



THE HUNTER ST SYSTEM

Synthetic Turf Cooling & Cleaning

RESIDENTIAL & COMMERCIAL IRRIGATION

Built on Innovation



TAKE YOUR FIELD TO THE NEXT LEVEL OF PLAYABILITY

Simple to specify, contractor-friendly to install and easy to service and maintain for the end-user, the Hunter ST System is the first and only complete package of irrigation products perfectly suited for cooling and cleaning synthetic sports fields.

Modern-day synthetic sports fields generate considerable heat when exposed to sunlight. With on-demand cooling capabilities, fields can remain safe and playable even on the hottest summer days. And when the occasional spill needs clean-up, the irrigation system is there to help get the job done.

The core of the Hunter ST System features our gear-driven long-range rotors. Coupled with special multi-axis swing joints, low-pressure loss valves and robust, feature-packed enclosures,

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, specialized equipment and procedures.

For the most complete and highest quality synthetic turf watering solution, the answer is clearly the Hunter ST System.

Inside the ST System

Open access to all components for ease of ongoing maintenance



From the top

Smooth and safe surface area with quick-access ports



Seamless integration

Blends in perfectly with the surrounding synthetic surface





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.

STK-1 / STK-2 FOR APPLICATIONS UP TO 120' RADIUS

Synthetic sports fields come in all sizes and shapes. For smaller field widths and layouts like football, combination football and soccer, softball and baseball, as well as small to mid-sized dedicated soccer fields, Hunter offers two ST System kits. These cost-competitive turn-key solutions each offer a collection of products designed to meet a radius range of up to 120', and a choice of Block type or VAH (Valve-Adjacent-to-Head) valve designs. Rotors in this category typically require higher pressures of 120 PSI to the base of the rotor, and 130 PSI to the swing joint's inlet in order to maximize performance.

STK-1

Blocked type design with remotely located valves. This configuration keeps high pressure mainlines away from beneath the synthetic surface.

STK-2

VAH type design and integrated solution simplifies installation. This configuration also eliminates the high pressure losses associated with valve in head type rotors in these high flow and high operating pressure systems.

ST Rotor Features

- Nozzle choices: 2
- Nozzle trajectory: 22.5°
- Arc adjustment: through-the-top
- Arc setting: 40° to 360°
- Quick-check arc mechanism
- Gear-drive: Water lubricated
- Rubber logo cap
- Optional rubber cover kits
- 5-Year component part warranty

The ST-90 is ideally suited for direct burial in the natural turf that is sometimes adjacent to the synthetic field to be irrigated. It is not intended for use with the ST System vaults.

The STG-900 is ideally suited for installation within the STK-1 or STK-2 vault on the synthetic surface. It can also be installed in the natural turf that is sometimes adjacent to the synthetic field to be irrigated.

ST-90 / STG-900 Rotors

Robust, reliable, and engineered for longevity in high flow and high pressure conditions, ST gear-driven rotors in the 103' to 120' category are available in two configurations.

ST-90

Model: 3" jar top
Overall height: 11½"
Pop-up height: 3"
Diameter: 5½"
Inlet size: 1½" NPT



STG-900

Model: 3" top service
Overall height: 14"
Pop-up height: 3"
Diameter: 8"
Inlet size: 1½" Acme



STK-1 / STK-2

The ST Kits Descriptions

For specification ease and to ensure the correct product is installed, the ST System is available in kit configurations.

	STK-1 STG-900 Block System (remotely located valve)	STK-2 STG-900 VAH System (valve adjacent to head)
ST Rotor: Synthetic turf rotor without rubber cover kit	STG-900-73	STG-900-73
ST Vault: Vault with 3-piece polymer-concrete cover	ST-173026B	ST-173026B
ST Swing Joint: "VA" 2" PVC swing joint with 7 pivot points	ST-2008VA	ST-2008VA
ST Valve & Fitting Kit: ICV-151 valve, high pressure rated ball valve and fitting kit	—	ST-VBVFk
ST Adapter Elbow Fitting*	239800	239800
ST Rotor Adapter Fitting**	239300	—
Rubber Cover Kit: STG-900 rubber cover kit	473900	473900
Quick Coupler Valve: 1" Inlet with 1¼" outlet for key	HQ5RC	HQ5RC

Notes:

*ST adapter elbow fitting connects ST-2008VA swing joint to rotor adapter fitting (STK-1) also connects ST-VBVFk to STG-900 rotor (STK-2)

**ST rotor adapter fitting connects 239800 Adapter Elbow Fitting to STG-900 Acme inlet rotor (STK-1)

STK-1 / STK-2 SPECIFICATIONS & ACCESSORIES

ST ROTOR USER INSTALLED OPTIONS

Rubber Cover Kit ST-90: P/N 234200

Rubber Cover Kit STG-900: P/N 473900

The rubber cover kit enhances safety with its smooth and flat rubberized exposed surface area.

ST-90 / STG-900 NOZZLE PERFORMANCE DATA

Nozzle	Pressure (PSI)	Radius (FT.)	Flow (GPM)	Precip in/hr ■ ▲	
73	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	100	112	84.2	1.29	1.49
	110	116	88.1	1.26	1.46
	120	120	92.0	1.23	1.42

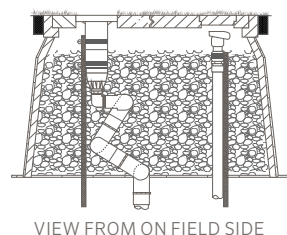
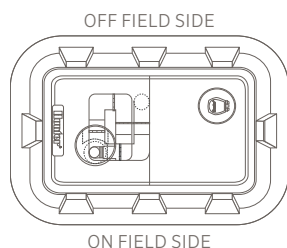
Notes:

All precipitation rates calculated for 180 degree operation.
For precipitation rate of 360 degree sprinkler divide by 2.

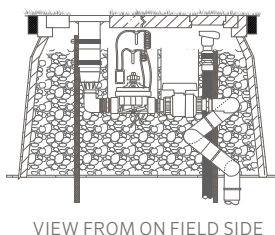
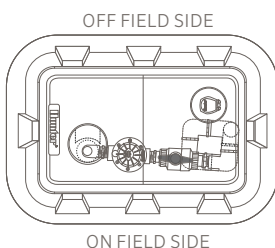
ST System Details and Instructions

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

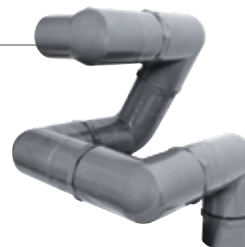


STK-2



ST Swing Joints

Multi-axis vertical alignment swing joints with seven O-ring sealed pivot points. With 100% directional flexibility, the rotor can be perfectly placed within the pre-cast opening in the ST Vault's cover set. Also dramatically reduces dangerous water velocities and performance robbing pressure loss through the ST System components.



ST-2008VA

2" PVC
315 PSI rating
2" Female slip inlet
1½" Female Acme outlet

ST Valve Sets

Heavy-duty control valves are uniquely configured to complement the ST System. Whether installed in Block or Valve-Adjacent-to-Head (VAH) designs, the result is dramatic reductions in pressure loss when compared to all available Valve-In-Head rotor designs. These ST System specific valve sets work to ensure that all components fit efficiently within the ST Vault.

ST-VBVK

1½" NPT ICV valve
1½" 315 PSI rated ball valve
Low pressure loss design
(9.8 PSI at 100 GPM)
Includes 1½" connection fittings



ST Vaults

Lightweight, yet super-duty, ST Vaults include construction-grade tapered fiberglass body shells with polymer-concrete exposed upper rims. The polymer-concrete cover sets include two main sections that simplify installation and maintenance. One side includes a pre-cast opening to support the ST Rotor's high-flow lateral thrust while the other side includes the quick-access port and lid for the quick-coupler.

ST-173026B

2" Thick 3-piece cover set
17" x 30" Main cover
26" Overall height
27" x 41" Base pad
One quick access port



STK-5 / STK-6 FOR APPLICATIONS UP TO 165' RADIUS

For larger and wider sports fields like full-sized soccer or field hockey, the STK-5 / STK-6 category is the perfect solution. These fields typically require the largest nozzles, and the system oftentimes must supply 120 PSI to the base of the rotor in order to maximize performance. This category also works well with smaller fields when the desired radius is beyond the STK-1 / STK-2 capabilities.

The big advantage to using larger rotors on smaller fields is the added benefit of being able to run the system at much lower operating pressures.

STK-5

Blocked type design with remotely located valves. This configuration keeps high pressure mainlines away from beneath the synthetic surface.

STK-6

VAH type design and integrated solution simplifies installation. This configuration also eliminates the high pressure losses associated with valve in head type rotors in these high flow and high operating pressure systems.

ST-1600B / ST-1600BR Rotor Features

- Nozzle choices: 6
- Nozzle trajectory: 22.5°
- Arc Adjustment: Movable stops
- Arc Setting: 40° to 360°
- Quick-check arc mechanism
- Ratcheting nozzle turret
- Gear-drive: Isolated and grease lubricated
- Rubber logo cap
- Telescoping infill barrier
- Adjustable rotation speed: 0 to 85 seconds (180° at 120 PSI)
- 5-Year component part warranty

The ST-1600 rotors complement the ST-90 and STG-900 rotors by adding long-range capabilities. The pop-up ST-1600B is ideally suited for installation within the STK-5 or STK-6 vault 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-1600BR rotor is perfect for sites where riser mounting is preferred, or for retrofitting existing synthetic fields to irrigation. It is also great for horse arenas and pastures.

ST-1600B / ST-1600BR

Robust, reliable, and engineered for longevity in high flow and high pressure conditions, ST gear-driven rotors in the 107' to 165' category are available in two configurations.

ST-1600B

Model: 5" top service
Overall height: 22½"
Pop-up height: 5"
Diameter: 14"
Inlet size: 2" BSP*

* Use P/N 241400 adapter to 2" pipe

ST-1600BR

Model: Riser mounted
Overall height: 8¾"
Diameter: 8¼"
Inlet size: 2" BSP*

* Use P/N 241400 adapter to 2" pipe



STK-5 / STK-6

The STK Kits Description

For specification ease and to ensure the correct product is installed, the ST System is available in kit configurations.

ST Rotor: Synthetic turf rotor

ST Vault: Vault with 4-piece polymer-concrete cover set

ST Swing Joint: 3" PVC swing joint with 6 pivot points (315 PSI rated)

ST Valve Sets: 3" Valve set with remote on-off-auto selector manifold

ST Fitting Sets: All fittings needed to connect swing joint to valve and/or rotor

Quick Coupler Valve: 1" inlet with 1¼" outlet for key

STK-5

ST-1600 Block System
(remotely located valve)

ST-1600B

ST-243642B

ST-3010VA

—

ST-F30K

HQ5RC

STK-6

ST-1600 VAH System
(valve adjacent to head)

ST-1600B

ST-243642B

ST-3010VA

ST-V30K

ST-F30K

HQ5RC

STK-5 / STK-6 SPECIFICATIONS & ACCESSORIES

ST-1600 NOZZLE PERFORMANCE DATA

Nozzle	Pressure (PSI)	Radius (FT.)	Flow (GPM)	Precip in/hr ■ ▲	
16	60	107	96.2	1.63	1.88
	75	115	107.3	1.57	1.81
	90	121	117.8	1.54	1.78
	105	128	127.3	1.50	1.73
	120	135	137.4	1.46	1.69
18	60	112	107.0	1.66	1.91
	75	121	119.4	1.56	1.80
	90	128	131.0	1.54	1.78
	105	133	141.3	1.54	1.78
	120	141	153.2	1.48	1.71
20	60	115	144.0	2.10	2.43
	75	128	160.9	1.89	2.18
	90	141	176.5	1.71	1.97
	105	144	190.5	1.76	2.03
	120	148	204.2	1.80	2.08
22	60	118	171.5	2.37	2.73
	75	130	191.8	2.20	2.54
	90	144	210.0	1.94	2.24
	105	151	226.9	1.84	2.12
	120	155	243.1	1.89	2.18
24	60	121	202.1	2.64	3.05
	75	133	225.9	2.46	2.84
	90	148	247.6	2.19	2.52
	105	156	267.4	2.12	2.45
	120	160	286.4	2.16	2.49
26*	60	126	233.2	2.83	3.27
	75	136	260.4	2.71	3.13
	90	151	284.5	2.40	2.77
	105	160	307.0	2.31	2.67
	120	165	326.8	2.32	2.68

Notes:

All precipitation rates calculated for 180 degree operation.

For precipitation rate of 360 degree sprinkler divide by 2.

* Preliminary data

ST Swing Joints

Multi-axis vertical alignment swing joints with seven O-ring sealed pivot points. With 100% directional flexibility, the rotor can be perfectly placed within the pre-cast opening in the ST Vault's cover set. Also dramatically reduces dangerous water velocities and performance robbing pressure loss through the ST System components.



ST-3010VA

3" PVC

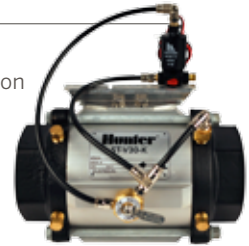
315 PSI rating

3" Female slip inlet

3" Female Acme outlet

ST Valve Sets

Heavy-duty control valves are uniquely configured to complement the ST System. Whether installed in Block or Valve-Adjacent-to-Head (VAH) designs, the results are dramatic reductions in pressure loss when compared to all available Valve In Head rotor designs. These ST System specific valve sets work to ensure that all components fit efficiently within the ST Vault.



ST-V30K

3" NPT cast iron and aluminum construction

Slow opening and closing feature

Ultra-low pressure loss design

(2 PSI at 286 GPM)

Remote On-Off-Auto selector and solenoid (not shown)

Inside the ST Vault



① Quick-coupler

② On-Off-Auto Selector

ST Vaults

Lightweight, yet super-duty, ST Vaults include construction-grade tapered fiberglass body shells with polymer-concrete exposed upper rims. The polymer-concrete cover sets include two main sections that simplify installation and maintenance. One side includes a pre-cast opening to support the ST Rotor's high-flow lateral thrust while the other side includes access ports for the quick-coupler valve and remote On-Off-Auto selector/solenoid manifold.

ST-243642B

3" Thick 4-piece cover set

24" x 36" Main cover

42" Overall height

44" x 50" Base pad

Two quick access ports



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 white ink that reads "Richard E. Hunter".

Richard E. Hunter, CEO of Hunter Industries

Website hunterindustries.com | **Customer Support** 760-744-5240 | **Technical Service** 760-591-7383

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