# Golf Irrigation Product Catalogue

**GOLF IRRIGATION** | Built on Innovation®

**VOLUME 40** 





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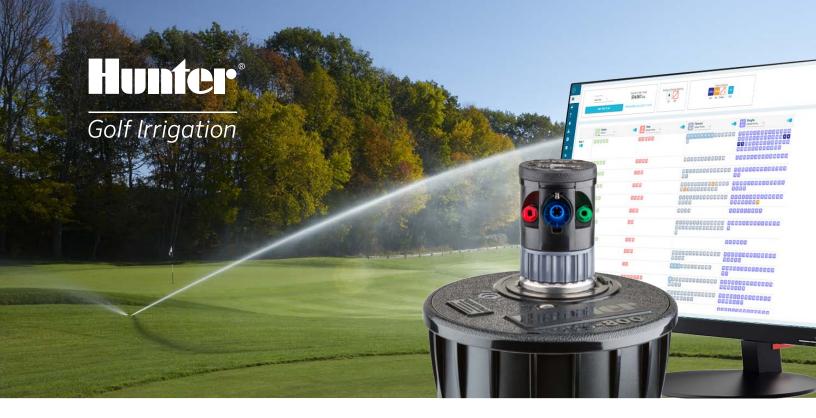
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### **Our Story**

Founded in 1981, Hunter Industries is a family-owned, global manufacturer of best-in-class solutions for residential, commercial, municipal, agricultural, and golf course irrigation systems, as well as the outdoor lighting industry. Headed by CEO Greg Hunter, our Global Operations Team provides leadership for the entire company. The core mission of Hunter Industries will always remain the same: to deliver valued products and services backed by unwavering customer support, grow the company conscientiously, and remain true to the culture that makes our employees proud to work at Hunter. Learn more at hunterindustries.com.

### **Product Highlights**

When it comes to ensuring green and playable golf courses, irrigation simply must become more efficient. Achieving this goal requires more than high-performing golf irrigation products that push the boundaries of innovation. You need a trusted partner, from conception to installation and beyond.

### **Pilot Command Center Software**

With cloud database backups, web-based features, and POGO visual insight integrations, Pilot Cloud lays the foundation for the future of golf course irrigation control. Offering optimised display and functionality and more informed scheduling adjustments using real-time data, this intuitive solution creates more possibilities for third-party integrations and mobile optimisation.

### **TTS-800 Series Golf Rotors**

Maximise performance in the field with our top-of-the-line golf rotors. Featuring exclusive PressurePort™ Nozzle Technology for maximum distribution uniformity, no-dig Total-Top-Serviceability for easy maintenance, and the largest flange compartment in the industry, these rotors ensure peak playability and years of reliable operation.

# PILOT CONTROL NETWORK





### **DEMAND THE BEST.**

CHOOSE HUNTER GOLF.

### **Pilot CCS**

### Command Center Software

With next-generation Pilot Command Center Software, you can create hydraulically safe and efficient daily course watering plans faster than ever before. Pilot helps manage thousands of individually controlled sprinklers in seconds. It's the ideal management tool for an Integrated Hub System.

### **Pilot IHS**

### Integrated Hub System

Integrated Hub Systems help you save time and money from day one. Compared to a Field Controller System, an Integrated Hub System uses less copper wire and requires fewer splices, valve boxes, and concrete pads. This means lower costs, faster installation, and easier system diagnosis and repair, if needed. You can also easily expand the system if desired.

### **TTS Rotors**

### With Two-Way Modules

Two-way module (TWM) technology built into every TTS rotor permits highly efficient control of complex irrigation systems. The rotors are connected to the system via low-voltage, direct-burial communication cable.

### **ICD-HP PROGRAMMER**

### Communicate Directly with TWMs

Program and troubleshoot Pilot Two-Way Modules with no digging or wires required. The handy device communicates directly through the plastic without barcodes, saving you time in the field.

### **PILOT™ COMMAND CENTER SOFTWARE**

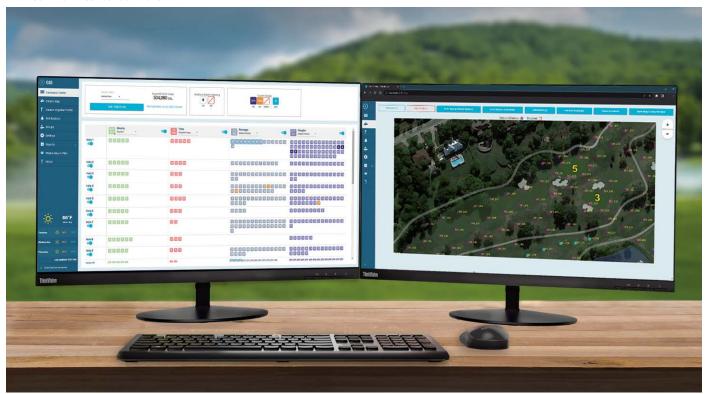
Enjoy simple yet powerful irrigation management and control with revolutionary Pilot CCS.

**Pilot Command Center Software (CCS) is easy to use and has all the features you need to reliably and automatically water your course.** Run times can be adjusted manually or determined automatically using evapotranspiration (ET). You create watering plans directly in the Command Center — a powerful irrigation planning tool that shows you every sprinkler on the course, organised according to your management style.

### **PILOT SPECIFICATIONS**

- Operating system: 64-bit Windows®
- · Maximum controllers or hubs: about 1,000
- Maximum Two-Way Module stations: about 1 million
- Sprinkler run time options: minutes, millimetres, inches, or ET
- Hydraulic management: fully customisable down to individual stations
- Mapping: interactive and based on scalable vector graphics (SVG)

#### **Pilot Command Center Software**



Windows is a trademark of Microsoft Corporation in the United States and/or other countries. Lenovo® and ThinkVision® are trademarks of Lenovo in the United States, other countries, or both.



### SET SCHEDULES WITH THE COMMAND CENTER

Planning daily watering for your course has never been simpler. The Command Center shows every sprinkler on the course, logically arranged according to your personal management requirements. You can easily make daily adjustments with just a few clicks of the mouse.



**Command Center** 

### SPEND LESS TIME RUNNING YOUR PUMP

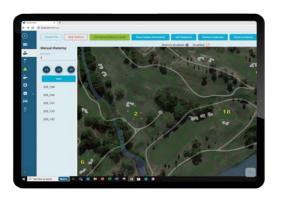
Pilot CCS uses your electrical and hydraulic data to efficiently balance sprinkler demand while maintaining flow at safe velocities. To protect your pump station and maintain optimal sprinkler uniformity, you can gradually step up irrigation in safe increments.



Flow Optimisation

### ACCESS INSIGHTS FROM ANYWHERE WITH PILOT CLOUD

Bring powerful irrigation control and monitoring to your fingertips with Pilot Cloud. Web-based features enable optimised display and functionality from any location on any device, while third-party integrations save time and resources with more informed scheduling adjustments using real-time data. Plus, cloud-based backups ensure peace of mind if the computer ever needs to be restored.



Maps



### PILOT™ FIELD CONTROLLER SYSTEMS

The sleek, clean design of Pilot Field Controllers makes them easy to install. use, and maintain.

### **KEY BENEFITS**

- · Five languages
- Up to 80 station outputs in 10-station increments
- Up to three Hunter golf Valve-in-Head Technology rotors per station output
- Up to 20 simultaneous Hunter golf Valve-in-Head Technology rotors
   active per controller
- 32 automatic schedules with eight start times per schedule
- Exclusive Safe-Toggle<sup>™</sup> Technology for mechanical on-off-auto station switches
- 1 to 31 day skip-day scheduling

- One-touch rain shutdown up to 30 days or indefinitely
- One-touch Safe-Pause<sup>™</sup> Technology with 30-minute safety timer
- 1% to 300% run time seasonal adjustment
- Seasonal start time adjustment is used to quickly change all start times plus or minus 30 minutes
- PilotFCP Utility enables remote scheduling from a computer or tablet for basic course irrigation management



### **Pilot-FC Plastic Pedestal**

Height: 100 cm Width: 60 cm Depth: 44 cm Weight: 32 kg

### **POWER SUPPLY INPUT**

Two voltage settings:

- 120 VAC nominal voltage at 60/50 Hz (100 to 132 VAC)
- 230 VAC nominal voltage at 50/60 Hz (200 to 260 VAC)

Current requirement:

- 1 A under load at 110 VAC
- · 0.7 A under load at 230 VAC

For additional information, see electrical data on page 65.



#### Pilot-FI Field Interface

One is required with any Pilot Network system. It is used to link the central computer to the field equipment. For indoor locations only.

Height: 30 cm Width: 30 cm Depth: 11 cm Weight: 2 kg

### **OUTPUT VOLTAGE**

- Station: 1 A at 24 VAC
- Hot post: 0.4 A at 24 VAC
- Capacity: Three standard 24 VAC Hunter golf rotors per output;
   20 maximum simultaneously running stations

### **RADIO SYSTEMS**

 UHF radio: 450 to 490 MHz; other UHF frequencies available for selected markets

### **WIRED SYSTEMS**

- GCBL: Two twisted pairs of shielded wire, 0.82 mm<sup>2</sup>
- GCBLA: Armoured, shielded two twisted pairs, 0.82 mm<sup>2</sup>



#### Examples:

**Pilot-FI-HWR** = Field Interface with hardwire communications **Pilot-FI-UHFA** = Field Interface with UHFA radio communications

### THE PILOT FIELD CONTROLLER IS ENGINEERED EXCLUSIVELY FOR GOLF COURSE IRRIGATION MANAGEMENT

### Water-Resistant Keypad

Large backlit display with convenient function buttons for the most commonly used features. Built-in system diagnostics make troubleshooting your system a breeze.

### Safe-Toggle Station Switches and Diagnostic LED Indicators

Standard for all station outputs, these features provide quick troubleshooting and watering tools.

### Conveniently Located Dual-Voltage (120/230 VAC) Junction Box

Features heavy-duty surge protection and even includes a spare fuse.



### Easy to Service

The only tool required is a Phillips screwdriver, which is included with every controller.

#### Modular 10-Station Expansion Boards

Colour-coded modular components have captured screws. This means no more lost screws, which simplifies assembly and troubleshooting.

### Spacious Wiring Area

No exposed circuitry or loose wires. All circuit boards are encapsulated in polyurethane to protect them from moisture, insects, and temperature extremes.

### PILOT-FC - SPECIFICATION BUILDER: ORDER 1 + 2 + 3

1 Model	2 Standard Features	3 Communication Options
Pilot-FC20 (20-station)		S Standalone Field Controller with no central communications
Pilot-FC30 (30-station)		HWR Wired communications
Pilot-FC40 (40-station)		
Pilot-FC50 (50-station)	Plastic pedestal (grey)	UHFA UHF radio (licence required, Australia only)
Pilot-FC60 (60-station)	120/230 VAC, 60/50 Hz dual-voltage transformer	
Pilot-FC70 (70-station)	dual-voltage transformer	
Pilot-FC80 (80-station)		

### Examples:

**Pilot-FC40-S** = 40-station, standalone Field Controller with no central communications

**Pilot-FC70-HWR** = 70-station Field Controller with wired communications



### PILOT™ INTEGRATED HUB SYSTEMS

Save money without sacrificing in-field sprinkler control with highly flexible and reliable Pilot Integrated Hub Systems.

Integrated Hub Systems use significantly less wire than conventional systems. This means lower costs, faster installation, and easier system diagnosis and repair if needed. They can be easily expanded — with minimal digging and disruption of turf — by adding more Pilot Two-Way Modules (TWMs) instead of running additional wires.

Pilot Two-Way Modules are available with 1-, 2-, 4-, and 6-station outputs, making it possible to run each head on an entire green with a single device. In all, TWMs let you operate about 1,000 stations up to approximately 2.5 km from a single hub.

Pilot Two-Way Modules include built-in surge suppression, wirelessly programmable station addresses using the ICD-HP Programmer, and two-way communication with confirmation and status indication. Pilot Surge Suppressors are required when the system is installed with integrated TWMs.

The PilotFCP Utility enables remote scheduling from a computer or tablet for basic course irrigation management. It can be directly connected to a Pilot Field Controller, eliminating the need for a Pilot Field Interface and communication module in smaller systems.



The distinct yellow design makes it much easier to find the modules in dark valve boxes or buried in the soil.



#### **TWM Hub**

#### Water-Resistant Keypad

The backlit display and illuminated control panel mean you can easily access the hub, day or night

#### Diagnostic LED Indicators

For all functions on 250-station output modules

#### 250-Station Output Modules

Enable your Integrated Hub System to expand with your course; start with 250 and grow to 999

#### **Pilot Surge Suppressor**

All integrated TWM rotors include two DBRY-6 Splice Connectors for connection to the two-wire path. Integrated TWM systems require grounding with Pilot Surge Suppressors coupled to an appropriate grounding plate or rod. Hunter recommends a minimum of one Pilot Surge Suppressor for every 12 installed rotors or as per project specification.



PILOT-DH - SPECIFICATION BUILDER: ORDER 1 + 2 + 3							
2 Standard Features	3 Communication Options						
	S	Standalone TWM hub with no central communications					
Plastic pedestal (grey)	HWR	Wired communications					
120/230 VAC, 60/50 Hz switching transformer							
	UHFA	UHF radio (licence required)					
	2 Standard Features  Plastic pedestal (grey)  120/230 VAC, 60/50 Hz	2 Standard Features 3 Con S  Plastic pedestal (grey) HWR  120/230 VAC, 60/50 Hz switching transformer					

Examples:

Pilot TWMs

Height: 9 cm

Width: 4 cm

Depth: 2.5 cm

Weight: 150 g

Height: 9 cm

Width: 4.5 cm

Weight: 250 g

Depth: 4 cm

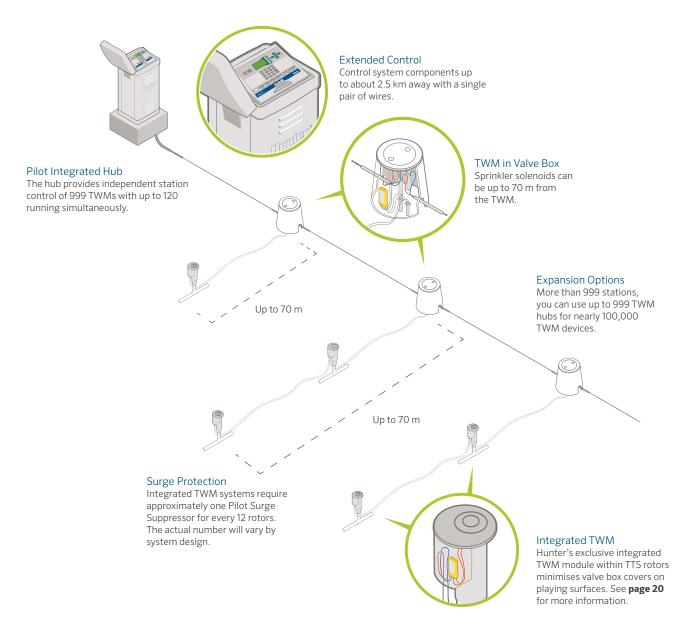
4- and 6-station:

1- and 2-station:

**Pilot-DH250-S** = 250-station, standalone TWM hub with no central communications

**Pilot-DH999-HWR** = 999-station TWM hub with wired communications





TWM - SPECIFICATION BUILDER: ORDER 1 + 2							
1 Model		2 Standard Features					
Pilot-100	1-station TWM	Built-in surge suppressor					
Pilot-200	2-station TWM	Waterproof DBRY-6 Splice					
Pilot-400	4-station TWM	Connectors included					
Pilot-600	6-station TWM						
Pilot-SG	Inline surge suppression (for integrated TWM rotor systems)						

Example:

Pilot-100 = 1-station TWM



### Wireless Programming

The ICD-HP Programmer is used to test, troubleshoot, and program integrated TWMs. It allows you to wirelessly link directly to TWMs without removing the TTS cover. You can also use it to update the coding inside the TWM's microprocessor.

See the ICD-HP Programmer on page 13.

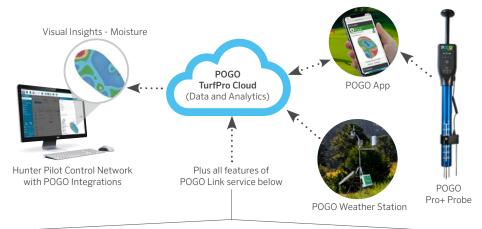
### **POGO™ HARDWARE**

Integrate the unmatched hardware and data analysis from POGO with the power and intuition of the Pilot Control Network to save time, maximise resources, and ensure peak playability.

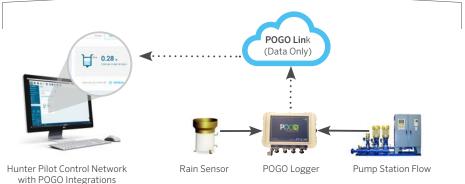
### **MANAGE YOUR WAY**

Subscribe to the all-inclusive **POGO TurfPro Cloud** or the sensor-based **POGO Link** service to gain better visibility of your golf course irrigation efficiency.

- Achieve optimum irrigation efficiency with more informed scheduling adjustments using real-time soil moisture, salinity, and temperature data
  - Better understand turfgrass performance between irrigation cycles
- Identify and address problem areas with colour-coded graphics that highlight turf in need of immediate attention — often before symptoms appear
- POGO TurfPro Cloud Data and Analytics with Advanced Visual Insights Proactively drive improved, consistent playability by knowing the exact conditions of your turf.



2 POGO Link Service - Data Only Make more informed irrigation adjustments by monitoring key environmental data in real time.



POGO HARDWARE	
Catalogue Number	Part Description
POGO-PRO-PLUS	POGO Pro+ Tool with Temperature Sensor. Active TurfPro Cloud subscription* required.
POGO-PRO-PLUS-KIT	POGO Pro+ Tool with Temperature Sensor, Case, Cart Mount, and Replacement Sensor. Active TurfPro Cloud subscription* required.
POGO-LOGGER-I	$POGO\ Data\ Logger\ with\ cellular\ communication\ for\ use\ with\ other\ sensors.\ Active\ data\ plan\ subscription *required.$
POGO-RAIN-CAN	POGO Rain Can - 15 cm Tipping Precipitation Gauge for use with POGO Logger
POGO-SOIL-SENSOR	POGO Soil Sensor - Buried Hydraprobe Root Zone Sensor for use with POGO Logger
POGO-WEATHER-I	$POGO\ Weather\ Station\ with\ cellular\ communication.\ Mounting\ sold\ separately.\ Active\ TurfPro\ Cloud\ subscription *required.$
POGO-TRI-POD	POGO Tripod Mount for Weather Station

<sup>\*</sup>Go to pogoturfpro.com to set up a subscription.



### MAINTENANCE RADIO

Save time and money with seamlessly integrated remote radio control.

### **KEY BENEFITS**

- Hunter's innovative StraightTalk™ Technology enables wireless remote control at ranges up to 3.5 km whether or not the central computer is turned on
- Instant control of stations, blocks, and programs
- · Instant audio confirmation of commands
- · Easy commands that show in display before sending
- · Compact size, industrial construction
- · Suitable for two-way voice communication with crews and office
- High signal output: 2 W, UHF (450 to 490 MHz)\*
- \* Licence required



### **TRNR Radio**

Height: 10.25 cm Width: 5.25 cm Depth: 3 cm Weight: 200 g

### ICD-HP PROGRAMMER

Gain wireless, handheld programming and diagnostic capabilities for Pilot Two-Way Modules.

### **KEY BENEFITS**

- · Wirelessly program TWM addresses
- Program TWM station numbers in any order or skip stations for future expansion
- Turn stations on and view solenoid status, current in milliamps, and more
- Built-in voltmeter for testing communication path
- Communicates with TWMs directly through plastic case; wireless electromagnetic induction saves waterproof connectors
- Communicates through the top of integrated TWM rotor cases; no cover removal required





### **ICD-HP Programmer**

Height: 21 cm Width: 9 cm Depth: 5 cm

Packaged in an outdoor carrying case, this complete kit includes probes, an induction cup, cable, a USB power cable for bench use, and four AA batteries for fieldwork.

#### **ICD-HP PROGRAMMER**



### **ROTOR SOLUTIONS**

### FOR EVERY GOLF COURSE

### TTS-800 SERIES: THE MOST ADVANCED ROTORS IN THE GOLF INDUSTRY

Over the last four decades, Hunter Industries has built a longstanding reputation for innovation in the golf industry. Some of our revolutionary inventions include the first Windows-based central control system, the first Total-Top-Service (TTS) rotors, the first Decoder-in-Head (DIH) rotors with integrated Pilot Two-Way Modules, and the powerful and water-efficient G-85 Gear Drives.

Our newest products in this groundbreaking lineup are the TTS-800 Series Golf Rotors — the most innovative and technologically advanced rotors in the industry. Combining accuracy and power, they provide maximum uniformity and longevity in the field. They also reduce the challenges of reclaimed water use or poor water quality, thanks to their high-torque gear drives. The fast-access flange compartment is the golf sector's largest, and it can accommodate full-sized DBRY-6 Splice Connectors. Even routine maintenance is a breeze with Total-Top-Serviceability, which allows for solenoid and pressure regulator servicing without mainline depressurisation.

Whether your golf rotor needs fall into our budget-conscious B Series, advanced G-800 Series, or top-of-the-line TTS-800 Series, Hunter Industries offers a full range of solutions that will exceed your expectations and ensure beautiful, playable courses for years to come.









### UNIFORMITY YOU CAN COUNT ON

Playability and water efficiency go hand-in-hand when it comes to golf course management. This means great distribution uniformity and proper irrigation scheduling are crucial to ensuring world-class performance and beautiful results.

Healthy, playable turf starts with top-level irrigation products — like Hunter's ultra-reliable TTS-800 Series Golf Rotors with superior distribution uniformity. Coupled with the best support team in the business, Hunter's golf solutions are second to none.

At Hunter Golf, we pride ourselves on providing products that set the standard in efficiency. Each year, we work directly with golf course superintendents worldwide to conduct comprehensive irrigation system audits that maximise water savings, reduce operating costs, and enhance the golf experience for players and course managers alike.

For best-in-class performance and enhanced playability, choose Hunter Golf.

### **BEST-IN-CLASS GEAR DRIVES**

# THAT SET THE STANDARD FOR PLAYABILITY

TTS-800 Series Golf Rotors



### LEADING THE WAY WITH POWER, PERFORMANCE, AND VERSATILITY

We've spent decades of research and millions of dollars to develop the best gear drives in the golf industry. When we introduced the G-85 Gear Drive, it quickly earned the respect of golf superintendents for its powerful performance and unmatched reliability. It also became known for its exceptional versatility, which boosted its popularity even more. That's because the adjustable arc drive with triple forward-facing nozzles can be adjusted not only to a non-reversing, full-circle rotation. It also can be configured at the factory as a G-84 Gear Drive in an opposing-nozzle, full-circle configuration.

But we didn't stop there. Next, we added the direct-drive G-80-a hybrid version that blends the G-85's outstanding platform with the proven G-80 Gearbox to create the best full-circle drive for the golf sector. Today, this revolutionary gear drive technology powers our full range of TTS-800 Series, G-800 Series, and B Series Golf Rotors. No matter which rotor is best for your golf irrigation needs, you can rest assured knowing that the most powerful gear drives in the industry will deliver long-lasting performance in every application.

### **GREATER FLEXIBILITY WITH DUAL-TRAJECTORY NOZZLES**



Standard Nozzles



Low-Angle Nozzles

To ensure precise distribution uniformity, we created a dedicated set of short-and mid-range nozzles to complement our gear drives. When combined with the primary nozzles that the G-80, G-84, and G-85 share, they deliver precise targeting for any application.

Choose from a wide assortment of wind-fighting 22.5° standard trajectory nozzles or 15° low-angle trajectory nozzles. For maximum throw, uniform distribution, and reliable performance under any condition, Hunter gear drives offer everything you need.

### **TTS-800 SERIES GOLF ROTORS**

### ADVANCED FEATURES

### With Total-Top-Service (TTS) Technology



### Access Everything Through the Top

This no-dig solution is appreciated by golfers, management, and especially the superintendent



### Large and Flexible Yardage Marker Capabilities

Oversized marker plates with standard black or red, white, blue, and purple options



### Largest Flange VIH Compartment in the Industry

Spacious cavity with enough room for full-sized DBRY-6 Splice Connectors



### Unitised Inlet Valve Design Includes Serviceable Components

Contamination damage is quickly resolved with replaceable valve seat and seat seal



### Easy Access and Servicing of Solenoid and Pressure Regulators

Colour-coded components are removed and replaced without mainline depressurisation



### Exclusive Inlet Valve Includes Self-Cleaning Capabilities

Proprietary Filter Sentry™ Mechanism wipes debris from the stainless steel screen with every activation



### Single-Point Fast-Access to Flange Compartment

Extra-thick compartment lid is retained with stainless steel ¼-turn fastener



### Two-Stage Serviceable Filtration in Valve Circuitry

Oversized stainless steel screens at inlet valve and pilot valve are easily cleaned or replaced





### Heavy-Duty Flanged and Ribbed Body Design

Impact-resistant and ultra-durable design includes extra-strength PVC Acme inlet



# Three Cable Entry Ports at Base of Flange Compartment

Makes splice and cable connections fast, easy, and organised



### Low-Bounce Rubber Cover Kit

Impact-absorbing design reduces ball ricochet around the greens



### **No-Bounce Turf Cup Kit**

Recessed turf cup design is aesthetically clean and eliminates ball ricochet







### Access Everything, Including Two-Way Modules, Through the Top

This no-dig solution is appreciated by golfers, management, and especially the superintendent



### Largest Flange DIH Compartment in the Industry

Spacious cavity with enough room for Pilot™ Two-Way Modules and full-sized DBRY-6 Splice Connectors



### Two-Way Modules Are Housed in the DIH Rotor's Spacious Flange Compartment

Improves playability and eliminates unsightly enclosures around the course



### Programming Two-Way Modules Wirelessly From the Surface with No Disassembly

Quick and easy to program and perform diagnostics before or after installation with ICD-HP Programmer



### **TTS-800 SERIES GOLF ROTORS**

### ADVANCED FEATURES

### With Integrated Two-Way Modules



### Individual Two-Way Module and Solenoid Components Within Flange Compartment

Isolated/separated configuration minimises yearly maintenance costs



### Two-Station DIH Rotor Option

Perfect cost-effective solution for back-to-back heads around greens



### State-of-the-Art Surge Suppression

Earth grounding is easily added with the Pilot Surge Suppressor



### DIH Rotors Include All the Unique Features and Benefits of TTS Rotors

Makes splice and cable connections fast, easy, and clean



### Seamless, No-Splice Connection Between Two-Way Module and Solenoid

Maintains ongoing electrical continuity with no connectors required



### Durability, Efficiency, and Reliability from the Makers of the Industry's First TTS and DIH Rotors

Peace of mind from the world's leading producer of gear-driven rotors

### TTS-800 SERIES



These rotors have Total-Top-Serviceability, powerful, high-torque gear drives, and the largest flange compartment in the industry to accommodate all  $Pilot^{TM}$  Two-Way Module components.

### **KEY BENEFITS**

- · Dedicated, true full-circle model distinguished by a black collar
- Extra-large, fast-access flange compartment to accommodate full-size DBRY-6 Splice Connectors and an integrated Pilot Two-Way Module
- Solenoid and pressure regulator are serviceable without system depressurisation
- Exclusive PressurePort<sup>™</sup> Technology optimises incoming pressure at each nozzle to increase consistency and maximise distribution uniformity
- High-torque gear drive is the strongest in the industry to mitigate the challenges of debris infiltration
- Proprietary Filter Sentry<sup>™</sup> Mechanism cleans the filter with every opening and closing cycle
- All TTS-800 Series Golf Rotors advanced features listed on pages 18 to 21

### **OPERATING SPECIFICATIONS**

- Radius: 14.9 to 29.6 m
- Flow: 3.23 to 13.29 m<sup>3</sup>/hr: 53.8 to 221.4 l/min
- Pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
- All TTS rotors are pressure-rated at 10 bar; 1,000 kPa
- Nozzle range: 15 to 53
  - 10 standard trajectory (22.5°) nozzles
  - 9 low-angle trajectory (15°) nozzles

### **OPTIONS**

- C Check-O-Matic Technology checks up to 8 m in elevation change and readily converts to normally open hydraulic with through-the-top connections
- D Decoder Valve-in-Head Technology with all "E" specifications below\*
- DD Two-station decoder Valve-in-Head Technology with all "E" specifications below\*
- E Electric Valve-in-Head Technology with adjustable pressure regulation, on-off-auto selector, 210 mA (370 mA inrush) 50 Hz; 190 mA (350 mA inrush) 60 Hz solenoid with captive plunger and internal downstream bleed
- \* All DIH rotors include two DBRY-6 Splice Connectors for connection to the two-wire path. See **page 11** for critical recommendations on grounding DIH rotors.



GT-880 Pop-up height: 9.5 cm Overall height: 30 cm Flange diameter: 18 cm Female inlet: 1½" (40 mm) Acme

Model	2 Valve Options	3 Nozzle	Л	Regulation
iviouei	2 valve options	J NOZZIE		Regulation
GT-880 = Full-circle	<b>C</b> = Check-O-Matic Technology*	<b>15 to 53</b> = Installed G-880 nozzle	P5 =	50 PSI; 3.4 bar; 340 kPa (nozzles 15 to 18)
	<b>D</b> = Decoder Valve-in-Head Technology		P6 =	65 PSI; 4.5 bar; 450 kPa (nozzles 18 to 25)
	<b>DD</b> = Two-station decoder Valve-in-Head Technology		<b>P8</b> = 80 PSI; 5.5 bar; 550 kPa (nozzles 25 to 5	
	<b>E</b> = Electric Valve-in-Head Technology			
	*Converts to N.O. hydraulic Valve-in-Head Technology			

#### Example:

 $\textbf{GT-880-E-48-P8} = \textbf{GT-880 full-circle electric Valve-in-Head Technology, installed 48 nozzle, 80 PSI; 5.5 bar; 550 kPa regulation and the state of the state$ 



#### **GT-880 NOZZLE PERFORMANCE DATA\*** Nozzle Set Radius Flow Pressure Precip mm/hr kPa m³/hr bar m 1/min 3.4 344 14.9 3.23 53.8 14.5 16.7 413 14.8 Tan Grey 4.1 15.5 3.57 59.4 17.0 4.5 450 15.9 3.73 62.1 14.8 17.1 0 15 4.8 482 16.2 3.86 64.4 14.8 17.1 803611 White 315317 5.5 551 4.13 68.9 14 7 17.0 16.8 3.4 344 17.1 3.91 65.1 13.4 15.5 Tan 4.1 413 17.7 4.28 71.3 13.7 15.8 4.5 450 18.0 4 48 74 6 16.0 13.8 0 18 0 4.8 482 18.3 4.54 75.7 13.6 15.7 803611 Orange 315317 5.5 551 18.6 4.82 80.3 13.9 16.1 4.18 69.7 3.4 344 17.4 13.8 16.0 Tan Grey 4.1 413 18.0 4.61 76.8 14.3 16.5 4.5 450 18.6 4.86 81.0 14.1 16.2 20 0 4.8 482 19.2 4.91 81.8 13.3 15.4 803611 315317 5.5 551 19.5 5.16 85.9 13.5 15.6 3.4 344 19.2 4.91 81.8 13.3 15.4 Lt. Blue 4.1 413 5.22 87.1 15.4 Tan 19.8 13.3 4.5 450 20.1 5.45 90.8 13.5 15.6 23 0 4.8 482 20.4 5 66 943 13.6 15.7 803611 315311 5.5 100.7 551 20.7 6.04 14.1 16.2 4.5 450 21.6 6.50 108.3 13.9 16.0 Lt. Blue 4.8 482 6.75 15.7 Tan 22.3 112.5 13.6 5.5 551 22.6 7.19 119.8 14.1 16.3 25 0 6.2 620 22.9 7.65 127.5 14.6 16.9 803611 Blue 315311 6.9 689 135.3 23.5 8.12 14.7 17.0 4.5 450 22.6 7.02 117.0 13.8 15.9 Tan Lt. Blue 4.8 482 22.9 7.27 121.1 13.9 16.1 5.5 551 7.77 129.5 23.5 14.1 16.3 33 6.2 24.1 8.22 137.0 620 14.2 16.4 803611 315311 Grey 6.9 689 247 8 68 144 6 14 2 16.4 4.5 450 23.5 7.97 132.9 14.5 16.7 Lt. Blue 4.8 482 24.1 8.31 138.5 14.3 16.6 Tan 55 551 25.0 8 84 1473 14 1 163 38 0 6.2 620 25.6 9.38 156.3 14.3 16.5 803611 Red 315311 6.9 689 26.5 9.90 165.0 14.1 16.3 Tan Blue 4.8 482 25.3 9.38 156.3 14.7 16.9 5.5 551 25.9 9.90 165.0 14.8 17.0 43 0 6.2 620 10.52 175.3 15.0 17.3 26.5 803611 Dk. Brown 315300 6.9 689 27.1 11.09 184.7 15.1 17.4 Dk. Brown Dk. Blue 4.8 482 27.4 10.65 177.5 14.2 16.3 5.5 551 28.0 11.11 185.1 14.1 16.3 48 O 0 6.2 191.0 14.0 16.1 620 28.7 11.46 803610 Dk. Green 833500 6.9 689 29.3 12.15 202.5 14.2 16.4 Dk. Brown Dk. Blue 4.8 482 27.7 11.31 188.5 14 7 17.0 5.5 551 28.3 11.86 197.7 14.8 17.0 53 0 0

620

689

29.0

29.6

12.61

13.29

210.1

221.4

15.0

15.2

17.4

17.6

6.2

6.9

833500

### **GT-880 STANDARD NOZZLES**

### GT-880 LOW-ANGLE NOZZLES\*\*





Low-angle nozzles reduce the radius by 15%



#### **Easy-Access Servicing**

An extra-thick compartment lid is retained with a ¼-turn, stainless steel, single-point fastener.



### **Spacious Flange Compartment**

The largest and deepest compartment in the industry offers plenty of room for full-sized DBRY-6 Splice Connectors.

803610 Dk. Blue

<sup>\*</sup> Complies to ASAE standard. All precipitation rates calculated for 360° operation. All triangular rates are equilateral. To calculate precipitation rates for 180° operation, multiply by 2.

### TTS-800 SERIES



These rotors have Total-Top-Serviceability, powerful, high-torque gear drives, and the largest flange compartment in the industry to accommodate all Pilot™ Two-Way Module components.

### **KEY BENEFITS**

- Adjustable model distinguished by a grey collar that comes factory set in a true full-circle configuration
- Extra-large, fast-access flange compartment to accommodate full-size DBRY-6 Splice Connectors and an integrated Pilot Two-Way Module
- Solenoid and pressure regulator are serviceable without system depressurisation
- Exclusive PressurePort™ Technology optimises incoming pressure at each nozzle to increase consistency and maximise distribution uniformity
- High-torque gear drive is the strongest in the industry to mitigate the challenges of debris infiltration
- Proprietary Filter Sentry<sup>™</sup> Mechanism cleans the filter with every opening and closing cycle
- All TTS-800 Series Golf Rotors advanced features listed on pages 18 to 21



- Radius: 14.9 to 29.6 m
- Flow: 3.23 to 13.29 m<sup>3</sup>/hr; 53.8 to 221.4 l/min
- Pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
- All TTS rotors are pressure-rated at 10 bar; 1,000 kPa
- Nozzle range: 15 to 53
  - 10 standard trajectory (22.5°) nozzles
  - 9 low-angle trajectory (15°) nozzles

### **GT-884**Pop-up height: 9.5 cm Overall height: 30 cm

Flange diameter: 18 cm Female inlet: 1½" (40 mm) Acme

### **OPTIONS**

- C Check-O-Matic Technology checks up to 8 m in elevation change and readily converts to normally open hydraulic with through-the-top connections
- D Decoder Valve-in-Head Technology with all "E" specifications below\*
- DD Two-station decoder Valve-in-Head Technology with all "E" specifications below\*
- E Electric Valve-in-Head Technology with adjustable pressure regulation, on-off-auto selector, 210 mA (370 mA inrush) 50 Hz; 190 mA (350 mA inrush) 60 Hz solenoid with captive plunger and internal downstream bleed
- \* All DIH rotors include two DBRY-6 Splice Connectors for connection to the two-wire path. See **page 11** for critical recommendations on grounding DIH rotors.

GT-884 - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4							
1 Model	2 Valve Options	3 Nozzle	4	Regulation			
GT-884 = Full-circle (convertible to forward- facing adjustable arc rotor)	C = Check-O-Matic Technology*	<b>15 to 53</b> = Installed G-880 nozzle	P5 =	50 PSI; 3.4 bar; 340 kPa (nozzles 15 to 18)			
racing adjustable are rotory	<b>D</b> = Decoder Valve-in-Head Technology		<b>P6</b> = 65 PSI; 4.5 bar; 450 kPa (nozzles 18 to 25)				
	<b>DD</b> = Two-station decoder Valve-in-Head Technology		P8 =	: 80 PSI; 5.5 bar; 550 kPa (nozzles 25 to 53)			
	<b>E</b> = Electric Valve-in-Head Technology						
	* Converts to N.O. hydraulic Valve-in-Head Technology						

Example

GT-884-E-48-P8 = GT-884 full-circle electric Valve-in-Head Technology, installed 48 nozzle, 80 PSI; 5.5 bar; 550 kPa regulation



#### **GT-884 NOZZLE PERFORMANCE DATA\*** Pressure Flow Nozzle Set Radius Precip mm/hr kPa m³/hr I/min bar m 3.4 344 14.9 3.23 53.8 14.5 16.7 Tan Grey 4.1 413 15.5 3.57 59.4 14.8 17.0 4.5 450 15.9 3.73 62.1 14.8 17.1 0 15 4.8 17.1 482 16.2 3.86 64.4 14.8 803611 White 315317 5.5 551 16.8 4.13 68.9 14.7 17.0 • lacktriangle3.4 344 17.1 3.91 13.4 15.5 65.1 4.1 413 17 7 4.28 71.3 13 7 Tan Grey 15.8 4.5 450 18.0 4.48 74.6 13.8 16.0 0 18 0 4.8 482 18.3 4.54 75.7 13.6 15.7 803611 5.5 551 315317 4.82 80.3 Orange 18.6 13.9 16.1 3.4 344 17.4 4.18 69.7 13.8 16.0 Tan Grey 4.1 413 18.0 4.61 76.8 14.3 16.5 450 4.5 18.6 4.86 81.0 14.1 16.2 20 4.8 482 19.2 4.91 81.8 13.3 15.4 803611 315317 5.5 Tan 551 19.5 5.16 13.5 15.6 85.9 • 3.4 344 19.2 4.91 81.8 13.3 15.4 Tan Lt. Blue 4.1 413 19.8 5.22 87.1 13.3 15.4 45 450 20.1 5 45 90.8 13 5 15.6 23 4.8 482 20.4 5.66 94.3 13.6 15.7 803611 Green 315311 5.5 551 20.7 6.04 100.7 14.1 16.2 4.5 21.6 450 6.50 1083 13.9 16.0 Tan Lt. Blue 4.8 482 22.3 6.75 112.5 13.6 15.7 5.5 551 22.6 7.19 119.8 14.1 16.3 25 0 62 620 229 7 65 1275 14 6 16 9 803611 315311 6.9 689 23.5 8.12 135.3 14.7 17.0 4.5 450 22.6 7.02 117.0 13.8 15.9 Tan It Blue 48 482 229 7 2 7 1211 13 9 16.1 5.5 551 23.5 7.77 129.5 14.1 16.3 33 6.2 620 241 8 22 137.0 14 2 16.4 803611 Grey 315311 6.9 689 24.7 8.68 14.2 16.4 144.6 4.5 450 23.5 7.97 132.9 14.5 16.7 Lt. Blue 48 482 241 8 31 138 5 143 16.6 Tan 5.5 551 25.0 8.84 147.3 14.1 16.3 38 0 6.2 620 25.6 9.38 156.3 14.3 16.5 803611 Red 315311 69 689 26.5 990 165.0 14 1 163 Tan Blue 4.8 482 25.3 9.38 156.3 14.7 16.9 5.5 551 25.9 9.90 165.0 14.8 17.0 43 6.2 10.52 175.3 15.0 17.3 620 26.5 803611 Dk. Brown 315300 6.9 689 27.1 11.09 184.7 15.1 17.4 Dk. Brown Dk. Blue 4.8 482 27.4 10.65 177.5 14.2 16.3 5.5 551 185.1 28.0 11.11 14.1 16.3 0 48 0 6.2 620 28.7 11.46 191.0 14.0 16.1 803610 Dk. Green 833500 6.9 689 29.3 12.15 202.5 14.2 16.4 Dk. Brown Dk. Blue 4.8 482 27.7 11.31 188.5 14.7 17.0 5.5 551 28.3 11.86 197.7 14.8 17.0 0 53 0 6.2 210.1 620 15.0 17.4 29.0 12.61 803610 Dk. Blue 833500 6.9 689 29.6 13.29 221.4 17.6

### **GT-884 STANDARD NOZZLES**

### **GT-884 LOW-ANGLE NOZZLES\*\***





<sup>\*</sup> Low-angle nozzles reduce the radius by 15%.





### Room to Spare

Adding a Pilot™ Two-Way Module does not reduce flange compartment space. The exclusive configuration provides extra room for full-sized DBRY-6 Splice Connectors and multiple cables.

 $<sup>^*</sup>$  Complies to ASAE standard. All precipitation rates calculated for 360° operation. All triangular rates are equilateral. To calculate precipitation rates for 180° operation, multiply by 2.

### TTS-800 SERIES



These rotors have Total-Top-Serviceability, powerful, high-torque gear drives, and the largest flange compartment in the industry to accommodate all Pilot™ Two-Way Module components.

### **KEY BENEFITS**

- Adjustable model distinguished by a grey collar that comes factory set in a part-circle configuration (60° to 360°)
- Extra-large, fast access flange compartment to accommodate full-size DBRY-6 Splice Connectors and an integrated Pilot Two-Way Module
- Solenoid and pressure regulator are serviceable without system depressurisation
- Exclusive PressurePort<sup>™</sup> Technology optimises incoming pressure at each nozzle to increase consistency and maximise distribution uniformity
- High-torque gear drive is the strongest in the industry to mitigate the challenges of debris infiltration
- Proprietary Filter Sentry<sup>™</sup> Mechanism cleans the filter with every opening and closing cycle
- All TTS-800 Series Golf Rotors advanced features listed on pages 18 to 21

### **OPERATING SPECIFICATIONS**

- Radius: 11.3 to 28.7 m
- Flow: 2.02 to 13.54 m<sup>3</sup>/hr: 33.7 to 225.6 l/min
- Pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
- All TTS rotors are pressure-rated at 10 bar; 1,000 kPa
- Nozzle range: 10 to 53
  - 12 standard trajectory (22.5°) nozzles
  - 9 low-angle trajectory (15°) nozzles

### GT-885

Pop-up height: 9.5 cm Overall height: 30 cm Flange diameter: 18 cm Female inlet: 1½" (40 mm) Acme

### **OPTIONS**

- C Check-O-Matic Technology checks up to 8 m in elevation change and readily converts to normally open hydraulic with through-the-top connections
- D Decoder Valve-in-Head Technology with all "E" specifications below\*
- DD Two-station decoder Valve-in-Head Technology with all "E" specifications below\*
- E Electric Valve-in-Head Technology with adjustable pressure regulation, on-off-auto selector, 210 mA (370 mA inrush) 50 Hz; 190 mA (350 mA inrush) 60 Hz solenoid with captive plunger and internal downstream bleed
- \* All DIH rotors include two DBRY-6 Splice Connectors for connection to the two-wire path. See **page 11** for critical recommendations on grounding DIH rotors.

GT-885 - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4						
1 Model	2 Valve Options	3 Nozzle	4 Regulation			
GT-885 = Full/part-circle, 60° to 360° arc range	C = Check-O-Matic Technology*  D = Decoder Valve-in-Head Technology	<b>10 to 53</b> = Installed G-885 nozzle	<b>P5</b> = 50 PSI; 3.4 bar; 340 kPa (nozzles 10 to 18)			
	<b>DD</b> = Two-station decoder Valve-in-Head Technology		<b>P6</b> = 65 PSI; 4.5 bar; 450 kPa (nozzles 18 to 25) <b>P8</b> = 80 PSI; 5.5 bar; 550 kPa (nozzles 25 to 53)			
	E = Electric Valve-in-Head Technology *Converts to N.O. hydraulic Valve-in-Head Technology					

Example:

GT-885-E-48-P8 = GT-885 full/part-circle electric Valve-in-Head Technology, installed 48 nozzle, 80 PSI; 5.5 bar; 550 kPa regulation



#### **GT-885 NOZZLE PERFORMANCE DATA\*** Nozzle Set Pressure Radius Flow Precip mm/hr bar kPa m³/hr I/min lackm Dk. Green 344 11.3 2.02 33.7 15.9 18.4 Orange 4.1 413 11.9 2.23 37.1 15.8 18.2 O 4.5 450 12.5 2.32 38.6 14.8 17.1 10 803603 315312 Lt. Green Orange White 3.4 344 14.3 2.59 43.2 12.6 14.6 4.1 413 14.6 2.79 46.6 13.1 15.1 O 450 14.9 2.93 48.8 4.5 13.1 15.2 13 803603 315314 Lt. Blue Orange 3.4 344 15.9 2.93 48.8 11.7 13.5 White 4.1 413 15.9 3.29 54.9 13.1 15.1 O 4.5 450 16.2 3.38 56.4 13.0 15.0 15 803603 315314 4.8 482 16.2 3.52 58.7 13.5 15.6 5.5 551 16.5 62.5 13.8 3.75 16.0 Orange Lt. Green 3.4 344 17.4 3.77 62.8 12.5 14.4 4.1 413 17.7 4.04 67.4 12.9 14.9 O 4.5 450 18.0 4.23 70.4 13.1 15.1 18 803603 315313 482 48 183 4 41 73.4 13.2 15 2 5.5 551 18.6 4.66 77.6 13.5 15.6 Orange Orange Lt. Green 3.4 344 18.0 4.07 67.8 12.6 14.5 4.1 413 18.6 4.43 73.8 12.8 14.8 O 4.5 450 18.9 4.50 75.0 12.6 14.5 20 803603 315313 4.8 482 19.2 4.68 78.0 12.7 14.7 5.5 551 19.5 Tan 5.02 83.7 13.2 15.2 Orange Lt. Green 3.4 344 19.8 4.59 76.5 11.7 13.5 4.1 413 20.1 5.02 83.7 12.4 14 3 4.5 450 20.4 5.43 90.5 13.0 15.0 23 803603 315313 4.8 482 20.4 5.50 91.6 15.2 13.2 Green 55 5.88 98.0 551 21.013 3 15 4 4.5 450 21.6 6.43 107.1 13.7 15.8 Red Green 4.8 482 21.9 6.66 110.9 13.8 16.0 0 55 551 7.16 223 119.2 14 5 16.7 25 803602 315310 6.2 620 22.6 7.59 126.4 14.9 17.2 • Blue 6.9 689 22.9 8.04 134.0 15.4 17.8 450 6 95 115.8 Red Green 45 219 14 4 16.7 4.8 482 22.3 7.18 119.6 14.5 16.7 O 5.5 551 22.9 7.70 128.3 14.7 17.0 33 803602 315310 6.2 620 23.5 135.5 14.8 17.0 8.13 • 6.9 689 24.1 8.61 143.5 14.8 17.1 Red Green 4.5 450 23.2 7.93 132.1 14.8 17.1 4.8 482 23.8 8.22 137.0 14.5 16.8 0 5.5 551 24.4 8.88 148.0 14.9 17.2 38 803602 315310 6.2 620 25.0 9.36 156.0 15.0 17.3 Red 6.9 689 25.6 9.88 164.7 15.1 17.4 Red Green 4.8 482 24.7 9.36 156.0 15.4 17 7 O 5.5 551 25.3 9.88 164.7 17.8 15.4 43 315310 803602 6.2 620 26.2 10.49 174.9 15.3 17.6 • Dk. Brown 6.9 689 27.1 11.06 184.3 15.0 17.4 Dk. Red Dk. Green 4.8 482 253 10.52 175.3 16.4 19.0 0 5.5 551 25.9 10.99 183.2 16.4 18.9 48 803601 315312 6.2 620 27.1 11.74 195.7 16.0 18.4 Dk. Green 6.9 689 27.7 12.38 206.3 16.1 18.6 Dk. Red Dk. Green 4.8 482 26.5 11.52 191.9 16.4 18 9 O 55 551 271 12 06 201.0 18 9 16.4 53 803601 315312 6.2 620 28.0 12.81 213.5 16.3 18.8

28.7

13.54

225.6

16.5

19.0

6.9

### **GT-885 STANDARD NOZZLES**

### **GT-885 LOW-ANGLE NOZZLES\*\***



<sup>\*\*</sup> Low-angle nozzles reduce the radius by 15%



### **Reduced Downtime**

There is no need to depressurise the mainline for solenoid and pressure regulator servicing.



### **Total-Top-Service Solution**

From the originators of TTS Technology, Hunter's no-dig TTS-800 Series Golf Rotors provide total-topservicing of every serviceable component.



Dk. Blue

•

<sup>689</sup> = Nozzle plug P/N 315300 installed in the back side of the nozzle housing.

<sup>\*</sup> Complies to ASAE standard. All precipitation rates calculated for 360° operation. All triangular rates are equilateral. To calculate precipitation rates for 180° operation, multiply by 2.

### TTS-800 SERIES



These rotors have Total-Top-Serviceability, shorter-radius, lower-flow internals, and the largest flange compartment in the industry to accommodate all Pilot™ Two-Way Module components.

### **KEY BENEFITS**

- Adjustable, shorter-radius model (50° to 360°)
- Extra-large, fast-access flange compartment to accommodate full-size DBRY-6 Splice Connectors and an integrated Pilot Two-Way Module
- Solenoid and pressure regulator are serviceable without system depressurisation
- Proprietary Filter Sentry™ Mechanism cleans the filter with every opening and closing cycle
- All TTS-800 Series Golf Rotors advanced features listed on pages 18 to 21

#### **OPERATING SPECIFICATIONS**

- Radius: 5.5 to 15.2 m
- Flow: 0.43 to 2.91 m<sup>3</sup>/hr; 7.2 to 48.5 l/min
- Pressure range: 2.8 to 4.5 bar; 280 to 450 kPa
- All TTS rotors are pressure-rated at 10 bar; 1,000 kPa
- Nozzle range: 2 to 12

### **OPTIONS**

- C Check-O-Matic Technology checks up to 8 m in elevation change and readily converts to normally open hydraulic with through-the-top connections
- D Decoder Valve-in-Head Technology with all "E" specifications below\*
- DD Two-station decoder Valve-in-Head Technology with all "E" specifications below\*
- E Electric Valve-in-Head Technology with adjustable pressure regulation, on-off-auto selector, 210 mA (370 mA inrush) 50 Hz; 190 mA (350 mA inrush)
   60 Hz solenoid with captive plunger and internal downstream bleed
- \* All DIH rotors include two DBRY-6 Splice Connectors for connection to the twowire path. See **page 11** for critical recommendations on grounding DIH rotors.



**GT-835**Pop-up height: 8 cm
Overall height: 30 cm
Flange diameter: 18 cm
Female inlet: 1½" (40 mm) Acme

GT-835 - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4						
1 Model	2 Valve Options	3 Nozzle	4	Regulation		
GT-835 = Full/part-circle, 50° to 360°	<b>C</b> = Check-O-Matic Technology*	<b>6</b> = Installed G-835 nozzle (includes 8-nozzle rack)	P5 =	50 PSI; 3.4 bar; 340 kPa (nozzles 18 to 25)		
	<b>D</b> = Decoder Valve-in-Head Technology		P6 =	65 PSI; 4.5 bar; 450 kPa (nozzles 18 to 25)		
	<b>E</b> = Electric Valve-in-Head Technology					
	*Converts to N.O. hydraulic Valve-in-Head Technology					

Example

GT-835-6-P5 = GT-835 full/part-circle electric Valve-in-Head Technology, installed 6 nozzle, 50 PSI; 3.4 bar; 340 kPa regulation



### **GT-835 NOZZLE PERFORMANCE DATA\***

Nozzle	Pres	sure	Radius	FI	ow	Precip	mm/hr
	bar	kPa	m	m³/hr	l/min		
_	2.8	280	5.5	0.43	7.2	14.3	16.6
2 •	3.4	340	6.1	0.48	7.9	12.8	14.8
Yellow	4.1	410	6.7	0.55	9.1	12.1	14.0
	4.5	450	7.0	0.59	9.8	12.0	13.9
	2.8	280	7.0	0.68	11.4	13.9	16.0
3	3.4	340	7.6	0.73	21.1	12.5	14.5
Yellow	4.1	410	8.2	0.80	13.2	11.7	13.6
	4.5	450	8.5	0.82	13.6	11.2	13.0
4 0	2.8	280	7.6	0.89	14.8	15.3	17.6
4 •	3.4	340	8.5	0.93	15.5	12.8	14.8
Yellow	4.1	410	9.1	1.00	16.7	12.0	13.8
	4.5	450	9.4	1.04	17.4	11.7	13.5
_	2.8	280	8.8	1.07	17.8	13.7	15.8
5	3.4	340	9.8	1.14	18.9	11.9	13.8
Yellow	4.1	410	10.1	1.20	20.1	11.9	13.7
	4.5	450	10.7	1.23	20.4	10.8	12.4
6	2.8	280	9.8	1.36	22.7	14.3	16.5
6 •	3.4	340	10.7	1.43	23.8	12.6	14.5
Yellow	4.1	410	11.3	1.50	25.0	11.8	13.6
	4.5	450	11.9	1.54	25.7	10.9	12.6
0 0	2.8	280	11.0	1.77	29.5	14.7	17.0
8 •	3.4	340	11.9	1.82	30.3	12.9	14.8
Yellow	4.1	410	12.8	1.89	31.4	11.5	13.3
	4.5	450	13.1	1.93	32.2	11.2	13.0
10 •	2.8	280	11.9	2.20	36.7	15.6	18.0
	3.4	340	13.1	2.29	38.2	13.4	15.4
Yellow	4.1	410	13.7	2.34	39.0	12.4	14.4
	4.5	450	14.3	2.39	39.7	11.6	13.4
12 •	2.8	280	13.4	2.73	45.4	15.2	17.5
	3.4	340	14.3	2.77	46.2	13.5	15.6
Yellow	4.1	410	14.6	2.84	47.3	13.3	15.3
	4.5	450	15.2	2.91	48.5	12.5	14.5

 $<sup>^{\</sup>ast}$  Complies to ASAE standard. All precipitation rates calculated for 360° operation. All triangular rates are equilateral. To calculate precipitation rates for 180° operation, multiply by 2.

### **GT-835 NOZZLES**













226 235 244

### **Optional Yardage Marker Colours**

Extra-large, snap-in marker plates are available in standard black as well as optional red, white, and blue to meet every golf course preference. Or choose the purple plate for identification when courses are using reclaimed water.



Low-Bounce Rubber Cover Kit - P/N 987200SP

Reduce the incoming bounce from balls hitting rotors that are surrounding the greens.



No-Bounce Turf Cup Kit - P/N 987100SP

Eliminate errant bounces from balls hitting greens-surrounding rotors with this subsurface rotor-mounting solution.

### **G-800 SERIES**



These rotors feature convenient, no-dig Total-Top-Serviceability and a powerful, high-torque gear drive.

### **KEY BENEFITS**

- · Dedicated, true full-circle model distinguished by a black collar
- Exclusive PressurePort<sup>™</sup> Technology optimises incoming pressure at each nozzle to increase consistency and maximise distribution uniformity
- High-torque gear drive is the strongest in the industry to mitigate the challenges of debris infiltration
- Proprietary Filter Sentry<sup>™</sup> Mechanism cleans the filter with every opening and closing cycle

### **OPERATING SPECIFICATIONS**

- Radius: 14.9 to 29.6 m
- Flow: 3.23 to 13.29 m<sup>3</sup>/hr; 53.8 to 221.4 l/min
- Pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
- All TTS rotors are pressure-rated at 10 bar; 1,000 kPa
- Nozzle range: 15 to 53
  - 10 standard trajectory (22.5°) nozzles
  - 9 low-angle trajectory (15°) nozzles

### **OPTIONS**

- C Check-O-Matic Technology checks up to 8 m in elevation change and readily converts to normally open hydraulic with through-the-top connections
- D Decoder Valve-in-Head Technology with all "E" specifications below\*
- DD Two-station decoder Valve-in-Head Technology with all "E" specifications below\*
- E Electric Valve-in-Head Technology with adjustable pressure regulation, onoff-auto selector, 210 mA (370 mA inrush) 50 Hz; 190 mA (350 mA inrush)
   60 Hz solenoid with captive plunger and internal downstream bleed
- \* All DIH rotors include two DBRY-6 Splice Connectors for connection to the two-wire path. See **page 11** for critical recommendations on grounding DIH rotors.

G-880 - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4



### **G-880C**Pop-up height: 9.5 cm

Overall height: 30 cm Flange diameter: 18 cm Female inlet: 1½" (40 mm) Acme



#### G-880E

Pop-up height: 9.5 cm Overall height: 30 cm Flange diameter: 18 cm Female inlet: 1½" (40 mm) Acme

	<u> </u>		
1 Model	2 Valve Options	3 Nozzle	4 Regulation
<b>G-880</b> = Full-circle	<b>C</b> = Check-O-Matic Technology*	<b>15 to 53</b> = Installed G-880 nozzle	<b>P5</b> = 50 PSI; 3.4 bar; 340 kPa (nozzles 15 to 18)
	<b>D</b> = Decoder Valve-in-Head Technology		<b>P6</b> = 65 PSI; 4.5 bar; 450 kPa (nozzles 18 to 25)
	<b>DD</b> = Two-station decoder Valve-in-Head Technology		<b>P8</b> = 80 PSI; 5.5 bar; 550 kPa (nozzles 25 to 53)
	<b>E</b> = Electric Valve-in-Head Technology		
	*Converts to N.O. hydraulic Valve-in-Head		

#### Example:

G-880-E-33-P8 = G-880 full-circle electric Valve-in-Head Technology, installed 33 nozzle, 80 PSI; 5.5 bar; 550 kPa regulation



#### **G-880 NOZZLE PERFORMANCE DATA\*** Nozzle Set Radius Flow Precip mm/hr Pressure $\blacksquare$ kPa m³/hr I/min bar m 3.4 344 14.9 3.23 53.8 14.5 16.7 413 15.5 59.4 148 17.0 Tan Grey 41 3.57 4.5 450 15.9 3.73 62.1 14.8 17.1 0 15 4.8 482 16.2 3.86 64.4 14.8 17.1 803611 White 315317 5.5 17.0 551 4.13 68 9 14 7 16.8 3.4 344 17.1 3.91 65.1 13.4 15.5 Tan 4.1 413 17.7 4.28 71.3 13.7 15.8 4.5 450 18.0 4 48 74 6 13.8 16.0 18 4.54 15.7 4.8 482 18.3 75.7 13.6 5.5 803611 Orange 315317 551 18.6 4.82 80.3 13.9 16.1 4.18 3.4 344 17.4 69.7 13.8 16.0 Tan Grey 4.1 413 18.0 4.61 76.8 14.3 16.5 4.5 450 18.6 4.86 81.0 14.1 16.2 20 4.8 482 19.2 4.91 81.8 13.3 15.4 803611 315317 5.5 551 19.5 5.16 85.9 13.5 15.6 3.4 344 19.2 4.91 81.8 13.3 15.4 Lt. Blue 4.1 413 5.22 87.1 13.3 15.4 Tan 19.8 4.5 450 20.1 5.45 90.8 13.5 15.6 23 0 4.8 20.4 943 482 5.66 13.6 15.7 803611 315311 5.5 551 100.7 20.7 6.04 14.1 16.2 4.5 450 21.6 6.50 108.3 13.9 16.0 Lt. Blue 4.8 482 6.75 15.7 Tan 22.3 112.5 13.6 5.5 551 22.6 7.19 119.8 14.1 16.3 25 0 6.2 620 22.9 7.65 127.5 14.6 16.9 803611 Blue 315311 6.9 689 14.7 23.5 8.12 135.3 17.0 4.5 450 22.6 7.02 117.0 13.8 15.9 Tan Lt. Blue 4.8 482 229 7.27 121.1 13.9 16.1 5.5 551 23.5 7.77 129.5 14.1 16.3 33 0 6.2 8.22 137.0 16.4 620 24.1 14.2 803611 315311 Grey 6.9 689 247 8 68 1446 14 2 16.4 4.5 450 23.5 7.97 132.9 14.5 16.7 Lt. Blue 4.8 482 24.1 8.31 138.5 14.3 16.6 Tan 5 5 551 25.0 8 84 1473 14 1 16.3 38 0 6.2 620 25.6 9.38 156.3 14.3 16.5 803611 Red 315311 6.9 689 26.5 9.90 165.0 14.1 16.3 Tan Blue 4.8 482 25.3 9.38 156.3 14.7 16.9 25.9 5.5 551 9.90 165.0 14.8 17.0 43 0 6.2 10.52 175.3 15.0 17.3 620 26.5 803611 Dk. Brown 315300 6.9 689 27.1 11.09 184.7 15.1 17.4 Dk. Brown Dk. Blue 4.8 482 27.4 10.65 177.5 14.2 16.3 5.5 551 28.0 11.11 185.1 14.1 16.3 48 0 0 6.2 620 11.46 14.0 16.1 28.7 191.0 803610 Dk. Green 833500 6.9 689 29.3 12.15 202.5 14.2 16.4 Dk. Brown Dk. Blue 4.8 482 27.7 11.31 188 5 14 7 17.0 5.5 551 11.86 197.7 14.8 17.0 28.3 53 0 0 6.2 620 29.0 12.61 210.1 15.0 17.4 803610 Dk. Blue 833500 6.9 689 221.4 17.6 29.6 13.29 15.2

### G-880 STANDARD NOZZLES

### G-880 LOW-ANGLE NOZZLES\*\*





<sup>\*\*</sup> Low-angle nozzles reduce the radius by 15%



### TTS Means Convenience and Versatility

With TTS Technology, every serviceable component of the rotor can be easily accessed anytime with no servicing mess.

 $<sup>^*</sup>$  Complies to ASAE standard. All precipitation rates calculated for 360° operation. All triangular rates are equilateral. To calculate precipitation rates for 180° operation, multiply by 2.

### **G-800 SERIES**



These rotors feature convenient, no-dig Total-Top-Serviceability and a powerful, high-torque gear drive.

### **KEY BENEFITS**

- Adjustable model distinguished by a grey collar that comes factory set in a true full-circle configuration
- Exclusive PressurePort™ Technology optimises incoming pressure at each nozzle to increase consistency and maximise distribution uniformity
- High-torque gear drive is the strongest in the industry to mitigate the challenges of debris infiltration
- Proprietary Filter Sentry<sup>™</sup> Mechanism cleans the filter with every opening and closing cycle



- Radius: 14.9 to 29.6 m
- Flow: 3.23 to 13.29 m<sup>3</sup>/hr; 53.8 to 221.4 l/min
- Pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
- All TTS rotors are pressure-rated at 10 bar; 1,000 kPa
- Nozzle range: 15 to 53
  - 10 standard trajectory (22.5°) nozzles
  - 9 low-angle trajectory (15°) nozzles

### **OPTIONS**

- C Check-O-Matic Technology checks up to 8 m in elevation change and readily converts to normally open hydraulic with through-the-top connections
- D Decoder Valve-in-Head Technology with all "E" specifications below\*
- DD Two-station decoder Valve-in-Head Technology with all "E" specifications below\*

G-884 - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

Technology

- E Electric Valve-in-Head Technology with adjustable pressure regulation, on-off-auto selector, 210 mA (370 mA inrush) 50 Hz; 190 mA (350 mA inrush) 60 Hz solenoid with captive plunger and internal downstream bleed
- \* All DIH rotors include two DBRY-6 Splice Connectors for connection to the two-wire path. See **page 11** for critical recommendations on grounding DIH rotors.



**G-884C**Pop-up height: 9.5 cm
Overall height: 30 cm
Flange diameter: 18 cm
Female inlet: 1½" (40 mm) Acme



G-884E
Pop-up height: 9.5 cm
Overall height: 30 cm
Flange diameter: 18 cm
Female inlet: 1½" (40 mm) Acme

1 Model	2 Valve Options	3 Nozzle	4 Regulation
<b>G-884</b> = Full-circle (convertible to forward-	<b>C</b> = Check-O-Matic Technology*	<b>15 to 53</b> = Installed G-880 nozzle	<b>P5</b> = 50 PSI; 3.4 bar; 340 kPa (nozzles 15 to 18)
facing adjustable arc rotor)	<b>D</b> = Decoder Valve-in-Head Technology		<b>P6</b> = 65 PSI; 4.5 bar; 450 kPa (nozzles 18 to 25)
	<b>DD</b> = Two-station decoder Valve-in-Head Technology		<b>P8</b> = 80 PSI; 5.5 bar; 550 kPa (nozzles 25 to 53)
	<b>E</b> = Electric Valve-in-Head Technology		
	*Converts to N.O. hydraulic Valve-in-Head		

#### Example:

G-884-E-33-P8 = G-884 full-circle electric Valve-in-Head Technology, installed 33 nozzle, 80 PSI; 5.5 bar; 550 kPa regulation

#### **G-884 NOZZLE PERFORMANCE DATA\*** Nozzle Set Pressure Radius Flow Precip mm/hr $\blacksquare$ kPa m m³/hr I/min bar 3.4 344 14.9 3.23 53.8 14.5 16.7 413 59.4 148 Tan Grey 41 15.5 3.57 17 0 4.5 450 15.9 3.73 62.1 14.8 17.1 0 15 4.8 482 3.86 64.4 14.8 17.1 16.2 803611 White 315317 5.5 551 4.13 68.9 14 7 17.0 16.8 3.4 344 17.1 3.91 65.1 13.4 15.5 Tan 4.1 413 17.7 4.28 71.3 13.7 15.8 Grey 4.5 450 4 48 74 6 13.8 16.0 18.0 18 4.8 482 18.3 4.54 75.7 15.7 13.6 5.5 803611 Orange 315317 551 18.6 4.82 80.3 13.9 16.1 3.4 344 17.4 4.18 69.7 13.8 16.0 Tan Grey 4.1 413 18.0 4.61 76.8 14.3 16.5 4.5 450 18.6 4.86 81.0 14.1 16.2 20 4.8 482 19.2 4.91 81.8 13.3 15.4 803611 Tan 315317 5.5 551 19.5 5.16 85.9 13.5 15.6 3.4 4.91 344 19.2 81.8 13.3 15.4 Tan Lt. Blue 4.1 413 19.8 5.22 87.1 13.3 15.4 4.5 450 20.1 5.45 90.8 13.5 15.6 23 0 4.8 943 482 20.4 5.66 13.6 15.7 803611 315311 5.5 551 20.7 6.04 100.7 14.1 16.2 4.5 450 21.6 6.50 108.3 13.9 16.0 Lt. Blue 4.8 482 6.75 15.7 Tan 22.3 112.5 13.6 5.5 551 22.6 7.19 119.8 14.1 16.3 25 0 6.2 620 22.9 7.65 127.5 14.6 16.9 803611 Blue 315311 6.9 689 14.7 23.5 8.12 135.3 17.0 4.5 450 22.6 7.02 117.0 13.8 15.9 Tan Lt. Blue 4.8 482 22.9 7.27 121.1 13.9 16.1 5.5 551 23.5 7.77 129.5 14.1 16.3 33 6.2 620 24.1 8.22 137.0 14.2 16.4 803611 Grey 315311 6.9 689 24.7 8.68 16.4 144.6 14.2 4.5 450 23.5 7.97 132.9 14.5 16.7 Tan Lt. Blue 4.8 482 24.1 8.31 138.5 14.3 16.6 5 5 551 25.0 8 84 1473 14 1 163 38 0 6.2 620 25.6 9.38 156.3 14.3 16.5 803611 Red 315311 6.9 689 26.5 9.90 165.0 14.1 16.3 Tan Blue 4.8 482 25.3 9.38 156.3 14.7 16.9 9.90 5.5 551 25 9 165.0 14.8 17.0 43 0 6.2 175.3 17.3 620 26.5 10.52 15.0 803611 Dk. Brown 315300 6.9 689 27.1 11.09 184.7 15.1 17.4 Dk. Brown Dk. Blue 4.8 482 27.4 10.65 177.5 14.2 16.3 5.5 551 28.0 11.11 185.1 14.1 16.3 48 0 0 6.2 620 28.7 11 46 191 0 14 0 16 1 803610 Dk. Green 833500 6.9 689 29.3 12.15 202.5 14.2 16.4 Dk. Brown 11.31 188.5 17.0 Dk. Blue 48 482 277 14 7 5.5 551 28.3 11.86 197.7 14.8 17.0 53 0 0 6.2 620 29.0 12.61 210.1 15.0 17.4 803610 Dk. Blue 833500 6.9 29.6 221.4 17.6 689 13.29 15.2

### **G-884 STANDARD NOZZLES**

G-884 LOW-ANGLE NOZZLES\*\*





<sup>\*\*</sup> Low-angle nozzles reduce radius by 15%



G-885 Rotor with Total-Top-Serviceability and Decoder-in-Head Technology

### TTS Flange Compartment

All TTS rotors include ample room for solenoid splice connections and a Pilot™ Two-Way Module when needed.

<sup>\*</sup> Complies to ASAE standard. All precipitation rates calculated for 360° operation. All triangular rates are equilateral. To calculate precipitation rates for 180° operation, multiply by 2.

### **G-800 SERIES**



These rotors feature convenient, no-dig Total-Top-Serviceability and a powerful, high-torque gear drive.

### **KEY BENEFITS**

- Adjustable model distinguished by a grey collar that comes factory set in a part-circle configuration (60° to 360°)
- Exclusive PressurePort™ Technology optimises incoming pressure at each nozzle to increase consistency and maximise distribution uniformity
- High-torque gear drive is the strongest in the industry to mitigate the challenges of debris infiltration
- Proprietary Filter Sentry<sup>™</sup> Mechanism cleans the filter with every opening and closing cycle

### **OPERATING SPECIFICATIONS**

- Radius: 11.3 to 28.7 m
- Flow: 2.02 to 13.54 m<sup>3</sup>/hr; 33.7 to 225.6 l/min
- Pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
- · All TTS rotors are pressure-rated at 10 bar; 1,000 kPa
- Nozzle range: 10 to 53
  - 12 standard trajectory (22.5°) nozzles
  - 9 low-angle trajectory (15°) nozzles

### **OPTIONS**

- C Check-O-Matic Technology checks up to 8 m in elevation change and readily converts to normally open hydraulic with through-the-top connections
- D Decoder Valve-in-Head Technology with all "E" specifications below\*
- DD Two-station decoder Valve-in-Head Technology with all "E" specifications below\*
- E Electric Valve-in-Head Technology with adjustable pressure regulation, on-off-auto selector, 210 mA (370 mA inrush) 50 Hz; 190 mA (350 mA inrush) 60 Hz solenoid with captive plunger and internal downstream bleed
- \* All DIH rotors include two DBRY-6 Splice Connectors for connection to the two-wire path. See **page 11** for critical recommendations on grounding DIH rotors.



#### G-885C Pop-up height: 9.5 cm Overall height: 30 cm Flange diameter: 18 cm Female inlet: 1½" (40 mm) Acme



### **G-885E**Pop-up height: 9.5 cm Overall height: 30 cm

Flange diameter: 18 cm Female inlet: 1½" (40 mm) Acme

G-885 - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4						
1 Model	2 Valve Options	3 Nozzle	4 Regulation			
<b>G-885</b> = Full/part-circle 60° to 360° arc range	C = Check-O-Matic Technology*	<b>10 to 53</b> = Installed G-885 nozzle	<b>P5</b> = 50 PSI; 3.4 bar; 340 kPa (nozzles 10 to 18)			
	<b>D</b> = Decoder Valve-in-Head Technology		<b>P6</b> = 65 PSI; 4.5 bar; 450 kPa (nozzles 18 to 25)			
	<b>DD</b> = Two-station decoder Valve-in-Head Technology		<b>P8</b> = 80 PSI; 5.5 bar; 550 kPa (nozzles 25 to 53)			
	<b>E</b> = Electric Valve-in-Head Technology *Converts to N.O. hydraulic Valve-in-Head					
	Technology					

Example:

G-885-E-33-P8 = G-885 full/part-circle electric Valve-in-Head Technology, installed 33 nozzle, 80 PSI; 5.5 bar; 550 kPa regulation



#### **G-885 NOZZLE PERFORMANCE DATA\*** Nozzle Set Flow Precip mm/hr Pressure Radius kPa m<sup>3</sup>/hr I/min $\triangle$ Orange Dk. Green 3.4 344 11.3 2.02 33.7 15.9 18.4 4.1 413 11.9 2.23 37.1 15.8 18.2 O $oldsymbol{O}$ 2.32 4.5 450 12.5 38.6 14.8 17.1 10 803603 315312 Lt. Green 344 14.3 2.59 43.2 12.6 14.6 Orange White 3.4 4.1 413 14.6 2.79 46.6 13.1 15.1 45 450 14.9 2.93 48.8 13.1 15.2 13 803603 315314 Lt. Blue 3 4 15 9 2 93 48 8 11 7 13 5 Orange White 344 4.1 413 15.9 3.29 54.9 13.1 15.1 M 4.5 450 16.2 3.38 56.4 13.0 15.0 15 803603 315314 48 482 16 2 3 52 58.7 13 5 15.6 White 5.5 551 16.5 3.75 62.5 13.8 16.0 Orange Lt. Green 3.4 344 17.4 3.77 62.8 12.5 14.4 413 17 7 4 04 674 14 9 41 12 9 O 4.5 450 18.0 4.23 70.4 13.1 15.1 18 803603 315313 4.8 482 18.3 4.41 73.4 13.2 15.2 Orange 55 551 18 6 4 66 77.6 13 5 15.6 Orange Lt. Green 3.4 344 18.0 4.07 67.8 12.6 14.5 4.1 413 18.6 4.43 73.8 12.8 14.8 4.5 450 18.9 4.50 75.0 12.6 14.5 20 803603 315313 4.8 482 19.2 4.68 78.0 12.7 14.7 5.5 Tan 551 19.5 5.02 83.7 13.2 15.2 Orange Lt. Green 3.4 344 19.8 4.59 76.5 11.7 13.5 4.1 413 20.1 5.02 83.7 12.4 14.3 45 450 20.4 5 43 905 13.0 15.0 23 803603 315313 4.8 482 20.4 5.50 91.6 13.2 15 2 Green 5.5 551 21.0 5.88 98.0 13.3 15.4 6.43 Red 4.5 450 21.6 107.1 13.7 15.8 Green 4.8 482 21.9 6.66 110.9 13.8 16.0 O 5.5 551 22.3 7.16 119.2 14.5 16.7 25 803602 315310 6.2 620 22.6 7.59 126.4 14.9 17.2 6.9 689 22.9 8.04 134.0 15.4 17.8 Red Green 45 450 219 6.95 115.8 14 4 16.7 4.8 482 22.3 7.18 119.6 14.5 16.7 O 5.5 551 22.9 7.70 128.3 14.7 17.0 33 803602 315310 6.2 620 235 8 13 135 5 14.8 17.0 • 6.9 689 24.1 8.61 143.5 14.8 17.1 Grev Red 4.5 450 23.2 7.93 132.1 14.8 17.1 Green 48 482 23.8 8 22 137 0 14 5 16.8 O 5.5 551 24.4 8.88 148.0 14.9 17.2 38 803602 315310 6.2 620 25.0 9.36 156.0 15.0 17.3 Red • 25.6 9.88 15.1 6.9 689 164 7 17.4 Red Green 48 482 24 7 936 156.0 15 4 17 7 0 5.5 551 25.3 9.88 164.7 15 4 17.8 43 803602 315310 620 26.2 10.49 174.9 15.3 17.6 6.2 Dk. Brown 184.3 6.9 689 27.1 11.06 15.0 17.4 Dk. Green Dk. Red 4.8 482 25.3 10.52 175.3 16.4 19.0 O 55 551 25 9 10 99 183 2 16.4 18 9 48 803601 315312 6.2 620 27.1 11.74 195.7 16.0 18.4 Dk. Greer 6.9 689 27.7 12.38 206.3 16.1 18.6 Dk. Red Dk. Green 48 482 26.5 11.52 191.9 16.4 18.9 $\mathbf{O}$ 5.5 551 27.1 12.06 201.0 16.4 18.9 53 803601 315312 6.2 620 28.0 12.81 213.5 16.3 18.8 Dk. Blue 6.9 689 28.7 13.54 225.6 19.0 16.5

#### **G-885 STANDARD NOZZLES**

#### G-885 LOW-ANGLE NOZZLES\*\*





\*\* Low-angle nozzles reduce the radius by 15%.



#### **Contour Back-Nozzle Capabilities**

Whether you want a little extra green behind your adjustable arc TTS rotors or a more modeled look to your fairway's hard edges, contour back-nozzles are here to make your vision a reality. Choose from four short-range or four mid-range nozzles to suit your needs.

CONTOUR BACK-NOZZLE PERFORMANCE DATA							
			4.5	4.5 Bar		5.5 Bar	
P/N	Colour	Profile	Metres	L/M	Metres	L/M	
803604	Peach		7.6	12.9	8.2	14.8	
803603	Orange		8.5	14.4	8.8	15.9	
803602	Red		9.4	15.9	10.1	17.0	
803601	Dk. Red		10.4	17.4	11.0	18.5	
315314	White		11.3	10.6	11.6	11.0	
315313	Lt. Green		12.8	16.3	13.4	17.8	
315310	Green		14.0	19.7	14.6	21.6	
315312	Dk. Green		14.9	29.9	15.5	33.3	

# GT-885/G-885 CONTOUR BACK-NOZZLES



#### QuickSet-360 with Ratcheting Riser

Setting up your adjustable arc TTS rotor is fast and simple. The integrated ratcheting mechanism allows a simple twist of the riser to align the right-side reversing point. These rotors are also easily convertible to a true non-reversing full-circle with our exclusive QuickSet-360 feature.

 $<sup>\</sup>bullet$  = Nozzle plug P/N 315300 installed in the back side of the nozzle housing.

<sup>\*</sup> Complies to ASAE standard. All precipitation rates calculated for 360° operation. All triangular rates are equilateral. To calculate precipitation rates for 180° operation, multiply by 2.

### **G-800 SERIES**



These rotors feature convenient, no-dig Total-Top-Serviceability and a shorter-radius, lower-flow internal.

### **KEY BENEFITS**

- Adjustable, shorter-radius model (50° to 360°)
- Proprietary Filter Sentry<sup>™</sup> Mechanism cleans the filter with every opening and closing cycle

### **OPERATING SPECIFICATIONS**

- Radius: 5.5 to 15.2 m
- Flow: 0.43 to 2.91 m<sup>3</sup>/hr; 7.2 to 48.5 l/min
- Pressure range: 2.8 to 4.5 bar; 280 to 450 kPa
- All TTS rotors are pressure-rated at 10 bar; 1,000 kPa
- Nozzle range: 2 to 12

### **OPTIONS**

- C Check-O-Matic Technology checks up to 8 m in elevation change and readily converts to normally open hydraulic with through-the-top connections
- D Decoder Valve-in-Head Technology with all "E" specifications below\*
- DD Two-station decoder Valve-in-Head Technology with all "E" specifications below\*
- E Electric Valve-in-Head Technology with adjustable pressure regulation, on-off-auto selector, 210 mA (370 mA inrush) 50 Hz; 190 mA (350 mA inrush)
   60 Hz solenoid with captive plunger and internal downstream bleed
- All DIH rotors include two DBRY-6 Splice Connectors for connection to the two-wire path. See page 11 for critical recommendations on grounding DIH rotors.



# G-835C Pop-up height: 8 cm Overall height: 30 cm Flange diameter: 18 cm Female inlet: 1½" (40 mm) Acme



# **G-835E**Pop-up height: 8 cm Overall height: 30 cm Flange diameter: 18 cm Female inlet: 1½" (40 mm) Acme

#### G-835 - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4 Model **Valve Options** Nozzle 4 Regulation **G-835** = Full/part-circle, 50° to 360° 6 = Installed G-835 nozzle **C** = Check-O-Matic P5 = 50 PSI; 3.4 bar; 340 kPa Technology \* (includes 8-nozzle rack) **D** = Decoder Valve-in-Head **P6** = 65 PSI; 4.5 bar; 450 kPa Technology **E** = Electric Valve-in-Head Technology \*Converts to N.O. hydraulic Valve-in-Head Technology

#### Example

**G-835E-6-P6**= G-835 full/part-circle electric Valve-in-Head Technology, installed 6 nozzle, 50 PSI; 3.4 bar; 340 kPa regulation



#### **G-835 NOZZLE PERFORMANCE DATA\***

Nozzle	Pres	sure	Radius	Flo	ow	Precip	mm/hr
	bar	kPa	m	m³/hr	l/min		
	2.8	280	5.5	0.43	7.2	14.3	16.6
2	3.4	340	6.1	0.48	7.9	12.8	14.8
Yellow	4.1	410	6.7	0.55	9.1	12.1	14.0
	4.5	450	7.0	0.59	9.8	12.0	13.9
•	2.8	280	7.0	0.68	11.4	13.9	16.0
3	3.4	340	7.6	0.73	21.1	12.5	14.5
Yellow	4.1	410	8.2	0.80	13.2	11.7	13.6
	4.5	450	8.5	0.82	13.6	11.2	13.0
	2.8	280	7.6	0.89	14.8	15.3	17.6
4	3.4	340	8.5	0.93	15.5	12.8	14.8
Yellow	4.1	410	9.1	1.00	16.7	12.0	13.8
	4.5	450	9.4	1.04	17.4	11.7	13.5
_	2.8	280	8.8	1.07	17.8	13.7	15.8
5	3.4	340	9.8	1.14	18.9	11.9	13.8
Yellow	4.1	410	10.1	1.20	20.1	11.9	13.7
	4.5	450	10.7	1.23	20.4	10.8	12.4
<b>C</b> •	2.8	280	9.8	1.36	22.7	14.3	16.5
6	3.4	340	10.7	1.43	23.8	12.6	14.5
Yellow	4.1	410	11.3	1.50	25.0	11.8	13.6
	4.5	450	11.9	1.54	25.7	10.9	12.6
0	2.8	280	11.0	1.77	29.5	14.7	17.0
8	3.4	340	11.9	1.82	30.3	12.9	14.8
Yellow	4.1	410	12.8	1.89	31.4	11.5	13.3
	4.5	450	13.1	1.93	32.2	11.2	13.0
10 •	2.8	280	11.9	2.20	36.7	15.6	18.0
	3.4	340	13.1	2.29	38.2	13.4	15.4
Yellow	4.1	410	13.7	2.34	39.0	12.4	14.4
	4.5	450	14.3	2.39	39.7	11.6	13.4
12 •	2.8	280	13.4	2.73	45.4	15.2	17.5
12	3.4	340	14.3	2.77	46.2	13.5	15.6
Yellow	4.1	410	14.6	2.84	47.3	13.3	15.3
	4.5	450	15.2	2.91	48.5	12.5	14.5

<sup>\*</sup> Complies to ASAE standard. All precipitation rates calculated for 360° operation. All triangular rates are equilateral. To calculate precipitation rates for 180° operation, multiply by 2.



#### **G-835 NOZZLES**



#### QuickSet-360

With Hunter's QuickCheck Arc Mechanism and patented QuickSet-360 non-reversing full-circle feature in a variable arc rotor, adjustments are fast, easy, and more flexible than ever before. Now available on all TTS-800 Series, G-800 Series, and B Series adjustable arc rotors.



## **B SERIES**



These highly efficient block rotors have a powerful gear drive backed by the reliability synonymous with the Hunter name.

#### **KEY BENEFITS**

- · Dedicated, true full-circle model distinguished by a black collar
- Exclusive PressurePort<sup>™</sup> Technology optimises incoming pressure at each nozzle to increase consistency and maximise distribution uniformity
- High-torque gear drive is the strongest in the industry to mitigate the challenges of debris infiltration

#### **OPERATING SPECIFICATIONS**

- G-80-B
  - Radius: 14.9 to 29.6 m
  - Flow: 3.23 to 13.29 m<sup>3</sup>/hr; 53.8 to 221.4 l/min
  - Pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
- All B Series Golf Rotors are pressure-rated at 10 bar; 1,000 kPa
- Check height up to 2 m in elevation change
- Nozzle range: 15 to 53
  - 10 standard trajectory (22.5°) nozzles
  - 9 low-angle trajectory (15°) nozzles



**G-80-B**Pop-up height: 9.5 cm
Overall height: 24.5 cm
Flange diameter: 13.7 cm
Female inlet: 1¼" (32 mm) Acme

G-80-B - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4						
1 Model	2 Valve Options	3 Nozzle	4 Options*			
G-80 = Full-circle	<b>B</b> = Block rotor with check valve	<b>15 to 53</b> = Installed G80 nozzle*	S = SSU*			
		*SSU = 18, 25, or 48	*Standard stocking unit			

Example:

**G-80-B-25-S** = G-80 full-circle block rotor, installed 25 nozzle, standard stocking unit model



#### **G-80-B NOZZLE PERFORMANCE DATA** Nozzle Set Pressure Radius Flow Precip mm/hr $\triangle$ kPa m m³/hr I/min bar 3.4 344 14.9 3.23 53.8 14.5 16.7 Tan 413 15.5 59.4 14.8 Grey 4.1 3.57 17.0 4.5 450 15.9 3.73 62.1 14.8 17.1 0 15 4.8 482 16.2 3.86 64.4 14.8 17.1 803611 White 315317 5.5 551 17.0 4.13 68.9 14 7 16.8 3.4 344 17.1 3.91 65.1 13.4 15.5 Tan 4.1 413 17.7 4.28 71.3 13.7 15.8 Grey 4.5 450 18.0 4 48 74 6 13.8 16.0 18 4.8 482 18.3 4.54 75.7 13.6 15.7 803611 Orange 5.5 551 315317 18.6 4.82 80.3 13.9 16.1 3.4 344 17.4 4.18 13.8 69.7 16.0 Tan Grey 4.1 413 18.0 4.61 76.8 14.3 16.5 4.5 450 18.6 4.86 81.0 14.1 16.2 20 4.8 482 19.2 4.91 81.8 13.3 15.4 803611 Tan 315317 5.5 551 19.5 5.16 85.9 13.5 15.6 3.4 4.91 344 19.2 81.8 13.3 15.4 Tan Lt. Blue 4.1 413 19.8 5.22 87.1 13.3 15.4 4.5 450 20.1 5.45 90.8 13.5 15.6 23 0 4.8 20.4 943 482 5.66 13.6 15.7 803611 315311 5.5 551 100.7 20.7 6.04 14.1 16.2 4.5 450 21.6 6.50 108.3 13.9 16.0 Lt. Blue 4.8 482 6.75 15.7 Tan 22.3 112.5 13.6 5.5 551 22.6 7.19 119.8 14.1 16.3 25 0 6.2 620 22.9 7.65 127.5 14.6 16.9 803611 Blue 315311 6.9 689 23.5 8.12 135.3 14.7 17.0 4.5 450 22.6 7.02 117.0 13.8 15.9 Tan Lt. Blue 4.8 482 22.9 7.27 121.1 13.9 16.1 5.5 551 23.5 7.77 129.5 14.1 16.3 33 0 6.2 620 24.1 8.22 137.0 14.2 16.4 803611 Grey 315311 6.9 689 24.7 8.68 144.6 14.2 16.4 4.5 450 23.5 7.97 132.9 14.5 16.7 Tan Lt. Blue 4.8 482 24.1 8.31 138.5 14.3 16.6 5 5 551 25.0 8 84 1473 14 1 163 38 0 6.2 620 25.6 9.38 156.3 14.3 16.5 803611 Red 315311 6.9 689 26.5 9.90 165.0 14.1 16.3 Tan Blue 4.8 482 25.3 9.38 156.3 14.7 16.9 14.8 5.5 551 25 9 9.90 165.0 17.0 43 0 6.2 175.3 17.3 620 26.5 10.52 15.0 803611 Dk. Brown 315300 6.9 689 27.1 11.09 184.7 15.1 17.4 Dk. Brown Dk. Blue 4.8 482 27.4 10.65 177.5 14.2 16.3 5.5 551 28.0 11.11 185.1 14.1 16.3 48 0 0 6.2 620 28.7 11.46 191.0 14 0 16.1 803610 Dk. Green 833500 6.9 689 29.3 12.15 202.5 14.2 16.4 Dk. Blue 27.7 11.31 188.5 17.0 Dk. Brown 48 482 14 7 5.5 551 28.3 11.86 197.7 14.8 17.0 53 O 0 6.2 620 29.0 12.61 210.1 15.0 17.4 803610 Dk. Blue 833500 6.9 29.6 13.29 221.4 17.6 689 15.2

#### **G-80-B NOZZLES**



#### **LOW-ANGLE NOZZLES\*\***



<sup>\*\*</sup> Low-angle nozzles reduce the radius by 15%.

<sup>\*</sup> Complies to ASAE standard. All precipitation rates calculated for 360° operation. All triangular rates are equilateral.

## **B SERIES**



These highly efficient block rotors have a powerful gear drive backed by the reliability synonymous with the Hunter name.

#### **KEY BENEFITS**

- G-84-B
  - Adjustable model distinguished by a grey collar that comes factory set in a true full-circle configuration
  - Exclusive PressurePort™ Technology optimises incoming pressure at each nozzle to increase consistency and maximise distribution uniformity
  - High-torque gear drive is the strongest in the industry to mitigate the challenges of debris infiltration
- G-85-B
  - Adjustable model distinguished by a grey collar that comes factory set in a part-circle configuration  $(60^{\circ} \text{ to } 360^{\circ})$
  - Exclusive PressurePort™ Technology optimises incoming pressure at each nozzle to increase consistency and maximise distribution uniformity
  - High-torque gear drive is the strongest in the industry to mitigate the challenges of debris infiltration



- G-84-B
  - Radius: 14.9 to 29.6 m
  - Flow: 3.23 to 13.29 m<sup>3</sup>/hr; 53.8 to 221.4 l/min
  - Pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
  - Check height up to 2 m in elevation change
  - Nozzle range: 15 to 53
    - 10 standard trajectory (22.5°) nozzles
    - 9 low-angle trajectory (15°) nozzles
- G-85-B
  - Radius: 11.3 to 28.7 m
  - Flow:  $2.02 \text{ to } 13.54 \text{ m}^3/\text{hr}$ ; 33.7 to 225.6 l/min
  - Pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
  - Check height up to 2 m in elevation change
  - Nozzle range: 10 to 53
    - 12 standard trajectory (22.5°) nozzles
    - $\circ$  9 low-angle trajectory (15°) nozzles
- All B Series Golf Rotors are pressure-rated at 10 bar; 1,000 kPa



G-84-B Pop-up height: 9.5 cm Overall height: 24.5 cm Flange diameter: 13.7 cm Female inlet: 11/4" (30 mm) Acme



## **G-85-B**Pop-up height: 9.5 cm Overall height: 24.5 cm Flange diameter: 13.7 cm Female inlet: 1¼" (30 mm) Acme

<b>G-84-B &amp; G-85-B - SPECIFICATION BUILDER:</b> ORDER 1 + 2 + 3 + 4						
1 Model	2 Valve Options	3 Nozzle	4 Options*			
G-84 = Full-circle	<b>B</b> = Block rotor with check valve	ve <b>15 to 53</b> = Installed G84 nozzle* <b>S</b> = SSU*				
		*SSU = 18, 25, or 48	*Standard stocking unit			
<b>G-85</b> = Full/part-circle, 60° to 360°	<b>B</b> = Block rotor with check valve	<b>10 to 53</b> = Installed G85 nozzle** <b>S</b> = SSU*				
		**SSU = 18, 25, or 48	*Standard stocking unit			

#### Example

G-85-B-25-S = G-85 part-circle block rotor, installed 25 nozzle, standard stocking unit model



G-84-B	NOZZL	E PERFO	RMA	NCE D	ATA*					G-85-E	NOZZL	E PERFO	RMA	NCE I	DATA				
N	ozzle Se	t	Pres	ssure	Radius	FI	ow	Precip	mm/hr		Nozzle Se	et .	Pres	ssure	Radius	FI	ow	Precip	mm/
			bar	kPa	m	m³/hr	l/min						bar	kPa	m	m³/hr	l/min		<b>A</b>
•		•	3.4	344	14.9	3.23	53.8	14.5	16.7	Orange		Dk. Green	3.4	344	11.3	2.02	33.7	15.9	18.4
Tan		Grey	4.1 4.5	413 450	15.5 15.9	3.57 3.73	59.4 62.1	14.8 14.8	17.0 17.1				4.1 4.5	413 450	11.9	2.23	37.1 38.6	15.8	18.2
	15	0	4.5	482	16.2	3.86	64.4	14.8	17.1	803603	10	315312	4.5	450	12.5	2.32	38.0	14.8	17.1
803611	White	315317	5.5	551	16.8	4.13	68.9	14.7	17.0	•	Lt. Green	•	-	-	-	-	-	-	-
•		•	3.4	344	17.1	3.91	65.1	13.4	15.5	Orange		White	3.4	344	14.3	2.59	43.2	12.6	14.6
Tan		Grey	4.1	413	17.7	4.28	71.3	13.7	15.8				4.1	413	14.6	2.79	46.6	13.1	15.1
	18	0	4.5 4.8	450 482	18.0 18.3	4.48 4.54	74.6 75.7	13.8 13.6	16.0 15.7	803603	13	315314	4.5	450 -	14.9	2.93	48.8	13.1	15.2
803611	Orange	315317	5.5	551	18.6	4.82	80.3	13.9	16.1	003003	Lt. Blue	•	-	-	-	-	-	-	_
•		•	3.4	344	17.4	4.18	69.7	13.8	16.0	Orange		White	3.4	344	15.9	2.93	48.8	11.7	13.5
Tan		Grey	4.1	413	18.0	4.61	76.8	14.3	16.5				4.1	413	15.9	3.29	54.9	13.1	15.1
	20	0	4.5	450	18.6	4.86	81.0 81.8	14.1	16.2		15		4.5	450	16.2	3.38	56.4	13.0	15.0
803611	Tan	315317	4.8 5.5	482 551	19.2 19.5	4.91 5.16	85.9	13.3 13.5	15.4 15.6	803603	White	315314	4.8 5.5	482 551	16.2 16.5	3.52 3.75	58.7 62.5	13.5 13.8	15.6 16.0
•		•	3.4	344	19.2	4.91	81.8	13.3	15.4	Orange	White	Lt. Green	3.4	344	17.4	3.77	62.8	12.5	14.4
Tan		Lt. Blue	4.1	413	19.8	5.22	87.1	13.3	15.4			<b>6</b>	4.1	413	17.7	4.04	67.4	12.9	14.9
	23	<b>6</b>	4.5	450	20.1	5.45	90.8	13.5	15.6		18		4.5	450	18.0	4.23	70.4	13.1	15.1
803611	Green	315311	4.8 5.5	482 551	20.4	5.66 6.04	94.3 100.7	13.6 14.1	15.7 16.2	803603	-	315313	4.8 5.5	482	18.3 18.6	4.41	73.4 77.6	13.2 13.5	15.2 15.6
003011		513511	4.5	450	21.6	6.50	100.7	13.9	16.0	Orange	Orange	Lt. Green	3.4	551 344	18.0	4.66	67.8	12.6	14.5
Tan		Lt. Blue	4.8	482	22.3	6.75	112.5	13.6	15.7				4.1	413	18.6	4.43	73.8	12.8	14.8
	25	6	5.5	551	22.6	7.19	119.8	14.1	16.3	O	20	0	4.5	450	18.9	4.50	75.0	12.6	14.5
			6.2	620	22.9	7.65	127.5	14.6	16.9	803603		315313	4.8	482	19.2	4.68	78.0	12.7	14.7
803611	Blue	315311	6.9 4.5	689 450	23.5	8.12 7.02	135.3	14.7	17.0 15.9	Orange	Tan	Lt. Green	5.5	551 344	19.5 19.8	5.02 4.59	83.7 76.5	13.2	15.2 13.5
Tan		Lt. Blue	4.8	482	22.0	7.02	121.1	13.9	16.1	Orange			4.1	413	20.1	5.02	83.7	12.4	14.3
	33		5.5	551	23.5	7.77	129.5	14.1	16.3		23		4.5	450	20.4	5.43	90.5	13.0	15.0
		0	6.2	620	24.1	8.22	137.0	14.2	16.4	803603		315313	4.8	482	20.4	5.50	91.6	13.2	15.2
803611	Grey	315311	6.9 4.5	689 450	24.7	8.68 7.97	144.6	14.2	16.4 16.7	Dad	Green	Crear	5.5	551	21.0	5.88	98.0	13.3	15.4 15.8
Tan		Lt. Blue	4.8	482	24.1	8.31	138.5	14.3	16.7	Red		Green	4.5 4.8	450 482	21.0	6.43 6.66	107.1 110.9	13.7 13.8	16.0
4	20		5.5	551	25.0	8.84	147.3	14.1	16.3	0	25	0	5.5	551	22.3	7.16	119.2	14.5	16.7
0	38	0	6.2	620	25.6	9.38	156.3	14.3	16.5	803602	25	315310	6.2	620	22.6	7.59	126.4	14.9	17.2
803611	Red	315311	6.9	689	26.5	9.90	165.0	14.1	16.3		Blue	•	6.9	689	22.9	8.04	134.0	15.4	17.8
Tan		Blue	- 4.8	- 482	- 25.3	- 9.38	- 156.3	- 14.7	- 16.9	Red		Green	4.5 4.8	450 482	21.9 22.3	6.95 7.18	115.8 119.6	14.4 14.5	16.7 16.7
	42		5.5	551	25.9	9.90	165.0	14.8	17.0	0	22	0	5.5	551	22.9	7.70	128.3	14.7	17.0
	43	0	6.2	620	26.5	10.52	175.3	15.0	17.3	803602	33	315310	6.2	620	23.5	8.13	135.5	14.8	17.0
	Dk. Brown		6.9	689	27.1	11.09	184.7	15.1	17.4	_	Grey	•	6.9	689	24.1	8.61	143.5	14.8	17.1
DI Drawa		Dk Blue	- 4 O	-	- 27.4	- 10.6E	- 177 E	14.2	16.2	Red		Green	4.5	450	23.2	7.93	132.1	14.8	17.1
Dk. Brown		Dk. Blue	4.8 5.5	482 551	27.4 28.0	10.65 11.11	177.5 185.1	14.2 14.1	16.3 16.3	0			4.8 5.5	482 551	23.8 24.4	8.22 8.88	137.0 148.0	14.5 14.9	16.8 17.2
0	48	0	6.2	620	28.7	11.46	191.0	14.0	16.1	803602	38	315310	6.2	620	25.0	9.36	156.0	15.0	17.3
803610	Dk. Green	833500	6.9	689	29.3	12.15	202.5	14.2	16.4	•	Red	•	6.9	689	25.6	9.88	164.7	15.1	17.4
•		•	-	-	-	-	-	-	-	Red		Green	-	-	-	-	-	-	-
Dk. Brown		Dk. Blue	4.8 5.5	482 551	27.7 28.3	11.31 11.86	188.5 197.7	14.7 14.8	17.0 17.0				4.8 5.5	482 551	24.7 25.3	9.36	156.0	15.4	17.7
0	53	0	6.2	620	29.0	12.61	210.1	15.0	17.4	803602	43	315310	6.2	620	26.2	9.88 10.49	164.7 174.9	15.4 15.3	17.8 17.6
803610	Dk. Blue	833500	6.9	689	29.6	13.29	221.4	15.2	17.6	●	Dk. Browr		6.9	689	27.1	11.06	184.3	15.0	17.4
										Dk. Red		Dk. Green	-	-	-	-	-	-	-
G-84-B	NOZZL	ES		G-	85-B N	OZZLE	S					<b>6</b>	4.8	482	25.3	10.52	175.3	16.4	19.0
										803601	48	315312	5.5	551	25.9	10.99	183.2	16.4	18.9
	<u> </u>									803001	Dk. Green		6.2	620 689	27.1 27.7	11.74 12.38	195.7 206.3	16.0 16.1	18.4 18.6
			I			Y				Dk. Red	Sin Siccili	Dk. Green	-	-	-	-	-	-	-
				0	<b>)</b> (0					_			4.8	482	26.5	11.52	191.9	16.4	18.9
~	<b>*</b>	-	-		7	-	_	-		0	53	0	5.5	551	27.1	12.06	201.0	16.4	18.9
										803601	-	315312	6.2	620	28.0	12.81	213.5	16.3	18.8
LOW-A	NCIEN	<b>OZZLES</b>	**							•	Dk. Blue		6.9	689	28.7	13.54	225.6	16.5	19.0

<sup>\*\*</sup> Low-angle nozzles reduce radius by 15%.

 $^{\star}$  Complies to ASAE standard. All precipitation rates calculated for 360  $^{\circ}$ 

operation. All triangular rates are equilateral.

## **B SERIES**



These cost-effective block rotors have shorter-radius, lower-flow nozzles for use in smaller areas.

#### **KEY BENEFITS**

• Adjustable, shorter-radius model (50° to 360°)

#### **OPERATING SPECIFICATIONS**

- Radius: 5.5 to 15.2 m
- Flow: 0.43 to 2.91 m<sup>3</sup>/hr; 7.2 to 48.5 l/min
- Pressure range: 2.8 to 4.5 bar; 280 to 450 kPa
- All B Series Golf Rotors are pressure-rated at 10 bar; 1,000 kPa
- Check height up to 2 m in elevation change
- Nozzle range: 2 to 12



**G-35-B**Pop-up height: 8 cm
Overall height: 23 cm
Flange diameter: 12 cm
Female inlet: 11¼" (30 mm) Acme

<b>G-35-B - SPECIFICATION BUILDER:</b> ORDER 1 + 2 + 3 + 4							
1 Model	2 Valve Options	3 Nozzle	4 Options*				
<b>G-35</b> = Full/part-circle 50° to 360°	<b>B</b> = Block rotor with check valve	6 = Installed G35 nozzle*  * Available in SSU model only SSU = 6 (includes nozzle rack)	<b>S</b> = SSU*  * Standard stocking unit				

Example:

G-35-B-6-S = G-35 full/part-circle block rotor, installed 6 nozzle with nozzle rack, standard stocking unit model



#### G-35-B NOZZLE PERFORMANCE DATA\*

Nozzle	Pres	sure	Radius	Flo	ow	Precip	mm/hr
	bar	kPa	m	m³/hr	l/min		<b>A</b>
	2.8	280	5.5	0.43	7.2	14.3	16.6
2	3.4	340	6.1	0.48	7.9	12.8	14.8
Yellow	4.1	410	6.7	0.55	9.1	12.1	14.0
	4.5	450	7.0	0.59	9.8	12.0	13.9
2	2.8	280	7.0	0.68	11.4	13.9	16.0
3	3.4	340	7.6	0.73	21.1	12.5	14.5
Yellow	4.1	410	8.2	0.80	13.2	11.7	13.6
	4.5	450	8.5	0.82	13.6	11.2	13.0
4	2.8	280	7.6	0.89	14.8	15.3	17.6
4	3.4	340	8.5	0.93	15.5	12.8	14.8
Yellow	4.1	410	9.1	1.00	16.7	12.0	13.8
	4.5	450	9.4	1.04	17.4	11.7	13.5
	2.8	280	8.8	1.07	17.8	13.7	15.8
5	3.4	340	9.8	1.14	18.9	11.9	13.8
Yellow	4.1	410	10.1	1.20	20.1	11.9	13.7
	4.5	450	10.7	1.23	20.4	10.8	12.4
<b>C</b> •	2.8	280	9.8	1.36	22.7	14.3	16.5
6	3.4	340	10.7	1.43	23.8	12.6	14.5
Yellow	4.1	410	11.3	1.50	25.0	11.8	13.6
	4.5	450	11.9	1.54	25.7	10.9	12.6
0	2.8	280	11.0	1.77	29.5	14.7	17.0
8	3.4	340	11.9	1.82	30.3	12.9	14.8
Yellow	4.1	410	12.8	1.89	31.4	11.5	13.3
	4.5	450	13.1	1.93	32.2	11.2	13.0
10.0	2.8	280	11.9	2.20	36.7	15.6	18.0
10 •	3.4	340	13.1	2.29	38.2	13.4	15.4
Yellow	4.1	410	13.7	2.34	39.0	12.4	14.4
	4.5	450	14.3	2.39	39.7	11.6	13.4
12 0	2.8	280	13.4	2.73	45.4	15.2	17.5
12 •	3.4	340	14.3	2.77	46.2	13.5	15.6
Yellow	4.1	410	14.6	2.84	47.3	13.3	15.3
	4.5	450	15.2	2.91	48.5	12.5	14.5

 $<sup>^{\</sup>ast}$  Complies to ASAE standard. All precipitation rates calculated for 360° operation. All triangular rates are equilateral. To calculate precipitation rates for 180° operation, multiply by 2.

#### G-35-B ROTOR



#### **G-35-B NOZZLES**





## **G-900 SERIES**



These rotors are simple to install and perfect for retrofits. Total-Top-Serviceability makes field maintenance quick and easy.

#### **KEY BENEFITS**

- G-990 is a dedicated, true full-circle model
- G-995 is an adjustable part-circle model (40° to 360°)
- · Higher-flow, longer-radius rotor designed for single-row systems
- · Contour back-nozzle capability for special applications

#### **OPERATING SPECIFICATIONS**

- G-990
  - Radius: 27.1 to 31.4 m
  - Flow: 12.31 to 18.92 m³/hr; 205.2 to 315.3 l/min
     Pressure range: 5.5 to 8.3 bar; 550 to 830 kPa
- G-995
  - Radius: 24.7 to 29.6 m
  - Flow: 12.47 to 19.04 m<sup>3</sup>/hr; 207.8 to 317.2 l/min
  - Pressure range: 5.5 to 8.3 bar; 550 to 830 kPa
- All TTS rotors are pressure-rated at 10 bar; 1,000 kPa
- Check height up to 2 m in elevation change
- Nozzle range: 53 to 73
  - 3 standard trajectory (22.5°) nozzles
  - 3 low-angle trajectory (15°) nozzles

#### **OPTIONS**

- C Check-O-Matic Technology checks up to 8 m in elevation change and readily converts to normally open hydraulic with through-the-top connections
- D Decoder Valve-in-Head Technology with all "E" specifications below\*
- DD Two-station decoder Valve-in-Head Technology with all "E" specifications below\*
- E Electric Valve-in-Head Technology with adjustable pressure regulation, on-off-auto selector, 210 mA (370 mA inrush) 50 Hz; 190 mA (350 mA inrush) 60 Hz solenoid with captive plunger and internal downstream bleed
- \* All DIH rotors include two DBRY-6 Splice Connectors for connection to the two-wire path. See **page 11** for critical recommendations on grounding DIH rotors.



## **G-990C**Pop-up height: 8 cm Overall height: 34 cm Flange diameter: 19 cm

Female inlet: 1½" (40 mm) Acme



#### G-995E

Pop-up height: 8 cm Overall height: 34 cm Flange diameter: 19 cm Female inlet: 1½" (40 mm) Acme

G-000 & G-00E - SPECIFICATION PHILIPED. OPNED 1	. 2	. 2	1 / 1	5

G-990 & G-995 - SPEC	<b>IFICATION BUILDER:</b> ORDER 1 + 2 + 3 +	4 + 5		
1 Model	2 Valve Options	3 Nozzle	4 Regulation*	5 Options
<b>G-990</b> = Full-circle	<b>C</b> = Check-O-Matic Technology*	<b>53 to 73</b> = Installed G-990 nozzle*	<b>P8</b> = 80 PSI; 5.5 bar; 550 kPa (nozzle 53)	<b>S</b> = SSU*
	<b>D</b> = Decoder Valve-in-Head Technology		<b>P1</b> = 100 PSI; 6.9 bar; 690 kPa (nozzles 53 to 73)	
	<b>DD</b> = Two-station decoder Valve-in-Head Technology		<b>P2</b> = 120 PSI; 8.3 bar: 830 kPa (nozzle 73)	
	<b>E</b> = Electric Valve-in-Head Technology			
<b>G-995</b> = Adjustable arc, 40° to 360°	<b>C</b> = Check-O-Matic Technology*	<b>53 to 73</b> = Installed G-995 nozzle*	<b>P8</b> = 80 PSI; 5.5 bar; 550 kPa (nozzle 53)	<b>S</b> = SSU*
	<b>D</b> = Decoder Valve-in-Head Technology		<b>P1</b> = 100 PSI; 6.9 bar; 690 kPa (nozzles 53 to 73)	
	<b>DD</b> = Two-station decoder Valve-in-Head Technology		<b>P2</b> = 120 PSI; 8.3 bar: 830 kPa (nozzle 73)	
	<b>E</b> = Electric Valve-in-Head Technology			
	*Converts to N.O. hydraulic Valve-in-Head Technology	* SSU = 53	* SSU = P8/53	*Standard stocking unit

Example:

G-990-E-53-P8-S = G-990 full-circle electric Valve-in-Head Technology, installed 53 nozzle, 80 PSI; 5.5 bar; 550 kPa regulation, standard stocking unit model



# **G-990 NOZZLE PERFORMANCE DATA\***

#### **G-995 NOZZLE PERFORMANCE DATA\*** Pressure Radius\*\*

550

760

550

6.2 620

6.9 690

bar kPa

5.5

7.6

8.3 830

6.2 620

6.9 690

7.6 760

8.3 830

5.5 550

6.2 620

6.9 690

7.6 760

8.3 830

m

24.7

25.6

26.2

26.5

26.8

26.2

26.8

27.4

27.7

28.0

27.1

27.7

28.3

29.0

29.6

Flow

m³/hr l/min

207.8

216.5

225.2

235.1

243.8

235.8

247.9

261.2

272.2

282.8

275.2

285.4

295.6

306.2

12.47

12.99

13.52

14.11

14.63

14.15

14.88

15.67

16.33

16.97

16.51

17.13

17.74

18.38

19.04 317.2

20.5

19.8

19.7

20.1

20.3

20.6

20.7

20.8

21.2

21.6

22.4

22.1

21.9

21.8

Nozzle

53 •

Dk. Blue

63 ●

Black

73

Orange

#### **NOZZLES\*\*** Precip mm/hr 23.6 22.9

22.7

23.2

23.5

23.8

23.9

24.0

24.5

24.9

25.9

25.7

25.5

25.3

25.1



**G-900 LOW-ANGLE** 

\*\* Low-angle nozzles reduce the radius by 15%.

Nozzle	Pres	sure	Radius**	Flo	ow	Precip	mm/hr
	bar	kPa	m	m³/hr	l/min		
	5.5	550	27.1	12.31	205.2	16.7	19.3
53 •	6.2	620	27.4	12.88	214.6	17.1	19.8
Dk. Blue	6.9	690	28.0	13.45	224.1	17.1	19.7
	7.6	760	28.3	14.02	233.6	17.4	20.1
	8.3	830	28.7	14.58	243.0	17.8	20.5
-	5.5	550	28.0	14.36	23.92	18.3	21.1
63 ●	6.2	620	28.7	14.97	249.5	18.2	21.1
Black	6.9	690	29.3	15.76	265.7	18.4	21.3
	7.6	760	29.6	16.36	272.5	18.7	21.6
	8.3	830	29.9	17.01	283.5	19.1	22.0
70.	5.5	550	29.3	16.38	272.9	19.1	22.1
73	6.2	620	29.9	17.04	283.9	19.1	22.0
Orange	6.9	690	30.2	17.67	297.5	19.4	22.4
Ü	7.6	760	31.1	18.29	304.7	18.9	21.8
	8.3	830	31.4	18.92	315.3	19.2	22.2

<sup>\*</sup> Complies to ASAE standard. All precipitation rates calculated for 360° operation. All triangular rates are equilateral. To calculate precipitation rates for 180° operation, multiply by 2.



#### **Contour Back-Nozzle Capabilities**

Choose any nozzle from the I-40 and G-70 nozzle racks, or from the short- and mid-range G-900 nozzles.

## SWING JOINTS AND ACCESSORIES



## **HSJ SWING JOINTS**

## ADVANCED FEATURES



#### PROVEN PRODUCTS, PROVEN PARTNERS

Over the last four decades, Hunter has become the leading producer of gear-driven rotors, known worldwide for its quality product and excellent customer support. Similarly, LASCO has spent the last 50 years developing a reputation as the industry's leading producer of PVC irrigation fittings and swing joints, providing outstanding customer support in the golf irrigation market. When Hunter sought a partner for its Hunter-branded swing joints, the choice was immediately clear.

We are proud to offer Hunter HSJ Swing Joints by LASCO — a proven team with time-tested solutions for the golf irrigation market. HSJs are available in a multitude of inlet, outlet, size, and length configurations for every course and preference.

#### **UPGRADE YOUR ROTOR WARRANTY**

Include Hunter HSJ Swing Joints with your golf rotor order and qualify for a 5-year component exchange warranty. HSJ Swing Joints must be purchased from an authorised Hunter Golf Distributor to qualify.



LASCO is a trademark of LASCO Fittings Inc.



## **HSJ SWING JOINTS**

With swivel ells on both ends, HSJ Swing Joints easily adjust sprinklers to proper height and position in any configuration.

#### **KEY BENEFITS**

- Strength, longevity, and contamination resistance
  - Prefabricated PVC design with O-Ring Seals
- · Configurations to meet every installation requirement
  - Available in all popular inlet and outlet configurations
  - Choose from 20 cm, 30 cm, or 46 cm lay arm lengths
  - Single top-out or triple top-out designs

#### **Swing Joints**

HSJ-0 = Model 3/4"

HSJ-1 = Model 1'' (25 mm)

HSJ-2 = Model 11/4" (30 mm) HSJ-3 = Model 11/2" (40 mm)



SWING JOINT - SPEC	IFICATION BUILDER: ORDER 1 + 2 + 3 + 4	4 + 5		
1 Model	2 Inlet Type (from pipe fitting)	3 Outlet Type (to sprinkler inlet)	4 Outlet Style	5 Lay Length
HSJ-0 = ¾" commercial swing joint	3 = Male NPT	0 = Male Acme	2 = Single top-out	<b>8</b> = 20 cm lay arm
<b>HSJ-1</b> = 1" (25 mm) heavy-duty swing joint			T.	Bauter
<b>HSJ-2</b> = 1½" (30 mm) heavy-duty swing joint	4 = Male Acme*	2 = Male NPT	4 = Triple top-out	<b>12</b> = 30 cm lay arm
<b>HSJ-3</b> = 1½" (40 mm) heavy-duty swing joint			لاح	Busice
	6 = Male BSP**	<b>5</b> = Male BSP (not available in HSJ-0)	11	<b>18</b> = 46 cm lay arm <sup>‡</sup>
	<b>7</b> = Spigot, 10 cm long**			
		6 = Enlarging to 1½" (40 mm) male BSP*		
	<b>B</b> = Additional elbow for male BSP inlet, allows	8 = Enlarging to 1½" (40 mm) male Acme*		
	vertical mounting. Available for outlet types 0, 5, 8.  F = Female InFusion for HDPE saddle****  M = Main Acme H-connection***  P = Main Acme V-connection***	A = Enlarging/reducing to 1¼" (30 mm) male Acme**		

#### Example:

HSJ-3-M-0-2-12 = HSJ 11/2" (40 mm) heavy-duty swing joint, 11/2" (40 mm) male Acme horizontal connection to mainline tee, 11/2" (40 mm) male Acme single top outlet, 30 cm lay arm length.

\* Not available in HSJ-0 or HSJ-3. Use "M" inlet for HSJ-3. \*\* Not available in HSJ-0. \*\*\* Connection reduces from 1½" (40 mm) Acme to swing joint size. \*\*\*\* HSJ-3 only. + HSJ-0 only. ‡ Not available in HSJ-0.

## **ACME ADAPTER FITTINGS**

Choose Hunter Acme Adapter Fittings for maximum system design flexibility.



#### 11/4" (30 mm) Models

 1¼" (30 mm) male Acme x 1" (25 mm) female NPT
 P/N 109325SP

 1¼" (30 mm) male Acme x 1" (25 mm) female BSP
 P/N 105329SP

 1¼" (30 mm) male Acme x 1¼" (30 mm) female NPT
 P/N 474800SP

 1¼" (30 mm) male Acme x 1½" (30 mm) female BSP
 P/N 474900SP

 1½" (30 mm) male Acme x 1½" (40 mm) female NPT
 P/N 104153SP

 1½" (30 mm) male Acme x 1½" (40 mm) female BSP
 P/N 107262SP



#### 11/2" (40 mm) Models

 1½" (40 mm) male Acme x 1" (25 mm) female NPT
 P/N 475400SP

 1½" (40 mm) male Acme x 1" (25 mm) female BSP
 P/N 475500SP

 1½" (40 mm) male Acme x 1½" (30 mm) female NPT
 P/N 475200SP

 1½" (40 mm) male Acme x 1½" (30 mm) female BSP
 P/N 475300SP

 1½" (40 mm) male Acme x 1½" (40 mm) female NPT
 P/N 475000SP

 1½" (40 mm) male Acme x 1½" (40 mm) female BSP
 P/N 475100SP



#### Acme x Acme Models

 1½" (40 mm) male Acme x 1" (25 mm) Acme female
 P/N 225300SP

 1½" (40 mm) male Acme x 1¼" (30 mm) Acme female
 P/N 225400SP

 1¼" (30 mm) male Acme x 1" (25 mm) Acme female
 P/N 225500SP



#### **B2B Tee Assembly**

 $1\!\!\!/2\!\!\!/$  (40 mm) Acme threaded tee and 40 mm adapter for connecting two swing joints to a single mainline connection in back-to-back installations around greens.

P/N = HSJ-305-015-3 = NPT inlet

P/N = HSJ-305-015-6 = BSP inlet

P/N = HSJ-305-015-M = Acme inlet (shown)

## **ROTOR ACCESSORIES**

Customise golf rotors according to course needs with these useful accessories.

#### **HOSE SWIVEL ADAPTERS**

#### Models

- Hose Swivel Adapter for G-900 Series (fits ¾" and 1" (25 mm) hose) P/N G90HS100
- Hose Swivel Adapter for G-800 Series (fits ¾" and 1" (25 mm) hose) P/N G800HS100



**Hose Swivel Adapters** 



**Rubber Cover Kit** 



P/N 987200SP

P/N 987201SP

P/N 987100SP

P/N 473800

P/N 473900



#### **RUBBER COVER KITS**

#### Models

- TTS-800 Series Low-Bounce Rubber Cover Kit
- TTS-800 Series Low-Bounce Rubber Cover Kit (Green)
- TTS-800 Series No-Bounce Turf Cup Kit
- G-990 Series Rubber Cover Kit (date codes 06/11 and prior only)
- G-995 Series Rubber Cover Kit (also G990 date codes 07/11 and after)

## SPOTSHOT HOSE-END NOZZLES

#### **MODELS**

- ¾" hose thread inlet P/N 160700SP
- 1" hose thread inlet P/N 160705SP

#### **FEATURES**

- Variable nozzle stream choices:
  - Jet-Stream Nozzle: Tightly focused stream for power washing
  - Soak-Stream Nozzle: Medium stream for dust control areas
  - Fan-Stream Nozzle: Broad light stream for turf hot spots

#### **OPERATING SPECIFICATIONS**

- Flow: 132 I/min (7.9 m<sup>3</sup>/hr) at 5.5 bar (550 kPa)\*
- \* Not recommended for residential use with regulated, low-pressure, or low-flow conditions.



SpotShot Hose-End Nozzles 3/4" P/N 160700SP 1" (25 mm) P/N 160705SP

#### Jet-Stream Nozzle



Soak-Stream Nozzle



Fan-Stream Nozzle



## **QUICK COUPLERS**

The sturdy red brass and stainless steel construction of Quick Couplers strengthens any project.

#### **FEATURES**

- 100% interchangeable with major brands
- · Red brass and stainless steel construction
- · Heavy-duty thermoplastic locking and non-locking covers
- · Optional winged stabilisation and Acme key connection
- Stainless steel lug on 1" (25 mm) and 11/4" (30 mm) keys
- Spring-loaded covers with stainless steel springs for positive closing and protection of valve's sealing components
- Warranty period: 5 years



**Quick Couplers** 

#### **HQ QUICK COUPLER - SPECIFICATION BUILDER:** ORDER 1 + 2 + 3 Model **Cover Options Additional Options** $HQ-3 = \frac{3}{4}$ " inlet, 1-piece body, 2 slots **RC** = Yellow rubber cover (blank) = No option **HQ-5** = 1" (25 mm) inlet, 1-piece body, 1 slot **LRC** = Yellow locking rubber cover **AW** = Acme key with anti-rotation wings (Not available for HQ-3 body) (Only available for HQ-44 body) $\mathbf{HQ-33D} = \frac{3}{4}$ " inlet, 2-piece body, 2 slots **BSP** = BSP threads (Only available for HQ-5 body) **HQ-44** = 1" (25 mm) inlet, 2-piece body, 1 slot or Acme R = Purple locking cover (reclaimed water ID; only available for LRC models)

#### Examples:

HQ-3-RC = HQ-3 valve with rubber cover

HQ-44-LRC = HQ-44 valve with locking rubber cover

HQ-44-LRC-R = HQ-44 valve with locking rubber cover and purple locking cover

HQ-44-LRC-AW-R = HQ valve with locking rubber cover, Acme key socket, anti-rotation wings, and purple locking cover

**HQ-5-LRC-BSP** = HQ-5 valve with locking rubber cover and BSP threads



HQ-3-RC HQ-5-RC HK-33



HQ-33-DLRC-R HQ-44-LRC HK-44



Non-locking Cover



Locking Cover



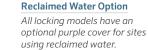
Reclaimed Cover



HQ-44-RC-AW HK-44A



Quick Coupler Key





HK KEYS		
Key Model	Compatible Valve	Compatible Swivel
HK-33 = ¾" valve, ¾" key inlet	HQ-3, HQ-33	HS-0
HK-44 = 1" (25 mm) valve, 1" (25 mm) key inlet	HQ-44	HS-1, HS-2, HS-1-B, HS-2-B
HK-44A = 1" (25 mm) valve, Acme key inlet	HQ-44-AW	HS-1, HS-2, HS-1-B, HS-2-B
HK-55 = 1" (25 mm) valve, 11/4" (30 mm) key inlet	HQ-5	HS-1, HS-2, HS-1-B, HS-2-B

HS HOSE SWIVELS	
Hose Swivel	Compatible Key
HS-0 = 3/4" inlet, 3/4" hose outlet	HK-33
HS-1 = 1" (25 mm) inlet, ¾" hose outlet	HK-44, HK-44A, HK-55
HS-2 = 1" (25 mm) inlet, 1" (25 mm) hose outlet	HK-44, HK-44A, HK-55
HS-1-B = 1" (25 mm) inlet, ¾" (20 mm) BSP outlet	HK-44, HK-44A, HK-55
HS-2-B = 1" (25 mm) inlet, 1" (25 mm) BSP outlet	HK-44, HK-44A, HK-55

QUICK COUPLER, KEY, AND HOSE SWIVEL CHARTS							
Model	Inlet Threads	Slots	Body	Colour*	Locking	Key	Swivels
HQ-3-RC	3/4"	2	1-piece	Yellow	No	HK-33	HS-0
HQ-33-DRC	3/4"	2	2-piece	Yellow	No	HK-33	HS-0
HQ-33-DLRC	3/4"	2	2-piece	Yellow	Yes	HK-33	HS-0
HQ-44-RC	1" (25 mm) NPT	1	2-piece	Yellow	No	HK-44	HS-1 or HS-2
HQ-44-LRC	1" (25 mm) NPT	1	2-piece	Yellow	Yes	HK-44	HS-1 or HS-2
HQ-44-RC-AW	1" (25 mm) NPT	Acme	2-piece wing**	Yellow	No	HK-44A	HS-1 or HS-2
HQ-44-LRC-AW	1" (25 mm) NPT	Acme	2-piece wing**	Yellow	Yes	HK-44A	HS-1 or HS-2
HQ-5-RC	1" (25 mm) NPT	1	1-piece	Yellow	No	HK-55	HS-1 or HS-2
HQ-5-LRC	1" (25 mm) NPT	1	1-piece	Yellow	Yes	HK-55	HS-1 or HS-2
HQ-5-RC-BSP	1" (25 mm) BSP	1	1-piece	Yellow	Yes	HK-55	HS-1 or HS-2
HQ-5-LRC-BSP	1" (25 mm) BSP	1	1-piece	Yellow	Yes	HK-55	HS-1 or HS-2

## **SNAPLOK™ COMBO KITS**

#### **FEATURES**

- · Versatile, cross-compatible, and heavy-duty quick coupler
- Highly effective solution for quick coupler stabilisation
- SnapLok design includes:
  - Heavy-duty PVC and brass outlet construction
  - Anti-rotation coupler locking feature
  - Accommodates both rebar and pipe stabilisation
- See the HSJ Swing Joints on page 48

SNAPLOK COMBO KITS		
Kit Model	Quick Coupler Model	SnapLok Model
HQ-SL-K-1-B = Locking Lid, BSP x 18" (46 cm) SnapLok	HQ-44-LRC	HSJ-1-6S-212
HQ-SL-K-1-RB = Locking Reclaimed Lid, BSP x 18" (46 cm) SnapLok	HQ-44-LRCR	HSJ-1-6S-212

SnapLok is a trademark of LASCO Fittings Inc.





 $<sup>^{\</sup>star}$  All locking cover models are available with purple covers for reclaimed water applications  $^{\star\star}$  Anti-rotation stabilisation wings

## **TOOLS**



Arc Adjustment/ Riser Hold-up Tool P/N 382800SP G-85B/G-885



Valve Insertion/ Removal Tool P/N 604000SP G-800 Series



Valve Insertion/ Removal Tool P/N 280500SP G-900/G90 Series



Valve and Snap Ring Insertion/Removal Pliers P/N 475600SP G-800 Series



**Snap Ring Removal Tool** P/N 251000SP All Golf Models



**T-Handle Tool** P/N 319100SP



**Hand Pump** P/N 217500SP



**Pitot Gauge** P/N 280100SP



**Hunter Wrench** P/N 172000SP



Nozzle Removal/ Installation Tool P/N 803700SP G-85B, G-885 Short- and Mid-range Nozzles



**Riser Pressure Gauge** P/N 991200SP G-80 (2019), G-85B, and G-885 Risers







## **PRODUCTS FOR THE**

## **GOLF COURSE AND BEYOND**

Everything we do at Hunter Industries is rooted in innovation. From small residential installations to fully automated smart cities, our teams continually develop solutions to help professionals deliver water as efficiently and sustainably as possible.

Whether it's water-saving MP Rotator™ Nozzles around a bunker or reliable I-20 Rotors on the surrounds or clubhouse grounds, Hunter's complete offering of commercial products has your course covered.

#### **Automatic Matched Precipitation**

MP Rotator Nozzles adjust the flow rate through the nozzle as the radius and arc are changed, resulting in the same matched precipitation rate regardless of the nozzle setting.

#### **Performance You Can Depend On**

From residential to commercial applications, high pressure to low pressure, and clean water to dirty water, Hunter valves keep systems running flawlessly day in and day out.

#### **Efficient, Reliable Irrigation**

Packed with upgraded features like FloStop™ Technology, check valves, and top-performing nozzles, the I-20 Rotor ensures efficient, reliable irrigation in a range of applications.

As we continue to explore new ways to innovate, you can expect us to deliver even more industry-leading products, services, and tools in the future to help your course thrive.



**I-20** 

The I-20 Rotor is loaded with upgraded features such as FloStop™ Technology, check valves, and efficient nozzles that make it the perfect choice in a range of applications.

#### **KEY BENEFITS**

- Patented automatic arc return feature returns the turret back to the original arc pattern if vandalised; adjustable arc from 50° to 360°
- Non-strippable drive mechanism is protected from damage if turned in the opposite direction of travel
- Part- and full-circle in one model is flexible for all landscapes and decreases inventory
- · Headed and slotted setscrew allows radius adjustment with a Hunter Wrench or flat-blade screwdriver
- FloStop Technology closes the flow of water from individual sprinklers to change the nozzle or perform repairs
- Flat-top nozzles allow fast, easy insertion
- Drain Check Valve prevents low-head drainage (up to 3 m of elevation)



I-20-04 Overall height: 19 cm Pop-up height: 10 cm Exposed diameter: 4.5 cm Inlet size: 3/4"

#### **OPERATING SPECIFICATIONS**

- Nozzle choices: 34
- Radius: 4.9 to 14.0 m
- Flow: 0.07 to 3.23 m<sup>3</sup>/hr; 1.2 to 53.8 l/min
- · Recommended pressure range: 1.7 to 4.5 bar; 170 to 450 kPa
- Operating pressure range: 1.4 to 7.0 bar; 140 to 700 kPa

- Precipitation rate: 10 mm/hr approximately
- Nozzle trajectory: standard = 25°, low-angle =  $13^{\circ}$
- Nozzle racks: 1.5 to 8.0 blue, 2.0 to 4.5 lowangle grey, 0.50 to 3.0 black, 6.0 to 13.0 green, MPR-25, MPR-30, MPR-35
- · Warranty period: 5 years



1-20-06 Overall height: 25 cm Pop-up height: 15 cm Exposed diameter: 4.5 cm Inlet size: 34"

#### **FACTORY-INSTALLED OPTIONS**

- No Drain Check Valve (NCV models)
- Reclaimed water ID
- 1.5-4.0 Blue Nozzles

#### **USER-INSTALLED OPTIONS**

• HSJ-0 prefabricated 3/4" PVC Swing Joint



I-20 (PLASTIC) - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4						
1 Model	2 Standard Features	3 Feature Options	4 Nozzle Options			
<b>I-20-00</b> = Shrub	Adjustable arc, plastic, check valve, 8 standard	(blank) = No option	1.5-8.0 Blue Grey low-angle			
<b>I-20-04</b> = 10 cm pop-up	nozzles, and 4 low-angle	NCV = Without check valve (only available on 10 cm	Black short-radius Green high-flow			
<b>1-20-06</b> = 15 cm pop-up	Hozzies	model)	MPR-25-Q, T, H, F MPR-30-Q, T, H, F			
<b>I-20-12</b> = 30 cm pop-up		<b>R</b> = Reclaimed water ID	MPR-35-Q, T, H, F 1.5 to 4.0 = Only nozzles 1.5- 4.0 can be factory-installed			

1-2	I-20 (STAINLESS STEEL) - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4						
1	Model	2	Standard Features	3	Feature Options	4	Nozzle Options
ро <b>I-2</b>	<b>0-04-SS</b> = 10 cm p-up <b>0-06-SS</b> = 15 cm p-up	sta va	ljustable arc, ainless steel, check Ive, 8 standard nozzles, d 4 low-angle nozzles	(or	lank) = No option  EV = Without check valve inly available on 10 cm indel)  = Reclaimed water ID	Gro Bla Gro MF MF MF	-8.0 Blue ey low-angle ack short-radius een high-flow PR-25-Q, T, H, F PR-30-Q, T, H, F to 4.0 = Only nozzles 1.5-0 can be factory-installed

#### Examples:

I-20-04 = 10 cm pop-up, adjustable arc

I-20-12-R-4.0 = 30 cm pop-up, adjustable arc, check valve, with reclaimed water ID, and 4.0 nozzle

I-20-06-SS-R-3.0 = 15 cm pop-up, adjustable arc, stainless steel riser, with reclaimed water ID, and 3.0 nozzle



### **I-25**

The reliable, durable, and versatile I-25 Rotor offers an expansive nozzle selection that makes it the perfect choice for large turf applications.

#### **KEY BENEFITS**

- Patented automatic arc return feature returns the turret back to the original arc pattern if vandalised; adjustable arc from 50° to 360°
- Non-strippable drive mechanism is protected from damage if turned in the opposite direction of travel
- Part- and full-circle in one model for flexibility across landscapes and reduced inventory
- Colour-coded nozzles make identification easy
- Drain Check Valve prevents low-head drainage (up to 3 m of elevation)



I-25-04 Overall height: 20 cm Pop-up height: 10 cm Exposed diameter: 5 cm Inlet size: 1" (25 mm) BSP

#### **OPERATING SPECIFICATIONS**

- Nozzle choices: 11Radius: 11.9 to 21.6 m
- Flow: 0.82 to 7.24 m³/hr; 13.6 to 120.2 l/min
- Recommended pressure range: 2.5 to 7.0 bar; 250 to 700 kPa
- Warranty period: 5 years

- Operating pressure range:
   2.5 to 7.0 bar; 250 to 700 kPa
- Precipitation rate:
   15 mm/hr approximately
- Nozzle trajectory: standard = 25°



#### I-25-06 Overall height: 26 cm Pop-up height: 15 cm Exposed diameter: 5 cm Inlet size: 1" (25 mm) BSP

#### **FACTORY-INSTALLED OPTIONS**

- · Reclaimed water ID
- · High-speed rotation

#### **USER-INSTALLED OPTIONS**

• HSJ-1 prefabricated 1" (25 mm) PVC Swing Joint



I-25 Reclaimed

Available as a factoryinstalled option on all models

## I-25 (PLASTIC) - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4 Model Standard Features Adjustable arc, plastic riser, check valve, and 5 nozzles B = BSP inlet threads R = Reclaimed water ID

I-25 (STAINLESS STEEL) - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4						
1 Model	2 Standard Features	3 Feature Options	4 Nozzle Options			
I-25-04-SS = 10 cm pop-up I-25-06-SS = 15 cm pop-up	Adjustable arc, stainless steel riser, check valve, and 5 nozzles	B = BSP inlet threads  R = Reclaimed water ID  HS = High-speed  HS-R = High-speed and reclaimed water ID	4 - 28 = Factory-installed nozzle number			

#### Examples:

**I-25-04-B** = 10 cm pop-up, adjustable arc, BSP inlet threads

I-25-04-SS-R-B-18 = 10 cm pop-up, adjustable arc, stainless steel riser, reclaimed water ID, and 18 nozzle, BSP inlet threads I-25-06-SS-B = 15 cm pop-up, adjustable arc, stainless steel riser, BSP inlet threads



## **MP ROTATOR™ NOZZLES**



The MP Rotator Nozzle is the most trusted high-efficiency solution on the market, offering up to 30% water savings over traditional spray nozzles.

#### **KEY BENEFITS**

- · Lowest precipitation rate in the industry of approximately 10 mm/hr
- · Matched precipitation for simplified irrigation design and flexibility
- Double-pop feature protects the nozzle from external debris
- High distribution uniformity for a healthy landscape with maximum water efficiency

#### **ADDITIONAL FEATURES**

- Wind-resistant, multi-stream technology prevents misting
- Arc adjustments allowed only when running to deter vandalism
- · Removable filter screen keeps nozzle from clogging
- · Colour-coded for easy identification

#### **OPERATING SPECIFICATIONS**

- Radius reduction up to approximately 25% on all models
- Recommended operating pressure: 2.8 bar; 280 kPa
- Minimum radius setting achieved at 2.1 bar; 210 kPa
- Warranty period: 3 years

#### **OPTIONS**

- Pair with Pro-Spray™ PRS40 Sprinkler Body for pressure regulation to 2.8 bar; 280 kPa for nominal radius settings
- Pair with Pro-Spray PRS30 Sprinkler Body for pressure regulation to 2.1 bar; 210 kPa for minimum radius settings

#### MP ROTATOR - SPECIFICATION BUILDER: ORDER 1 + 2 Model Options MP1000-90 = 2.5 to 4.5 m radius,(blank) = No option adjustable from 90° to 210° MP1000-210 = 2.5 to 4.5 m radius,**HT** = Male threaded version adjustable from 210° to 270° (Not available in 3500 and 1000-210) **MP1000-360** = $2.5 \text{ to } 4.5 \text{ m radius}, 360^{\circ}$ MP2000-90 = 4.0 to 6.4 m radius,adjustable from 90° to 210° MP2000-210 = 4.0 to 6.4 m radius,adjustable from 210° to 270° $MP2000-360 = 4.0 \text{ to } 6.4 \text{ m radius}, 360^{\circ}$ MP3000-90 = 6.7 to 9.1 m radius,adjustable from 90° to 210° MP3000-210 = 6.7 to 9.1 m radius,adjustable from 210° to 270° $MP3000-360 = 6.7 \text{ to } 9.1 \text{ m radius. } 360^{\circ}$ MP3500-90 = 9.4 to 10.7 m radius,adjustable from 90° to 210° **MPLCS-515** = Left corner strip, $1.5 \text{ m} \times 4.6 \text{ m}$ MPRCS-515 = Right corner strip, 1.5 m x 4.6 m MPSS-530 = Side strip, 1.5 m x 9.1 mMP-CORNER = 2.5 to 4.5 m radius, adjustable from 45° to 105°

#### MP1000: 2.5 to 4.5 m radius







**MP1000-90** 90° to 210°

**MP1000-210** 210° to 270°

**MP1000-360** 360°

#### MP2000: 4.0 to 6.4 m radius







**MP2000-90** 90° to 210°

**MP2000-210** 210° to 270°

**MP2000-360** 360°

#### MP3000: 6.7 to 9.1 m radius







**MP3000-90** 90° to 210°

**MP3000-210** ° 210° to 270°

MP3000-360

#### MP3500: 9.4 to 10.7 m radius



**MP3500-90** 90° to 210°



## PRO-SPRAY™ PRS40

To optimise MP Rotator Nozzle performance, the Pro-Spray PRS40 Sprinkler Body is pressure-regulated to 2.8 bar; 280 kPa.

#### **KEY BENEFITS**

- Industry's strongest sprinkler body for years of reliable performance
- Pressure-regulated to 2.8 bar; 280 kPa for the MP Rotator Nozzle
- Grey cap for easy field identification
- · Co-moulded wiper seal made from chemical- and chlorine-resistant materials
- Innovative seal design prevents cap-to-body leaks, even with a loose cap
- FloGuard Technology option eliminates water waste in the event of a missing nozzle

#### **ADDITIONAL FEATURES**

- Directional flush plug design for cleaner installation
- · Interchangeable components for easier servicing, retrofits, and upgrades
- · Heavy-duty spring for consistent riser retraction
- · Check valve option eliminates low-head drainage

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PROS-00-PRS40 Retracted height: 11 cm Inlet size: ½"



PROS-04-PRS40-CV Retracted height: 15.5 cm Pop-up height: 10 cm Exposed diameter: 5.7 cm Inlet size: ½"

#### **OPERATING SPECIFICATIONS**

- Check valve available for 10 cm, 15 cm, and 30 cm models (up to 4.3 m of elevation)
- Operational pressure range: 1.0 to 7.0 bar; 100 to 700 kPa
- Warranty period: 5 years

#### **FACTORY-INSTALLED OPTIONS**

- · Reclaimed water identification
- FloGuard Technology available for pop-up models

### USER-INSTALLED OPTIONS

Reclaimed water ID cap (P/N 458562SP)

**PRS40 Reclaimed** 

reclaimed caps.

- Snap-on reclaimed cover (P/N PROS-RC-CAP-SP)
- Shutoff cap (P/N 213600SP)
- Shutoff nozzle (P/N 916400SP)



FloGuard Technology



PROS-06-PRS40-CV Retracted height: 22.5 cm Pop-up height: 15 cm Exposed diameter: 5.7 cm Inlet size: ½"



PROS-12-PRS40-CV Retracted height: 41 cm Pop-up height: 30 cm Exposed diameter: 5.7 cm Inlet size: ½"

#### PRO-SPRAY PRS40 - SPECIFICATION BUILDER: ORDER 1 + 2 + 3

PRS40 models include optional factory-installed purple

1Model2Feature Options3Specialty OptionsPROS-00-PRS40 = 2.8 bar regulated shrub adapter(blank) = No option(blank) = No optionPROS-04-PRS40 = 2.8 bar regulated 10 cm pop-upCV = Factory-installed drain check valve (pop-up models only)R = Factory-installed reclaimed body capF = FloGuard Technology

#### **PRO-SPRAY PRS40 (SIDE INLET) MODELS**

PROS-12-PRS40 = 2.8 bar regulated 30 cm pop-up

PROS-06-SI-PRS40 = 2.8 bar regulated 15 cm pop-up with side inlet

**PROS-12-SI-PRS40** = 2.8 bar regulated 30 cm pop-up with side inlet

#### Examples:

 $\label{eq:pros-o6-si-pros-o6-si-pros-o6-si-pros-o6-si-pros-o6-pros-o$ 

#### Compatible with:

**F-**R = FloGuard Technology with reclaimed body cap



ICV



This valve is the perfect choice for high-pressure systems and dirty water conditions.

#### **KEY BENEFITS**

- Optional Filter Sentry Mechanism scours the filter screen in dirty water conditions
- External/internal manual bleed allows for quick and easy activation at the valve
- · Glass-filled nylon construction provides high-pressure rating and reliability
- Double-beaded diaphragm seal design ensures leak-free performance
- · Fabric-reinforced EPDM diaphragm and seat ensure greater performance in all water conditions
- Captive bonnet screws eliminate the possibility of lost parts during disassembly
- Triple-tool bonnet screws are compatible with standard or Phillips screwdrivers as well as a nut driver
- Encapsulated solenoid with captive plunger used on every Hunter valve provides hassle-free service
- Flow control maximises efficiency and prolongs the life of the system

#### **USER-INSTALLED OPTIONS**

- Accu Sync™ Pressure Regulator at the valve
- DC-Latching Solenoid for battery-operated controllers (P/N 458200)
- Filter Sentry Mechanism easily added to an installed valve

#### **FACTORY-INSTALLED OPTIONS**

- · LS: Valve without solenoid
- DC: DC-Latching Solenoid for battery-operated controllers
- FS-R: Reclaimed option with Filter Sentry Mechanism, purple control knob, and purple chlorine-resistant diaphragm

#### **OPERATING SPECIFICATIONS**

- Flow:
  - ICV-101G: 0.03 to 9 m<sup>3</sup>/hr; 0.4 to 150 l/min
  - ICV-151G: 0.03 to 34 m<sup>3</sup>/hr: 0.4 to 568 l/min
  - ICV-201G: 0.03 to 45 m<sup>3</sup>/hr; 0.4 to 757 l/min
  - ICV-301: 0.03 to 68 m<sup>3</sup>/hr; 0.4 to 1,135 l/min
- Recommended pressure range: 1.5 to 15.0 bar; 150 to 1,500 kPa
- Temperature rating: 66°C
- · Warranty period: 5 years

#### **SOLENOID SPECIFICATIONS**

- 24 VAC solenoid
  - 350 mA inrush, 190 mA holding, 60 Hz
  - 370 mA inrush, 210 mA holding, 50 Hz



ICV-101G Inlet diameter: 1" (25 mm) Height: 14 cm Length: 12 cm Width: 10 cm



ICV-151G Inlet diameter: 1½" (40 mm) Height: 18 cm Length: 17 cm Width: 14 cm



ICV-201G Inlet diameter: 2" (50 mm) Height: 18 cm Length: 17 cm Width: 14 cm



ICV-301 Inlet diameter: 3" (80 mm) Height: 27 cm Length: 22 cm Width: 19 cm



**ICV-R** Inlet diameter: 1" (25 mm), 1½" (40 mm), 2" (50 mm), and 3" (80 mm) Height: 18 cm Length: 17 cm Width: 14 cm





ICV 1", 1½", 2" AND 3" - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4									
1	Model	2	Standard Features	3	Feature Options	4	User-Installed Options		
	/-101-G-B =			lank) = No option	AS	-ADJ = Accu Sync adjustable			
1 (2	25 mm) BSP	110	w control	R = Filter Sentry, purple reclaimed diaphragm and ID tag DC = DC-Latching Solenoid battery- operated controllers		21			8200 = DC-Latching
	<b>/-151-G-B</b> = (40 mm) BSP					Solenoid for battery-operated controllers			
172	(40 11111) D3F					60	<b>7105</b> = Reclaimed		
	<b>/-201-G-B</b> = (50 mm) BSP					TIOW CC		w control handle 5, 40, 50 mm only)	
2 (	,50 11111) 551			LS	= Less solenoid	LIT	-700 = Reclaimed ID tag		
	<b>/-301-B</b> = (80 mm) BSP	val	obe / angle lve with flow ntrol				J		



**Captive Bonnet Bolts** 



adjustable Accu Sync Pressure Regulator

ICV D	)ECCUE	1000/17	ODTIA	LELOWIS	INIDAD	10		Y DDECCUDE	V DDECCUDE LOCG /AT	V PRESSURE LOSS (AT ORTHA	V DDESCUBE LOSS (AT ODTIMAL FLOWS)
CVPF	KESSURE	LUSS (AI	OPTIMA	L FLOWS)	IN BAR	ICV PI	1	RESSURE	RESSURE LUSS (AT	RESSURE LOSS (AT OPTIMA	RESSURE LOSS (AT OPTIMAL FLOWS)
Flow 1 <sup>3</sup> /hr	1" (25 mm) Globe	1½" (40 mm) Globe	2" (50 mm) Globe	3" (80 mm) Globe	3" (80 mm) Angle	Flow I/min		1" (25 mm) Globe	(25 mm) (40 mm)	(25 mm) (40 mm) (50 mm)	(25 mm) (40 mm) (50 mm) (80 mm)
0.05	0.1					1		14	14	14	14
0.1	0.1					2		14	14	14	14
).3	0.1					4		14	14	14	14
1.0	0.2					20		17	17	17	17
2.5	0.2					40	20				
3.5	0.2					60	20				
4.5	0.2	0.1				75	20		9.6	9.6	9.6
7.0	0.4	0.1				115	62		10	10	10
9.0	1.0	0.1	0.1			150	139		12	12 5.0	12 5.0
11.0		0.2	0.1			190			15	15 7.0	15 7.0
13.5		0.2	0.1			225			18	18 9.3	18 9.3
17.0		0.3	0.1			280			26	26 14	26 14
20.5		0.4	0.2			340			37	37 20	37 20
23.0		0.5	0.3			380			46	46 26	46 26
27.0		0.7	0.4			450			65	65 36	65 36
30.5		0.9	0.5			510			84	84 47	84 47
34.0		1.2	0.6	0.2	0.1	565			104	104 57	
40.0			0.9	0.2	0.2	660				79	79 22
45.5			1.2	0.3	0.2	750				103	103 29
51.0				0.3	0.3	850					38
57.0				0.4	0.4	950					47
62.5				0.5	0.5	1,050		_			58
68.0				0.6	0.6	1,135					69



**AC Solenoid** (P/N 606800) Two red wires



**DC-Latching Solenoid** (P/N 458200) One black (common) wire and one red (station) wire

## **ACCU SYNC™ PRESSURE REGULATORS**

Gain unparalleled pressure regulation for any Hunter valve.

#### **OPERATING SPECIFICATIONS**

- Regulation from 1.4 to 7.0 bar; 140 to 700 kPa
- Static pressure: 10 bar; 1,000 kPa
- Required dynamic pressure differential: 1.0 bar; 100 kPa
- Works with DC-Latching and AC Solenoids
- Works with any Hunter valve
- Warranty period: 2 years

ACCU SYNC VALVE
<b>RECOMMENDED FLOW RANGE</b>

RECOMMENDED LEGIT RANGE					
Valve	FI m³/hr	ow I/min			
PGV-100/101	1.2-6.8	19-114			
PGV-151	4.5-28	75-454			
PGV-201	9.0-34	150-750			
ICV-101	1.2-9.0	19-150			
ICV-151	4.5-31	75-510			
ICV-201	9.0-34	150-560			
ICV-301	34-68	565-1135			
IBV-101	1.2-9.0	19-150			
IBV-151	4.5-31	75-510			
IBV-201	9.0-46	150-560			
IBV-301	34-68	565-1135			

#### **ADJUSTABLE**





#### **ADAPTER**



**SOLENOID ADAPTER** 

#### **FIXED**



Height with solenoid: 8 cm



AS-40 Height with solenoid: 8 cm

AC	ACCU SYNC APPLICATIONS			
•	Adjustable 1.4 to 7.0 bar	For full customisation, the adjustable Accu Sync can regulate pressure from 1.4 to 7.0 bar; 140 to 700 kPa		
•	Fixed 2.1 bar	Ideal for spray systems, pressure-regulated to 2.1 bar; 210 kPa		
•	Fixed 2.8 bar	Ideal for MP Rotator Nozzles and large, in-line drip systems, pressure-regulated to 2.8 bar; 280 kPa		

A	CCU SYNC PRESSURE REG	GUALTORS- SPECIFICATION BUILDER: ORDER 1 + 2		
1	Model	2 Inlet/Outlet		
AC	CU SYNC	ADJ = Adjustable Pressure Regulator (1.4 to 7.0 bar)		
		<b>30</b> = Fixed Pressure Regulator (2.1 bar)		
		<b>40</b> = Fixed Pressure Regulator (2.8 bar)		

#### Example:

ICV-201G-B-AS-ADJ = 2" (50 mm) BSP ICV globe valve with flow control, user-installed adjustable Accu Sync Pressure Regulator





Installation

Accu Sync Pressure Regulator shown installed on ICV and PGV Valves.







## **EXPERIENCE ALL**

## WALKS OF LIGHT

#### **Landscape and Architectural Lighting**

FX Luminaire provides industry-leading landscape and architectural lighting solutions with a focus on the advancement of LED technology and digital lighting control with zoning, dimming, and colour adjustment capabilities.

#### **Designer and Standard Series Fixtures**

FX Luminaire offers a range of classic and contemporary lighting fixtures in all configurations, from up lights and down lights to path lights and specialty lights.

Our fixture classification system is based on material construction, performance, and price. This helps you quickly identify common fixtures and create lighting packages for any project or budget. All FX Luminaire fixtures are made with top-quality materials and backed by the industry's best support team.

#### **Luxor™ Controller**

With Luxor Technology, you can liven up your clubhouse, course pathways, or property entryways to complement any occasion with 30,000 vibrant colour possibilities. Design one-of-a-kind holiday displays, create the perfect ambience for weddings, add company colours for corporate events, or simply adjust hues to match vegetation as the seasons change.

With a Luxor Controller, you can also create up to 250 adjustable lighting groups that can be turned on independently and dimmed from 1-100%.

The Luxor App provides ultimate flexibility and convenience when designing with Luxor Lighting Control Systems. With the app, you can adjust fixture intensities and colours, program up to 40 calendar-based themes, and fine-tune your colour palette — from anywhere!











#### **HUNTER UNIVERSITY**

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- 1. Access free golf product training online at **training.hunterindustries.com**.
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#### **On-Site Expert Workshops**

These interactive, instructor-led courses feature a hands-on approach to learning about irrigation. Classes are held at the Hunter Industries campus in San Marcos, California, and select locations worldwide. To learn more, contact training@hunterindustries.com.

#### **Golf Irrigation Training Programs**

Learn how to expertly manage your watering needs to ensure a healthy, playable course. Check out the golf-specific training programs below!

#### **Pilot Command Center Software**

- Pilot Command Center Introduction
- Pilot Command Center Course Irrigation Profile
- Pilot Command Center Settings
- Pilot Command Center Disable Specific Areas
- Pilot Command Center Adjust Plan for Limited Flow

#### **Pilot Controllers**

- · PilotFCP Utility Demo
- Pilot Field Controller and Integrated Hub Fundamentals

#### Maintenance

- Golf Rotor Maintenance
- Golf Controller Maintenance
- · Distribution Uniformity Audit

#### PRECIPITATION RATES

In this section, the "Sprinkler Spacing Method – Any Arc and Any Spacing" equation is used to calculate precipitation rates. The first set of equations with the shows the precipitation rate for the sprinklers when they are laid out in a square pattern. The next set with the shows the precipitation rate for the sprinklers laid out in an equilateral triangular spacing pattern. This is the "Sprinkler Spacing Method – Equilateral Triangular Spacing" equation.

#### WHAT IS PRECIPITATION RATE?

If someone said they were caught in a rainstorm that dropped 25 mm of water in an hour, you would have some idea of how hard or heavily the rain came down. A rainstorm that covers an area with 25 mm of water in one hour has a precipitation rate of 25 mm per hour. Similarly, the precipitation rate is the speed at which a sprinkler or an irrigation system applies water.

#### MATCHED PRECIPITATION RATES

A zone or system in which all the heads have similar precipitation rates is said to have "matched precipitation rates." Systems that have matched precipitation rates reduce wet and dry spots and minimise run times, which reduces water consumption and lowers costs. Knowing that sprinkler spacing, flow rates, and arcs of coverage affect precipitation rates, a general guideline is: as the spray arc doubles, so should the flow.

90° Arc = 1 GPM; 0.23 m<sup>3</sup>/hr; 3.8 l/min



180° Arc = 2 GPM;  $0.45 \text{ m}^3/\text{hr}$ ; 7.6 l/min

The flow rate of half-circle heads must be two times the flow rate of the quarter-circle heads, and the full-circle heads must have two times the flow rate of the half-circle heads. In the illustration, the same amount of water is applied to each quarter circle area and precipitation is therefore matched.

Depending on the construction of the irrigation system, the pre	cipitation rate may be calculated by ei	ther a Sprinkler Spacing or a Total Area method.	
Sprinkler Spacing Method (■)	Any Arc and Any Spacing (■):		
The precipitation rate should be calculated for each individual zone. If all sprinkler heads on the zone have the same spacing, flow rate, and arc of coverage, use one of the following formulas:	P.R. (in/hr) =	Flow Rate (GPM) for any Arc x 34,650 Degrees of Arc x Head Spacing (ft) x Row Spacing (ft)	
	P.R. (mm/hr) =	Flow Rate (m³/hr) for any Arc x 360,000 Degrees of Arc x Head Spacing (m) x Row Spacing (m)	
	P.R. (mm/hr) =	Flow Rate (I/min) for any Arc x 21,600 Degrees of Arc x Head Spacing (m) x Row Spacing (m)	
Sprinkler Spacing Method (▲)	Equilateral Triangular Spacing (▲):		
The precipitation rate should be calculated for each individual zone. If all sprinkler heads on the zone have the same spacing, flow rate, and arc of coverage, use one of the following formulas:	P.R. (in/hr) =	Flow Rate (GPM) for any Arc x 34,650 Degrees of Arc x (Head Spacing) <sup>2</sup> x 0.866	
	P.R. (mm/hr) =	Flow Rate (m³/hr) for any Arc x 360,000 Degrees of Arc x (Head Spacing)² x 0.866	
	P.R. (mm/hr) =	Flow Rate (I/min) for any Arc x 21,600 Degrees of Arc x (Head Spacing) <sup>2</sup> x 0.866	
Total Area Method			
The precipitation rate for a "system" is the average precipitation rate of all sprinklers in an area, regardless of the spacing, flow rate, or arc for each head. The Total Area Method	P.R. (in/hr) =	Flow (GPM) x 96.25 Total Area (ft)	
calculates all the flows of all of the heads in any given area.	P.R. (mm/hr) =	Flow (m³/hr) x 1,000 Total Area (m²)	
	P.R. (mm/hr) =	Flow (I/min) x 60 Total Area (m²)	



#### PILOT FIELD CONTROLLER ELECTRICAL SPECIFICATIONS

#### **ELECTRICAL SPECIFICATIONS**

#### **Supply Voltage**

Auto-sensing frequency (50 or 60 Hz) 120 VAC nominal (100 to 132 VAC)<sup>1</sup> 230 VAC nominal (200 to 260 VAC)<sup>1</sup> Station output: 24 VAC at 1.0 A

#### **CAPACITIES**

#### **Station Capacity**

80 stations

Up to 20 stations can run simultaneously<sup>2</sup>

#### Station Solenoid Load

Up to four 24 VAC Hunter golf solenoids per station output<sup>3</sup>

- <sup>1</sup> To prevent damage, all Pilot Field Controllers are shipped with the supply voltage set to 230 VAC.
- <sup>2</sup> One 24 VAC Hunter golf solenoid per station.
- <sup>3</sup> Multiple solenoids connected to a single station will reduce total simultaneous stations.

#### PILOT INTEGRATED HUB ELECTRICAL SPECIFICATIONS

#### **ELECTRICAL SPECIFICATIONS**

#### **Supply Voltage**

Auto-sensing frequency (50 or 60 Hz)
Auto-switching 120/230 VAC nominal (100 to 277 VAC at 50/60 Hz)<sup>1</sup>

#### **CAPACITIES**

#### **Integrated Two-Way Module Capacity**

Up to 999 integrated Pilot™ Two-Way Modules per Pilot Integrated Hub Up to 120 24 VAC Hunter solenoids on at one time²

#### Integrated Two-Way Module Solenoid Load

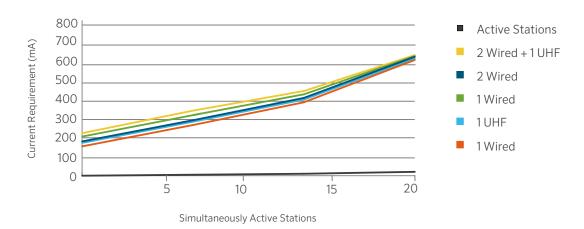
Up to two 24 VAC Hunter solenoids per integrated Pilot Two-Way Module<sup>3</sup>

- <sup>1</sup>The Pilot Integrated Hub automatically detects supply voltage and frequency.
- <sup>2</sup> Depends on configuration. Pilot Integrated Hub will run up to 30 stations simultaneously per output module.
- <sup>3</sup> Two solenoids per Pilot Two-Way Module does not reduce the maximum simultaneous station count.

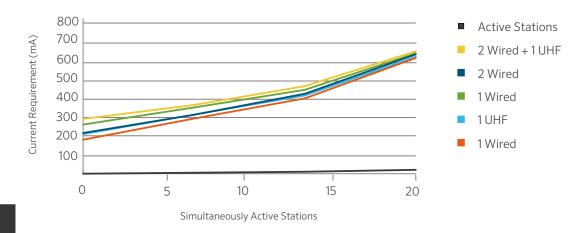


## PILOT-FC CURRENT REQUIREMENT CHARTS

PILOT-FC FIELD CONTROLLER CURRENT REQUIREMENTS: 230 VAC/50 Hz Supply Voltage, 10 to 40 Stations, Various Loads and Communication Options

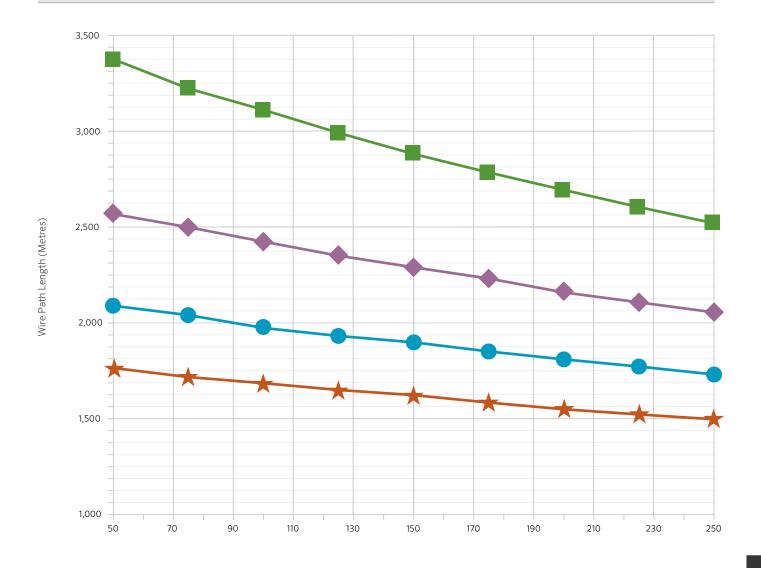


PILOT-FC FIELD CONTROLLER CURRENT REQUIREMENTS: 230 VAC/50 Hz Supply Voltage, 50 to 80 Stations, Various Loads and Communication Options



### **WIRE USE CHARTS**

#### Active Stations Based on Wire Length and Number of Two-Way Modules Using ID1 (2.2 mm²) Wire



Total Number of Two-Way Modules on Wire Path

ACTIVE STATIONS				
	15			
<b>♦</b>	20			
	25			
*	30			

#### **WIRE SIZING**

#### REQUIRED INFORMATION

- 1) Actual one-way length of wire between the controllers and the power source or the controllers and valves
- 2) Allowable voltage loss along the wire circuit
- 3) Accumulative current flowing through the wire section being sized in amperes

#### **RESISTANCE IS CALCULATED USING THIS FORMULA:**

 $R = \frac{1,000 \times AVL}{2L \times I}$ 

R = Maximum allowable resistance of wire in ohms per 1,000 m

AVL = Allowable voltage loss

L = Wire length (one way)

I = Inrush current

AVL for controller power wire sizing is calculated by subtracting the minimum operating voltage required by the controller from the minimum available voltage at the power source.

AVL for valve wire sizing is calculated by subtracting minimum solenoid operating voltage from controller output voltage. This number will vary depending on the manufacturer and in some cases with line pressure.

#### **VALVE WIRE SIZING EXAMPLE**

Given: The distance from the controller to the valve is 600 m. The controller output is 24 V. The valve has a minimum operating voltage of 20 V and an inrush current of 370 mA (0.37 A).

$$R = \frac{1,000 \times 4}{2(600) \times 0.37}$$

$$R = 4,000$$

R = 9.01 ohms/ 1,000 m

So, wire resistance cannot exceed 9 ohms per 1,000 m. Now go to table 1 and select the proper wire size. Since 1.5 mm<sup>2</sup> gauge wire has more resistance than 9 ohms per 1,000 m, choose 2.5 mm<sup>2</sup> wire.

Table 2 is a quick reference and is set up to provide maximum wire runs given the information at the bottom of the table.

TABLE 1 - RE	SISTANCE OF COPPER WIRE	TABLE 2 - ALL	OWABLE	DISTANCES	FOR VARI	OUS WIRE	SIZES*	
Wire Size	Resistance in Ohms per	Ground Wire			Control V	Vire (mm²)		
(mm²)	1,000 m at 20° C	(mm²)	0.5	1.0	1.5	2.5	4.0	6.0
0.5	34.5	0.5	157	209	235	261	279	289
1.0	17.2	1.0	209	314	377	449	503	538
1.5	11.5	1.5	235	377	470	588	684	754
2.5	6.9	2.5	261	449	588	783	965	1103
4.0	4.3	4.0	279	503	684	965	1,257	1,502
6.0	2.9	6.0	289	538	751	1,103	1,502	1,864

#### Notes:

Maximum one-way distance in metres between controller and solenoid assuming 370 mA inrush current, AVL = 4 volts, 1 valve on at a time.

Table 2 is for a single active solenoid. With two solenoids operating simultaneously on the same wires, the wire distances should be halved.



### **WIRE DATA**

STANDARD	ANNEALED COPP	ER AT 20°C				
American Wire Gauge	Common Metric Equivalent (mm²)	Diameter (mils)	Diameter (mm)	Cross-Sectional Area (mm²)	Resistance (Per mft ohms)	Resistance (per km ohms)
1	50	289.3	7.348	42.4	0.924	0.407
2	35	257.6	6.543	33.6	0.156	0.513
3		229.4	5.827	26.7	0.197	0.647
4	25	204.3	5.189	21.1	0.249	0.815
5		181.9	4.62	16.8	0.313	1.028
6	16	162	4.115	13.3	0.395	1.297
7		144.3	3.665	10.6	0.498	1.634
8	10	128.5	3.264	8.36	0.628	2.061
9		114.4	2.906	6.63	0.793	2.6
10	6	101.9	2.588	5.26	0.999	3.277
11		90.7	2.3	4.17	1.26	4.14
12	4	80.8	2.05	3.31	1.59	5.21
13		72	1.83	2.63	2	6.56
14	2.5	64.1	1.63	1.63	2.52	8.28
15		57.1	1.45	1.65	3.18	10.4
16	1.5	50.8	1.29	1.31	4.02	13.2
17		45.3	1.15	1.04	5.05	16.6
18	0.75	40.3	1.02	0.82	6.39	21
19		35.9	0.912	0.65	8.05	26.4
20	0.5	32	0.813	0.52	10.1	33.2

#### **PSR WIRE DATA**

MAXIMUM WIRE LENGTH, ONE WAY						
Model	0.75 mm <sup>2</sup>	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	4 mm²	6 mm <sup>2</sup>	10 mm²
PSR-22	74 m	118 m	188 m	298 m	473 m	751 m
PSR-52	41 m	65 m	104 m	165 m	262 m	416 m
PSR-53	41 m	65 m	104 m	165 m	262 m	416 m

#### STATEMENT OF WARRANTY

#### **Hunter Residential and Commercial Irrigation Products**

Hunter Industries Incorporated ("Hunter") warrants the following products to be free of defects in materials or workmanship under normal use in landscape irrigation applications for the specified period of time outlined below from the original date of manufacture:

ONE YEAR	ROTORS	SRM	MICRO	Micro Sprays, PLD Fittings, Rigid Risers, Air Relief Valves, RZB			
TWO YEARS	ROTORS	PGP-ADJ, PGJ, HCV	CONTROLLERS	ACC (Legacy), BTT, Eco-Logic, HC, HCC, HPC, I-Core/DUAL Families (Legacy), NODE, NODE-BT, Pro-C Families, Pro-HC, PSR, ROAM, X2, X-Core, XC Hybrid, WAND, WVL			
	SPRAYS	PS Ultra Family, SJ, FlexSG, HSBE Family	SENSORS	HC Flow Meter (wired and wireless)			
	NOZZLES	Spray Nozzles, PCN, PCB, AFB, MSBN	MICRO	ACZ, PCZ, RZWS, Point-Source Emitters, Tubing, Multi-Port Emitters, IH Risers, MLD, Eco-Indicator, Multi-Purpose Box, Senninger Regulators, PLD-LOC Fittings			
	VALVES	PGV Family	TOOLS	SpotShot			
	CENTRAL	A2C-WIFI, A2C-LAN, A2C-CELL-E, WIFIKIT, LANKIT, CELLKIT					
THREE YEARS	CONTROLLERS	ROAM XL, EZ Decoder System, EZ-DT	MP ROTATOR	All			
FIVE YEARS	ROTORS	PGP Ultra, I-20, I-25, I-40, I-50, I-80, and I-90 Families	CONTROLLERS	ACC2, ICC2, ICD Decoders, ICD-HP			
	SPRAYS	Pro-Spray, Pro-Spray PRS30, and Pro-Spray PRS40 Families	SENSORS	Clik Sensors, Flow-Sync, MWS, Solar Sync, Wireless Flow Sensor			
	VALVES	HQ, ICV, IBV	MICRO	ICZ, PLD, HDL, HDL-COP**, Eco-Mat, Eco-Wrap			

#### **Hunter Golf and ST System Irrigation Products\***

Hunter will unconditionally repair, replace, or repurchase, at its sole discretion, any defective component\* assemblies contained within the Golf and ST products listed below by category, returned freight prepaid, from the date of manufacture within a period of:

ONE YEAR	GOLF CONTROLLERS	Pilot Command Center Software, Pilot-FC, Pilot-FI, Pilot Hub
THREE		
YEARS	GOLF ROTORS	TTS-800 Series, G-800 Series, G-900 Series, B Series
	GOLF TWO-WAY MODULES	Pilot 100, Pilot 200, Pilot 400, Pilot 600
FIVE YEARS	GOLF ROTORS	The golf rotor component warranty is extended to 5 years with a one-for-one purchase of an HSJ Swing Joint from an authorised Hunter Golf distributor.
	SWING JOINTS	HSJ-0, HSJ-1, HSJ-2, HSJ-3
	ST ROTORS	ST-90, STG-900, ST-1200, ST-1600, ST-1700
	ST ACCESSORIES	All models starting with "ST"
	COMPUTER, PRINTERS & ACCESSORIES, MAINTENANCE RADIO & BATTERY	Equipment manufacturer's warranty (no Hunter warranty)



## HUIIICI® Built on Innovation®

\* Warranty covers repair, replacement, or repurchase of individual defective component assemblies contained within the product. Returns of complete finished goods are not allowed under warranty without prior approval from the Hunter Product Manager.

If used for agricultural applications, Hunter limits the warranty for valves, sprays, MP Rotator Nozzles, and rotor products to a period of one (1) year from the original date of manufacture. This agriculture limitation supersedes all other warranties expressed or implied.

- \*\* Plus 2 additional years for environmental stress cracking. No warranty against root intrusion on HDL-COP. While the use of copper does not completely remove the chance of root intrusion, it has been shown to assist in its prevention when coupled with proper irrigation scheduling.
- \*\*\* Eco-Indicator 15 cm ECO-ID: 2-year warranty; 30 cm ECO-ID-12: 5-year warranty
- \*\*\*\* Hunter's cellular module warranty does not apply to the availability or compatibility of cellular data service, in any particular area. Availability of compatible data services should be determined prior to installation.

#### Statement of Warranty, Continued

If a defect in a Hunter product is discovered during the applicable warranty period, Hunter will repair or replace, at its option, the product or the defective part. This warranty does not extend to repairs, adjustments, or replacement of a Hunter product or part that results from misuse, negligence, alteration, modification, tampering, or improper installation and/or maintenance of the product. This warranty extends only to the original installer of the Hunter product. If a defect arises in a Hunter product during the warranty period, contact your local Hunter Authorized Distributor.

Hunter's warranty applies only to products installed as specified and used as intended for irrigation purposes. Hunter's warranty shall be limited to defects in materials and workmanship during the warranty period, and shall not extend to situations in which the product was subjected to improper design, installation, operation, maintenance, application, abuse, improper electrical current, grounding, service other than by Hunter authorized agents, operating conditions other than that for which it was designed, or in systems using water containing corrosive chemicals, electrolytes, sand, dirt, silt, rust, or agents that otherwise attack and degrade plastics. Hunter's warranty does not cover component failures caused by lightning strikes, electrical power surges, or unconditioned power supplies. If products are repurchased, the price to Distributor for such products in effect at the time of return will apply.

Hunter's obligation to repair, replace, or repurchase its products or product components as set forth above is the sole and exclusive warranty extended by Hunter. There are no other warranties, expressed or implied, including warranties of merchantability and warranties of fitness for a particular purpose. Hunter will not be liable to a distributor or to any other party in strict liability, tort, contract, or any other manner for any damages caused or claimed to be caused as a result of any design of or defect in Hunter's products, or for any special, incidental, or consequential damages of any nature.

Where applicable, Hunter's statement of warranty complies with local directives.

If you have any questions concerning the warranty or its application, please email support@hunterindustries.com.

#### ASAE CERTIFICATION STATEMENT

Hunter Industries Incorporated certifies that pressure, flow rate, and radius data for these products were determined and listed in accordance with ASAE Standard S398.1, Procedure for Sprinkler Testing and Performance Reporting, and are representative of performance of production sprinklers at the time of publication. Actual product performance may differ from the published specifications due to normal manufacturing variations and sample selection. All other specifications are solely the recommendation of Hunter Industries Incorporated.





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.

Gregory R. Hunter, CEO of Hunter Industries

Denise Mullikin, President, Landscape Irrigation and Outdoor Lighting

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