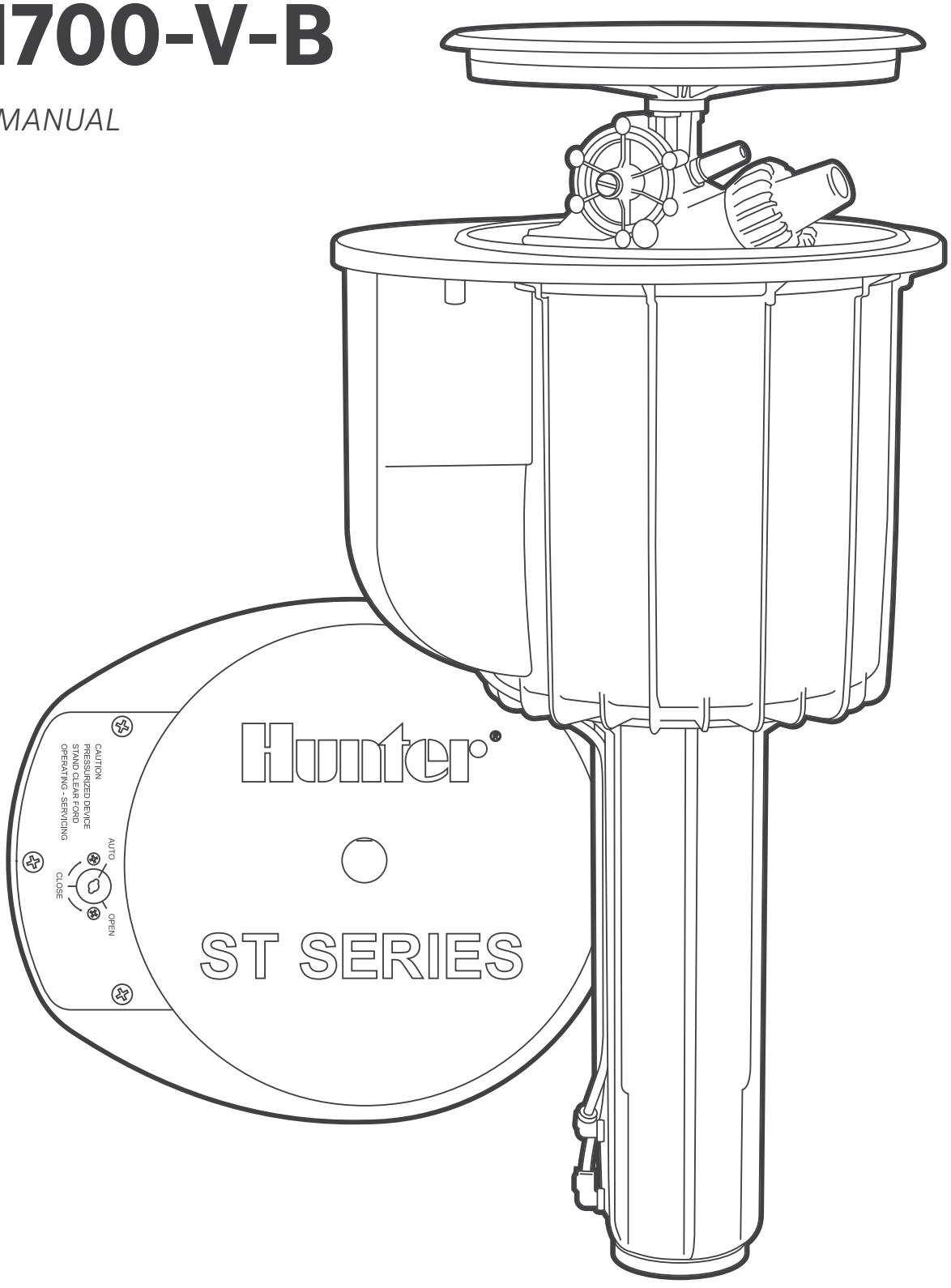
ST-1700-V-B

OWNER'S MANUAL



ST-1700-V-B
Long-Range Synthetic Turf Rotor

Hunter®

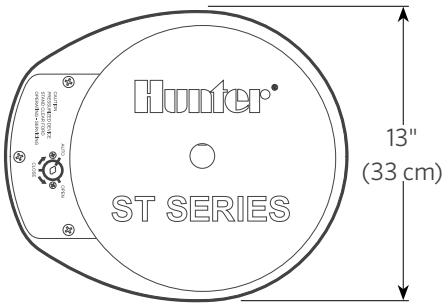
Product Dimensions

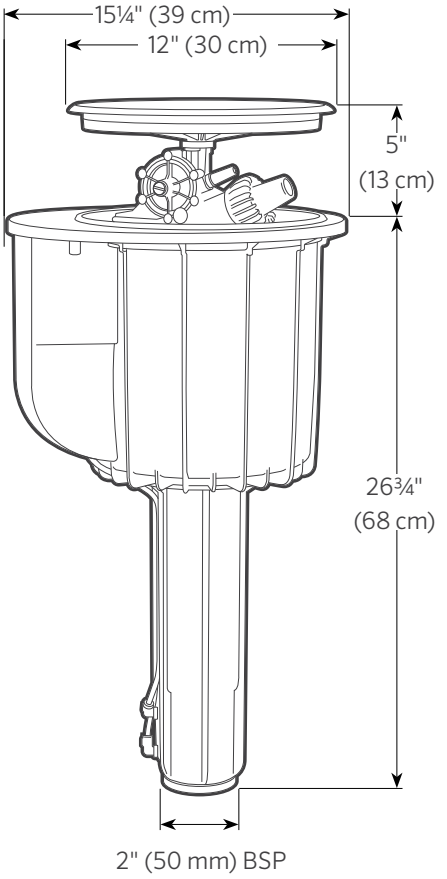
- Overall height: 26¾" (68 cm)
- Pop-up height: 5" (13 cm)
- Exposed diameter: 13" x 15¼" (33 cm x 39 cm)
- Inlet size: 2" (50 mm) BSP*

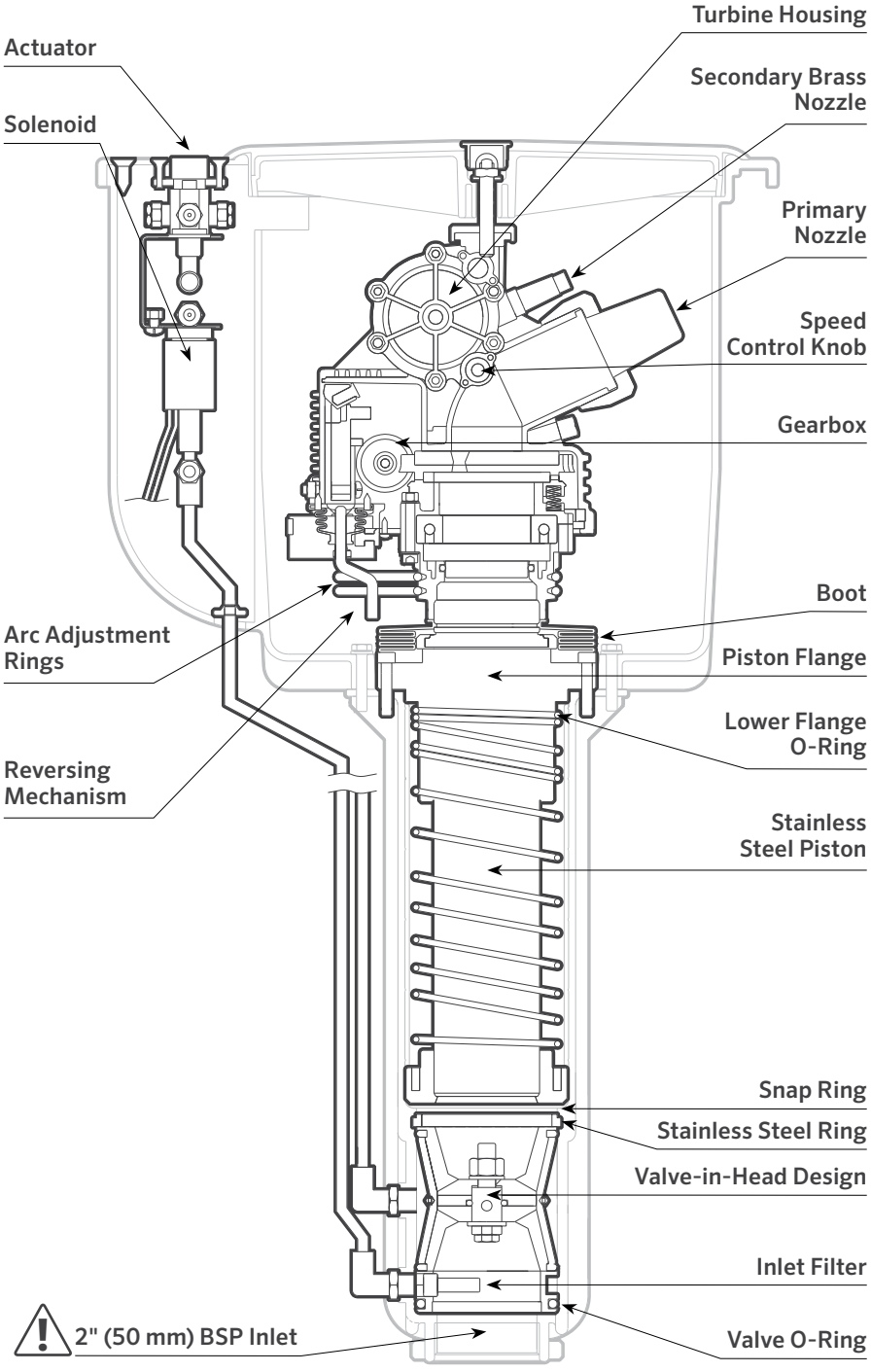
**Use P/N 241400SP adapter to 2" (50 mm) PVC pipe if needed.*

Operating Specifications

- Radius: 105' to 157' (32 to 48 m)
- Flow: 92.4 to 259 GPM (21.0 to 58.8 m^3/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







Overview

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

Valve-in-Head Design

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 165' (48 m) with five nozzles 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.help/ST1700V

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

If rotor does not rotate after installation:

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

If rotor does not operate after connecting to a decoder system:

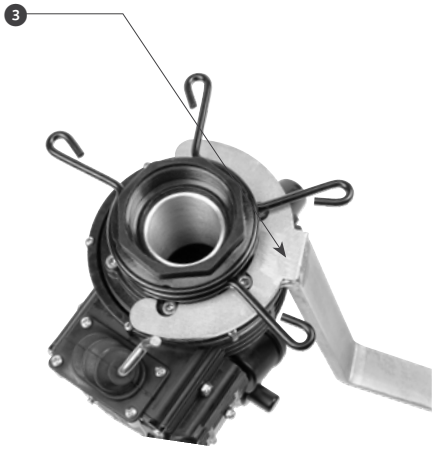
1. Check for proper wire connections.
2. Switch the two solenoid wires.

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 people, animals, power lines, roads, or other objects.

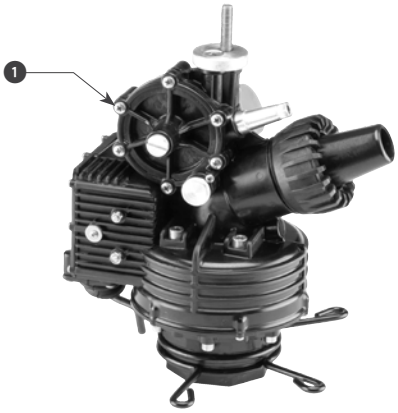
A. Replacing the cover and rotor

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.



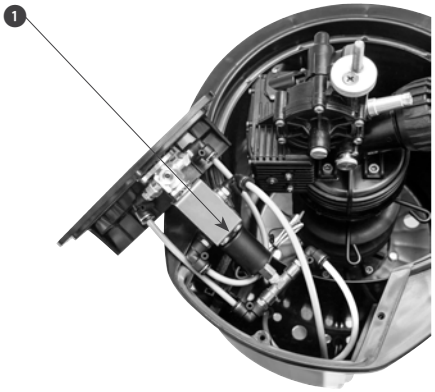
B. Replacing the propeller

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 will lift off.



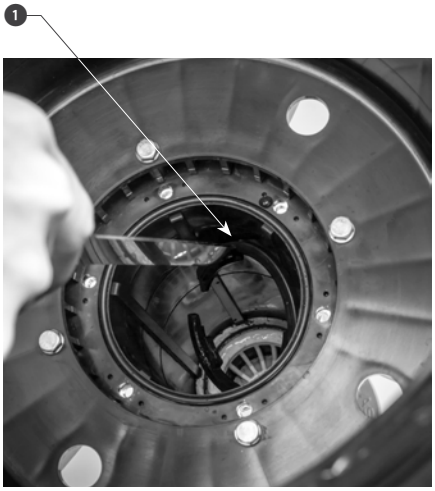
D. Part-circle and 360° operation

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

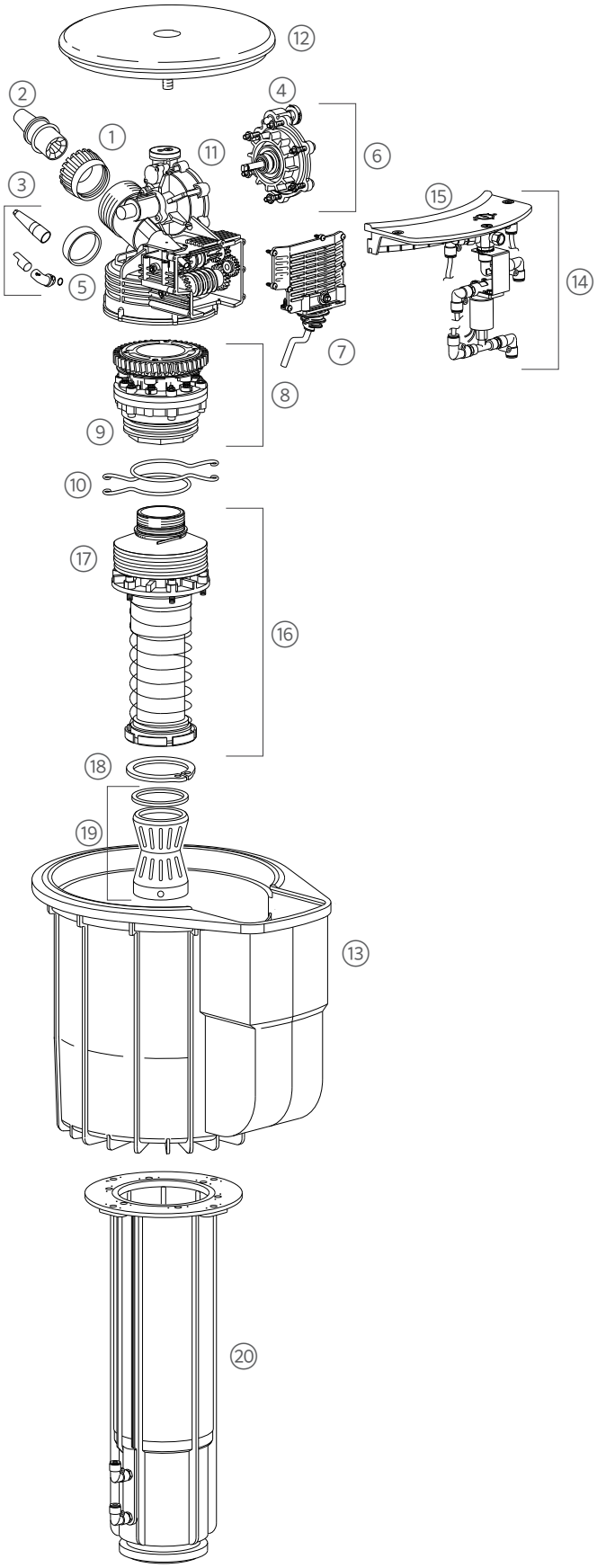
Remove the rotor (see Step A). Remove the boot. Unscrew the six Allen bolts on the piston flange. Remove the piston.

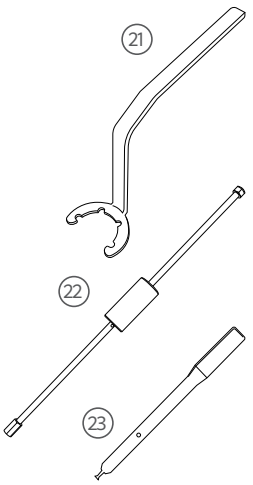
1. Remove the snap ring with the Snap Ring Removal Tool.
2. Remove the valve with the Valve Insertion/Removal Tool.



Replacement Parts

ITEM	DESCRIPTION		CATALOG NO.
1	Primary Nozzle Retainer		502402SP
2	Primary Nozzle Kit	16	784800SP
		18	784801SP
		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

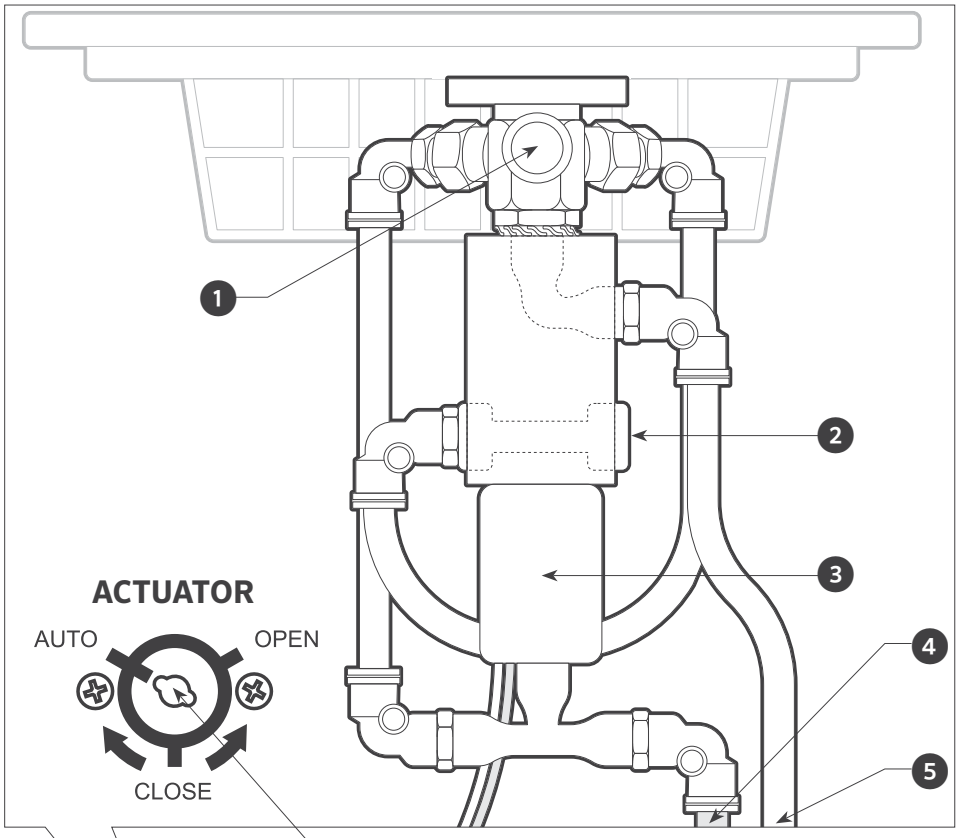




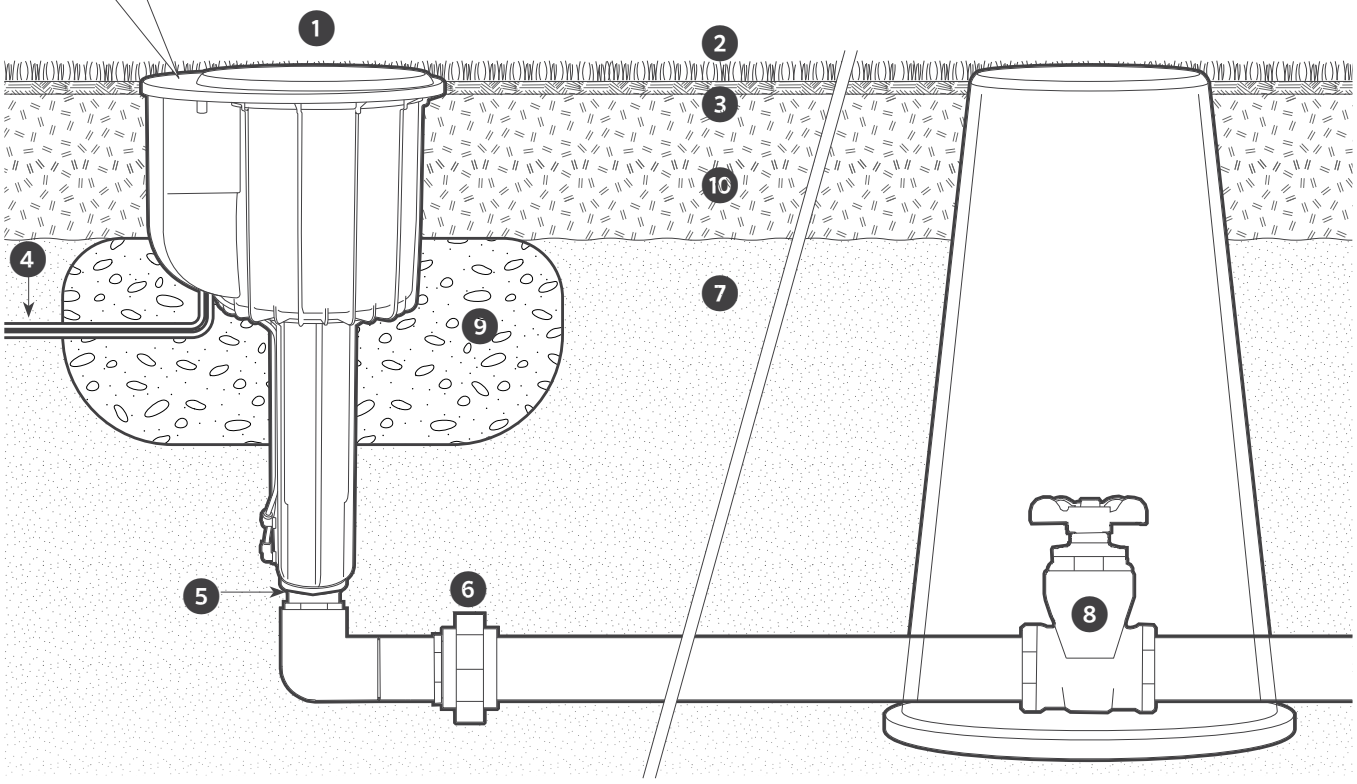
SOLENOID COMPARTMENT DETAIL	
1	Discharge port (**OPEN**)
2	Discharge port (**AUTO**)
3	Solenoid*
4	Water line to filter
5	Water line to Valve-in-Head

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

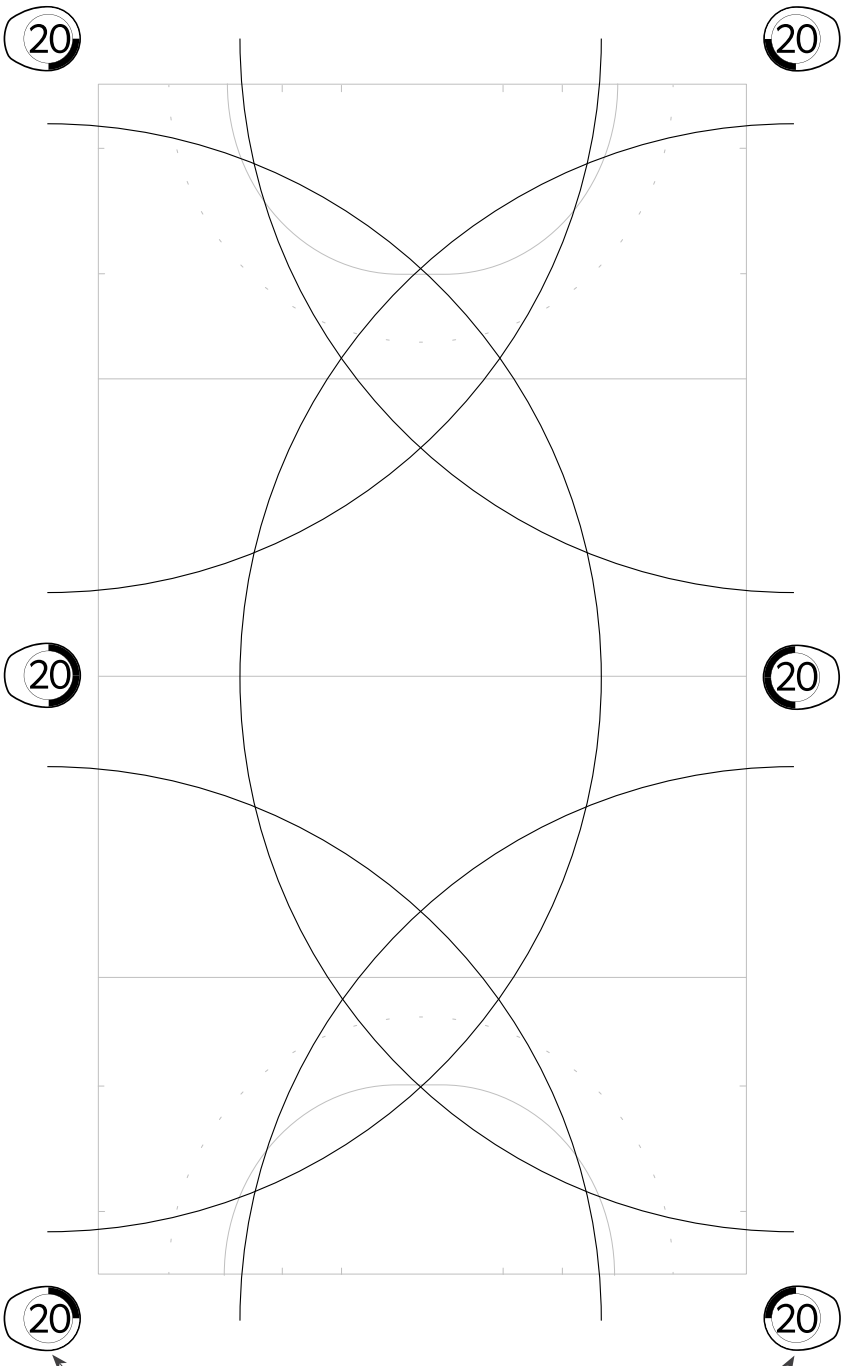
INSTALLATION DETAILS	
1	**ST-1700-V-B** Synthetic Turf Rotor
2	Synthetic turf per plan
3	Aggregate base per plan
4	Control wire to solenoid
5	2" (50 mm) BSP connection
6	Union fitting per plan
7	Compacted substrate
8	Optional isolation valve
9	Coarse rock for drainage
10	Compacted soil where applicable



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



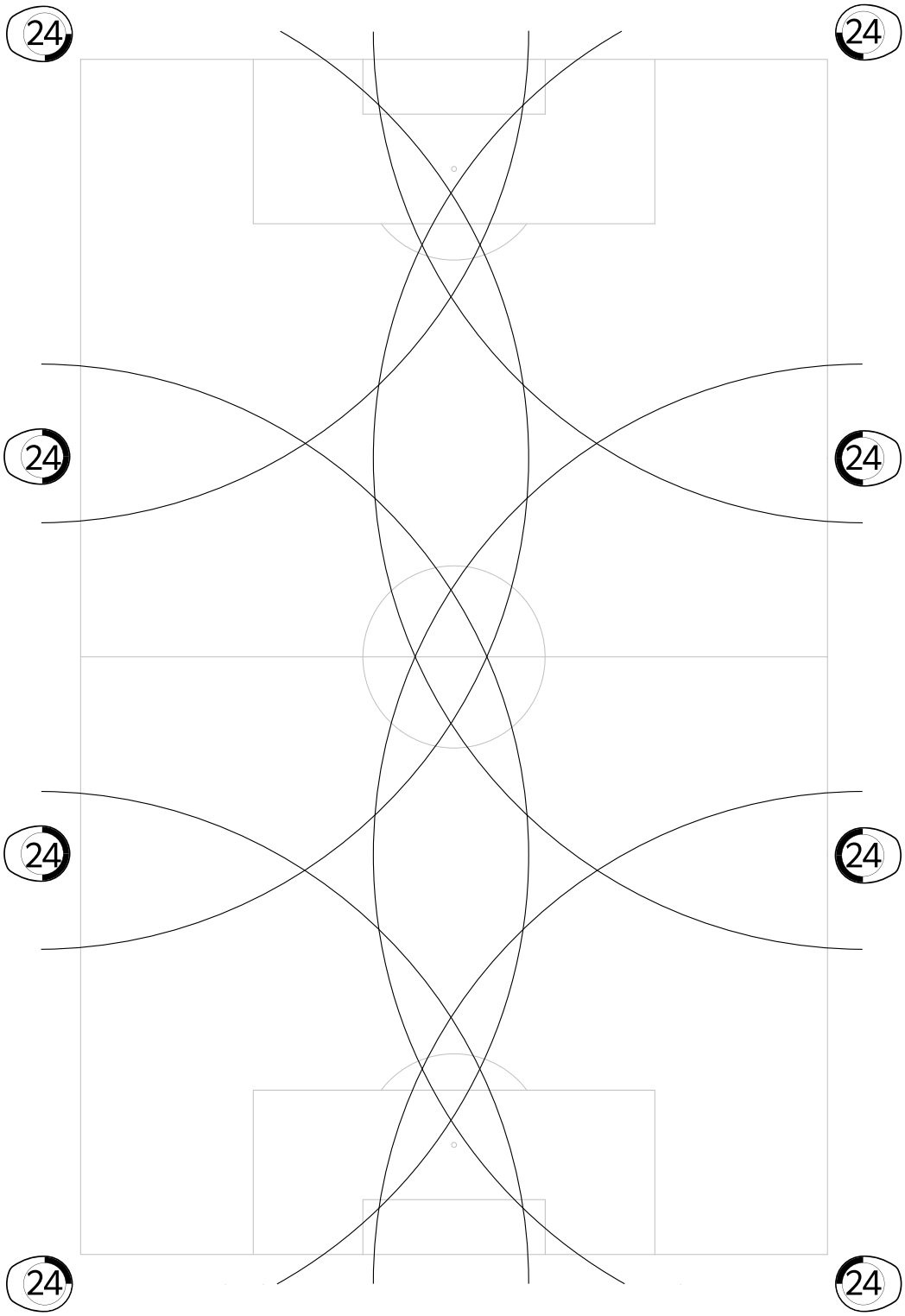
Field hockey field with a 20 nozzle installed, operating at 100 PSI (7.0 bar; 700 kPa)



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

Field Layouts

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



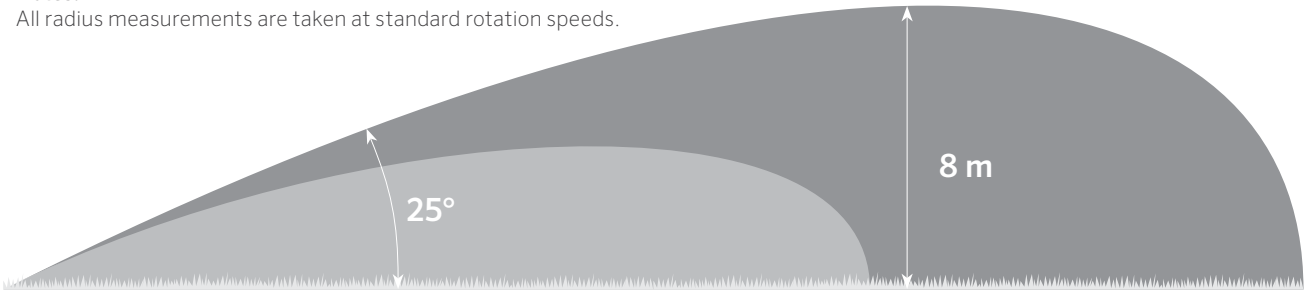
ST-1700-V-B PERFORMANCE CHART (METRIC)

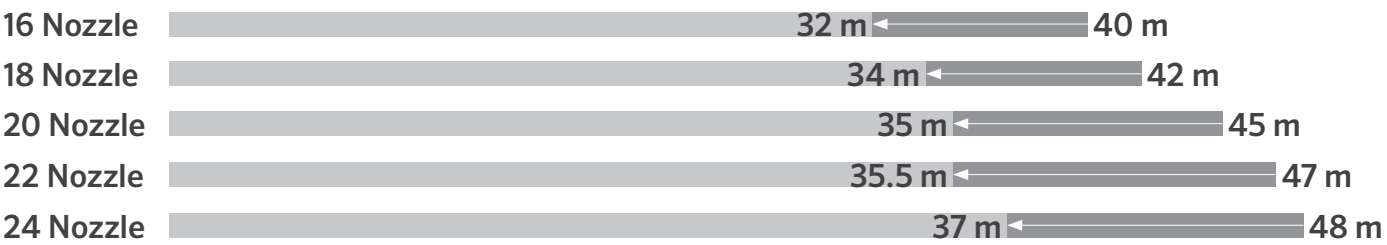
Nozzle	Pressure		Radius	Flow		Precipitation mm/hr*	
	Bar	kPa	m	m^3/hr	l/min	■	▲
16	4	400	32.0	21.0	350	41.0	47.3
	5	500	35.0	22.7	379	37.1	42.8
	6	600	37.0	25.9	432	37.8	43.7
	7	700	38.5	28.1	469	38.0	43.9
	8	800	40.0	30.4	508	38.1	43.9
18	4	400	34.0	24.3	405	42.0	48.5
	5	500	36.5	26.1	435	39.2	45.3
	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.





ST-1700-V-B WITH SHORT-RADIUS NOZZLES PERFORMANCE CHART (METRIC) P/N 959900

Nozzle	Pressure		Radius	Flow		Precipitation mm/hr*	
	bar	kPa	m	m³/hr	l/min	■	▲
8	4.0	400	21.3	6.0	100	26.2	30.3
	5.0	500	21.9	6.5	108	26.9	31.0
	6.0	600	22.6	7.1	118	27.9	32.3
	7.0	700	23.2	7.5	126	28.1	32.4
10	4.0	400	24.7	8.6	143	28.2	32.5
	5.0	500	25.6	9.7	161	29.4	34.0
	6.0	600	26.2	10.7	178	31.1	36.0
	7.0	700	26.8	11.2	187	31.3	36.1
12	4.0	400	28.0	12.2	204	31.1	36.0
	5.0	500	28.7	13.7	229	33.5	38.7
	6.0	600	29.3	14.9	249	34.9	40.2
	7.0	700	29.9	15.7	261	35.1	40.6
14	4.0	400	31.4	15.7	262	31.9	36.9
	5.0	500	32.0	17.8	296	34.7	40.0
	6.0	600	32.9	19.4	324	35.8	41.4
	7.0	700	33.5	20.3	338	36.1	41.7

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

Notes:

All radius measurements are taken at standard rotation speeds.

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 Division

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