

# SYNTHETIC TURF IRRIGATION

THE HUNTER ST SYSTEM

Hunter®



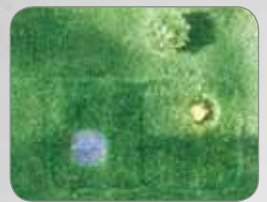
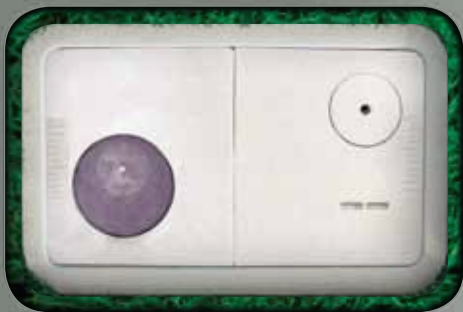
The **Hunter ST System** is the first and only cost-effective integrated solution designed to exceed the unique and specific needs of the **synthetic turf irrigation market**



# The Hunter ST System:

Simple to specify, contractor-friendly to install and easy to service and maintain for the end-user. Finally, a unique package of irrigation products perfectly suited for cooling and cleaning synthetic sports fields.

The Hunter ST System features gear-driven long-range rotors based on Hunter's legendary rotor technology coupled with a special multi-axis swing joint, low-pressure loss valves and a robust feature-packed enclosure. Combined, they provide the ultimate in installation flexibility and long-term total access to all irrigation components, including the swing joint point of connection. Such complete access is an absolute must when the surrounding synthetic surface is not easily excavated and restored to original condition without huge expense and specialized equipment and procedures.



Install the ST System enclosures "as is" or cover and layer them with infill for a near seamless transition to the surrounding surface.





## The ST Satisfaction

Customer response to the Hunter ST system has been nothing short of phenomenal. Here are a few examples of what they have said:

### 01 SPECIFIERS

"The ST System Kits were simple to specify and the product performed as promised."

*Carl Kominsky, Owner*

*Carl Kominsky Landscape Architecture, Inc., Tucson, Arizona*

### 02 CONTRACTORS

"The ST System is designed for simple, contractor-friendly installation, and the easy access to all components is great for the end-user over the years that follow."

*Joe Penny, Owner*

*Aquamatic Sprinklers System, West Palm Beach, FL*

### 03 END-USERS

"We are a happy customer and appreciate the support that Hunter provided before, during and after the installation of our ST System."

*Curt Huckins, Director of Operations*

*Carlsbad Unified School District, Carlsbad, California*

"The installation was straight-forward, the rotors perform as advertised, and we particularly like the **long term servicing ease** of the ST System."

*Bill Free, Irrigation Crew Chief  
University of Arizona, Tucson, Arizona*





Optional rubber cover kits

## The ST Rotors

Hunter synthetic turf rotors are designed specifically to satisfy the unique needs of synthetic turf irrigation. Robust, reliable, and engineered for longevity in high flow and high pressure conditions, ST rotors are available in two configurations:

### ST-90

This model features a smaller exposed surface area and jar-top access to the riser assembly. The ST-90 is ideally suited for direct burial in the natural turf that is sometimes adjacent to the synthetic field to be irrigated.

### STG-900

Featuring a slightly larger exposed surface area, this model includes through-the-top access to the riser assembly. The STG-900 is ideally suited for installation within the ST enclosure that is installed on the synthetic surface. It can also be installed in the natural turf that is sometimes adjacent to the synthetic field to be irrigated.



## The ST Vertical Alignment Swing Joint

Traditional swing joints will cause the rotor to move back and forth as the elevation of the rotor is raised and lowered. While appropriate for natural turf installations, synthetic turf systems require a completely different approach. The best way to support the rotor's tremendous lateral thrust during operation is to place the rotor in a snug fitting hole within the enclosure's cover. In order to set the rotor perfectly to grade—and in this very specific location—the swing joint must provide flexible movement in every direction, not only up and down, but also forward, backward, left and right. Ideally, this flexibility would include the ability to “reset” the elevation grade of the rotor should the enclosure settle downward during the vibratory compaction of the surrounding field base material.

Enter the Hunter “VA” swing joint. Offering the ultimate in flexibility, our vertical alignment swing joint includes six pivot points for multi-axis movement plus a seventh pivot at the outlet for rotational adjustments of the valve and rotor assembly. Constructed of rugged 2" (50 mm) PVC pipe and fittings, this 315 PSI (21.7 bar; 2,172 kPa) rated swing joint dramatically reduces dangerous water velocities and performance robbing pressure loss through the ST System's components.



## The ST Enclosure

The Hunter ST enclosure's complimentary blend of features include construction grade fiberglass in the body, a high impact resistant composite plastic on the exposed upper rim and a near indestructible polymer-concrete cover set. Together, they form a 20,000+ lb. (9,072 kg) rated enclosure that is durable, yet easy to install at 105 lbs. (48 kg) with the covers removed.

The exclusive 2" (50 mm) thick three-piece polymer-concrete cover has a perfectly located cast-in hole for the STG-900 rotor on one side. This design allows the rotor to be held perfectly to grade within the hole while the enclosure is back-filled from the exposed opposite side. Quick couplers are a must-have around every synthetic field. The cast-in quick coupler port and cover on the opposite side eliminates the need for separate quick coupler enclosures around the playing field.

### Clear Advantage of the Hunter ST Enclosure

Have you ever tried to bore a hole into polymer-concrete? It is near impossible. How about installing and setting a 400 lb. (180 kg) polymer-concrete enclosure? Not very much fun.

We designed the ST enclosure to be as lightweight and easy to install as possible without sacrificing durability. From the functionality perspective, the three-piece cover, large interior space and total top access to all components make servicing easier and the system less expensive to maintain.



## The ST System Valve Configurations

For some, the preferred approach to designing synthetic turf irrigation systems is the “block” type configuration with remotely located valves that are off the synthetic surface. The benefit of this configuration is that it removes all high-pressure mainlines from beneath the synthetic surface. Through the use of a remotely located isolation valve, constantly pressurized supply lines to the quick couplers can be removed from beneath the synthetic surface as well.

For others, the preferred approach is to use valve-in-head (VIH) rotors. However, typical VIH rotors have an unacceptably high-pressure loss at the high flows and pressures that are inherent in all synthetic turf irrigation

systems. As a result, the Hunter ST System utilizes a valve-adjacent-to-head (VAH) configuration. This design lowers the pressure loss down to a very acceptable 4 PSI (0.28 bar; 28 kPa) through the valve assembly.

The ST valve and fitting kit (STVBVFK) includes a heavy-duty Hunter ICV-151 valve, a high pressure 235 PSI (16.2 bar; 1,620 kPa) rated ball valve, and all the fittings needed to couple the assembly to the swing joint.

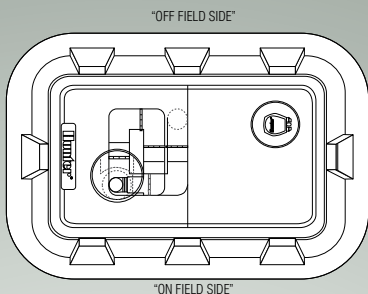


<b>The ST Kits ▶</b> For specification ease and to ensure the correct product is installed, the ST System is available in four kit configurations.	<b>STK-1:</b> STG-900 Block System (remotely located valve)	<b>STK-1B:</b> STG-900 Block System BSP (remotely located valve)	<b>STK-2:</b> STG-900 VAH System (valve adjacent to head)	<b>STK-2B:</b> STG-900 VAH System BSP (valve adjacent to head)
Rotor	STG-900	STG-900	STG-900	STG-900
Enclosure	ST173026B	ST173026B	ST173026B	ST173026B
Swing Joint	ST2008VA	ST2008VA	ST2008VA	ST2008VA
Valve and Fitting Kit	—	—	STVBVFK	STVBVFK
Adapter Fitting(s)	239300 and 239800	239300 and 239800	239800	239800
Inlet Adapter for Swing Joint	—	241400 BSP	—	241400 BSP
Rubber Cover Kit	473900	473900	473900	473900
Quick Coupler	HQ5RC	HQ5RC-BSP	HQ5RC	HQ5RC-BSP

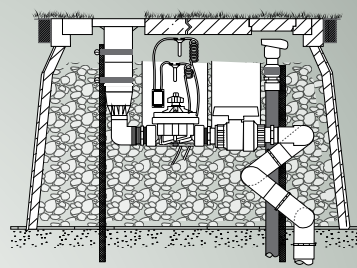
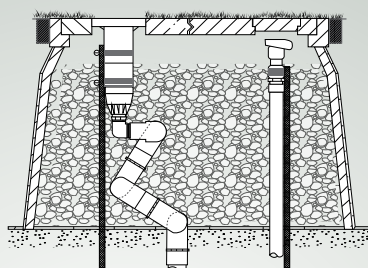
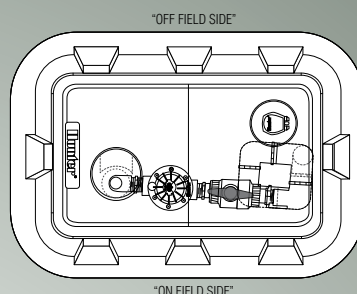
## ST System Details and Instructions

Every ST Kit also includes a set of concise installation details and installation instructions. Each installation detail contains more than 20 callouts and references to ensure the system is installed to the exact and intended specifications.

**STK-1/STK-1B**



**STK-2/STK-2B**



## Ultimate Operational Convenience

### Compliment Your ST System with a Hunter Controller and Handheld Remote Control

No matter the size of your natural or synthetic turf irrigation project, and regardless of whether you're looking for something small or large, simple to program, or one with all the latest water-saving features, Hunter has the right controller to help you keep it running day in, day out. From decoder control or conventional, to indoor mounts and outdoor pedestals, Hunter can meet your needs and exceed your expectations. For the ultimate in convenience, our ROAM or ICR handheld remote controls are the perfect accessory for any project. With handheld remotes, the rotors can be activated from the handheld without the need to go to the controller and be familiar with its programming functions.





# Charts and Specs

## The ST Components

**ST173026:** Enclosure with 3-piece polymer-concrete cover  
**ST2008VA:** "VA" 2" (50 mm) PVC swing joint with 6 pivot points  
**STVBVFK:** ICV-151 valve, high pressure rated ball valve and fitting kit

### Adapter Elbow Fitting:

**239800:** Connects ST2008VA swing joint to rotor adapter fitting (STK-1, STK-3). Also connects STVBVFK to STG-900 rotor (STK-2, STK-4).

### Rotor Adapter Fittings:

**239300:** Connects 239800 elbow fitting to STG-900 Acme inlet rotor (STK-1, STK-3)  
**239301:** Connects 239800 elbow fitting to ST-90 NPT inlet rotor (STK-1, STK-3)  
**239302:** Connects 239800 elbow fitting to ST-90B BSP inlet rotor (STK-1, STK-3)

### BSP Adapter Fitting:

**241499:** Converts ST2008VA swing joint inlet to 2" (51 mm) BSP male threads

### Rubber Cover Kits:

**234200:** ST-90/ST-90B Rubber Cover Kit  
**473900:** STG-900 Rubber Cover Kit

## The ST System Dimensions

### ST-90 Rotor\*

**Pop-up height:** 3" (8 cm)  
**Female inlet:** 1½" NPT or BSP  
**Exposed diameter:** 5½" (14 cm)  
**Overall height:** 11½" (29 cm)

### STG-900 Rotor\*

**Pop-up height:** 3" (8 cm)  
**Female inlet:** 1½" Acme  
**Exposed diameter:** 8" (20 cm)  
**Overall height:** 14" (36 cm)

*\* with rubber cover kit installed*

### ST173026 Enclosure

**3-piece cover:** 17" x 30" (43 cm x 76 cm)  
**Exposed rim:** 20" x 33" (51 cm x 84 cm)  
**Overall height:** 26" (66 cm)  
**Base Pad:** 27" x 41" (69 cm x 104 cm)

## Performance Data – Domestic

103 feet radius, 74.5 GPM at 100 PSI  
 109 feet radius, 77.0 GPM at 110 PSI  
 115 feet radius, 79.6 GPM at 120 PSI

## Performance Data – Metric

31.4 meters radius, 16.9 m<sup>3</sup>/hr,  
 282 l/m at 6.9 bar; 690 kPa  
 33.2 meters radius, 17.5 m<sup>3</sup>/hr,  
 292 l/m at 7.6 bar; 760 kPa  
 35.1 meters radius, 18.1 m<sup>3</sup>/hr,  
 301 l/m at 8.3 bar; 830 kPa

MODELS	STANDARD FEATURES	FEATURE OPTIONS		NOZZLE OPTION
ST-90 = 3" pop-up	Jar top cap synthetic turf rotor, adjustable arc with plastic riser, NPT inlet threads	B	B = BSP inlet threads	#73 = Factory installed nozzle number
STG-900 = 3" pop-up	Top service synthetic turf rotor, adjustable arc with plastic riser, ACME inlet threads			

### EXAMPLES

<b>ST-90 - 73</b>	3" pop-up, jar top cap, adjustable arc, plastic riser, NPT inlet threads, and #73 nozzle
<b>ST-90 - B - 73</b>	3" pop-up, jar top cap, adjustable arc, plastic riser, BSP inlet threads, and #73 nozzle
<b>STG-900 - 73</b>	3" pop-up, top service, adjustable arc, plastic riser, ACME inlet threads, and #73 nozzle