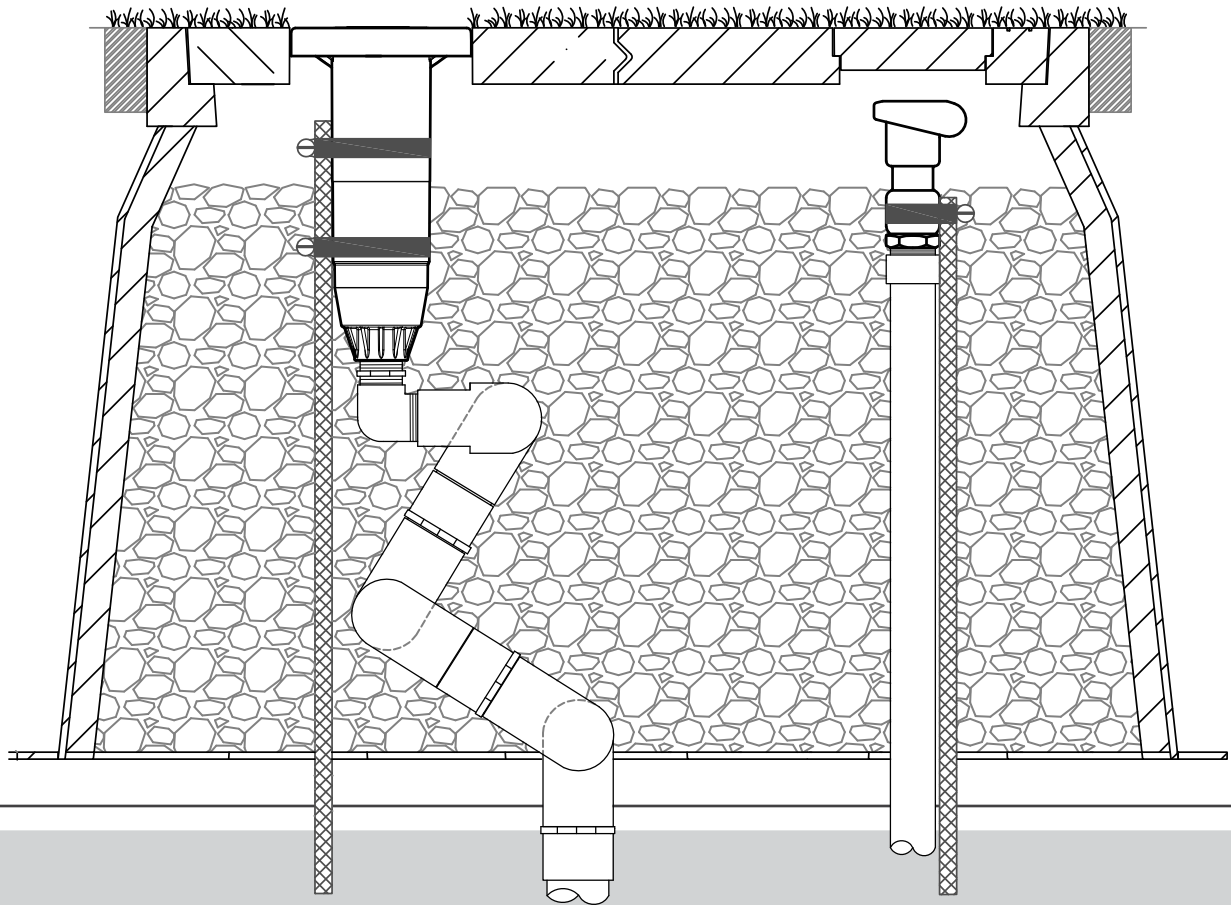


STG-900 Synthetic Turf Rotor

OWNER'S MANUAL



Synthetic Turf Rotor
Installation Instructions

Hunter®

Table of Contents

- 2 Nozzle Performance Charts
- 3 Setting Rotor's Arc Orientation and Arc Adjustment
- 3 Upper Snap Ring Removal
- 4 Riser Assembly Removal
- 4 Arc Adjustment Preparation
- 4 Arc Adjustment Procedure
- 4 Replacing Riser in the Rotor Body
- 5 Upper Snap Ring Installation
- 5 Logo Cap Installation
- 5 Attaching Rotor to the ST-VBVF-K Kit

Product Description

The STG-900 Rotor comes standard with through-the-top access to the riser assembly for easy maintenance. For added safety, order the user-installed Rubber Cover Kit featuring a cushioned, non-slip surface over the exposed surface of the rotor.

Application Synthetic Turf Sports Fields

Radius 103' to 120' (31.4 m to 36.6 m)

Flow 74.5 to 92.0 GPM (16.9 to 20.9 m³/hr; 282 to 348 l/min)

Inlet Size 1½" (40 mm) Acme



NOZZLE PERFORMANCE CHARTS

Nozzle	Pressure PSI	Radius ft	Flow GPM	Precip in/hr	
				■	▲
73 Orange	100	103	74.5	1.35	1.56
	110	109	77.0	1.25	1.44
	120	115	79.6	1.16	1.34
83 Tan	100	112	84.2	1.29	1.49
	110	116	88.1	1.26	1.46
	120	120	92.0	1.23	1.42

Notes:

All precipitation rates are calculated for 180° operation.
For the precipitation rate of a 360° sprinkler, divide by 2.

Requires minimum 100 PSI dynamic pressure supplied to swing joint inlet.

Nozzle	Pressure		Radius m	Flow		Precip mm/hr	
	bar	kPa		m ³ /hr	l/min	■	▲
73 Orange	7.0	700	31.4	16.9	282	34.3	39.6
	7.5	750	33.2	17.5	291	31.7	36.6
	8.0	800	35.1	18.1	301	29.4	34.0
83 Tan	7.0	700	34.1	19.1	319	32.8	37.9
	7.5	750	35.4	20.0	333	32.0	37.0
	8.0	800	36.6	20.9	348	31.2	36.1

Notes:

All precipitation rates are calculated for 180° operation.
For the precipitation rate of a 360° sprinkler, divide by 2.

Requires minimum 7.0 bar; 700 kPa dynamic pressure supplied to the swing joint inlet.

Setting Rotor Arc Orientation and Arc Adjustment

To ensure the rotor applies water to the intended area, set both the arc orientation (direction) and adjustable arc. These initial adjustments can be made without water running through the rotor.

First, remove the riser assembly so the right fixed stop on the arc adjustment mechanism aligns with the right side of the irrigation area. To remove the riser assembly, remove the upper Snap Ring from the rotor.

Upper Snap Ring Removal

Before removing the upper Snap Ring assembly, remove the rubberized logo cap and press the riser assembly below the Snap Ring rubber seal. If these steps aren't followed, the Snap Ring assembly can't be removed.

Remove the stainless steel screw from the center of the rubberized logo cap using a Phillips screwdriver (Figure 1).

Before removing the logo cap, note that the arrows on the cap indicate the nozzle positions on the riser assembly. The underside of the cap includes an alignment pin (Figure 2) that must be properly aligned during reassembly so the arrows remain positioned over the nozzles. Note which hole the pin fits into on top of the riser (Figure 3).



FIGURE 1



FIGURE 2

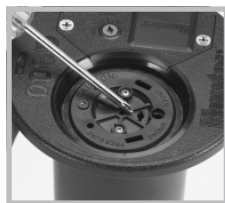


FIGURE 3



FIGURE 4



FIGURE 5



FIGURE 6



FIGURE 7



FIGURE 8



FIGURE 9

Once the logo cap is removed, use the heel of your palm to firmly press the riser assembly downward (Figure 4) until it moves below the Snap Ring rubber seal (Figure 5). More force may be required when the rotor is dry. If the sprinkler has previously operated, water inside the rotor will help lubricate the seal and make this step easier.

To remove the Snap Ring assembly, hold the Snap Ring Tool vertically over the rotor's upper Snap Ring area. Align the metal tip of the tool with the indicator on the Snap Ring rubber seal (Figure 6). Press the tool downward through the rubber membrane (Figure 7) until it penetrates approximately ¼" into the Snap Ring assembly.

While holding the tool in the Snap Ring, press the handle downward and away from the rotor. This will lift the Snap Ring from the rotor. Hold the Snap Ring in the raised position with the tool and use your other hand to remove the Snap Ring from the rotor (Figure 8).

If only the rubber seal lifts, the tool has not penetrated far enough into the Snap Ring assembly.

Riser Assembly Removal

To remove the riser assembly, first remove the upper Snap Ring as described above.

Insert the Hunter Wrench, T-Handle Tool, or tip of the Snap Ring Tool into the riser lift socket. Turn the tool $\frac{1}{4}$ turn, then lift the riser assembly from the rotor body.

STG-900 models include a lift socket located directly on top of the riser (Figure 9).

Arc Adjustment Preparation

All Hunter adjustable-arc rotors feature a fixed stop on the right side of the arc and an adjustable stop on the left side. Arc adjustments can be made with the riser removed, after installation with the rotor off, or while the rotor is operating.

Before adjusting the arc, locate the right-side fixed stop.

To expose the rotating nozzle housing (turret), press down on the riser seal assembly to compress the retraction spring (Figure 10). Hold the assembly in this position while rotating the nozzle housing back and forth until the right-side arc stop is located. This is the fixed (non-adjustable) side of the arc.

Make all arc adjustments with the nozzle housing positioned at the right stop.



FIGURE 10



FIGURE 11

Arc Adjustment Procedure

Insert the small end of the T-Handle Tool or the plastic end of the Hunter Wrench into the riser adjustment socket located on the top of the riser (Figure 11). Insert the tool fully to engage the adjustment mechanism.

Make all arc adjustments with the turret positioned at the right fixed stop, as described in the previous section.

Increasing the Arc

Insert the tool into the adjustment socket and confirm the nozzle housing is positioned at the right arc stop.

Each full clockwise turn increases the arc by 45° . Two full turns increase the arc by 90° . The arc is adjustable from 40° to 360° .

When the maximum arc is reached, the tool will stop turning or a ratcheting sound will be heard.

To verify the setting, rotate the turret back and forth. Repeat the adjustment as needed.

Decreasing the Arc

Insert the tool into the adjustment socket and confirm the nozzle housing is positioned at the right arc stop.

Each full counterclockwise turn decreases the arc by 45° . Two full turns decrease the arc by 90° . The arc is adjustable from 40° to 360° .

When the minimum arc is reached, the tool will stop turning or a ratcheting sound will be heard.

To verify the setting, rotate the turret back and forth. Repeat the adjustment as needed.

Aligning the Arc to the Irrigated Area

Set the arc by first aligning the right fixed stop with the right boundary of the irrigated area.

Unlike natural turf, synthetic turf does not require irrigation to maintain color. Arc adjustments for synthetic turf rotors are intended to cool target areas on the playing surface. For example, if the field is surrounded by a running track, the arc may be adjusted to focus coverage on the playing surface rather than the track.

Wind conditions should also be considered, especially when irrigation is applied during daytime hours.

Once the target area is determined, align the right arc stop with the right boundary. Then adjust the left stop to align with the left boundary of the irrigated area.

Replacing Riser in the Rotor Body

Adjustable part-circle risers must be installed so the arc aligns with the irrigated area.

All Hunter adjustable-arc rotors feature a fixed stop on the right side of the arc and an adjustable stop on the left side. Rotate the nozzle housing (turret) back and forth to locate the right fixed stop.

With the riser positioned at the right fixed stop, point the long-range nozzle toward the right side of the irrigated area. Insert the riser into the rotor body and press downward until fully seated.

Upper Snap Ring Installation

Hold the Snap Ring with the wiper seal facing up and the open ends positioned at the top. Install the left end of the Snap Ring first.

Place the Snap Ring on top of the rotor and use your left thumb to press the left open end into the upper Snap Ring groove inside the rotor body (Figure 12). Once engaged, continue pressing the remaining portion of the Snap Ring into place in a counterclockwise direction around the rotor.

Before installing the rubberized logo cap, pull the riser assembly above the upper Snap Ring rubber seal. If this step isn't completed, the logo cap screw won't reach the riser assembly and the cap can't be secured.

To raise the riser assembly above the upper Snap Ring seal, locate the lift-up socket on top of the riser assembly. Insert the T-Handle Tool, Snap Ring Tool, or Hunter Wrench into the socket and turn $\frac{1}{4}$ turn (Figure 13).

Lift the riser assembly until the nozzles are visible above the upper Snap Ring assembly (Figure 14). Slowly release the riser assembly until it rests on top of the upper Snap Ring assembly.



FIGURE 12

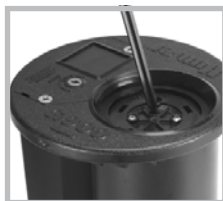


FIGURE 13



FIGURE 14

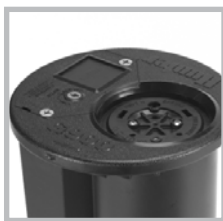


FIGURE 15



FIGURE 16



FIGURE 17

Logo Cap Installation

Before installing the rubberized logo cap, locate the alignment pin on the underside of the cap (Figure 16). This pin must align with the correct hole in the top of the riser assembly (Figure 17) so the nozzle direction arrows on the cap align with the nozzles below.

When installing the Rubber Cover Kit logo cap, it's recommended to first raise the riser assembly with the T-Handle Tool and hold it in the raised position during installation.

Position the logo cap on top of the riser assembly, ensuring the alignment pin is properly seated. Secure the cap using the supplied screw and a Phillips screwdriver.

Tighten the stainless steel screw clockwise until hand-tight. Do not overtighten.

Attaching Rotor to the ST-VBVF-K Kit

Remove the red protective cap from the Acme outlet elbow on the ST-VBVF-K assembly.

Thread the rotor clockwise onto the assembly by hand until fully seated. Then rotate the rotor counterclockwise until the rotor side compartment faces the off-field side of the enclosure.

Lower the rotor, valve, and swing joint assembly into the enclosure.





Helping our customers succeed is what drives us. While our passion for innovation and engineering is built into everything we do, it is our commitment to exceptional support that we hope will keep you in the Hunter family of customers for years to come.

A handwritten signature in black ink, appearing to read "G. R. Hunter", with a long horizontal flourish extending to the right.

Gregory R. Hunter, CEO of Hunter Industries

A handwritten signature in black ink, appearing to read "Denise J. Mullikin", with a stylized, flowing script.

Denise Mullikin, President, Landscape Division

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