# (Orbit) Irrigation Products, Inc.

## AUTOMATIC CONVERTER MODEL 57029, 57030



### **INSTRUCTIONS FOR OPERATION**

The Automatic Converter converts manual sprinkler valves to automatic.

The Converter works with most 24-volt timers.

Always check local codes before installing any sprinkler system.
 If static water pressure exceeds 80 PSI, a pressure regulator should be used.

#### ORBIT® IRRIGATION PRODUCTS, INC. • NORTH SALT LAKE, UTAH 84054

OTHER ORBIT® PRODUCTS						
PRODUCT	PART NUMBER	<b>BENEFIT/DESCRIPTION OF USE</b>				
Automatic Rain Shut-Off	57069	Automatically interrupts the watering cycle of sprinkler timer when it rains and returns the timer to automatic cycle when the water in the collecting pan evaporates.				
Weather Resistant Box UL®	57095	Allows outdoor installation of any brand of indoor mount timer. It is $\mathrm{UL}^{\circledast}$ listed.				
Pump Start Relay	57009	Automatically activates pump for automatic water- ing (i.e. with well water).				



### WEATHER RESISTANT BOX UL® - 57095



### **ORBIT® LIMITED 6 YEAR WARRANTY**

Orbit<sup>®</sup> Irrigation Products, Inc. warrants to its customers that its Orbit<sup>®</sup> products will be free from defects in materials and workmanship for a period of six years from the date of purchase. We will replace, free of charge, the defective part or parts found to be defective under normal use and service for a period of up to six years after purchase; proof of purchase is required. We reserve the right to inspect the defective part prior to replacement. Orbit<sup>®</sup> Irrigation Products, Inc. will not be responsible for consequential or incidental cost or damage caused by the product failure. Orbit<sup>®</sup> Irrigation Products, Inc. liability under this warranty is limited solely to the replacement or repair of defective parts.

## INSTALLATION INSTRUCTIONS

1. **REMOVE MANUAL STEM**—Shut off the water supply and remove the manual valve stem, leaving the valve body installed. Remove the o-ring or flat washer.

2. INSERT CONVERTER AND REASSEMBLE VALVE-Attach the automatic converter, making sure the o-ring or gasket seals completely. When converting a brass anti-siphon valve, the anti-siphon cover must be removed and replaced simultaneously with the converter. Make sure the plunger and gasket are lined up correctly when replacing the anti-siphon cover. Turn on the water supply and check assembly for leaks.

3. RUN THE WIRE—With the power off, connect the valve to an Orbit® timer (or other timer that uses a UL® approved 24-volt class 2 transformer as a power source). Use a multi-colored, multi-strand, jacketed sprinkler wire. Be sure the wire has at least one more strand than the number of valves in the manifold. Trench and run the wire to the valves. It is recommended, in areas that you will be frequently digging, that you use a section of PVC as a protective covering.

4. ATTACH THE WIRE-Attach a colored wire to one wire on the solenoid and a common wire to the other wire of the solenoid. It doesn't matter which solenoid wire you use as the common. Attach the colored wires to the corresponding zone terminal in the timer and the common wire to the common connection of the timer. Use standard sprinkler wire (20 gauge) for distances less than 800 feet and 18 gauge wire for over 800 feet. Use an Orbit® Grease Cap and Wire Nut at each solenoid for a water-proof connection. Also water-proof any splices made along the run.

5. CLOSE THE SPRINKLER VALVES-Turn the Manual Bleed Lever clockwise until closed. Turn the water supply on. The valve should remain closed.

6. OPEN VALVES AND SET FLOW CONTROL-Turn the Manual Bleed Lever counter-clockwise to manually open the valve. Open the flow control to adjust the sprinkler heads to the desired spray coverage. Then close the Manual Bleed Lever, the valve will shut off in a few moments. The system is now ready to be controlled electrically from the controller or manually by opening the Manual Bleed Lever. NOTE: The flow control is not a positive shut-off.

**DRAINING**—In freezing areas, the valves and lines will need to be drained. Refer to the Orbit<sup>®</sup> Layout Guide or your local dealer to recommend proper drain points. To insure the electric valves are completely drained in the fall, turn off the main sprinkler shut-off valve and electrically run each valve dry for a few minutes. Turn the timer to the off position until spring.

#### CAUTION:

If Static Water Pressure exceeds 80 PSI, a pressure regulator should be used.
For outdoor use with cold water only: Do not use for indoor applications. Valves should be placed so that water drains away from the house.

#### NOTES:

• Where possible, always protect valves with an Orbit® Valve Box and place gravel in the bottom.

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Flow Contro

Manual Ricod

Anti-Siphor

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REPLACING THE MANUAL STEM WITH THE CONVERTER

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## WIRING THE CONVERTER TO THE TIMER



## ELECTRIC VALVE TROUBLE SHOOTING

Your Orbit<sup>®</sup> Automatic Converter valve should provide years of trouble-free service. However, if you do have any problems, try the following solutions.

#### PROBLEM: THE VALVE WILL NOT OPEN ELECTRICALLY

First, run the valve manually: Open the bleed lever (rotating it clockwise) and check to see that the flow control is in the open position (Turn counter-clockwise). If the flow control is open and the valve still will not operate electrically, check the following possibilities. (Close bleed lever when manual test is completed)

Check if	Solution: Check the wiring at the valve and at the timer. Check to see that the timer is working properly.		
1. Wiring is correct.			
2. There is debris in the port hole.	Turn off the water. Remove the solenoid. Push a wire or large paper clip down through the round port hole working it up and down to free any debris. Be sure the plunger and o-ring are in place when reassembling.		
3. Solenoid plunger is stuck.	Turn off the water. Remove solenoid and clean out any sand and debris. Be sure the plunger and o-ring are in place when reassembling.		
4. Defective solenoid.	Turn off the water. Unscrew the solenoid and replace with one from a working valve. If the valve now works, replace the solenoid. Be sure the plunger and o-ring are in place when reassembling.		

## PROBLEM: THE VALVE WILL NOT CLOSE

Check if	Solution:		
1. Improper sizing.	Check that the proper-sized automatic valve was purchased for your size and brand name of valve body. See conversion chart on reverse side.		
2. Solenoid plunger is stuck.	Turn off the water. Remove solenoid and clean out sand and debris. Be sure the and o-ring are in place when reassembling.		
3. Worn seat in valve body.	Turn off water. Remove the automatic converter and check that the lower seat of the valve body is not worn or damaged.		
<ol> <li>Debris between washer and valve seat.</li> </ol>	Turn off water. Remove the Automatic Converter Valve by turning the hex nut counter- clockwise. Clean out any debris.		
5. Diaphragm is ruptured.	Turn off water. Replace Diaphragm Assembly.		

PROBLEM: EXTERNAL VALVE LEAKS				
Check if	Solution:			
1. Pressure is too high.	Install a pressure regulator valve and set at about 80 PSI.			
2. Leaking around screws.	Turn off the water. Undo the leaking screw 4 or 5 turns and retighten firmly.			
3. Leaking below solenoid.	Turn off the water. Tighten the solenoid.			
<ol> <li>Adapter o-ring missing.</li> </ol>	Turn off the water. If using the Adapter Ring, check that the o-ring is in place.			
5. Hex Nut o-ring missing.	Turn off the water. Check that the Hex Nut o-ring or gasket is in place and is not pinched or otherwise unable to seal against the valve body.			
6. The diaphragm is split or torn.	Turn off the water. Remove cap and change the diaphragm.			
7. Hex Nut is cross threaded.	Turn off the water. Check that the Automatic Converter Hex Nut has been installed into the valve body correctly. Attempt to reinstall the Automatic Converter into the valve body. If the threads are stripped, replace the Hex Nut.			





Model 57030 includes a ring adapter required to convert most brands of manual valves to automatic.

Auto Converter brand compatibility table	3/4" Plastic	1" Plastic	3/4" Brass	1" Brass
Orbit®	57030	57030	57029	57030
Champion®	57030	57030	57029	57030
Rainjet®	57030	57030	-	-
Rainbird®	57030	57030	57029	57030
Richdel <sup>®</sup> /Lawn Genie <sup>®</sup>	57030	57030	-	-

