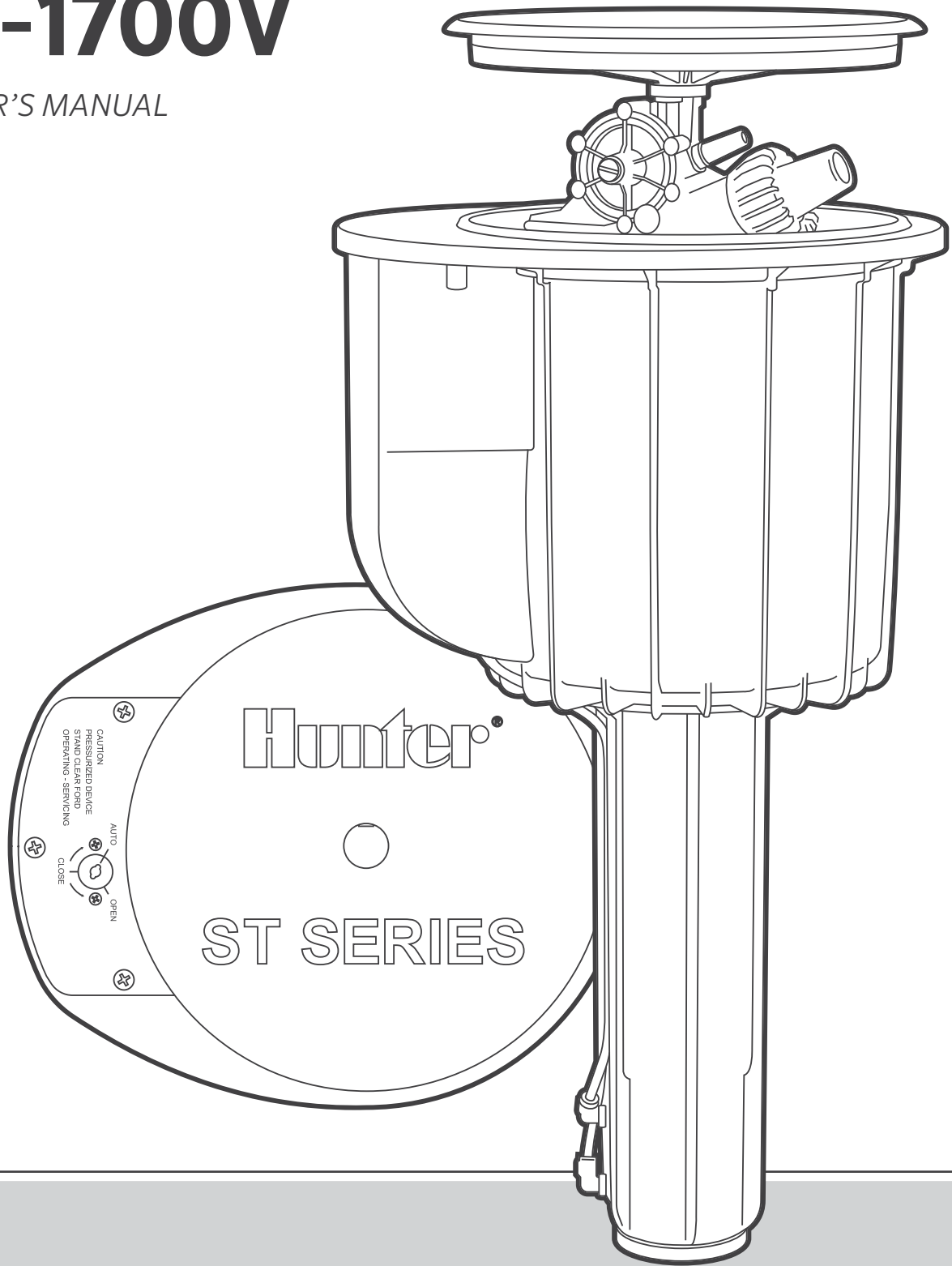


ST-1700V

OWNER'S MANUAL



ST-1700V
Long-Range Synthetic Turf Rotor

Hunter[®]

Overview

Hunter's synthetic turf rotors are designed to cool, clean, and flush synthetic sports fields. The ST-1700V 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 rotor, the ST-1700V provides years of reliable operation.

Valve-in-Head

The Valve-in-Head design integrates the control valve, solenoid, and manual On-Off-Auto detector 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 165' (48 m) 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

Troubleshooting

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



 hunter.direct/st1700vhelphelp

 +1 760-591-7383

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 plugged secondary nozzle.
2. Check for a blocked propeller in 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.

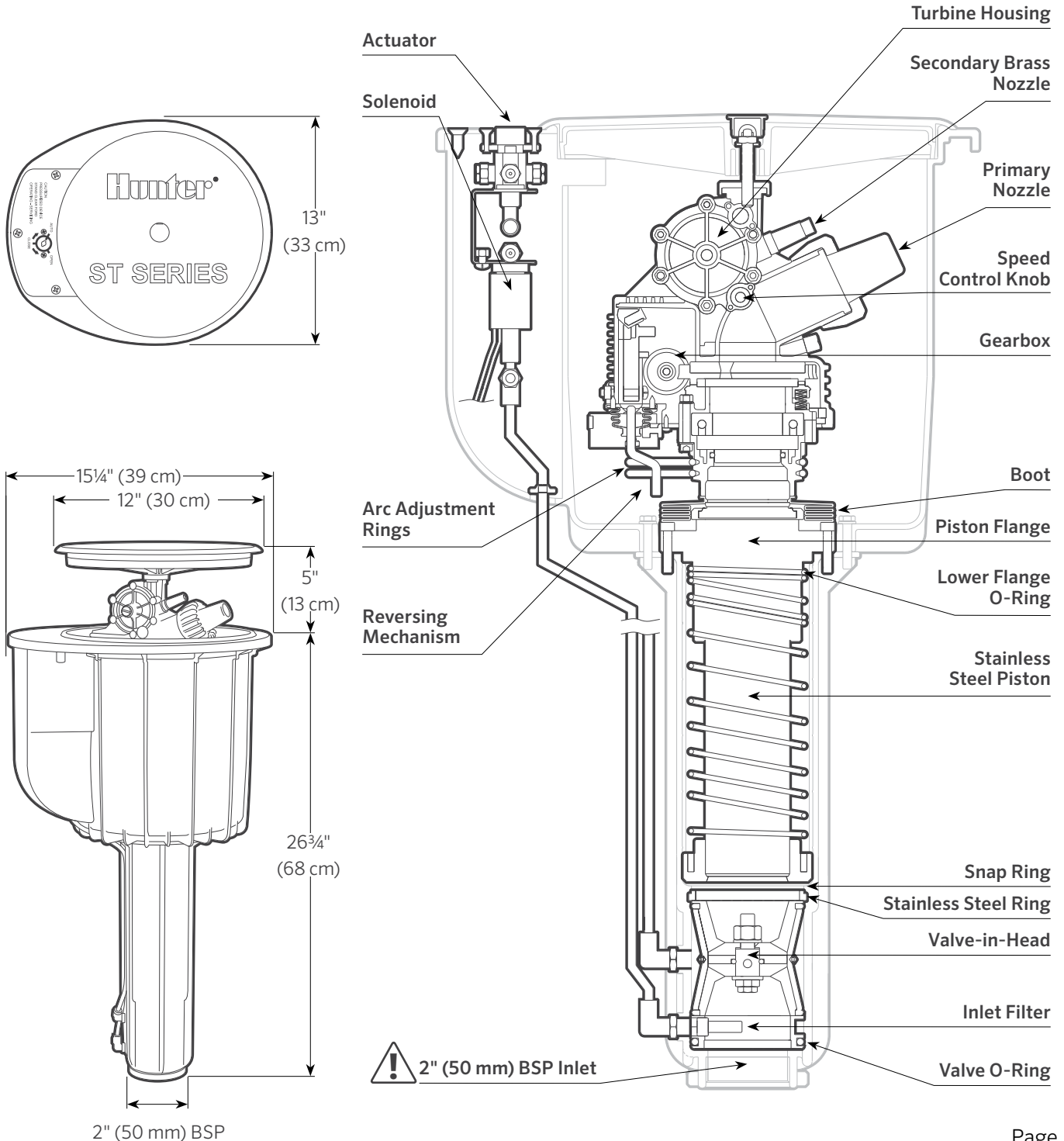
Product Dimensions

- Overall height: 26¾" (68 cm)
- Pop-up height: 5" (13 cm)
- Exposed diameter: 13" x 15¼" (33 cm x 39 cm)
- Inlet size: 2" (50 mm) BSP*

 *Use P/N 241400SP adapter to 2" (50 mm) PVC pipe if needed.

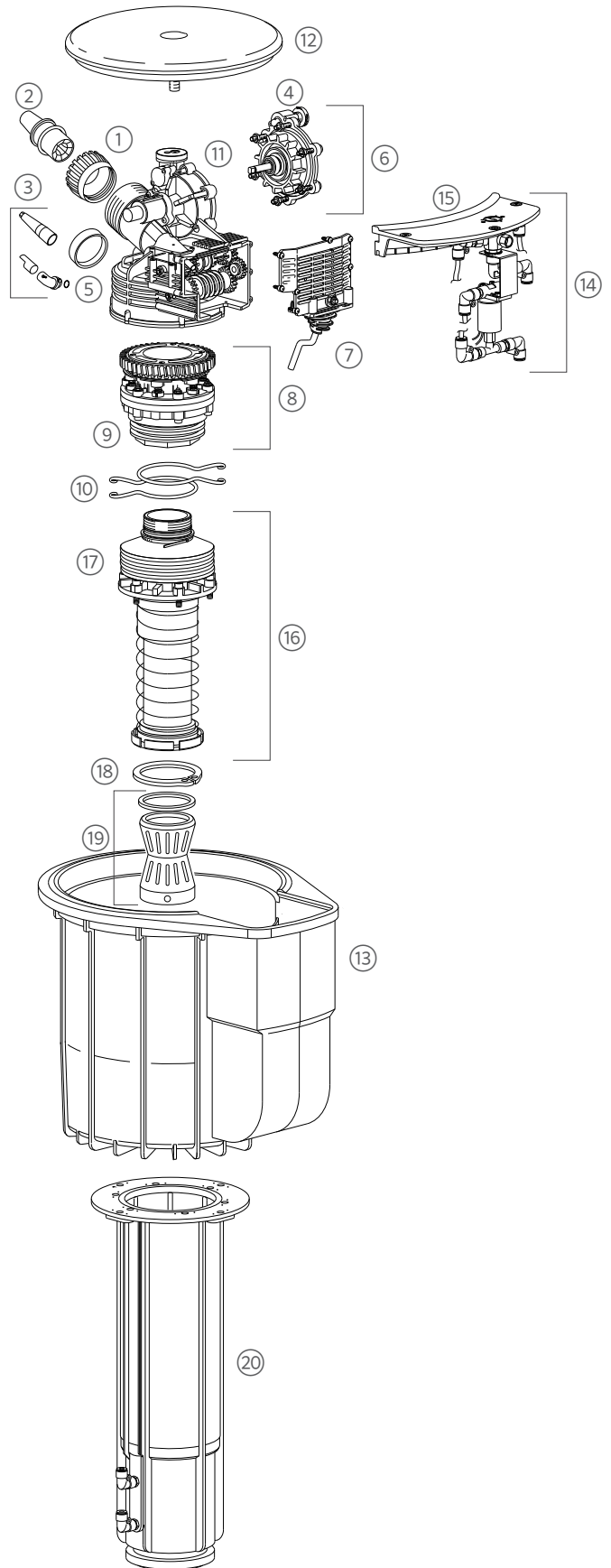
Operating Specifications

- Radius: 105' to 157' (32 to 48 m)
- Flow: 92.4 to 259 GPM (21.0 to 58.8 m³/hr; 350 to 980 l/min)
- Operating pressure range: 60 to 120 PSI (4.0 to 8.0 bar; 400 to 800 kPa)
- Speed of rotation: 80 seconds at 120 PSI (6 bar; 600 kPa) in a single 180° sweep



Replacement Parts

ITEM	DESCRIPTION	CATALOG NO.
1	Primary Nozzle Retainer	502402SP
	#16	784800SP
	#18	784801SP
2	Primary Nozzle Kit	#20 784802SP
	#22	784803SP
	#24	784804SP
3	Secondary Nozzle Kit	Female-threaded nozzle with elbow 10005900SP
		Male-threaded nozzle 10006100SP
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



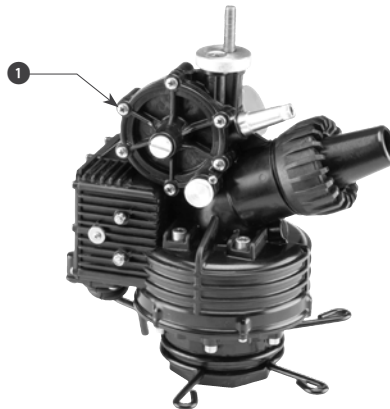
A. Replacing the cover and rotor

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.



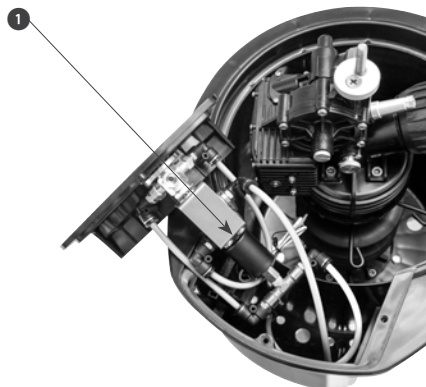
B. Replacing the propeller

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.



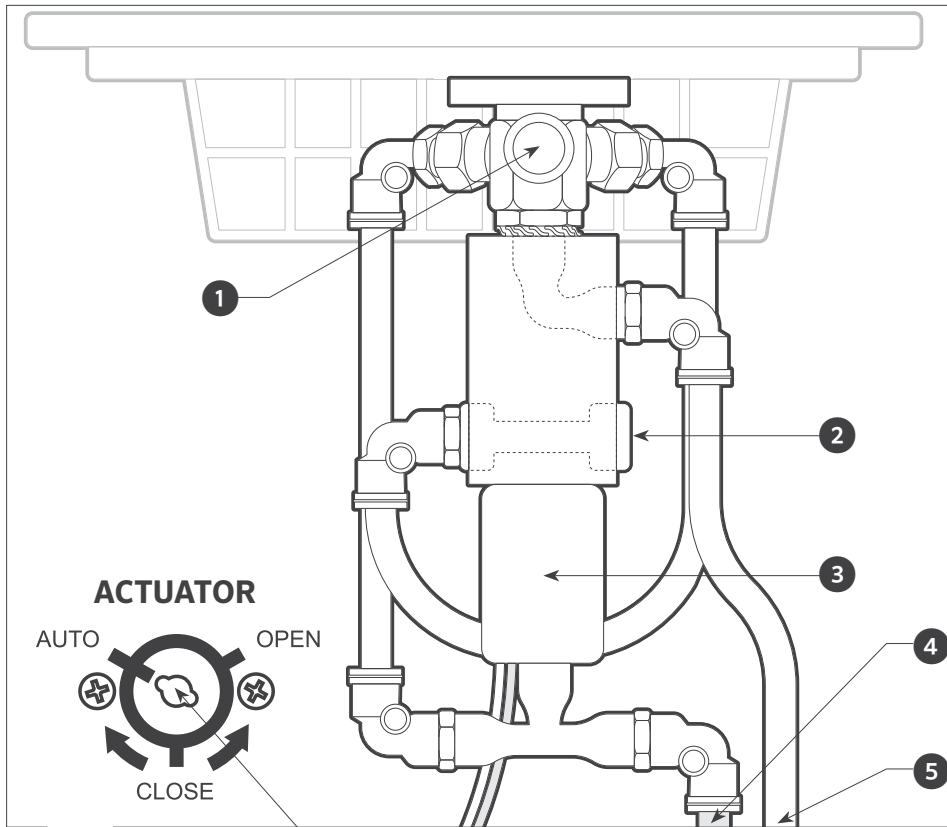
E. Accessing the valve-in-head

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

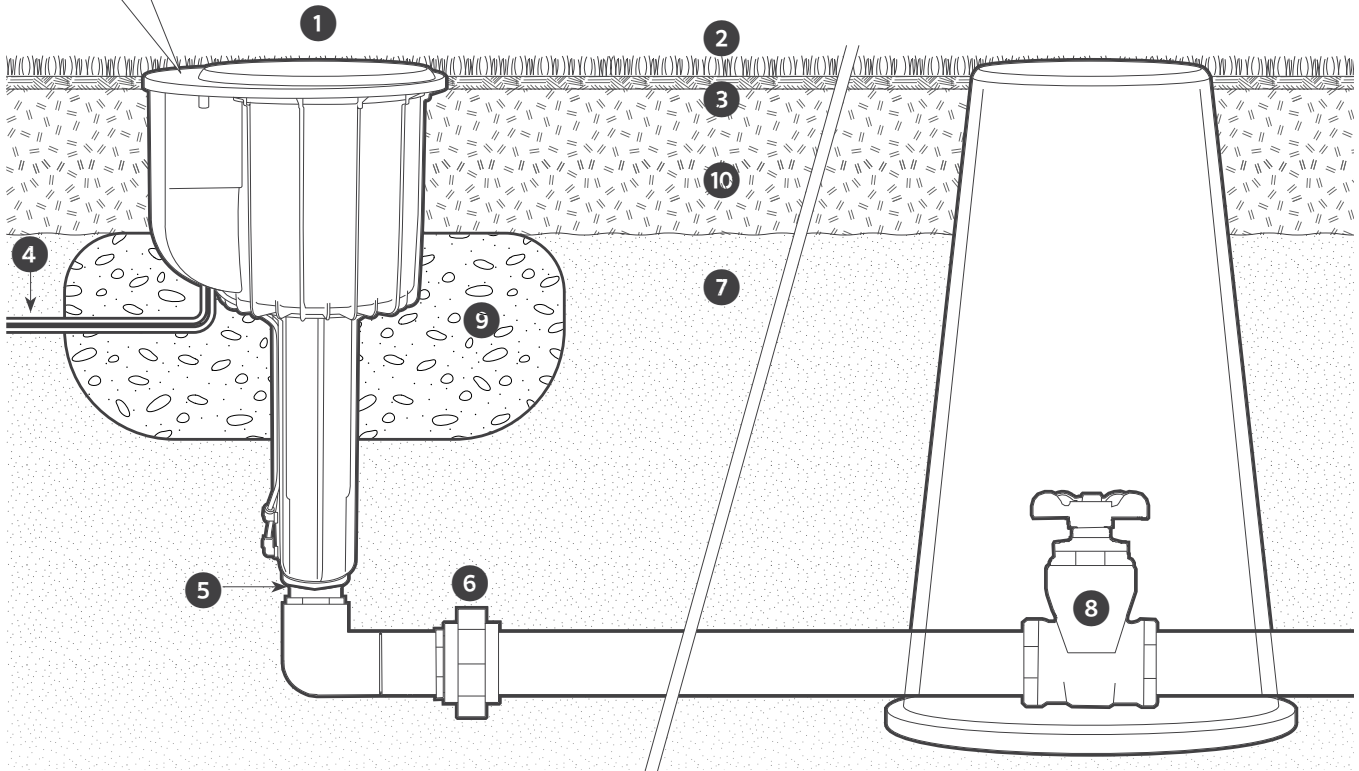
1. Remove the snap ring with the snap ring removal tool.
2. Remove the valve with the valve insertion/removal tool.



Installation Guide



Use "T" handle tool (P/N 319100SP) to operate solenoid actuator.



SOLENOID COMPARTMENT DETAIL

- 1 Discharge port (**OPEN**)
- 2 Discharge port (**AUTO**)
- 3 Solenoid*
- 4 Water line to filter
- 5 Water line to valve-in-head

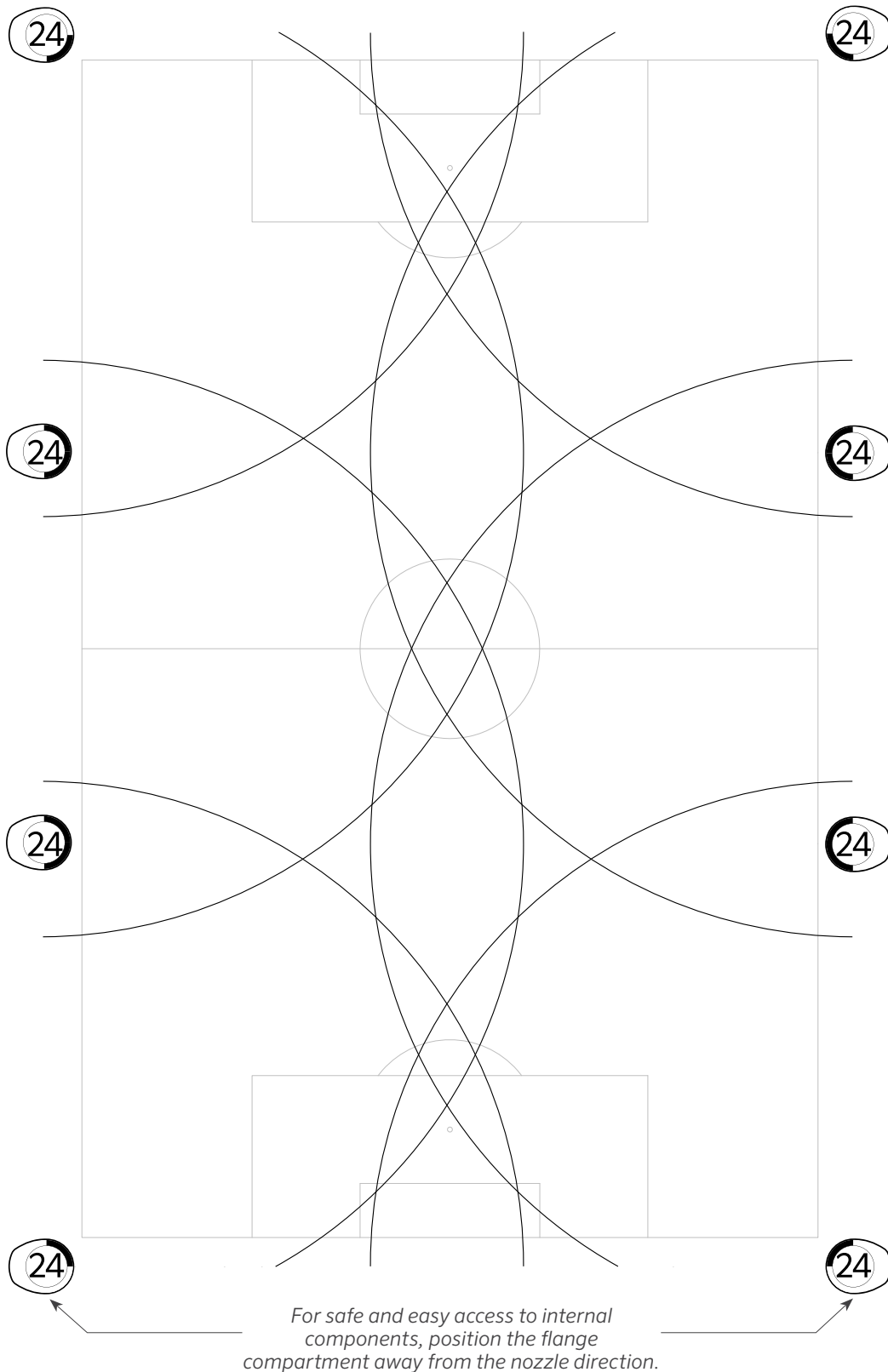
* If connecting to a two-wire system, there is potential for miswiring the solenoid. Should your solenoid not fire during system start-up, your first troubleshooting measure should be to swap the two solenoid wires.

INSTALLATION DETAIL

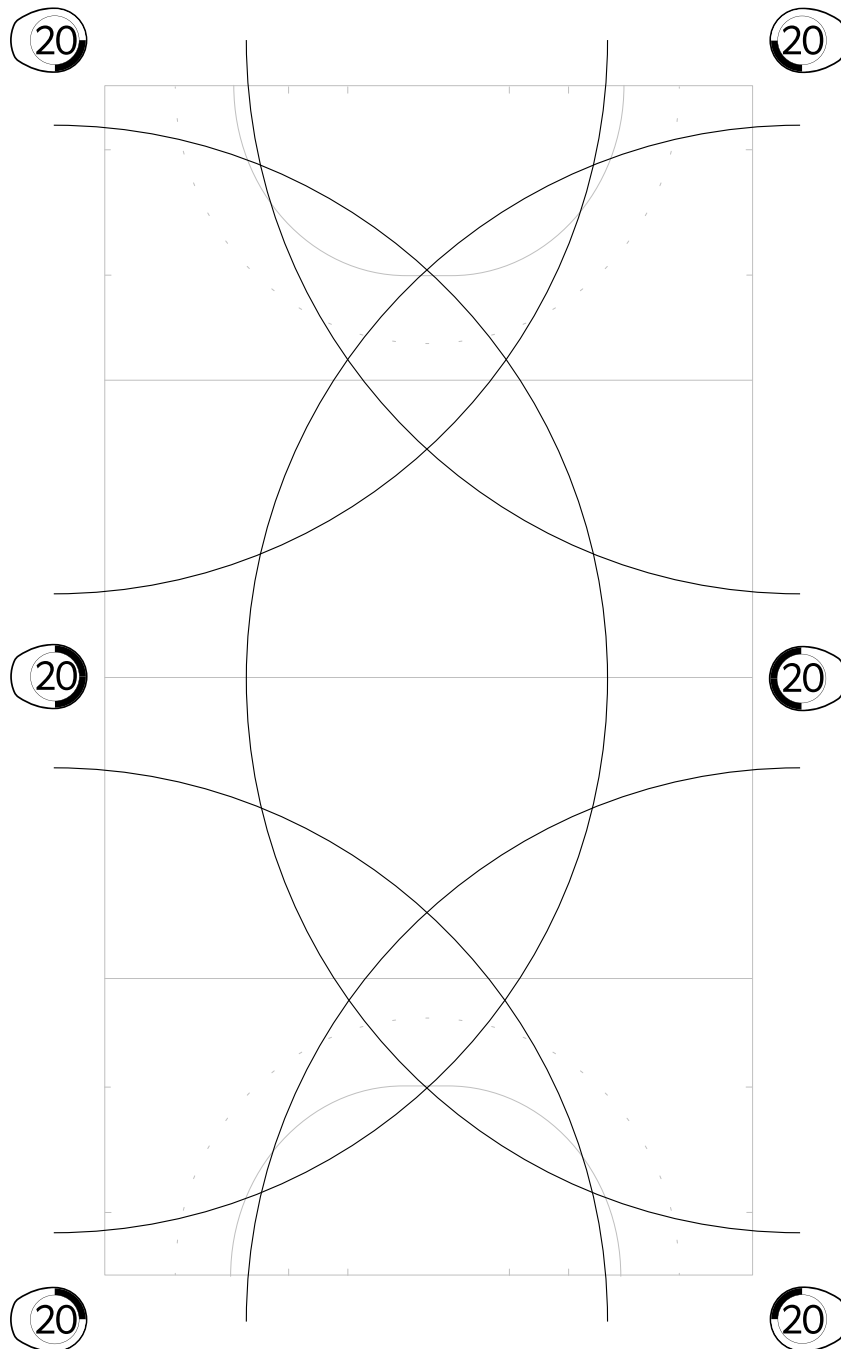
- 1 **ST-1700V** synthetic turf rotor
- 2 Synthetic turf per plan
- 3 Aggregate base per plan
- 4 Control wire to solenoid
- 5 2" (50 mm) BSP connection
- 6 Union fitting per plan
- 7 Compacted substrate
- 8 Optional isolation valve
- 9 Coarse rock for drainage
- 10 Compacted soil where applicable

Field Layouts

International soccer pitch, with a #24 nozzle installed, operating at 90 PSI (6.0 bar; 600 kPa)



Field hockey field, with a #20 nozzle installed, operating at 100 PSI (7.0 bar; 700 kPa)



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

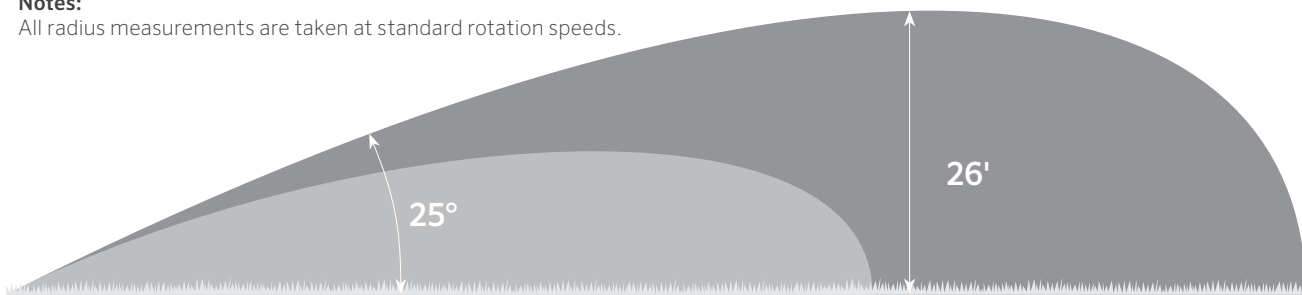
ST-1700V PERFORMANCE CHART (IMPERIAL)

Nozzle	Pressure	Radius	Flow	Precipitation in/hr*	
	PSI	ft	GPM	■	▲
16	60	105	92.4	1.61	1.86
	70	114	100	1.48	1.71
	90	120	114	1.52	1.76
	100	126	124	1.50	1.74
	115	130	134.1	1.53	1.76
18	60	111	107	1.67	1.93
	70	119	115	1.56	1.81
	90	126	127	1.54	1.78
	100	131	137	1.54	1.77
	115	137	148.9	1.53	1.76
20	60	114	134.1	1.99	2.29
	70	127	151	1.80	2.08
	90	135	164	1.73	2.00
	100	141	180	1.74	2.01
	115	146	193.7	1.75	2.02
22	60	115	153.7	2.24	2.58
	70	127	174	2.08	2.40
	90	141	189	1.83	2.11
	100	149	206	1.79	2.06
	115	154	222.2	1.80	2.08
24	60	121	177.2	2.33	2.69
	70	132	201	2.22	2.56
	90	144	222	2.06	2.38
	100	154	240	1.95	2.25
	115	157	259	2.02	2.34

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

Notes:

All radius measurements are taken at standard rotation speeds.



Nozzle #16	105'	130'
Nozzle #18	111'	137'
Nozzle #20	114'	146'
Nozzle #22	115'	154'
Nozzle #24	121'	157'

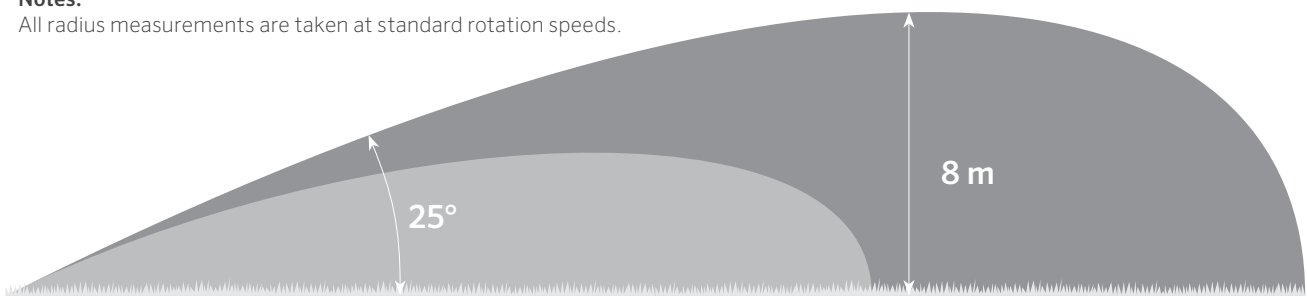
ST-1700V PERFORMANCE CHART (METRIC)

Nozzle	Pressure		Radius m	Flow		Precipitation mm/hr*	
	Bar	kPa		m ³ /hr	l/min	■	▲
16	4	400	32.0	21.0	350	41.0	47.3
	5	500	35.0	22.7	379	37.1	42.8
	6	600	37.0	25.9	432	37.8	43.7
	7	700	38.5	28.1	469	38.0	43.9
	8	800	40.0	30.4	508	38.1	43.9
18	4	400	34.0	24.3	405	42.0	48.5
	5	500	36.5	26.1	435	39.2	45.3
	6	600	38.5	28.8	481	38.9	44.9
	7	700	40.0	31.1	519	38.9	44.9
	8	800	42.0	33.8	564	38.3	44.3
20	4	400	35.0	30.4	508	49.7	57.4
	5	500	39.0	34.3	572	45.1	52.0
	6	600	41.0	37.2	621	44.3	51.1
	7	700	43.0	40.9	681	44.2	51.0
	8	800	45.0	44.0	733	43.4	50.1
22	4	400	35.5	34.9	582	55.4	63.9
	5	500	39.0	39.5	659	51.9	60.0
	6	600	43.0	42.9	715	46.4	53.6
	7	700	45.5	46.8	780	45.2	52.2
	8	800	47.0	50.4	841	45.7	52.7
24	4	400	37.0	40.2	671	58.8	67.9
	5	500	40.5	45.6	761	55.6	64.2
	6	600	44.0	50.4	840	52.1	60.1
	7	700	47.0	54.5	908	49.3	57.0
	8	800	48.0	58.8	980	51.0	58.9

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

Notes:

All radius measurements are taken at standard rotation speeds.



Nozzle #16	32 m	40 m
Nozzle #18	34 m	42 m
Nozzle #20	35 m	45 m
Nozzle #22	35.5 m	47 m
Nozzle #24	37 m	48 m

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