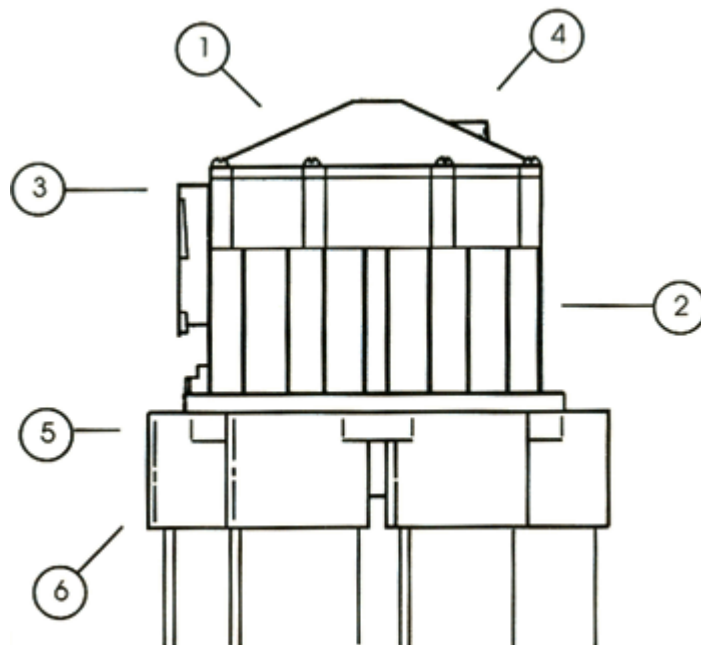


**HYDROTEK® 6000****VALVE FUNCTIONS**

**1. Valve Top:** A high strength metal die cast top which is secured to the valve body by eight stainless steel screws.

**2. Valve Body:** A high strength metal die cast housing.

**3. Inlet:** Female 1 ½" NPT inlet for connection to water source.

**4. Vacuum Breaker Port:** Used to prevent back-siphon of water to source.

**5. Valve Bottom:** High strength ABS plastic bottom which is secured to valve body with 6 stainless steel screws.

**6. Outlets:** Allows for slip and glue connection to 1 ½" PVC pipe.

**CAM REPLACEMENT INSTRUCTIONS**

Replacement cams are available to increase or decrease the number of outlets to be used on the HYDROTEK® 6000 Series Valve

6400 Series four outlet valves have interchangeable cams for two, three or four zone operation.

6600 series six outlet valves have interchangeable cams for five or six zone operation.

To replace cam, first remove valve top by removing eight valve top retaining screws. Remove two cam retaining screws which hold cam on the underside of the valve

top.

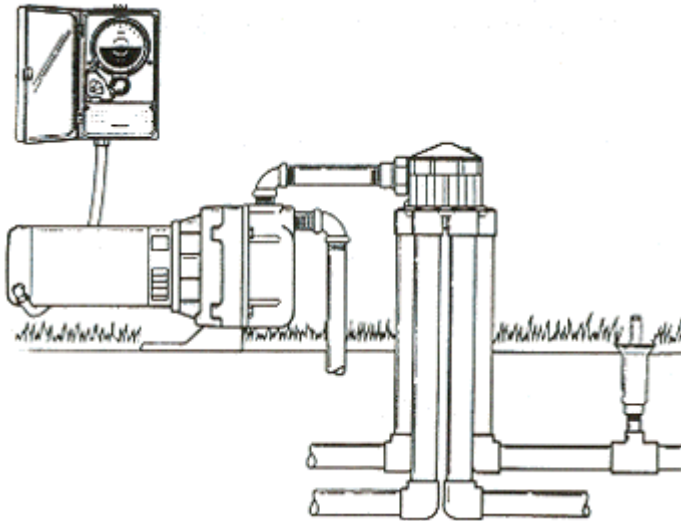
Insert replacement cam into valve top, ensuring that the wide notch on cam is aligned with notch on valve top, and secure with two cam retaining screws.

Replace top, ensuring body seal is in place.

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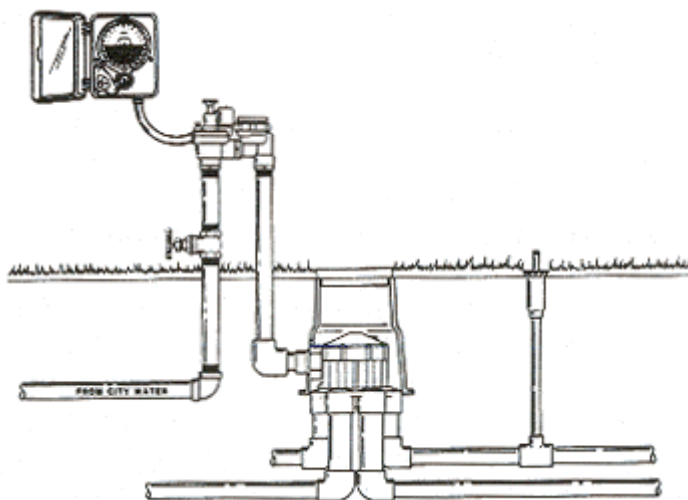
## VALVE APPLICATIONS

### Pump Fed application



For direct pump - fed installations, the HYDROTEK® 6000 Series Valve is directly connected to the discharge side of the pump and is cycled from one zone to the next by turning the pump off and on . Install the valve as close to the pump as possible and ensure suction line to the pump has a proper check valve installed and all joints are completely sealed.

### In-line Valve Application



For high flow city water supplied installations using an in-line valve, ensure the HYDROTEK® Valve is installed as close to the in-line valve as possible. The 6000 Series Valve may be mounted below ground in a valve box (do not direct bury). Ensure backflow prevention is in compliance with local codes.

### VALVE INSTALLATION

Prior to installation of HYDROTEK® 6000 Series Valve, make sure that the system is designed using adequate pipe sizes and control valves to ensure maximum performance of the valve.

For installation with large terrain elevations, or applications with high lift requirements such as overhead systems in greenhouses, the valve should be installed at the highest point in the system, or check-valves should be installed near the valve in the elevated lines to prevent the back-flow of water from the higher locations to the lower zones.

When connecting the lines to the valve outlets, ensure that the correct cam is installed. See diagram for proper zone hookup of outlets.

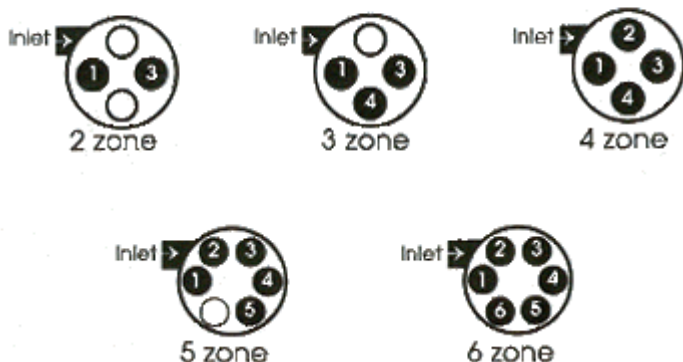
Do NOT turn the valve upside down when gluing the lines into the valve outlets. Glue may run down into the valve and interfere with valve operation. Allow glue to dry for at least two hours before operating or testing the valve. For best results, use a multi-purpose glue which is compatible with ABS plastic.

To seal off any unused outlets, install a piece of PVC pipe at least six inches in length to the outlet and cap the pipe. This will allow additional zones to be added easily at a later time. Make sure proper cam is installed for number of zones to be used.

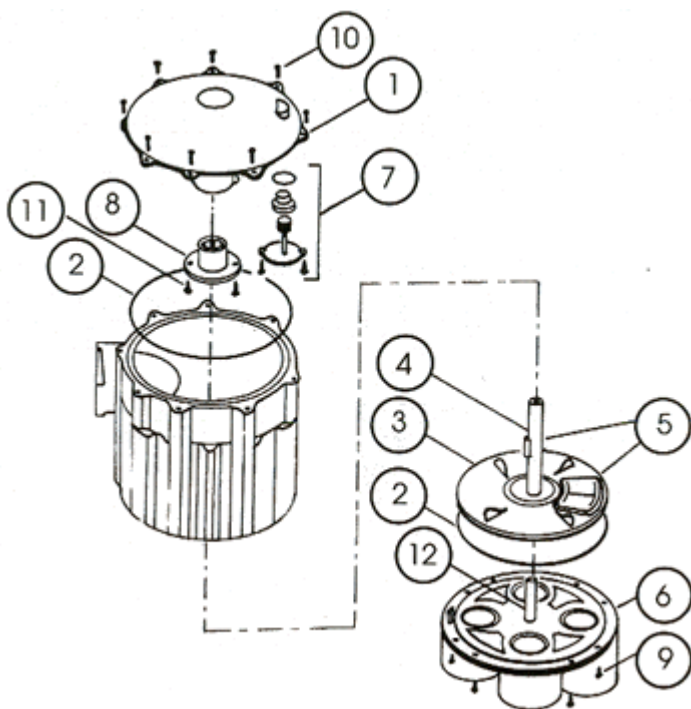
In regions of the country where winter temperatures may cause damage to exterior pipes, the HYDROTEK® 6000 Series Valve should be winterized. To protect the control valve and other irrigation components from damage, the entire system should be drained or cleared using compressed air. Contact your K-Rain dealer for information on the winterization requirements in your area.

### Active Zone Diagram

Black dots indicate active outlets for cam being used



### HYDROTEK® 6000 VALVE PARTS



1	4 Outlet valve top 6 Outlet valve top	8002804 8002806
2	Valve body seal	8600000
3	Rubber flap disk	8003000
4	Stem with .032 spring Stem with .028 spring	8004002 8004003
5	Stem/disk assy.with .032 spring Stem/disk assy.with .028 spring	8003050 8003051

6	4 Outlet valve bottom 6 Outlet valve bottom	8002704 8002706
7	Vacuum breaker assy.	8005001
8	Two zone, 4 outlet cam Three zone, 4 outlet cam Four zone, 4 outlet cam Five zone, 6 outlet cam Six zone, 6 outlet cam	8002902 8002903 8002904 8002905 8002906
9	Valve bottom screws (6) (10-24 x3/4 Phil Pan SS)	8004410
10	Valve top screws (8) (10-24 x5/8 Slit.phst SS)	8004412
11	Cam retaining screws (2) (6 x1/2 Phil Pan SS)	8004414
12	Valve bottom S.S Pin (1/4" dia.)	8600001

## TROUBLESHOOTING

### 1. **Problem:** Valve Does Not Change or Cycle to Next Zone or Outlet

**Cause:** Debris or foreign objects preventing proper movement of stem and disk assembly.

**Solution:** Remove valve top and check for foreign objects. Clean build-up from walls of valve as necessary.

**Solution:** Check for freedom of movement of stem and disk assembly up and down over the center pin in bottom of valve. Scale deposits may build up on the pin and hold stem and disk assembly down. Clean pin and again check for freedom of movement.

**Cause:** Disk may have expanded and is rubbing against inside walls of body.

**Solution:** Replace disk and clean build-up from walls of valve as necessary.

**Cause:** Restriction of flow causing pressure in valve to build up, preventing valve from cycling.

**Solution:** Be sure that all operating outlets are not capped and that the flow to operating zones is not restricted in any manner.

**Solution:** The backflow of water from uphill lines may be preventing the valve from cycling properly. This can happen when the valve is placed too far below an elevated irrigation line. If the valve cannot be placed close to the high point of the system, a check valve should be installed near the valve in the outlet line that runs uphill from the valve.

### 2. **Problem:** Water Comes Out of all the Valve Outlets

**Cause:** Stem and disk assembly not seating properly on valve outlet.

**Solution:** Check for sufficient water flow . A minimum of 15 GPM is required to properly seat the disk.

**Solution:** Remove the valve top and clean the inside walls as necessary to ensure that nothing is interfering with the up and down movement of the stem and disk assembly inside the valve.

**Solution:** Make sure that the operating outlets are not capped and that the flow to the operating zones is not restricted in any manner.

**Solution:** Replace disk if necessary.

**Cause:** Too many sprinkler heads on a zone will cause insufficient pressure for disk to seat firmly over valve outlet.

**Solution:** Reduce the number of heads on the zone to obtain the proper sprinkler operating pressure.

### **3. Problem:** Valve Skips Outlets or Zones.

**Cause:** For a pump installation, the pump may be losing its prime, causing the water flow to surge. This will cause the valve to cycle quickly several times, skipping one or more zones. Verify that the flow to the valve is constant by turning ON after having been OFF for at least 15 minutes. The flow should be steady and uninterrupted.

**Solution:** Seal any pump suction line leaks.

**Solution:** Replace or install suction line check valve to prevent pump from losing its prime.

**Cause:** The stem and disk assembly is being advanced past the desired outlet.

**Solution:** Ensure that the correct cam for the desired number of zones is installed and that the outlet lines are installed to the correct outlet ports of the valve.

## **TECHNICAL INFORMATION**

Valve Top and Body Construction:	Die Cast Metal
Valve Bottom Construction:	ABS High Strength Plastic
Flow Range:	15-100 G.P.M
Inlet:	Threaded 1 1/2" NPT
Outlets:	Allows for 1 1/2" PVC pipe slip and glue connection

#### FLOW AND PRESSURE LOSS CHARACTERISTICS

##### 6400 Series 4 Outlet Valve

FLOW (GPM)	15	20	30	40	50	60	70	80	90	100	110	120	130	140	150
PSI LOSS	2.0	2.5	3.0	3.5	4.0	5.0	6.0	7.5	9.0	10.0	10.5	11.0	12.0	12.5	13.0

##### 6600 Series 6 Outlet Valve

FLOW (GPM)	15	20	30	40	50	60	70	80	90	100	110	120	130	140	150
PSI LOSS	2.0	3.0	3.5	4.0	5.0	6.0	7.5	9.0	10.0	11.0	11.5	12.0	12.5	13.0	14.0