17) and impeller (Item 6).
- STEP 6.** Attach impeller housing to 3/4" pipe (Item 9) and tighten.
- STEP 7.** Insert drive shaft (Item 8) through 3/4" pipe so that it engages with striker shaft (Item 7).
- STEP 8.** Place impeller in housing and rotate to engage with drive shaft. Once engaged, turn several times to assure assembly is free to move.
- STEP 9.** Replace backing plate gasket and plate, then secure with six screws.
- STEP 10.** Attach piping from alarm valve, or retard chamber, dry pipe valve, deluge or preaction valve to impeller housing fitting. Run drain to safe location.
- STEP 11.** Test alarm for proper operation, by flowing water through the alarm test valve or waterflow test connection.

## **MAINTENANCE**

- The 3/4" strainer located between the alarm, dry pipe, deluge or preaction valve and impeller housing should be cleaned periodically to assure sufficient water flow to sound alarm.
- The cleanout plug on the impeller housing should be periodically removed and the housing cleaned to avoid debris and accumulation that could hinder alarm operation.
- The inside of the gong should be checked periodically for accumulation of foreign matter and cleaned accordingly, in accordance with the applicable Inspection and Maintenance standard typically NFPA 25.

## **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).

## **ORDERING INFORMATION**

### **MODEL WM WATER MOTOR ALARM**

SPECIFY: Model WM, PN:

WM Water Motor Gong .....	325500
WM Water Motor Gong Domestic Galvanized .....	323535-DG

## **REPLACEMENT PARTS**

### **EXTENDED DRIVE SHAFT**

Specify: WM Extended Drive Shaft , Length, PN:

*20" .....	325515
24" .....	325515-24"
30" .....	325515-30"
36" .....	325515-36"
40" .....	325515-40"
48" .....	325515-48"

*\*Standard Offering*

### **STRIKER ARM REPLACEMENT PART KIT**

Striker Arm Kit .....

325510-A

*Striker Arm Replacement Part Kit Includes: Knocker, Striker Arm, 2 Retaining Washers, and Knocker Retaining Rivet*

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Ph. 989-846-4583

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