

# ST SYSTEM ROTORS

Application: **Synthetic Turf Sports Fields**

Radius: **103' to 165'**

Flow Rate: **74.5 to 326.8 GPM**

Inlet Size: **1½" NPT, 1½" ACME & 2" BSP**

## FEATURES

- Models
  - ST-90: 3" jar top
  - STG-900: 3" top service
  - ST-1600B: 5" top service
  - ST-1600BR: Riser mount
- Nozzle choices
  - ST-90, STG-900: 2
  - ST-1600B, ST-1600BR: 6
- Nozzle ranges
  - ST-90, STG-900: #73 to 83
  - ST-1600B, ST-1600BR: #16 to 26
- Standard installed nozzle
  - ST-90, STG-900: #73
  - ST-1600B, ST-1600BR: #20
- Arc adjustment
  - ST-90, STG-900: Through-the-top
  - ST-1600B, ST-1600BR: Movable stops
- Arc setting: 40 to 360 degrees (all models)
- Quick check arc mechanism (all models)
- Gear-drive
  - ST-90, STG-900: Water lubricated
  - ST-1600B, ST-1600BR: Isolated grease lubrication
- Ratcheting nozzle turret: ST-1600B, ST-1600BR
- Telescoping infill protection barrier: ST-1600B
- Factory installed rubber logo cap (all pop-up models)
- Nozzle trajectory: 22.5 degrees (all models)
- 5-year component part warranty (all models)

## OPERATING SPECIFICATIONS

- Radius: 103' to 165'
- Flow rate: 74.5 to 326.8 GPM
- Operating pressure range: 60 to 120 PSI
- Precipitation rate: 1.23 to 3.27 in/hr

## USER INSTALLED OPTIONS

- Rubber Cover Kit ST-90: P/N 234200
- Rubber Cover Kit STG-900: P/N 473900



### ST-90\*

Overall height: 11½"

Pop-up height: 3"

Diameter: 5½"

Inlet size: 1½" NPT

\* not for use with the  
ST Enclosure



### STG-900\*

Overall height: 14"

Pop-up height: 3"

Diameter: 8"

Inlet size: 1½" Acme

\* for use with the  
ST173026B Enclosure



### ST-1600B\*

Overall height: 22½"

Pop-up height: 5"

Diameter: 14"

Inlet size: 2" BSP\*\*

\* for use with the  
ST243642B Enclosure

\*\* use PN 241400 adapter  
to 2" pipe



### ST-1600BR\*

Overall height: 8¾"

Diameter: 8¼"

Inlet size: 2" BSP\*\*

\* riser mounted model

\*\* use PN 241400 adapter  
to 2" pipe

## ST ROTOR MODELS

Model	Description
ST-90-73	3" pop-up, jar top cap, adjustable arc, plastic riser, NPT inlet threads, and 2 nozzles
STG-900-73	3" pop-up, top service, adjustable arc, plastic riser, ACME inlet threads, and 2 nozzles
ST-1600-B	5" pop-up, top service, adjustable arc, stainless riser, BSP* inlet threads, and 6 nozzles
ST-1600-BR	Riser mount, adjustable arc, BSP* inlet threads and 5 nozzles

\* To adapt to 2" pipe use adapter P/N 241400

# ST SYSTEM ACCESSORIES

## ST SWING JOINTS

Multi-axis 315 PSI rated vertical alignment PVC swing joints with seven O-ring sealed pivot points allow the rotor to be perfectly placed within the ST Vault's cover set opening.



**ST2008VA** - 2" for ST-90, STG-900

Inlet: 2" Female Slip  
Outlet: 1½" Female Acme



**ST3010VA** - 3" for ST-1600B

Inlet: 3" Female Slip  
Outlet: 3" Female Acme

## ST VALVE SETS

Heavy-duty control valves configured to complement the ST Rotors and ST Vaults.



**STVBVFK** - for STG-900 in STK-2 Kit

Valve: 1½" NPT ICV  
Ball Valve: 315 PSI rated

Low Pressure Loss Design:  
9.8 PSI at 100 GPM  
Inlet: 1½" Acme  
Outlet: 1½" Acme



**STV30K** - for ST-1600B in STK-6 Kit

Valve: 3" NPT ST-30

Low Pressure Loss Design:  
2.0 PSI at 325 GPM  
Inlet: 3" NPT  
Outlet: 3" NPT

Slow Opening and Closing Feature  
Remote On-Off-Auto Selector  
(not shown)

## ST VAULTS

Heavy-duty tapered fiberglass and polymer-concrete construction with pre-cast holes for rotor.



**ST173026B** - for STG-900 includes 2" thick 3-piece PC cover set

Main Cover: 17" x 30"  
Overall Height: 26"  
Body Weight: 104 lbs.  
Total Weight: 161 lbs.  
Base Pad: 27" x 41"  
One Quick Access Port



**ST243642B** - for ST-1600 includes 3" thick 4-piece PC cover set

Main Cover: 24" x 36"  
Overall Height: 42"  
Body Weight: 170 lbs.  
Total Weight: 320 lbs.  
Base Pad: 44" x 50"  
Two Quick Access Ports



① Quick Coupler

All ST Vaults include convenient quick access ports. Quick-couplers provide a convenient source of water for washing down spills and water-soluble paint. Integrated in-vault design eliminates the need for additional quick-coupler enclosures.



② On-Off-Auto Selector

The ST-V30K valve kit includes a remotely located On-Off-Auto selector and solenoid manifold assembly. These convenient features bring valve manual control functions and solenoid splice connections closer to the surface for easy access.

# ST SYSTEM

## KIT CONFIGURATIONS

### 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**

**STG-900**

**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

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**ST-VBVFK**

**ST Adapter Elbow Fitting\***

**239800**

**239800**

**ST Rotor Adapter Fitting\*\***

**239300**

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**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-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.

#### STK-5

ST-1600 Block System  
(remotely located valve)

#### STK-6

ST-1600 VAH System  
(valve adjacent to head)

**ST Rotor:** Synthetic Turf Rotor

**ST-1600B**

**ST-1600B**

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

**ST-243642B**

**ST-243642B**

**ST Swing Joint:** 3" PVC Swing Joint with 7 pivot points (315 PSI rated)

**ST-3010VA**

**ST-3010VA**

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

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**ST-V30K**

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

**ST-F30K**

**ST-F30K**

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

**HQ5RC**

**HQ5RC**

**ST-1600 NOZZLE PERFORMANCE DATA**

Nozzle	Pressure (PSI)	Radius (FT.)	Flow (GPM)	Precip in/hr ■ ▲	
<b>16</b> ●	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
Black	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
<b>18</b> ●	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
Black	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
<b>20</b> ●	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
Black	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

\* Preliminary data

**ST-90 / STG-900 NOZZLE PERFORMANCE DATA**

Nozzle	Pressure (PSI)	Radius (FT.)	Flow (GPM)	Precip in/hr ■ ▲	
<b>73</b> ●	100	103	74.5	1.35	1.56
	110	109	77.0	1.25	1.44
	120	115	79.6	1.16	1.34
Orange	100	112	84.2	1.29	1.49
	110	116	88.1	1.26	1.46
	120	120	92.0	1.23	1.42
<b>83</b> ●	100	112	84.2	1.29	1.49
	110	116	88.1	1.26	1.46
	120	120	92.0	1.23	1.42
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 calculated for 180 degree operation.  
For precipitation rate of 360 degree sprinkler divide by 2.

**INSTALLATION DETAILS**