ST-1700-V Rotor Written Specifications

**Part 1 – General**

1.1 The ST-1700-V is a gear-driven synthetic turf rotor designed for cooling, cleaning, and flushing large synthetic sports fields. The rotor features an integrated valve-in-head and actuator design for Total-Top-Serviceability.

**Part 2 – Parts and Material**

2.1The ST-1700-V Rotor shall be available in one model as a valve-in-head rotor.

1. The sprinkler body shall be constructed from corrosion- and impact-resistant ABS plastic.
2. The pop-up assembly shall be constructed with a stainless steel riser and a solid brass machined base.
3. The sprinkler shall have a stainless steel retraction spring.
4. The pop-up assembly shall be protected from external contamination by a telescoping rubber boot sealed at both ends along the riser.
5. The sprinkler shall have a brass adjustment knob to modify the speed of rotation.
6. The sprinkler shall have a ratcheting mechanism within the gear drive that allows for adjustment of the nozzle turret assembly without damage to the sprinkler.
7. The sprinkler shall be capable of both full-circle and adjustable part-circle configurations from 40° to 360°.
8. The sprinkler shall have a factory-installed rubber cover.
9. The sprinkler shall include five nozzle options for distances ranging from 105' to 157'
(32 m to 48 m) with flow rates from 92.4 to 259.0 GPM (21.0 to 58.8 m3/hr; 350 to 980 l/min).

2.2. ST-1700-V Rotor dimensions

1. Overall height: 27" (69 cm)
2. Pop-up height: 5" (13 cm)
3. Rubber cover diameter: 12" (30 cm)
4. Exposed top surface: 13" x 15¼" (33 cm x 39 cm)
5. Inlet size: 2" (50 mm) BSP

2.3 ST-IBS-1700 (Infill Barrier System)

A. The infill barrier system shall include three heavy-duty rubber components, two stainless steel screws, and two black plastic plugs.

B. The outer ring shall be attached to the rotor’s flange and include a vertical barrier wall to prevent substantial portions of the exterior-to-rotor infill material from migrating to the rotor’s interior cavity when the rotor is popped up and operating.

C. The inner cup component shall be attached to the rotor’s central pop-up logo cap. The cup shall include a vertical barrier wall to prevent substantial portions of the cup’s infill material from migrating to the rotor’s interior cavity when the rotor is popped up and operating.

D. The TTS insert shall overlay the TTS cover on the rotor. The insert shall be fastened to the cover with two provided screws topped by two black plugs. This piece shall have a vertical barrier wall to retain substantial portions of the infill material within the insert.

D. All three components shall be removable and re-installable for rotor-servicing purposes.

E. All three components shall include ringed reference markings to assist with trimming the height of the vertical wall barriers to accommodate various lengths of synthetic turf.

F. All three components shall be trimmable to provide a generally flat upper surface for the rotor’s exposed upper surface, allowing for attachment of short-fibered turf or running track material.

2.4 Warranty

 A. 5-year component warranty

**Part 3 – Function and Operation**

3.1 Recommended pressure range: 60 to 120 PSI (4.0 to 8.0 bar; 400 to 800 kPa)

3.2Radius description: 105' to 157' (32 m to 48 m)

3.3 Flow rate: 92.4 to 259.0 GPM (21.0 to 58.8 m3/hr; 350 to 980 l/min)

3.4 Precipitation rate: 1.8 in/hr (45 mm/hr) approximately

3.5 Nozzle trajectory: 25° approximately

3.6 Arc adjustment: 40° to 360°

3.7 Rotation speed

1. Standard speed of rotation is 80 seconds at 90 PSI (6.0 bar; 600 kPa) for a single 180° sweep.
2. Brass adjustment knob allows for speed of rotation adjustments down to zero — or no rotation — and up to 65 seconds at 120 PSI (8.0 bar; 800 kPa).

3.8 Internal ratcheting mechanism

1. Ratcheting mechanism allows for easy rotor setting through full rotational adjustment of the turret without the risk of damage.

3.9 Serviceability

1. All components are serviced through the top of the rotor.
2. Flange compartment holds the solenoid and on-off-auto selector, and it can accommodate full-sized waterproof connectors and decoders for two-wire control system applications.

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