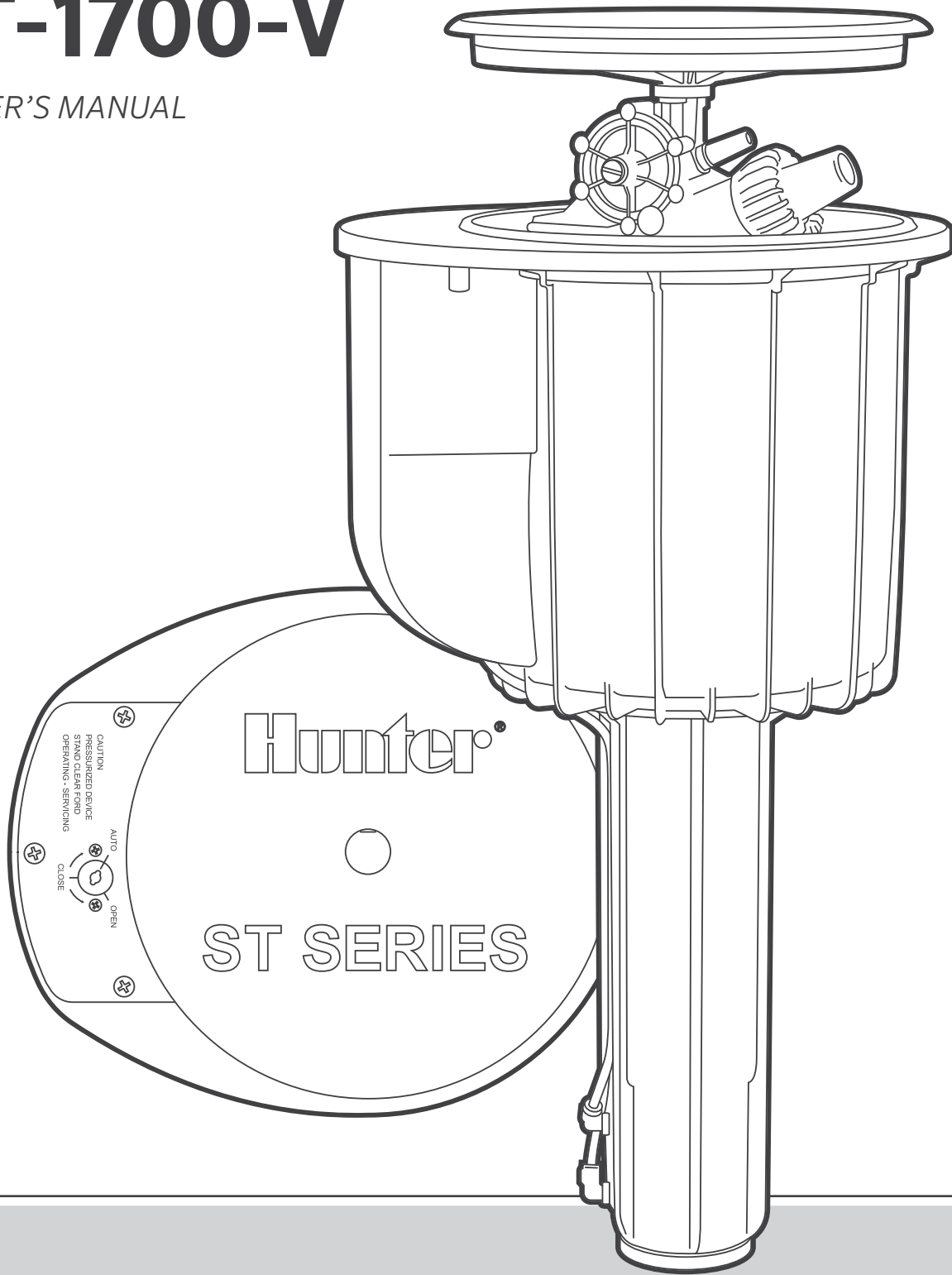


# ST-1700-V

OWNER'S MANUAL



ST-1700-V  
Long-Range Synthetic Turf Rotor

**Hunter**<sup>®</sup>

## Overview

Hunter's synthetic turf rotors are designed to cool, clean, and flush synthetic sports fields. The ST-1700-V long-range synthetic turf rotor offers high-performance irrigation from the field perimeter while integrating Valve-in-Head (VIH) capabilities and a Total-Top-Service (TTS) design to simplify installation and maintenance. With the same heavy-duty internal gear drive as the proven ST-1600-HS-B Synthetic Turf Rotor, the ST-1700-V provides years of reliable operation.

### Valve-in-Head

The Valve-in-Head design integrates the control valve, solenoid, and manual On-Off-Auto selector within the rotor's heavy-duty, impact-resistant case. The convenient and compact design is appreciated by installers and end users.

### Total-Top-Serviceability

With Total-Top-Serviceability, every serviceable component can be accessed from the surface without cutting into the synthetic turf. The spacious flange compartment can accommodate full-sized waterproof splice connectors, and the compartment can hold a decoder for two-wire control system applications.

### Key Benefits

- Heavy-duty internal gear drive and stainless steel pop-up riser provide years of reliable operation
- Long-range performance flexibility up to 157' with five nozzle choices
- Full-circle and adjustable arc in one model from 40° to 360°
- Adjustable speed of rotation using the adjustment knob to set the speed to your requirements

### Important

The water may contain foreign objects such as sand, rocks, and other impurities, which can damage the rotor. To avoid these problems, it may be necessary to install a filter.

### After Installation

Troubleshooting non-rotation after installation:

1. Check for a plugged secondary nozzle.
2. Check for a blocked propeller in the turbine assembly.

Troubleshooting non-operation after connecting to a decoder system:

1. Check for proper wire connections.
2. Switch the two solenoid wires.

### Caution

- Do not perform any adjustments or controls during operation.
- Stand clear of the action area of the rotor and the water jet.
- Ensure the water jet is not directed toward persons, animals, power lines, roads, or other objects.

## Troubleshooting

Find more helpful information about your product, including installation tips, and more.



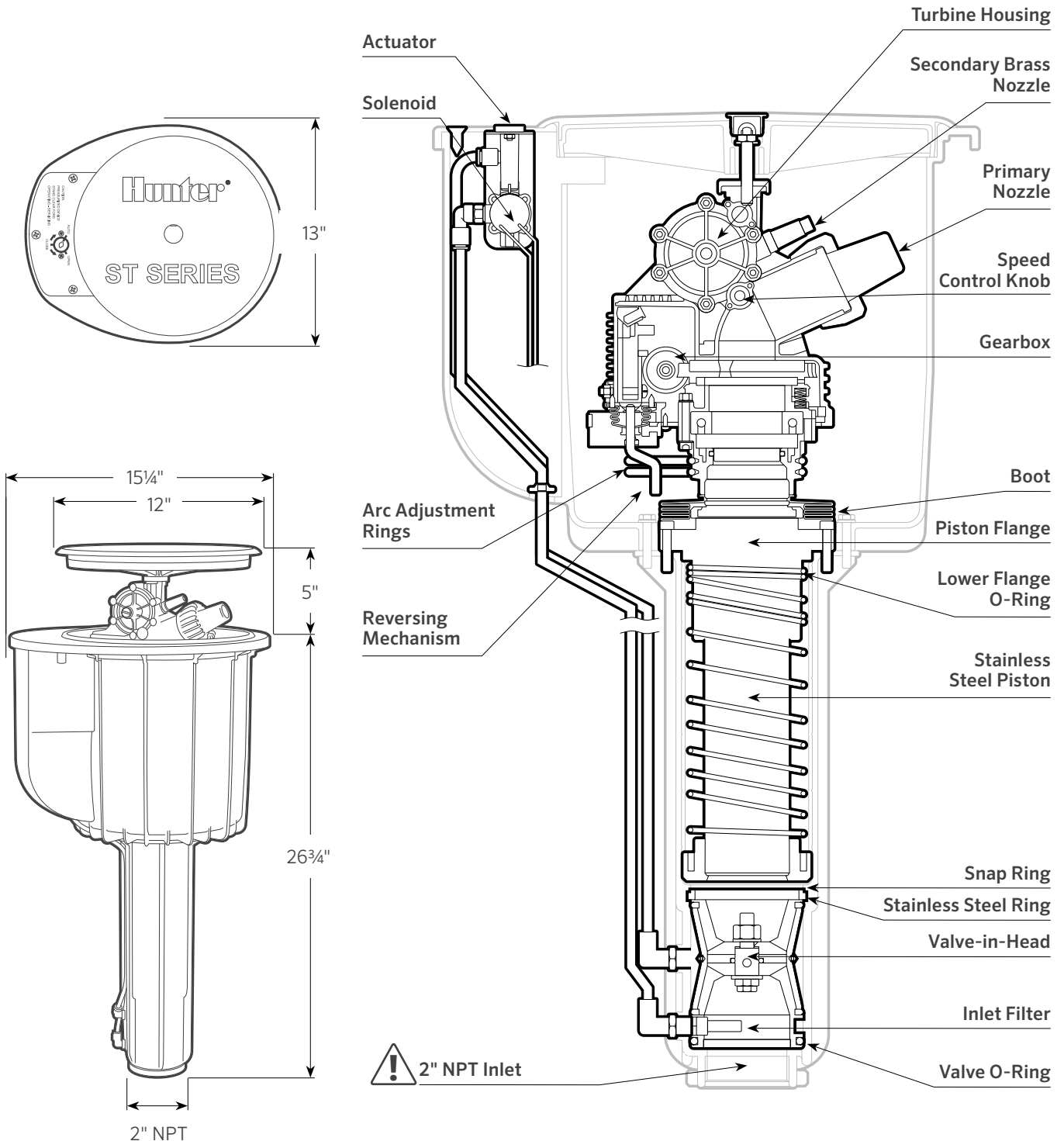
[hunter.direct/st1700vhhelp](https://hunter.direct/st1700vhhelp)

**Product Dimensions**

- Overall height: 26¾"
- Pop-up height: 5"
- Exposed diameter: 13" x 15¼"
- Inlet size: 2" NPT

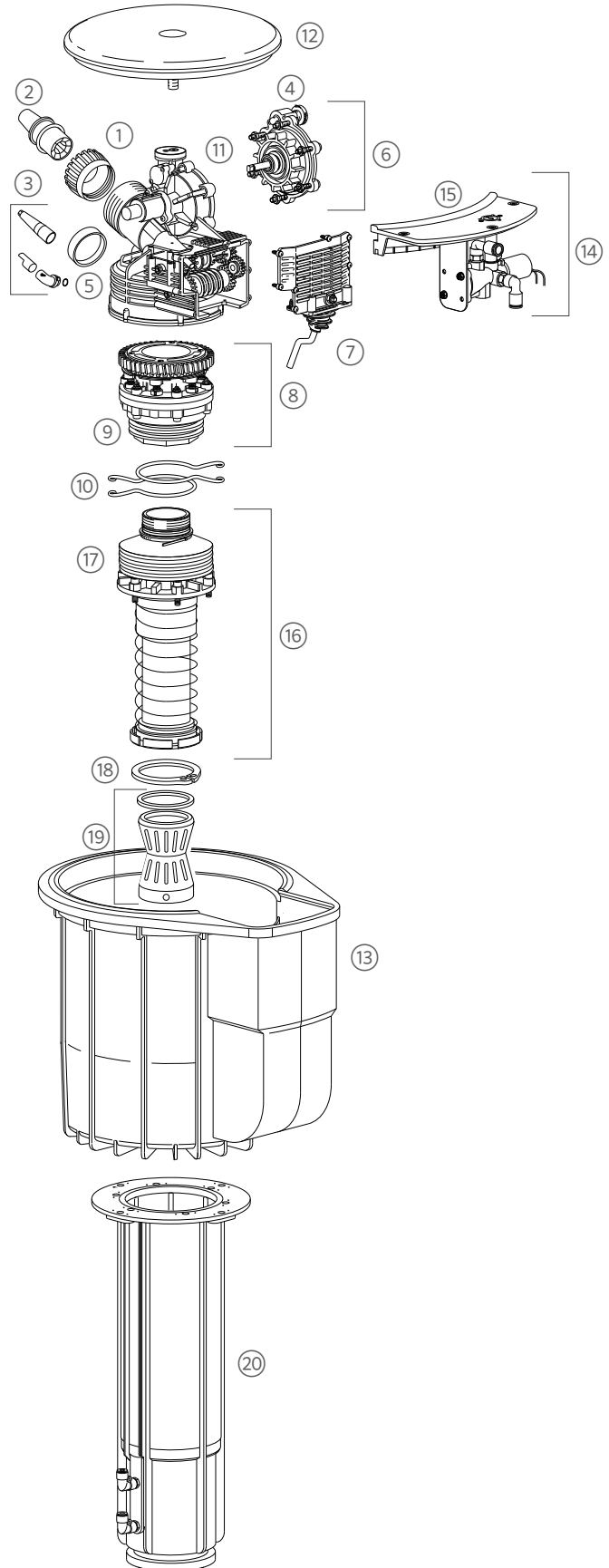
**Operating Specifications**

- Radius: 105' to 157'
- Flow: 92.4 to 259 GPM
- Operating pressure range: 60 to 120 PSI
- Speed of rotation: 80 seconds at 120 PSI



## Replacement Parts

ITEM	DESCRIPTION	CATALOG NO.
1	Primary Nozzle Retainer	502402SP
	#16	784800SP
	#18	784801SP
2	Primary Nozzle Kit	784802SP
	#20	784803SP
	#22	784803SP
	#24	784804SP
3	Secondary Nozzle Kit	10005900SP
	Female-threaded nozzle with elbow	10006100SP
	Male-threaded nozzle	
4	Speed Control Knob	510101SP
5	Gearbox Cover	502455
6	Turbine Assembly Kit	10006200SP
7	Reversing Kit	510164SP
8	Turret Inlet Kit	510167SP
9	Threaded Rotor Inlet	893600SP
10	Arc Rings (2)	205617SP
11	Gear Drive Assembly	881900SP
12	Rotor Cover Kit	204205SP
13	Upper Body Kit	10006300SP
14	Solenoid Actuator Kit	10006400SP
15	Actuator Cover	10006500SP
16	Riser Assembly	502436SP
17	Rubber Boot	502423
18	Snap Ring	10006600SP
19	Valve-in-Head with Stainless Steel Ring	10006700SP
20	Lower Body Kit	10006800SP
21	Gear Drive Insertion/Removal Tool	517600SP
22	Valve-in-Head Insertion/Removal Tool	10000100SP
23	Snap Ring Removal Tool	251000SP



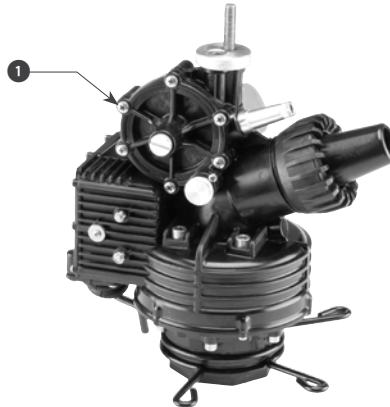
### A. Replacing the cover and rotor

1. Remove the center plug with a flat-blade screwdriver and unscrew the nut underneath. The lid will lift off.
2. Use the gear drive insertion/removal tool to unscrew the rotor from the piston.
3. The tool will grab onto the screws underneath the rotor.



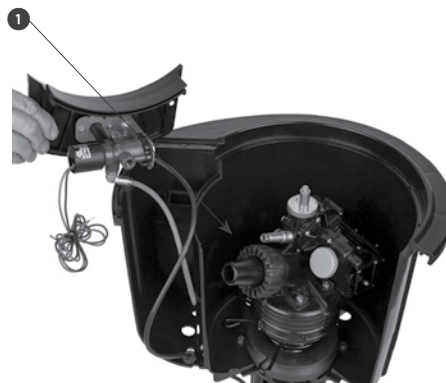
### B. Replacing the propeller

1. Remove the eight screws on the turbine housing (six large, two small). The propeller will pull out of the housing.



### C. Accessing the solenoid

1. Remove the three screws from the top of the solenoid housing. The housing lifts off.



### D. Part-circle and 360° operation

1. Lift up the cover. Set the arc adjustment rings to the desired arc (this can be done by hand).
2. Remove both adjustment rings completely to allow full 360° operation.



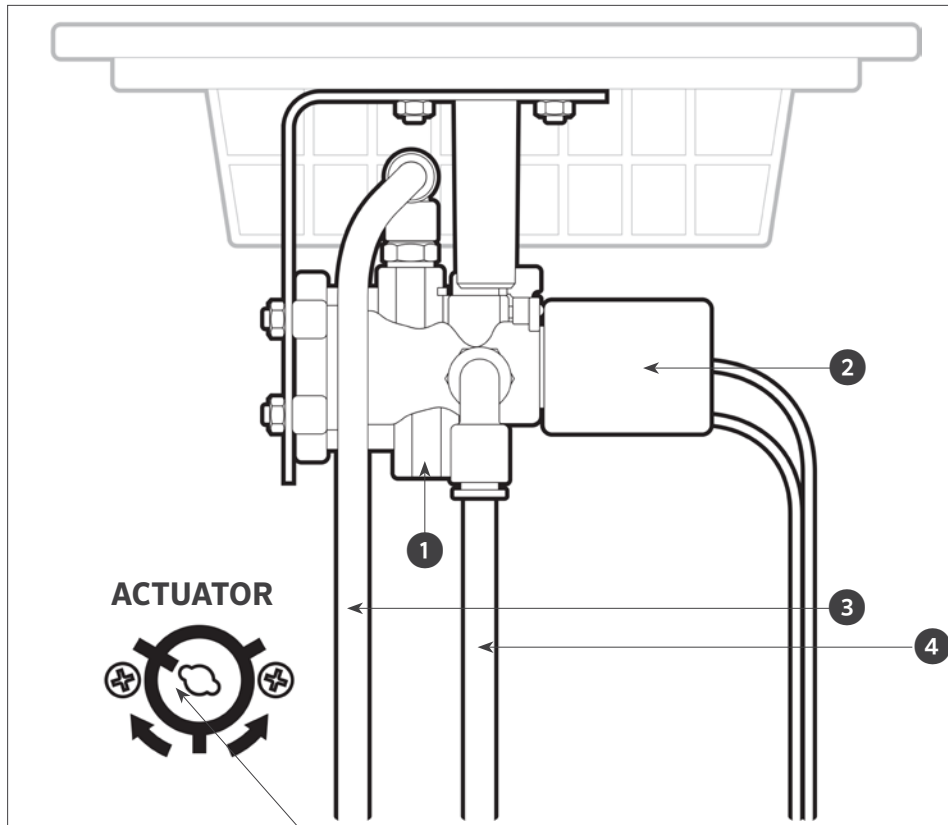
### E. Accessing the valve-in-head

Remove the rotor (see Step A). Remove the boot. Unscrew the six Allen bolts on the piston flange. Remove the piston.

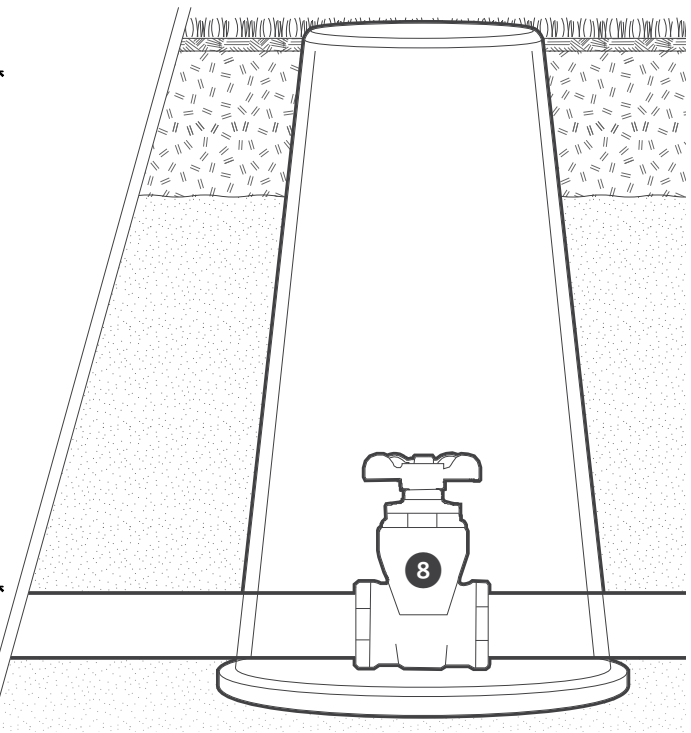
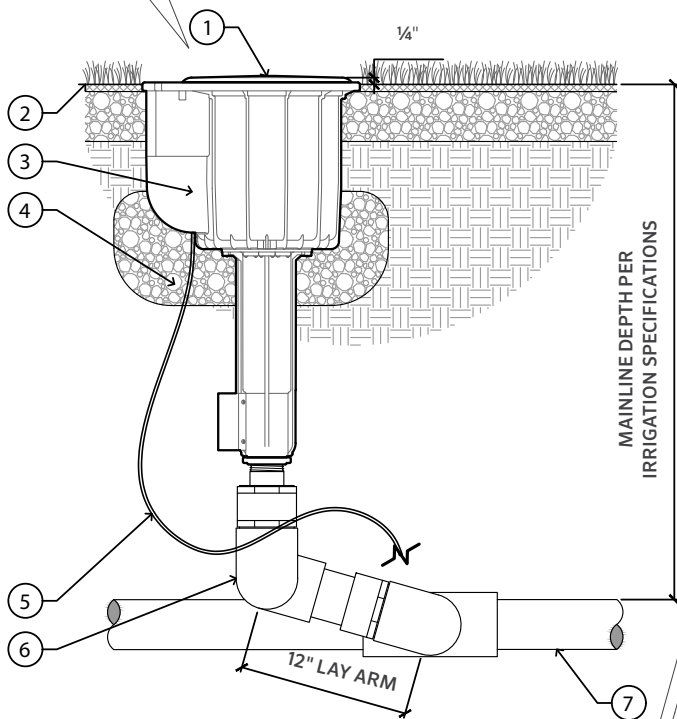
1. Remove the snap ring with the Snap Ring Removal Tool.
2. Remove the valve and stainless steel ring with the valve insertion/removal tool.



# Installation Guide



Use T-Handle Tool (P/N 319100SP) to operate solenoid actuator.



### SOLENOID COMPARTMENT DETAIL

- 1 Discharge port
- 2 Solenoid\*
- 3 Water line to filter (RED)
- 4 Water line to Valve-in-Head (BLUE)

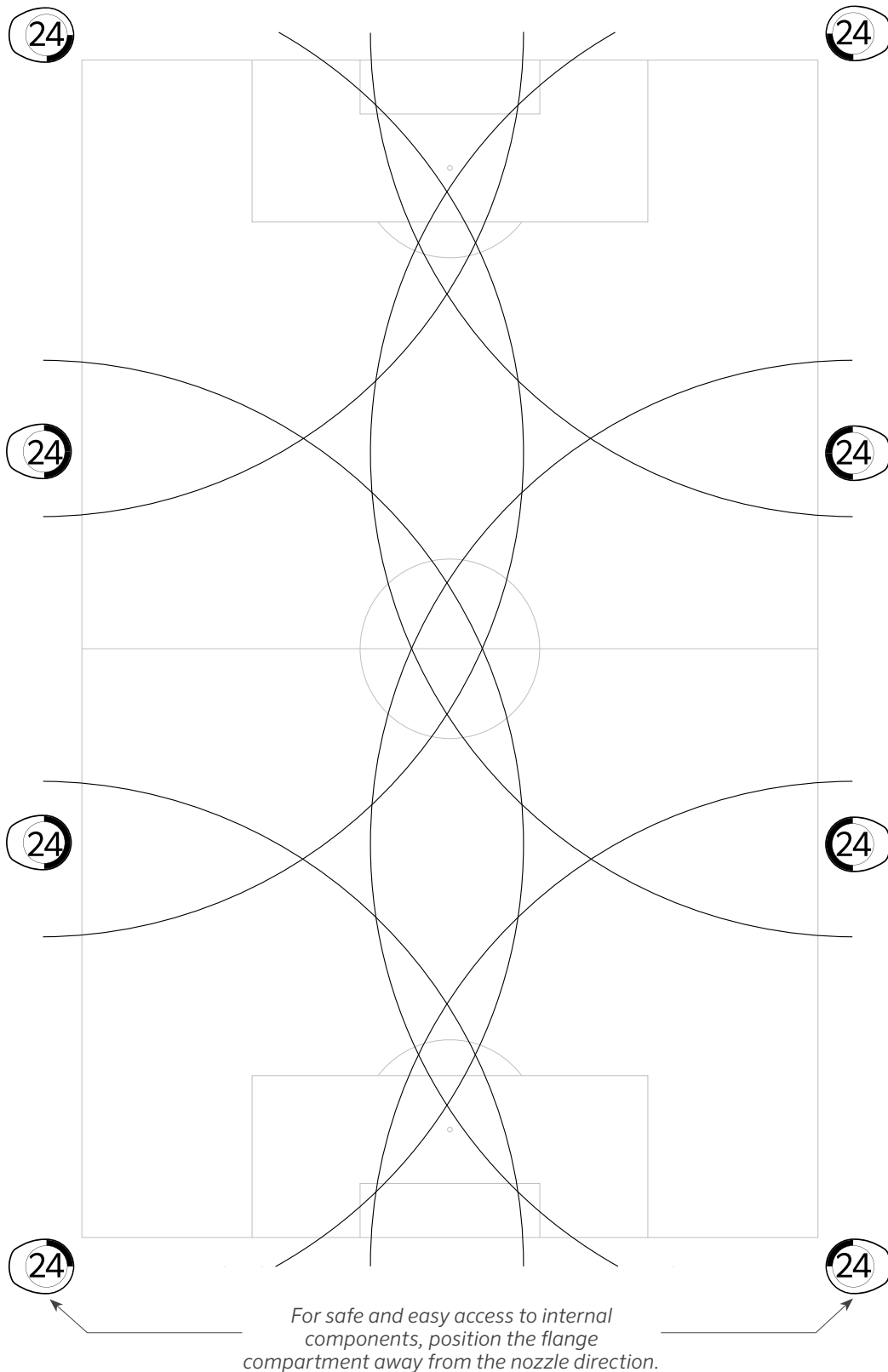
\* If connecting to a two-wire system, there is potential for miswiring the solenoid. Should your solenoid not fire during system startup, your first troubleshooting measure should be to swap the two solenoid wires.

### INSTALLATION DETAIL

- 1 **ST-1700-V** Synthetic Turf Rotor
- 2 Synthetic turf per plans
- 3 Decoder and Solenoid with waterproof connectors within compartment
- 4 Coarse rock for drainage
- 5 Hunter two-wire cable
- 6 Hunter HSJ-5-3-8-3-12 Swing Joint: 3" male NPT inlet with 2" male NPT outlet
- 7 Mainline and fittings

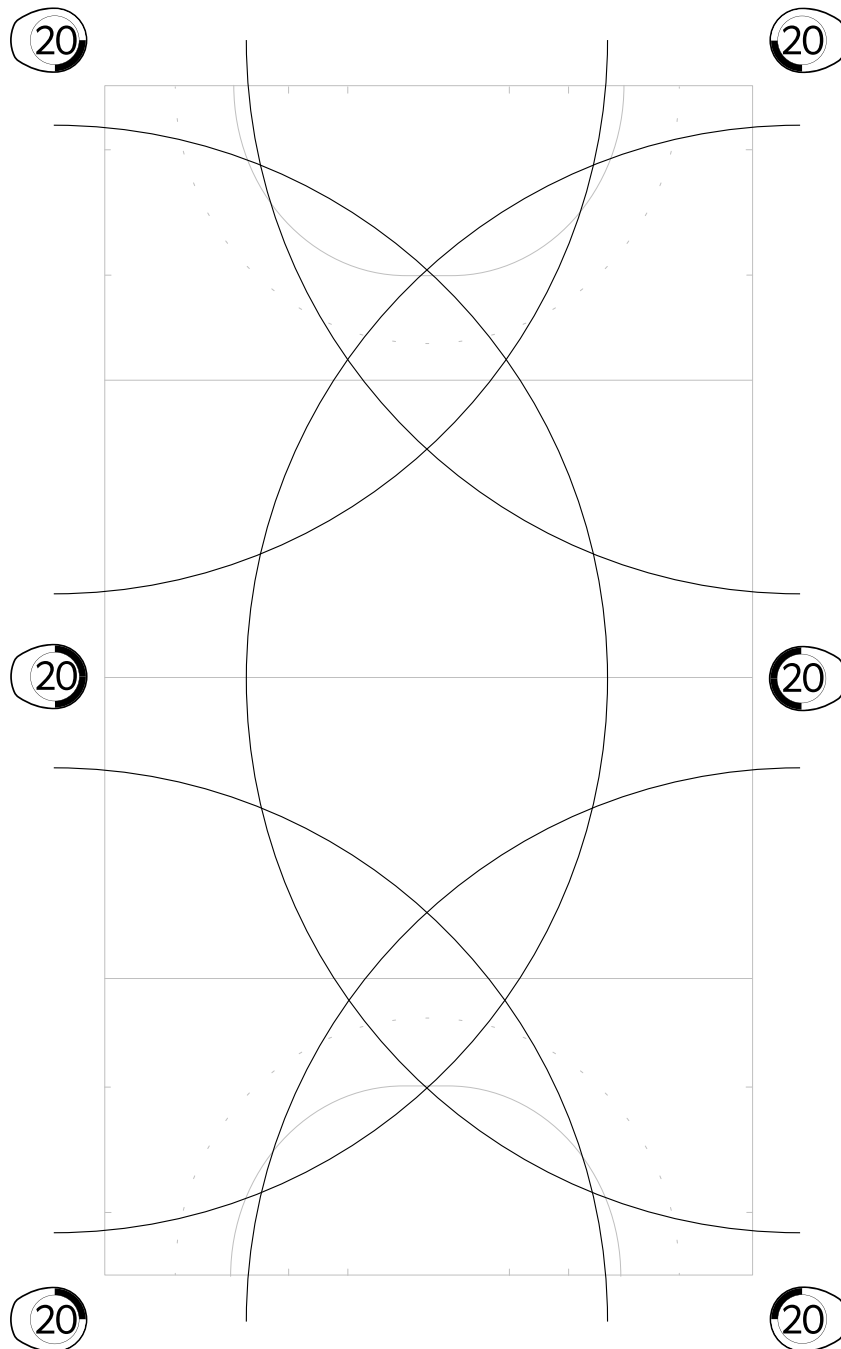
## Field Layouts

International soccer field, with a #24 nozzle installed, operating at 90 PSI





Field hockey field, with a #20 nozzle installed, operating at 100 PSI



*For safe and easy access to internal components, position the flange compartment away from the nozzle direction.*

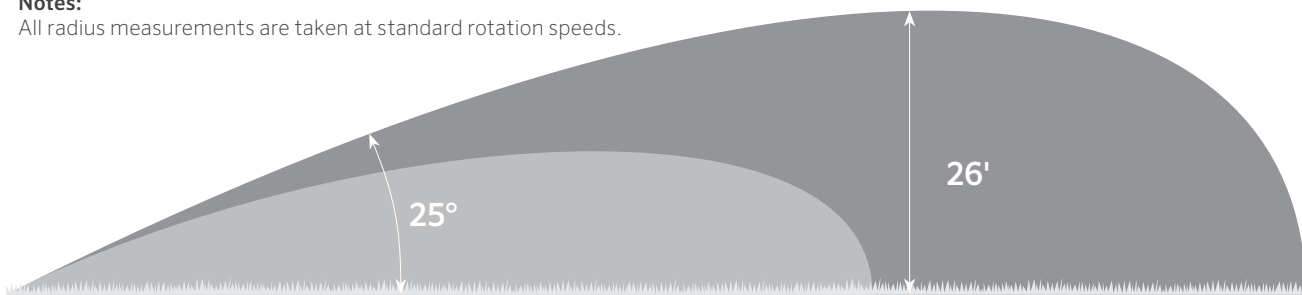
## ST-1700-V PERFORMANCE CHART (IMPERIAL)

Nozzle	Pressure	Radius ft	Flow GPM	Precipitation in/hr*	
	PSI			■	▲
<b>16</b>	60	105	92.4	1.61	1.86
	70	114	100.0	1.48	1.71
	90	120	114.0	1.52	1.76
	100	126	124.0	1.50	1.74
	115	130	134.1	1.53	1.76
<b>18</b>	60	111	107.0	1.67	1.93
	70	119	115.0	1.56	1.81
	90	126	127.0	1.54	1.78
	100	131	137.0	1.54	1.77
	115	137	148.9	1.53	1.76
<b>20</b>	60	114	134.1	1.99	2.29
	70	127	151.0	1.80	2.08
	90	135	164.0	1.73	2.00
	100	141	180.0	1.74	2.01
	115	146	193.7	1.75	2.02
<b>22</b>	60	115	153.7	2.24	2.58
	70	127	174.0	2.08	2.40
	90	141	189.0	1.83	2.11
	100	149	206.0	1.79	2.06
	115	154	222.2	1.80	2.08
<b>24</b>	60	121	177.2	2.33	2.69
	70	132	201.0	2.22	2.56
	90	144	222.0	2.06	2.38
	100	154	240.0	1.95	2.25
	115	157	259.0	2.02	2.34

\* Precipitation rates are shown with head-to-head coverage.

**Notes:**

All radius measurements are taken at standard rotation speeds.



<b>Nozzle 16</b>	105'	130'
<b>Nozzle 18</b>	111'	137'
<b>Nozzle 20</b>	114'	146'
<b>Nozzle 22</b>	115'	154'
<b>Nozzle 24</b>	121'	157'



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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.



**Denise Mullikin, President,  
Landscape Irrigation and Outdoor Lighting**

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