Product Catalogue

RESIDENTIAL, COMMERCIAL, AND GOLF IRRIGATION | *Built on Innovation®*

This is What **INNOVATION MEANS TO US**

We believe the future of irrigation brings together the latest technologies, high-quality products, and unsurpassed customer support. Our focus on new innovations and solutions includes advancements in software that will improve the efficiency of irrigation worldwide.

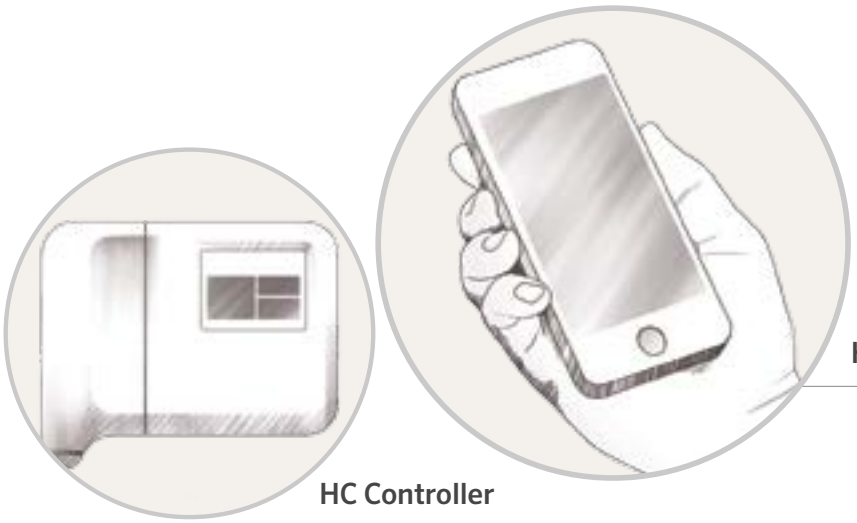
We're committed to making your job easier and helping grow your business to the highest level. Your success is what drives us. We are proud to be your partner, and thank you for your loyalty.

Hunter®


Hydrawise
Hunter | HC

The Future of Irrigation
IS IN YOUR HANDS

Now you can manage customer irrigation systems from anywhere in the world using your smart device or web browser. The Hunter HC controller with Hydrawise™ web-based software lets you oversee all of your customer irrigation schedules and receive alerts and alarms at home, at the office or on vacation, anywhere in the world. Or, you can manage your irrigation right from the controller's easy-to-use full graphic touchscreen. Predictive Watering™ adjustments change daily schedules based on temperature forecast, rainfall probability and wind and humidity to provide maximum water savings while keeping your landscape healthy and beautiful.



Hydrawise Software

HC Controller

Hunter®


EASY TO USE
SAVE WATER
SAVE TIME
MONITOR
WATER USAGE
Welcome to your Hydrawise Contractor Portal!
Dashboard
6316 mins
76 %
7
0
7
4
76%
ALERTS
9 Alerts, 64 Events total

What's **NEW**

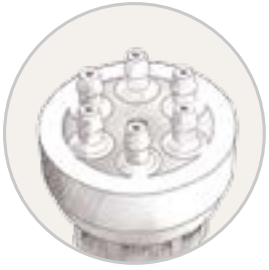
The ICC2 is a value-packed, mid-range commercial controller with exciting new features. With up to 54 stations, it's especially designed to irrigate large landscapes. The controller can run any two of its four automatic programs simultaneously, which means more irrigation within a shorter time period. The control panel and internal modules are forward- and backward-compatible with original ICC controllers. The new high-visibility backlit display makes the ICC2 easy to operate, even in low-light conditions. With its customizable language overlay, the ICC2 is a global player.

ICC2

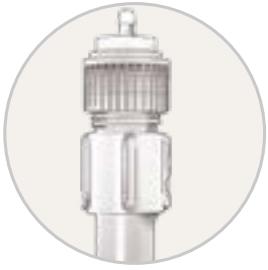
The Wireless Flow Sensor is designed to be used with flow monitoring commercial controllers such as the I-Core and ACC. It has uniquely designed flow-sensing capabilities up to 152 m from the controller, which means no more running wires or digging trenches. Mounted securely in a valve box, it's easy to install. The sealed battery compartment makes it fully waterproof. It can detect leaks or breaks and responds by interrupting the watering program.

Wireless Flow Sensor

We've made big moves in some small spaces, with over 50 new Micro irrigation products. Whether you're designing dense or sparse plantings, narrow beds, small spaces, or even green roofs, we now offer all the products you need with the high quality you expect from Hunter.



Multi-Port Emitters



IH Risers

Rigid Risers

PLD-Loc Fittings

MLD, ¼", and ½" Tubing

Table of CONTENTS

Hunter®

RESIDENTIAL *Solutions*

Hunter's residential irrigation systems combine efficiency, water savings, and ease of use for jobs of any size. A design featuring the MP Rotator® will achieve distribution uniformity without runoff in a radius range of 1.8 to 10.7 m, so no matter what type of space you're working with, you can help your customers save water while maintaining a beautiful landscape.

1 Pro-C®

Pro-C – our most robust residential controller easily converts to a smart watering device when paired with Solar Sync.
Page 105

2 Solar Sync®

Solar Sync – uses evapotranspiration (ET) and adjusts the Pro-Cs run time daily to apply the right amount of water.
Page 126

3 MP Rotator & PRS40

MP Rotator – the world's most efficient sprinkler uses multiple streams to deliver water slowly without runoff. PRS40 ensures optimal output pressure for maximum efficiency with the MP Rotator.
Pages 52 and 67

MICRO IRRIGATION *Solutions*

Hunter's micro irrigation solutions offer efficiency and water savings for the unique needs of challenging spaces. Higher quality at-grade and subsurface drip products from Hunter provide the versatility and durability required for all varieties of plantings: large & small spaces, landscape beds, hedge rows, mixed plantings, green walls, and rooftop gardens - no overspray, no runoff.

1 PCZ-101

PCZ-101 – contains our PGV valve, filter, and 1.7 or 2.8 bar pressure regulator for maximum efficiency and complete zone control.

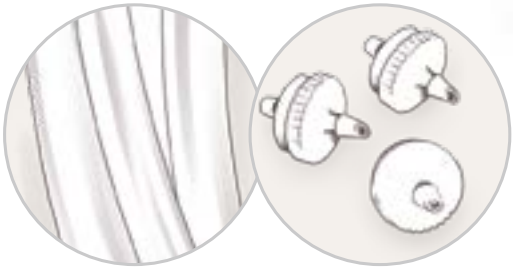
Page 146

2 Eco Mat®

Eco-Mat - unique subsurface irrigation product comprised of dripline, fleece, and a special capillary mat that irrigates with unrivaled efficiency.

Page 139

3 PLD & Point Source Emitters



PLD - Professional Landscape Dripline irrigates with maximum consistency and includes a check valve to prevent low-point drainage. Point Source Drip Emitters - Colour-coded emitters which come in a variety of flows and deliver water directly to the plant's root zone without waste.

Pages 140 and 144

COMMERCIAL *Solutions*

For commercial applications and public spaces, Hunter's proven water savers include our most durable commercial rotors with built-in pressure regulation, plus our ACC controller with Solar Sync®. Adding IMMS graphically-based central control simplifies the management of large-scale irrigation systems by monitoring and reporting totals to track water usage and quickly identify plumbing issues.

1 I-20 PRB

I-20 PRB – a high-performance rotor with a pressure-regulated body for optimal watering efficiency.

Page 30

2 Solar Sync

Solar Sync – conserves water by adjusting ACC run times based on ET and local weather conditions.

Page 126

3 ACC

ACC – our most advanced large-scale commercial controller works as a stand alone or with IMMS and Solar Sync for the ultimate in smart watering for even the largest properties.

Page 110

4 IMMS

IMMS – PC-based software for wide area systems management. Optional ET software provides weather-based irrigation when used with Solar Sync.

Page 122

1 ICV & Accu-Sync®

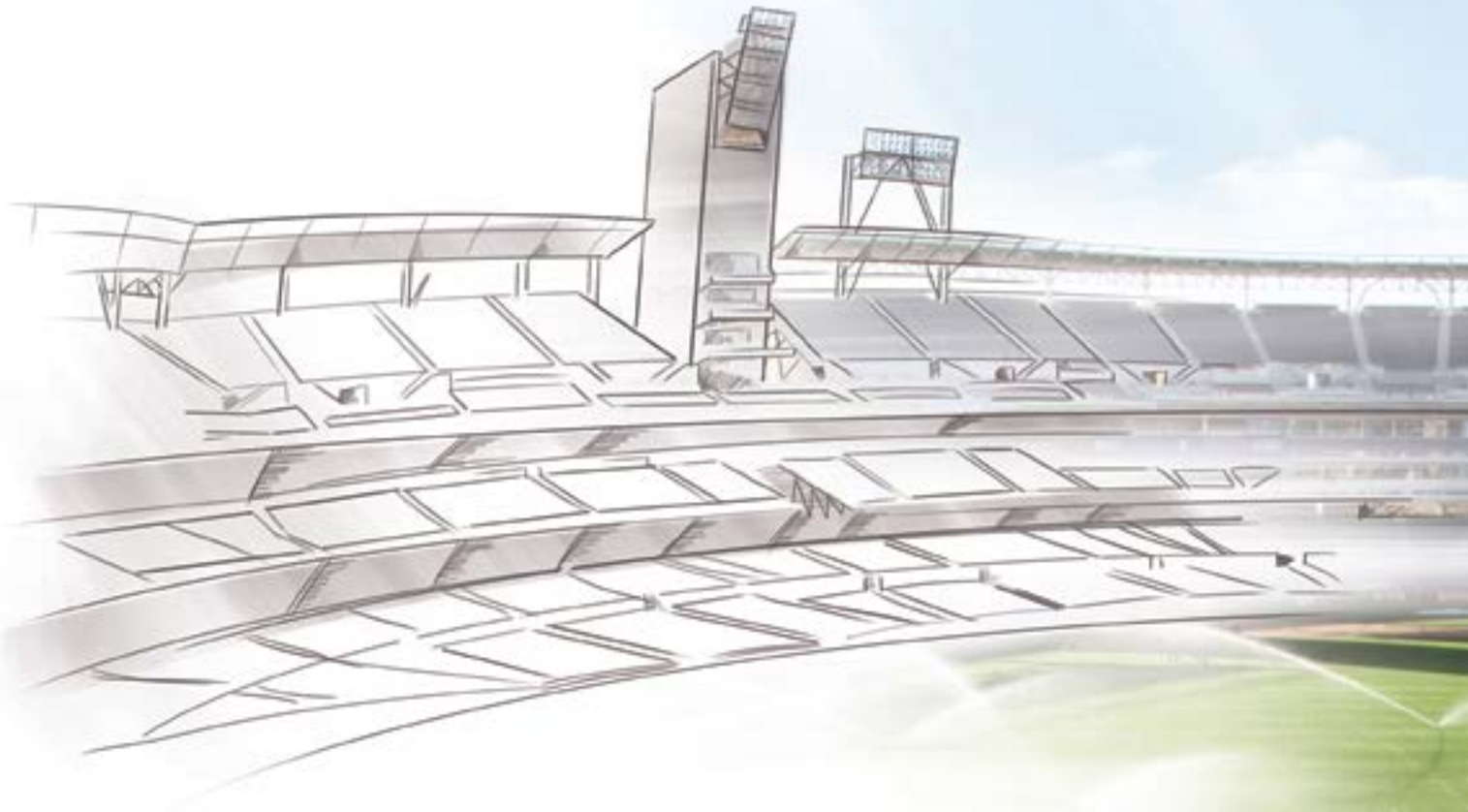
ICV – our top-of-the-line valve for high-pressure commercial systems with flow control to maximise efficiency. Accu-Sync regulates pressure at the valve to save water and extend the life of the system.
Page 90 and 96

2 I-Core®

I-Core – our versatile commercial controller saves water with built-in Solar Sync® compatibility, flow monitoring, cycle and soak, programmable rain delay, and more.
Page 108

3 I-40

I-40 – tough stainless steel commercial rotors that deliver water with accuracy for professional results.
Page 37



SPORTS TURF *Solutions*

World-class stadiums demand world-class irrigation systems.
Hunter's winning combination includes the most durable and safe sports turf rotors, robust controllers, and trouble-free, reliable valves for the healthiest, most playable turf all season long.

1 Pilot® Controller

Pilot FC – field controller for up to 80 stations allows the flexibility to make adjustments as needed.
Page 190

2 Pilot Software

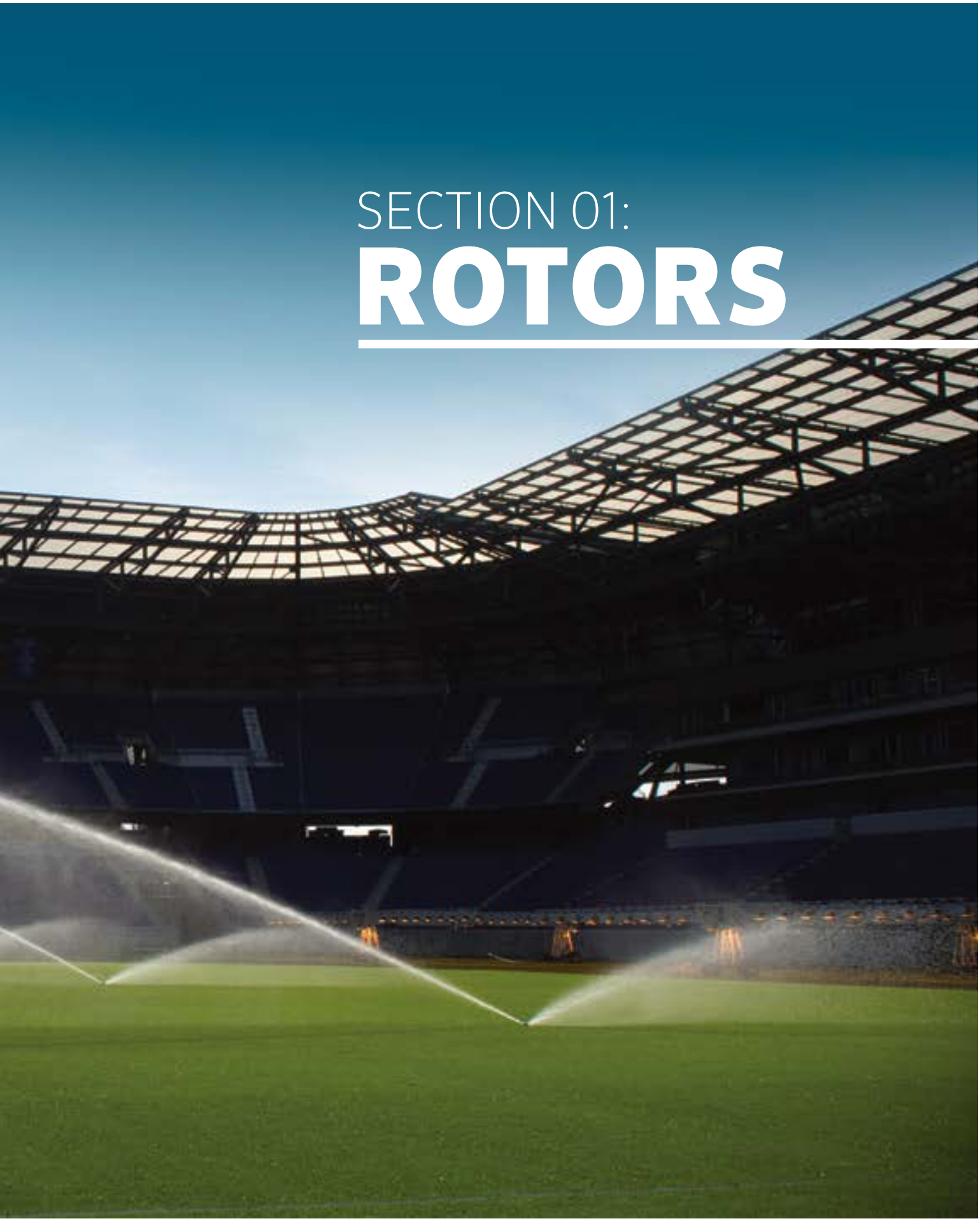
Pilot Control System - puts you in complete command of your course. Quick and easy to program, Pilot is the only software in the industry with single–screen scheduling. Available in conventional or decoder configurations, Pilot allows you to create and edit schedules out on the course – an industry first.
Page 188

3 G885

G885 – the highest torque output of any golf rotor with full and part circle capabilities, plus Total Top Service (TTS) and Decoder-In-Head (DIH) technology for easy programming.
Page 172

Hunter's Golf irrigation systems provide the unprecedented simplicity of central control with single screen-scheduling; the Pilot FC offers a convenient way to make quick and easy adjustments out on the course. Our G880 and G885 rotors are a flexible combination to meet a variety of needs and with total top serviceability (TTS) there's no digging or downtime, so your course is always beautiful and playable.

GOLF COURSE
Solutions



SECTION 01:
ROTORS

ROTORS
ADVANCED FEATURES

RELIABLE STRENGTH & DURABILITY

PRESSURE REGULATED BODY

Reduces high incoming pressure to prevent misting and allows nozzles to operate at peak efficiency. Lower pressure produces larger water droplets that fight the effects of wind.

PGP Ultra 10 cm, I-20 10 and 15 cm

STAINLESS STEL RISER

For unforgiving soil conditions, unpredictable climates, or heavy foot traffic, stainless steel is the best choice.

Standard on I-40
Optional on I-20 and I-25

DRAIN CHECK VALVE

The drain check valve keeps lines from draining when the system is shut off. This saves water, reduces liability, and increases system life.

PGJ, PGP Ultra, I-20, I-25, I-40, I-90

VALUE-ADDED OPTIONS

OPPOSING NOZZLE 360° MODEL

The opposing nozzle design offers excellent water distribution. With primary and secondary nozzles on opposing sides of the turret, streams arc in opposite directions as the sprinkler rotates for outstanding mid-range and close-in watering.

I-40, I-90

EASY IN-THE-FIELD IDENTIFICATION

OPTIONAL RECLAIMED WATER ID

Purple caps indicate where non-potable irrigation water is being used.

PGJ, PGP® Ultra, I-20, I-25, I-40, I-90

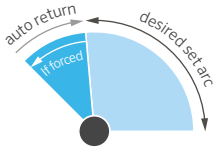
COLOUR-CODED NOZZLES

Nozzles are easier to differentiate in the field for simple installation and quick organisation.

I-25, I-40, I-90

EASY AS-NEEDED ADJUSTMENTS

AUTOMATIC ARC RETURN & NON-STRIPPABLE DRIVE



This patented feature returns the turret to the original arc regardless of where it is turned. The non-strippable drive mechanism is protected from damage, ensuring protection from vandalism.

PGP Ultra, I-20, I-25, I-40

FLOSTOP® CONTROL

FloStop closes the flow of water from individual sprinkler heads while the system is running. This is ideal for changing nozzles or turning off specific heads during maintenance and construction.

I-20

HEADED AND SLOTTED SET SCREW

Use a slotted screwdriver or the Hunter wrench for easier and simpler adjustments as needed.

PGJ, PGP Ultra, I-20

ROTORS COMPARISON CHART

QUICK SPECS		PGJ	SRM	PGP®-ADJ	PGP ULTRA	I-20	I-25	I-40	I-40-ON	I-90
INLET SIZE		½"	½"	¾"	¾"	¾"	1"	1"	1"	1½"
RADIUS	m	4.3–11.6	4.0–9.4	6.4–15.8	4.9–14.0	4.9–14.0	11.9–21.6	13.1–23.3	15.2–23.2	22.3–31.7
FLOW	m^3/hr	0.13–1.23	0.08–0.82	0.10–3.22	0.07–3.23	0.07–3.23	0.82–7.24	1.63–6.84	2.75–7.76	6.7–19.04
	l/min	2.2–20.5	1.4–13.7	1.7–53.7	1.2–53.8	1.2–53.8	13.6–120.7	27.2–114.1	45.8–129.4	111.7–317.2
FEATURES										
RECOMMENDED PRESSURE RANGE	bar	1.7–3.8	1.7–3.8	1.7–4.5	1.7–4.5	1.7–4.5	2.5–7.0	2.5–7.0	2.5–7.0	5.5–8.0
	kPa	170–380	170–380	170–450	170–450	170–450	250–700	280–700	280–700	550–800
OPERATING PRESSURE RANGE	bar	1.4–7.0	1.4–7.0	1.4–7.0	1.4–7.0	1.4–7.0	2.8–6.9	2.5–7.0	2.5–7.0	5.0–8.0
	kPa	140–700	140–700	140–700	140–700	140–700	280–690	250–700	250–700	500–800
NOZZLE TRAJECTORY		15°	15°	25°	25°	25°	25°	25°	25°	22.5°
SPECIFIC NOZZLES		---	---	---	Optional	Optional	Pre-Installed	Pre-Installed	Pre-Installed	Pre-Installed
NOZZLE OPTIONS		8	6	27	34	34	12	6	6	16
WARRANTY		2 Years	1 Year	2 Years	5 Years	5 Years	5 Years	5 Years	5 Years	5 Years
ADVANCED FEATURES										
LOW ANGLE NOZZLE CHOICES				●	●	●				●
AUTOMATIC ARC RETURN					●	●	●	●		
NON-STRIPPABLE DRIVE					●	●	●	●		
PART- AND FULL-CIRCLE IN ONE MODEL					●	●	●	●		
HEADED AND SLOTTED SET SCREW		●			●	●				
RECLAIMED WATER ID		●			●	●	●	●	●	●
AVAILABLE SHORT RADIUS NOZZLES					●	●				
FLOSTOP® CONTROL						●				
OPPOSING NOZZLE									●	●
STAINLESS STEEL RISER OPTION						●	●	●	●	
OPTIONAL PRESSURE REGULATED BODY					●	●				
OPTIONAL OR FACTORY INSTALLED DRAIN CHECK VALVE		● (2 m)			● (2 m)	● (3 m)	● (3 m)	● (4.5 m)	● (4.5 m)	● (2 m)

PGJ

Radius: **4.3 to 11.6 m**
Flow: **0.13 to 1.23 m³/hr; 2.2 to 20.5 l/min**
Inlet: **½"**

FEATURES

- Models: Shrub, 10 cm, 15 cm, 30 cm
- Arc setting: 40° to 360°
- Nozzle choices: 8
- Nozzle range: 0.75 to 5.0
- Standard factory installed nozzle: 2.0 only
- Factory installed rubber cover
- Through-the-top arc adjustment
- QuickCheck™ arc mechanism
- Water lubricated gear-drive
- Warranty period: 2 years
- ▸ Headed and slotted set screw
- ▸ Optional reclaimed water ID
- ▸ Drain check valve (up to 2 m of elevation)

OPERATING SPECIFICATIONS

- Radius: 4.3 to 11.6 m
- Flow: 0.13 to 1.23 m³/hr; 2.2 to 20.5 l/min
- Recommended pressure range: 1.7 to 3.8 bar; 170 to 380 kPa
- Operating pressure range: 1.4 to 7.0 bar; 140 to 700 kPa
- Precipitation rates: 15 mm/hr approximately
- Nozzle trajectory: 15° approximately

▸ = *Advanced Feature descriptions on page 20*

PGJ Reclaimed
Available as a factory installed option on all models

PGJ – SPECIFICATION BUILDER: ORDER 1 + 2 + 3

1 Model	2 Standard Features	3 Feature Options
PGJ-00 = Shrub	Adjustable arc, 8 standard nozzles	**(blank)** = No option
PGJ-04 = 10 cm Pop-up		**V** = Drain check valve
PGJ-06 = 15 cm Pop-up		**R** = Drain check valve and reclaimed water ID *(pop-up models only)*
PGJ-12 = 30 cm Pop-up		

Examples:
PGJ-04 = 10 cm Pop-up, adjustable arc
PGJ-06 - V = 15 cm Pop-up, adjustable arc, with drain check valve
PGJ-12 - R = 30 cm Pop-up, adjustable arc, with drain check valve and reclaimed water ID

PGJ-00
Overall height: 18 cm
Exposed diameter: 3 cm
Inlet size: ½"

PGJ-04
Overall height: 18 cm
Pop-up height: 10 cm
Exposed diameter: 3 cm
Inlet size: ½"

PGJ-06
Overall height: 23 cm
Pop-up height: 15 cm
Exposed diameter: 3 cm
Inlet size: ½"

PGJ-12
Overall height: 41 cm
Pop-up height: 30 cm
Exposed diameter: 3 cm
Inlet size: ½"

PGJ RED NOZZLE PERFORMANCE DATA

Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲
.75 ● Red	1.7	170	4.3	0.13	2.2	14	17
	2.0	200	4.6	0.14	2.4	14	16
	2.5	250	4.9	0.16	2.7	13	15
	3.0	300	5.2	0.18	3.0	13	15
	3.5	350	5.2	0.19	3.2	14	17
	3.8	380	5.5	0.20	3.4	13	15
1.0 ● Red	1.7	170	5.2	0.18	3.0	13	15
	2.0	200	5.5	0.19	3.2	13	15
	2.5	250	5.5	0.21	3.5	14	16
	3.0	300	5.8	0.23	3.8	14	16
	3.5	350	5.8	0.24	4.1	15	17
	3.8	380	6.1	0.25	4.2	14	16
1.5 ● Red	1.7	170	6.1	0.27	4.5	15	17
	2.0	200	6.4	0.29	4.8	14	16
	2.5	250	6.4	0.32	5.4	16	18
	3.0	300	6.7	0.36	6.0	16	18
	3.5	350	6.7	0.39	6.4	17	20
	3.8	380	7.0	0.40	6.7	16	19
2.0 ● Red	1.7	170	7.0	0.34	5.6	14	16
	2.0	200	7.3	0.37	6.2	14	16
	2.5	250	7.3	0.42	7.1	16	18
	3.0	300	7.6	0.48	8.0	17	19
	3.5	350	7.6	0.53	8.8	18	21
	3.8	380	7.9	0.56	9.3	18	20
2.5 ● Red	1.7	170	7.9	0.46	7.6	15	17
	2.0	200	8.2	0.49	8.1	14	17
	2.5	250	8.2	0.54	9.0	16	18
	3.0	300	8.5	0.59	9.8	16	19
	3.5	350	8.5	0.63	10.5	17	20
	3.8	380	8.8	0.65	10.9	17	19
3.0 ● Red	1.7	170	8.8	0.51	8.5	13	15
	2.0	200	9.1	0.56	9.3	13	15
	2.5	250	9.1	0.64	10.6	15	18
	3.0	300	9.4	0.72	12.0	16	19
	3.5	350	9.4	0.78	13.1	18	20
	3.8	380	9.8	0.82	13.7	17	20
4.0 ● Red	1.7	170	9.8	0.80	13.3	17	19
	2.0	200	10.1	0.83	13.8	16	19
	2.5	250	10.1	0.89	14.8	18	20
	3.0	300	10.4	0.94	15.7	17	20
	3.5	350	10.4	0.98	16.3	18	21
	3.8	380	10.7	1.00	16.7	18	20
5.0 ● Red	1.7	170	10.7	1.02	17.0	18	21
	2.0	200	11.0	1.06	17.6	18	20
	2.5	250	11.0	1.11	18.5	18	21
	3.0	300	11.3	1.17	19.4	18	21
	3.5	350	11.3	1.21	20.1	19	22
	3.8	380	11.6	1.23	20.5	18	21

Note:
All precipitation rates calculated for 180° operation. For the precipitation rate for a 360° sprinkler, divide by 2.

PGJ NOZZLES

PGJ

SRM

Radius: **4.0 to 9.4 m**
Flow: **0.08 to 0.82 m³/hr; 1.4 to 13.7 l/min**
Inlet: **½"**

FEATURES

- Model: 10 cm
- Arc setting: 40° to 360°
- Nozzle choices: 6
- Nozzle range: 0.50 to 3.0
- Standard factory installed nozzle: 3.0 only
- Through-the-top arc adjustment
- QuickCheck™ arc mechanism
- Water lubricated gear-drive
- Warranty period: 1 year

SRM-04
Overall height: 18 cm
Pop-up height: 10 cm
Exposed diameter: 3 cm
Inlet size: ½"

OPERATING SPECIFICATIONS

- Radius: 4.0 to 9.4 m
- Flow: 0.08 to 0.82 m³/hr; 1.4 to 13.7 l/min
- Recommended pressure range: 1.7 to 3.8 bar; 170 to 380 kPa
- Operating pressure range: 1.4 to 7.0 bar; 140 to 700 kPa
- Precipitation rates: 11 mm/hr approximately
- Nozzle trajectory: 15° approximately

SRM

Model	Description
SRM-04	10 cm Pop-up, adjustable arc, 6 standard nozzles

SRM NOZZLES

SRM

SRM GREEN NOZZLE PERFORMANCE DATA

Nozzle	Pressure bar	Pressure kPa	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
.50 ● Dk. Green	1.7	170	4.0	0.08	1.4	11	12
	2.0	200	4.3	0.09	1.6	10	12
	2.5	250	4.3	0.11	1.8	12	14
	3.0	300	4.6	0.12	2.0	12	13
	3.5	350	4.6	0.13	2.2	13	15
	3.8	380	4.9	0.14	2.3	12	14
.75 ● Dk. Green	1.7	170	4.9	0.13	2.2	11	13
	2.0	200	5.2	0.14	2.4	11	12
	2.5	250	5.2	0.16	2.7	12	14
	3.0	300	5.5	0.18	3.0	12	14
	3.5	350	5.5	0.19	3.2	13	15
	3.8	380	5.8	0.20	3.4	12	14
1.0 ● Dk. Green	1.7	170	5.8	0.18	2.9	11	12
	2.0	200	6.1	0.19	3.2	10	12
	2.5	250	6.1	0.21	3.5	11	13
	3.0	300	6.4	0.24	3.9	12	13
	3.5	350	6.4	0.25	4.2	12	14
	3.8	380	6.7	0.26	4.4	12	14
1.5 ● Dk. Green	1.7	170	6.7	0.27	4.5	12	14
	2.0	200	7.0	0.29	4.8	12	14
	2.5	250	7.0	0.32	5.4	13	15
	3.0	300	7.3	0.36	6.0	13	16
	3.5	350	7.3	0.39	6.5	15	17
	3.8	380	7.6	0.40	6.7	14	16
2.0 ● Dk. Green	1.7	170	7.3	0.35	5.8	13	15
	2.0	200	7.9	0.38	6.3	12	14
	2.5	250	7.9	0.43	7.1	14	16
	3.0	300	8.2	0.48	8.0	14	16
	3.5	350	8.2	0.53	8.8	16	18
	3.8	380	8.5	0.55	9.2	15	17
3.0 ● Dk. Green	1.7	170	8.2	0.51	8.5	15	17
	2.0	200	8.5	0.56	9.3	15	18
	2.5	250	8.5	0.64	10.6	17	20
	3.0	300	9.1	0.72	12.0	17	20
	3.5	350	9.1	0.78	13.1	19	22
	3.8	380	9.4	0.82	13.7	18	21

Note:
All precipitation rates calculated for 180° operation. For the precipitation rate for a 360° sprinkler, divide by 2.

PGP®

Radius: **6.4 to 15.8 m**
Flow: **0.10 to 3.22 m³/hr; 1.7 to 53.7 l/min**
Inlet: **¾"**

FEATURES

- Model: 10 cm
- Arc setting: 40° to 360°
- Factory installed rubber cover
- Through-the-top arc adjustment
- QuickCheck™ arc mechanism
- Water lubricated gear-drive
- Nozzle choices: 27 total
- Nozzle racks: Red, Blue, Grey Low Angle
- Warranty period: 2 years

PGP-ADJ
Overall height: 19 cm
Pop-up height: 10 cm
Exposed diameter: 4 cm
Inlet size: ¾"

OPERATING SPECIFICATIONS

- Radius: 6.4 to 15.8 m
- Flow: 0.10 to 3.22 m³/hr; 1.7 to 53.7 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 rates: 10 mm/hr approximately
- Nozzle trajectory: Standard = 25°, Low Angle = 13°

PGP-ADJ
Easy arc and radius adjustment

PGP-ADJ – SPECIFICATION BUILDER: ORDER 1 + 2 + 3

1 Model	2 Standard Features	3 Feature Options
PGP-ADJ-B = 10 cm Pop-up	Adjustable arc with Blue nozzle rack	**1.5 to 4.0** = Factory-installed Blue nozzle number
PGP-ADJ = 10 cm Pop-up	Adjustable arc with Red nozzle rack	**#5 to #8** = Factory-installed Red nozzle number
		#7 = Factory-installed Red nozzle number

Examples:
PGP-ADJ = 10 cm Pop-up, adjustable arc
PGP-ADJ-B - 3.0 = 10 cm Pop-up, adjustable arc, and #3.0 Blue nozzle
PGP-ADJ - 07 = 10 cm Pop-up, adjustable arc, and #7 Red nozzle

PGP Red Nozzle

PGP® BLUE NOZZLE PERFORMANCE DATA

Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲
1.5 ● Blue	1.7	170	8.8	0.27	4.5	7	8
	2.0	200	9.1	0.29	4.8	7	8
	2.5	250	9.4	0.32	5.4	7	8
	3.0	300	9.8	0.35	5.9	7	9
	3.5	350	9.8	0.38	6.4	8	9
	4.0	400	9.8	0.41	6.8	9	10
	4.5	450	9.4	0.43	7.2	10	11
2.0 ● Blue	1.7	170	10.1	0.32	5.4	6	7
	2.0	200	10.1	0.35	5.8	7	8
	2.5	250	10.1	0.39	6.5	8	9
	3.0	300	10.4	0.43	7.2	8	9
	3.5	350	10.4	0.47	7.8	9	10
	4.0	400	10.4	0.50	8.3	9	11
	4.5	450	10.4	0.53	8.8	10	11
2.5 ● Blue	1.7	170	10.1	0.39	6.6	8	9
	2.0	200	10.4	0.43	7.1	8	9
	2.5	250	10.7	0.48	8.0	8	10
	3.0	300	10.7	0.54	8.9	9	11
	3.5	350	10.7	0.58	9.7	10	12
	4.0	400	10.7	0.62	10.4	11	13
	4.5	450	10.7	0.66	11.1	12	13
3.0 ● Blue	1.7	170	10.7	0.50	8.4	9	10
	2.0	200	10.7	0.54	9.1	10	11
	2.5	250	11.0	0.61	10.2	10	12
	3.0	300	11.6	0.68	11.4	10	12
	3.5	350	11.9	0.74	12.3	10	12
	4.0	400	11.9	0.79	13.2	11	13
	4.5	450	11.9	0.84	14.0	12	14
4.0 ● Blue	1.7	170	11.3	0.68	11.3	11	12
	2.0	200	11.6	0.73	12.2	11	13
	2.5	250	11.9	0.81	13.6	12	13
	3.0	300	12.2	0.90	15.0	12	14
	3.5	350	12.2	0.97	16.2	13	15
	4.0	400	12.5	1.04	17.3	13	15
	4.5	450	12.5	1.10	18.3	14	16
5.0 ● Blue	1.7	170	11.3	0.84	14.0	13	15
	2.0	200	11.6	0.91	15.2	14	16
	2.5	250	11.9	1.02	17.1	15	17
	3.0	300	12.8	1.14	19.0	14	16
	3.5	350	12.8	1.24	20.6	15	17
	4.0	400	12.8	1.32	22.1	16	19
	4.5	450	12.8	1.41	23.4	17	20
6.0 ● Blue	1.7	170	11.6	1.01	16.8	15	17
	2.0	200	11.9	1.09	18.2	15	18
	2.5	250	12.2	1.22	20.4	16	19
	3.0	300	13.1	1.36	22.7	16	18
	3.5	350	13.1	1.47	24.5	17	20
	4.0	400	13.4	1.57	26.2	18	20
	4.5	450	13.4	1.67	27.9	19	21
8.0 ● Blue	1.7	170	11.3	1.35	22.5	21	25
	2.0	200	11.9	1.46	24.3	21	24
	2.5	250	12.5	1.63	27.2	21	24
	3.0	300	13.4	1.81	30.2	20	23
	3.5	350	13.7	1.95	32.6	21	24
	4.0	400	14.0	2.09	34.8	21	25
	4.5	450	14.0	2.22	36.9	23	26

Note:
All precipitation rates calculated for 180° operation. For the precipitation rate for a 360° sprinkler, divide by 2.

PGP GREY LOW ANGLE NOZZLE PERFORMANCE DATA

Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲
4 LA ● Grey	1.7	170	6.4	0.30	4.9	14	17
	2.0	200	6.7	0.32	5.3	14	16
	2.5	250	7.0	0.35	5.9	14	17
	3.0	300	7.3	0.39	6.5	15	17
	3.5	350	7.9	0.42	7.0	13	15
	4.0	400	8.5	0.45	7.5	12	14
	4.5	450	8.5	0.47	7.9	13	15
5 LA ● Grey	1.7	170	7.3	0.33	5.6	12	14
	2.0	200	7.6	0.36	6.0	12	14
	2.5	250	7.9	0.40	6.7	13	15
	3.0	300	8.2	0.45	7.4	13	15
	3.5	350	8.5	0.48	8.0	13	15
	4.0	400	8.8	0.52	8.6	13	15
	4.5	450	9.1	0.55	9.1	13	15
6 LA ● Grey	1.7	170	8.8	0.44	7.3	11	13
	2.0	200	9.1	0.47	7.9	11	13
	2.5	250	9.4	0.53	8.8	12	14
	3.0	300	9.8	0.59	9.8	12	14
	3.5	350	10.1	0.64	10.6	13	15
	4.0	400	10.7	0.68	11.3	12	14
	4.5	450	10.7	0.72	12.0	13	15
7 LA ● Grey	1.7	170	8.5	0.58	9.7	16	18
	2.0	200	8.8	0.62	10.3	16	18
	2.5	250	9.4	0.68	11.4	15	18
	3.0	300	10.1	0.75	12.5	15	17
	3.5	350	10.7	0.80	13.3	14	16
	4.0	400	11.3	0.85	14.1	13	15
	4.5	450	11.3	0.89	14.8	14	16
8 LA ● Grey	1.7	170	9.1	0.71	11.8	17	20
	2.0	200	9.4	0.76	12.7	17	20
	2.5	250	9.8	0.84	14.1	18	20
	3.0	300	10.4	0.93	15.5	17	20
	3.5	350	11.3	1.00	16.6	16	18
	4.0	400	11.6	1.06	17.6	16	18
	4.5	450	11.6	1.12	18.6	17	19
9 LA ● Grey	1.7	170	9.8	0.89	14.9	19	22
	2.0	200	10.1	0.96	16.0	19	22
	2.5	250	10.7	1.07	17.9	19	22
	3.0	300	11.3	1.19	19.8	19	22
	3.5	350	12.2	1.28	21.3	17	20
	4.0	400	12.8	1.37	22.8	17	19
	4.5	450	12.8	1.45	24.1	18	20
10 LA ● Grey	1.7	170	10.1	1.17	19.5	23	27
	2.0	200	10.7	1.26	21.0	22	26
	2.5	250	11.3	1.40	23.4	22	25
	3.0	300	11.6	1.55	25.9	23	27
	3.5	350	12.2	1.67	27.8	22	26
	4.0	400	12.8	1.78	29.7	22	25
	4.5	450	12.8	1.89	31.4	23	27

Note:
All precipitation rates calculated for 180° operation. For the precipitation rate for a 360° sprinkler, divide by 2.

PGP NOZZLES

Blue
(P/N 665300)

Grey
(P/N 233200)

PGP® RED NOZZLE PERFORMANCE DATA

Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲
1 ● Red	1.7	170	8.2	0.10	1.7	3	3
	2.0	200	8.5	0.11	1.8	3	3
	2.5	250	8.5	0.13	2.1	4	4
	3.0	300	8.8	0.15	2.4	4	4
	3.5	350	8.8	0.16	2.7	4	5
	4.0	400	9.1	0.18	2.9	4	5
	4.5	450	9.1	0.19	3.2	5	5
2 ● Red	1.7	170	8.5	0.14	2.4	4	5
	2.0	200	8.8	0.16	2.6	4	5
	2.5	250	8.8	0.17	2.9	4	5
	3.0	300	9.1	0.19	3.2	5	5
	3.5	350	9.1	0.21	3.5	5	6
	4.0	400	9.4	0.22	3.7	5	6
	4.5	450	9.4	0.23	3.9	5	6
3 ● Red	1.7	170	8.8	0.18	3.0	5	5
	2.0	200	9.1	0.20	3.3	5	5
	2.5	250	9.1	0.22	3.7	5	6
	3.0	300	9.4	0.25	4.1	6	6
	3.5	350	9.4	0.27	4.5	6	7
	4.0	400	9.8	0.29	4.8	6	7
	4.5	450	9.8	0.31	5.1	6	7
4 ● Red	1.7	170	9.4	0.24	4.1	5	6
	2.0	200	9.8	0.27	4.4	6	6
	2.5	250	9.8	0.30	5.0	6	7
	3.0	300	10.1	0.34	5.6	7	8
	3.5	350	10.1	0.37	6.2	7	8
	4.0	400	10.4	0.40	6.6	7	9
	4.5	450	10.4	0.43	7.1	8	9
5 ● Red	1.7	170	10.1	0.33	5.5	7	8
	2.0	200	10.4	0.36	5.9	7	8
	2.5	250	10.4	0.39	6.5	7	8
	3.0	300	11.0	0.43	7.2	7	8
	3.5	350	11.6	0.46	7.7	7	8
	4.0	400	11.6	0.49	8.1	7	8
	4.5	450	11.6	0.51	8.6	8	9
6 ● Red	1.7	170	10.1	0.42	6.9	8	10
	2.0	200	10.4	0.45	7.5	8	10
	2.5	250	10.7	0.51	8.5	9	10
	3.0	300	11.0	0.57	9.4	9	11
	3.5	350	11.6	0.61	10.2	9	11
	4.0	400	11.6	0.66	10.9	10	11
	4.5	450	11.9	0.70	11.6	10	11
7 ● Red	1.7	170	10.1	0.54	9.0	11	12
	2.0	200	10.4	0.58	9.7	11	12
	2.5	250	11.0	0.65	10.8	11	12
	3.0	300	11.6	0.72	12.0	11	12
	3.5	350	12.2	0.78	12.9	10	12
	4.0	400	12.2	0.83	13.8	11	13
	4.5	450	12.2	0.88	14.6	12	14

PGP RED NOZZLE PERFORMANCE DATA

Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲
8 ● Red	1.7	170	11.0	0.66	11.0	11	13
	2.0	200	11.3	0.71	11.8	11	13
	2.5	250	11.6	0.79	13.2	12	14
	3.0	300	11.9	0.87	14.5	12	14
	3.5	350	12.5	0.94	15.6	12	14
	4.0	400	12.5	1.00	16.6	13	15
	4.5	450	12.8	1.05	17.6	13	15
9 ● Red	1.7	170	11.3	0.73	12.2	11	13
	2.0	200	11.6	0.80	13.4	12	14
	2.5	250	11.6	0.92	15.4	14	16
	3.0	300	12.5	1.05	17.5	13	16
	3.5	350	13.4	1.15	19.2	13	15
	4.0	400	13.4	1.25	20.9	14	16
	4.5	450	13.7	1.35	22.4	14	17
10 ● Red	2.0	200	12.2	1.14	19.0	15	18
	2.5	250	12.8	1.29	21.4	16	18
	3.0	300	13.4	1.44	24.0	16	18
	3.5	350	14.0	1.56	26.1	16	18
	4.0	400	14.3	1.68	28.0	16	19
	4.5	450	14.3	1.79	29.9	17	20
	5.0	500	14.6	1.90	31.7	18	21
11 ● Red	2.0	200	12.8	1.55	25.9	19	22
	2.5	250	13.7	1.73	28.7	18	21
	3.0	300	14.0	1.90	31.7	19	22
	3.5	350	14.6	2.05	34.1	19	22
	4.0	400	14.9	2.18	36.3	20	23
	4.5	450	15.2	2.30	38.4	20	23
	5.0	500	15.5	2.42	40.4	20	23
12 ● Red	2.0	200	12.8	2.03	33.8	25	29
	2.5	250	13.4	2.26	37.7	25	29
	3.0	300	14.3	2.51	41.8	24	28
	3.5	350	14.6	2.70	45.0	25	29
	4.0	400	14.9	2.88	48.1	26	30
	4.5	450	15.2	3.06	50.9	26	30
	5.0	500	15.8	3.22	53.7	26	30

Note:
All precipitation rates calculated for 180° operation. For the precipitation rate for a 360° sprinkler, divide by 2.

PGP NOZZLES

Red (P/N 130900)

ROTORS

PGP® ULTRA

Radius: **4.9 to 14.0 m**
Flow: **0.07 to 3.23 m³/hr; 1.2 to 53.8 l/min**
Inlet: **¾"**

FEATURES

- Models: Shrub, 10 cm, 30 cm
- Arc setting: 50° to 360°
- Factory installed rubber cover
- Through-the-top arc adjustment
- QuickCheck™ arc mechanism
- Water lubricated gear-drive
- Nozzle choices: 34
- Nozzle racks: 1.5 to 8.0 Blue, 2.0 Low Angle to 4.0 Low Angle Grey, 0.50 Short Radius to 3.0 Short Radius Black, 6.0 to 13.0 Green, MPR-20, MPR-30, MPR-35
- Warranty period: 5 years
- ▸ Automatic arc return
- ▸ Non-strippable drive
- ▸ Part- and full-circle in one model
- ▸ Headed and slotted set screw
- ▸ Optional reclaimed water ID
- ▸ Drain check valve (up to 3 m of elevation)

OPERATING SPECIFICATIONS

- Radius: 4.9 to 14.0 m
- Flow: 0.07 to 3.23 m³/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 rates: 10 mm/hr approximately
- Nozzle trajectory: Standard = 25°, Low Angle = 13°
- ▸ = *Advanced Feature descriptions on page 20*

PGP Ultra Reclaimed
Available as a factory installed option on all models

PGP Ultra
Easy arc and radius adjustment

PGP-00
Overall height: 19 cm
Exposed diameter: 4.5 cm
Inlet size: ¾"

PGP-04
Overall height: 19 cm
Pop-up height: 10 cm
Exposed diameter: 4.5 cm
Inlet size: ¾"

PGP-12
Overall height: 43 cm
Pop-up height: 30 cm
Exposed diameter: 4.5 cm
Inlet size: ¾"

PGP-ULTRA - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Standard Features	3 Feature Options	4 Nozzle Options
PGP-00 = Shrub **PGP-04** = 10 cm Pop-up **PGP-12** = 30 cm Pop-up	Adjustable arc, plastic riser, 8 standard nozzles, and 4 low angle nozzles	**CV** = Drain check valve **CV-R** = Drain check valve and reclaimed water ID	**Blue 1.5 - 8.0** **Grey Low Angle** **Black Short Radius** **Green High Flow** **MPR-25-Q, T, H, F** **MPR-30-Q, T, H, F** **MPR-35-Q, T, H, F** **1.5 to 4.0** = only nozzles 1.5 - 4.0 can be factory-installed

Examples:
PGP-04 = 10 cm Pop-up, adjustable arc
PGP-04 - 2.5 = 10 cm Pop-up, adjustable arc and 2.5 nozzle
PGP-12 - CV-R - 4.0 = 30 cm Pop-up, adjustable arc, with drain check valve and reclaimed water ID with 4.0 nozzle

I-20

Radius: **4.9 to 14.0 m**
Flow: **0.07 to 3.23 m³/hr; 1.2 to 53.8 l/min**
Inlet: **¾"**

FEATURES

- Models plastic riser: Shrub, 10 cm, 15 cm, 30 cm
- Models stainless steel riser: 10 cm, 15 cm
- Arc setting: 50° to 360°
- Factory installed rubber cover
- Through-the-top arc adjustment
- QuickCheck™ arc mechanism
- Water lubricated gear-drive
- Nozzle choices: 34
- Nozzle racks: 1.5 to 8.0 Blue, 2.0 to 4.0 Low Angle Grey, 0.50 to 3.0 Short Radius Black, 6.0 to 13.0 Green, MPR-20, MPR-30, MPR-35
- Warranty period: 5 years

- ▸ Automatic arc return
- ▸ Non-strippable drive
- ▸ Part- and full-circle in one model
- ▸ Headed and slotted set screw
- ▸ FloStop® control
- ▸ Optional reclaimed water ID
- ▸ Stainless steel riser
- ▸ Drain check valve (up to 3 m of elevation)

OPERATING SPECIFICATIONS

- Radius: 4.9 to 14.0 m
- Flow: 0.07 to 3.23 m³/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 rates: 10 mm/hr approximately
- Nozzle trajectory: Standard = 25°, Low angle = 13°

▸ = *Advanced Feature descriptions on page 20*

I-20 Reclaimed
Available as a factory installed option on all models

I-20 (PLASTIC) - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Standard Features	3 Feature Options	4 Nozzle Options
I-20-00 = Shrub **I-20-04** = 10 cm Pop-up **I-20-06** = 15 cm Pop-up **I-20-12** = 30 cm Pop-up	Adjustable arc, plastic, check valve, 8 standard nozzles, and 4 low-angle nozzles	**(blank)** = no option **NCV** = Without check valve *(only available on 10 cm model)* **R** = Reclaimed water ID	**Blue 1.5 - 8.0** **Grey Low Angle** **Black Short Radius** **Green High Flow** **MPR-25-Q, T, H, F** **MPR-30-Q, T, H, F** **MPR-35-Q, T, H, F** **1.5 to 4.0** = only nozzles 1.5 - 4.0 can be factory-installed

I-20 (STAINLESS STEEL) - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Standard Features	3 Feature Options	4 Nozzle Options
I-20-04-SS = 10 cm Pop-up **I-20-06-SS** = 15 cm Pop-up	Adjustable arc, stainless steel, check valve, 8 standard nozzles, and 4 low-angle nozzles	**(blank)** = no option **NCV** = Without check valve *(only available on 10 cm model)* **R** = Reclaimed water ID	**Blue 1.5 - 8.0** **Grey Low Angle** **Black Short Radius** **Green High Flow** **MPR-25-Q, T, H, F** **MPR-30-Q, T, H, F** **MPR-35-Q, T, H, F** **1.5 to 4.0** = only nozzles 1.5 - 4.0 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-20-00
Overall height: 20 cm
Exposed diameter: 4.5 cm
Inlet size: ¾"

I-20-04
Overall height: 19 cm
Pop-up height: 10 cm
Exposed diameter: 4.5 cm
Inlet size: ¾"

I-20-06
Overall height: 25 cm
Pop-up height: 15 cm
Exposed diameter: 4.5 cm
Inlet size: ¾"

I-20-12
Overall height: 43 cm
Pop-up height: 30 cm
Exposed diameter: 4.5 cm
Inlet size: ¾"

PGP® ULTRA & I-20 PRB

PRESSURE REGULATED BODY

Radius: **4.9 to 14.0 m**
Flow: **0.07 to 2.22 m³/hr; 1.2 to 36.0 l/min**
Inlet: **¾"**

FEATURES

- Models:
  - PGP Ultra: 10 cm
  - I-20: 10 cm, 15 cm
- Arc setting: 50° to 360°
- Factory installed rubber cover
- Through-the-top arc adjustment
- QuickCheck™ arc mechanism
- Water lubricated gear-drive
- Nozzle choices: 30
- Nozzle racks: 1.5 to 8.0 Blue, 2.0 to 4.5 Low Angle Grey, 0.50 to 3.0 Black, MPR-25, MPR-30, MPR-35
- Warranty period: 5 years
- ▸ Pressure Regulated Body (3.1 bar; 310 kPa)
- ▸ Automatic arc return
- ▸ Non-strippable drive
- ▸ Part- and full-circle in one model
- ▸ Headed and slotted set screw
- ▸ Optional reclaimed water ID
- ▸ Drain check valve (up to 3 m of elevation)

OPERATING SPECIFICATIONS

- Radius: 4.9 to 14.0 m
- Flow: 0.07 to 2.22 m³/hr; 1.2 to 36.0 l/min
- Nozzle discharge pressure: 3.1 bar; 310 kPa
- Operating pressure range: 1.7 to 4.5 bar; 170 to 450 kPa
- Precipitation rates: 10 mm/hr approximately
- Nozzle trajectory: Std = 25°, Low Angle = 13°

▸ = *Advanced Feature descriptions on page 20*

PGP-ULTRA-PRB – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Standard Features	3 Feature Options	4 Nozzle Options
PGP-04-PRB = 10 cm Pop-up	Adjustable arc, plastic riser, Pressure Regulated Body, 8 standard nozzles, and 4 low-angle nozzles	**(blank)** = No option **CV** = Drain check valve **CV-R** = Drain check valve and reclaimed water ID	**Blue 1.5 - 8.0** **Grey Low Angle** **Black Short Radius** **MPR-25, 30, 35 - Q, T, H, F**

Examples:
PGP-04-PRB = 10 cm Pop-up, adjustable arc, pressure regulated body
PGP-04-PRB - 2.5 = 10 cm Pop-up, adjustable arc, Pressure Regulated Body and 2.5 nozzle

I-20 (PLASTIC)-PRB – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Standard Features	3 Feature Options	4 Nozzle Options
I-20-04-PRB = 10 cm Pop-up **I-20-06-PRB** = 15 cm Pop-up	Adjustable arc, plastic riser, check valve, Pressure Regulated Body, 8 standard nozzles, and 4 low-angle nozzles	**(blank)** = No option **R** = Drain check valve and reclaimed water ID	**Blue 1.5 - 8.0** **Grey Low Angle** **Black Short Radius** **MPR-25, 30, 35 - Q, T, H, F**

I-20 (STAINLESS)-PRB – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Standard Features	3 Feature Options	4 Nozzle Options
I-20-04-SS-PRB = 10 cm Pop-up **I-20-06-SS-PRB** = 15 cm Pop-up	Adjustable arc, plastic riser, Pressure Regulated Body, 8 standard nozzles, and 4 low-angle nozzles	**(blank)** = No option **R** = Drain check valve and reclaimed water ID	**Blue 1.5 - 8.0** **Grey Low Angle** **Black Short Radius** **MPR-25, 30, 35 - Q, T, H, F**

Examples:
I-20-04-PRB = 10 cm Pop-up, adjustable arc, Pressure Regulated Body
I-20-06-SS-PRB - R - 3.0 = 15 cm Pop-up, adjustable arc, stainless steel riser, Pressure Regulated Body, with reclaimed water ID, and 3.0 nozzle

PGP-04-PRB
Overall height: 22 cm
Pop-up height: 10 cm
Exposed diameter: 4.5 cm
Inlet size: ¾"

I-20-04-PRB
Overall height: 22 cm
Pop-up height: 10 cm
Exposed diameter: 4.5 cm
Inlet size: ¾"

I-20-06-PRB
Overall height: 27 cm
Pop-up height: 15 cm
Exposed diameter: 4.5 cm
Inlet size: ¾"

PGP® ULTRA / I-20 / PRB BLUE STANDARD NOZZLE PERFORMANCE DATA

Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m^3/hr	l/min	■	▲
1.5 ● Blue	1.7	170	8.8	0.27	4.5	7	8
	2.0	200	9.1	0.29	4.8	7	8
	2.5	250	9.4	0.32	5.4	7	8
	3.0	300	9.8	0.35	5.9	7	9
	3.5	350	9.8	0.38	6.4	8	9
	4.0	400	9.8	0.41	6.8	9	10
	4.5	450	9.4	0.43	7.2	10	11
2.0 ● Blue	1.7	170	10.1	0.32	5.4	6	7
	2.0	200	10.1	0.35	5.8	7	8
	2.5	250	10.1	0.39	6.5	8	9
	3.0	300	10.4	0.43	7.2	8	9
	3.5	350	10.4	0.47	7.8	9	10
	4.0	400	10.4	0.50	8.3	9	11
	4.5	450	10.4	0.53	8.8	10	11
2.5 ● Blue	1.7	170	10.1	0.39	6.6	8	9
	2.0	200	10.4	0.43	7.1	8	9
	2.5	250	10.7	0.48	8.0	8	10
	3.0	300	10.7	0.54	8.9	9	11
	3.5	350	10.7	0.58	9.7	10	12
	4.0	400	10.7	0.62	10.4	11	13
	4.5	450	10.7	0.66	11.1	12	13
3.0 ● Blue	1.7	170	10.7	0.50	8.4	9	10
	2.0	200	10.7	0.54	9.1	10	11
	2.5	250	11.0	0.61	10.2	10	12
	3.0	300	11.6	0.68	11.4	10	12
	3.5	350	11.9	0.74	12.3	10	12
	4.0	400	11.9	0.79	13.2	11	13
	4.5	450	11.9	0.84	14.0	12	14
4.0 ● Blue	1.7	170	11.3	0.68	11.3	11	12
	2.0	200	11.6	0.73	12.2	11	13
	2.5	250	11.9	0.81	13.6	12	13
	3.0	300	12.2	0.90	15.0	12	14
	3.5	350	12.2	0.97	16.2	13	15
	4.0	400	12.5	1.04	17.3	13	15
	4.5	450	12.5	1.10	18.3	14	16
5.0 ● Blue	1.7	170	11.3	0.84	14.0	13	15
	2.0	200	11.6	0.91	15.2	14	16
	2.5	250	11.9	1.02	17.1	15	17
	3.0	300	12.8	1.14	19.0	14	16
	3.5	350	12.8	1.24	20.6	15	17
	4.0	400	12.8	1.32	22.1	16	19
	4.5	450	12.8	1.41	23.4	17	20
6.0 ● Blue	1.7	170	11.6	1.01	16.8	15	17
	2.0	200	11.9	1.09	18.2	15	18
	2.5	250	12.2	1.22	20.4	16	19
	3.0	300	13.1	1.36	22.7	16	18
	3.5	350	13.1	1.47	24.5	17	20
	4.0	400	13.4	1.57	26.2	18	20
	4.5	450	13.4	1.67	27.9	19	21
8.0 ● Blue	1.7	170	11.3	1.35	22.5	21	25
	2.0	200	11.9	1.46	24.3	21	24
	2.5	250	12.5	1.63	27.2	21	24
	3.0	300	13.4	1.81	30.2	20	23
	3.5	350	13.7	1.95	32.6	21	24
	4.0	400	14.0	2.09	34.8	21	25
	4.5	450	14.0	2.22	36.9	23	26

Note:
All precipitation rates calculated for 180° operation. For the precipitation rate for a 360° sprinkler, divide by 2.

PGP ULTRA / I-20 / PRB GREY LOW ANGLE NOZZLE PERFORMANCE DATA

Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m^3/hr	l/min	■	▲
2.0 LA ● Grey	1.7	170	7.3	0.33	5.6	12	14
	2.0	200	7.6	0.36	6.0	12	14
	2.5	250	7.9	0.40	6.7	13	15
	3.0	300	8.2	0.45	7.4	13	15
	3.5	350	8.5	0.48	8.0	13	15
	4.0	400	8.8	0.52	8.6	13	15
	4.5	450	9.1	0.55	9.1	13	15
2.5 LA ● Grey	1.7	170	7.9	0.44	7.3	14	16
	2.0	200	8.2	0.47	7.9	14	16
	2.5	250	8.8	0.53	8.8	14	16
	3.0	300	9.4	0.59	9.8	13	15
	3.5	350	10.1	0.64	10.6	13	15
	4.0	400	10.4	0.68	11.3	13	15
	4.5	450	10.7	0.72	12.0	13	15
3.5 LA ● Grey	1.7	170	8.5	0.58	9.7	16	18
	2.0	200	8.8	0.62	10.3	16	18
	2.5	250	9.1	0.68	11.4	16	19
	3.0	300	10.1	0.75	12.5	15	17
	3.5	350	10.7	0.80	13.3	14	16
	4.0	400	11.0	0.85	14.1	14	16
	4.5	450	11.3	0.89	14.8	14	16
4.5 LA ● Grey	1.7	170	8.2	0.71	11.8	21	24
	2.0	200	8.8	0.76	12.7	19	23
	2.5	250	9.1	0.84	14.1	20	23
	3.0	300	10.1	0.93	15.5	18	21
	3.5	350	10.7	1.00	16.6	18	20
	4.0	400	11.0	1.06	17.6	18	20
	4.5	450	11.3	1.12	18.6	18	20

PGP ULTRA / I-20 / PRB NOZZLES

Blue Standard / Grey Low Angle (P/N 782900)

Nozzle screw allows you to adjust the way you want to. Square top nozzle makes installation easy.

Pressure Regulation

Continual operating pressure of 3.1 bar; 310 kPa

ROTORS

PGP® ULTRA / I-20 GREEN HIGH FLOW NOZZLE PERFORMANCE DATA

Nozzle	Pressure bar	Pressure kPa	Radius m	Flow m^3/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
10 ● Dk. Green	1.7	170	10.7	1.48	24.6	26	30
	2.0	200	11.9	1.60	26.7	23	26
	2.5	250	12.5	1.80	30.0	23	27
	3.0	300	12.8	2.01	33.5	25	28
	3.5	350	13.1	2.18	36.3	25	29
	4.0	400	13.7	2.34	39.0	25	29
	4.5	450	14.0	2.49	41.5	25	29
13 ● Dk. Green	1.7	170	11.0	1.91	31.9	32	37
	2.0	200	12.2	2.08	34.6	28	32
	2.5	250	12.8	2.34	38.9	29	33
	3.0	300	13.1	2.61	43.4	30	35
	3.5	350	13.4	2.83	47.1	31	36
	4.0	400	13.7	3.03	50.5	32	37
	4.5	450	14.0	3.23	53.8	33	38
6.0 LA ● Dk. Green	1.7	170	9.1	0.86	14.3	21	24
	2.0	200	9.4	0.94	15.6	21	24
	2.5	250	10.1	1.07	17.8	21	24
	3.0	300	10.7	1.20	20.0	21	24
	3.5	350	11.3	1.31	21.9	21	24
	4.0	400	11.6	1.42	23.6	21	24
	4.5	450	11.9	1.52	25.3	21	25
8.0 LA ● Dk. Green	1.7	170	10.1	1.17	19.5	23	27
	2.0	200	10.7	1.28	21.3	22	26
	2.5	250	11.3	1.44	24.0	23	26
	3.0	300	11.6	1.61	26.9	24	28
	3.5	350	11.9	1.76	29.3	25	29
	4.0	400	12.5	1.89	31.5	24	28
	4.5	450	12.5	2.01	33.6	26	30

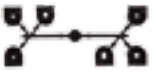
PGP ULTRA / I-20 / PRB BLACK SHORT RADIUS NOZZLE PERFORMANCE DATA

Nozzle	Pressure bar	Pressure kPa	Radius m	Flow m^3/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
.50 SR ● Black	1.7	170	4.9	0.07	1.2	6	7
	2.0	200	5.2	0.08	1.3	6	7
	2.5	250	5.2	0.09	1.5	7	8
	3.0	300	5.2	0.10	1.7	8	9
	3.5	350	5.5	0.12	1.9	8	9
	4.0	400	5.5	0.13	2.1	8	10
	4.5	450	5.5	0.14	2.3	9	10
1.0 SR ● Black	1.7	170	4.9	0.16	2.7	14	16
	2.0	200	5.2	0.17	2.9	13	15
	2.5	250	5.2	0.19	3.2	14	17
	3.0	300	5.2	0.21	3.6	16	18
	3.5	350	5.5	0.23	3.8	15	18
	4.0	400	5.5	0.25	4.1	16	19
	4.5	450	5.5	0.26	4.3	17	20
2.0 SR ● Black	1.7	170	4.9	0.28	4.7	24	27
	2.0	200	5.2	0.31	5.2	23	27
	2.5	250	5.2	0.36	6.0	27	31
	3.0	300	5.2	0.41	6.9	31	35
	3.5	350	5.5	0.45	7.6	30	35
	4.0	400	5.5	0.49	8.2	33	38
	4.5	450	5.5	0.53	8.9	35	41
.75 SR ● Black	1.7	170	6.7	0.12	2.0	5	6
	2.0	200	7.0	0.13	2.2	5	6
	2.5	250	7.0	0.15	2.4	6	7
	3.0	300	7.3	0.16	2.7	6	7
	3.5	350	7.6	0.17	2.9	6	7
	4.0	400	7.6	0.19	3.1	6	7
	4.5	450	7.6	0.20	3.3	7	8
1.5 SR ● Black	1.7	170	6.7	0.23	3.8	10	12
	2.0	200	7.0	0.25	4.1	10	12
	2.5	250	7.0	0.28	4.6	11	13
	3.0	300	7.3	0.31	5.2	12	13
	3.5	350	7.6	0.34	5.6	12	13
	4.0	400	7.6	0.36	6.0	12	14
	4.5	450	7.6	0.39	6.4	13	15
3.0 SR ● Black	1.7	170	6.7	0.53	8.9	24	27
	2.0	200	7.0	0.56	9.3	23	26
	2.5	250	7.0	0.60	10.0	24	28
	3.0	300	7.3	0.64	10.7	24	28
	3.5	350	7.6	0.67	11.2	23	27
	4.0	400	7.6	0.70	11.7	24	28
	4.5	450	7.6	0.73	12.1	25	29

Note:
All precipitation rates calculated for 180° operation. For the precipitation rate for a 360° sprinkler, divide by 2.

PGP ULTRA / I-20 / PRB NOZZLES

Dk. Green
High Flow
(P/N 444800)



Black Short Radius
(P/N 466100)

I-20 with Blue Standard Nozzle

Convenient Nozzle Rack

PGP® ULTRA / I-20 / PRB MPR-25 NOZZLE PERFORMANCE DATA

Nozzle	Pressure bar	Pressure kPa	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
90°	1.7	170	7.0	0.17	3.0	13.7	15.8
	2.4	240	7.3	0.20	3.6	14.9	17.3
	3.1	310	7.6	0.23	3.6	15.6	18.1
	3.8	380	7.6	0.25	4.2	17.4	20.1
	4.5	450	7.6	0.27	4.8	18.9	21.9
120°	1.7	170	7.0	0.23	3.6	13.9	16.0
	2.4	240	7.3	0.27	4.8	15.4	17.8
	3.1	310	7.6	0.31	5.4	16.2	18.7
	3.8	380	7.6	0.35	6.0	18.0	20.7
	4.5	450	7.6	0.38	6.6	19.6	22.6
180°	1.7	170	7.0	0.33	5.4	13.3	15.4
	2.4	240	7.3	0.39	6.6	14.7	17.0
	3.1	310	7.6	0.45	7.2	15.5	17.9
	3.8	380	7.6	0.50	8.4	17.3	20.0
	4.5	450	7.6	0.55	9.0	18.9	21.8
360°	1.7	170	7.0	0.63	10.8	12.8	14.8
	2.4	240	7.3	0.76	12.6	14.2	16.4
	3.1	310	7.6	0.87	14.4	14.9	17.3
	3.8	380	7.6	0.97	16.2	16.6	19.2
	4.5	450	7.6	1.05	17.4	18.1	20.9

MPR-25 NOZZLE

PGP ULTRA / I-20 / PRB MPR-35 NOZZLE PERFORMANCE DATA

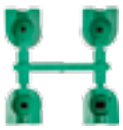
Nozzle	Pressure bar	Pressure kPa	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
90°	1.7	170	9.8	0.32	5.4	13.4	15.4
	2.4	240	10.4	0.38	6.6	14.1	16.3
	3.1	310	10.7	0.44	7.2	15.3	17.7
	3.8	380	10.7	0.48	7.8	17.0	19.6
	4.5	450	10.7	0.52	9.0	18.4	21.3
120°	1.7	170	9.8	0.40	6.6	12.7	14.6
	2.4	240	10.4	0.49	8.4	13.6	15.8
	3.1	310	10.7	0.56	9.6	14.7	17.0
	3.8	380	10.7	0.62	10.2	16.4	18.9
	4.5	450	10.7	0.68	11.4	17.9	20.7
180°	1.7	170	9.8	0.62	10.2	13.1	15.2
	2.4	240	10.4	0.76	12.6	14.1	16.3
	3.1	310	10.7	0.87	14.4	15.2	17.6
	3.8	380	10.7	0.96	16.2	16.9	19.5
	4.5	450	10.7	1.05	17.4	18.4	21.3
360°	1.7	170	9.8	1.22	20.4	12.8	14.8
	2.4	240	10.4	1.50	25.2	14.0	16.2
	3.1	310	10.7	1.72	28.8	15.1	17.5
	3.8	380	10.7	1.91	31.8	16.8	19.4
	4.5	450	10.7	2.09	34.8	18.3	21.2

MPR-35 NOZZLE

PGP ULTRA / I-20 / PRB MPR-30 NOZZLE PERFORMANCE DATA

Nozzle	Pressure bar	Pressure kPa	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
90°	1.7	170	8.8	0.23	3.6	12.0	13.8
	2.4	240	9.1	0.28	4.8	13.4	15.4
	3.1	310	9.1	0.32	5.4	15.2	17.6
	3.8	380	9.1	0.35	6.0	17.0	19.6
	4.5	450	9.1	0.38	6.6	18.4	21.2
120°	1.7	170	8.8	0.30	4.8	11.7	13.5
	2.4	240	9.1	0.37	6.0	13.2	15.2
	3.1	310	9.1	0.42	7.2	15.1	17.4
	3.8	380	9.1	0.47	7.8	16.8	19.4
	4.5	450	9.1	0.51	8.4	18.3	21.1
180°	1.7	170	8.8	0.49	8.4	12.5	14.4
	2.4	240	9.1	0.59	9.6	14.1	16.2
	3.1	310	9.1	0.67	11.4	16.1	18.6
	3.8	380	9.1	0.75	12.6	17.9	20.7
	4.5	450	9.1	0.82	13.8	19.6	22.6
360°	1.7	170	8.8	0.96	16.2	12.3	14.2
	2.4	240	9.1	1.15	19.2	13.8	15.9
	3.1	310	9.1	1.31	21.6	15.7	18.1
	3.8	380	9.1	1.45	24.0	17.4	20.0
	4.5	450	9.1	1.57	26.4	18.8	21.7

MPR-30 NOZZLE



Note:
All precipitation rates calculated for 180 degree operation. For the precipitation rate for a 360 degree sprinkler, divide by 2.

I-25

Radius: **11.9 to 21.6 m**
Flow: **0.82 to 7.24 m³/hr; 13.6 to 120.2 l/min**
Inlet: **1" BSP**

FEATURES

- Models plastic riser: 10 cm, 15 cm
- Models stainless steel riser: 10 cm, 15 cm
- Arc setting: 50° to 360°
- Factory installed rubber cover
- Through-the-top arc adjustment
- QuickCheck™ arc mechanism
- Water lubricated gear-drive
- Nozzle choices: 12
- Nozzle range: #4 to #28
- Warranty period: 5 years

- ▸ Automatic arc return
- ▸ Non-strippable drive
- ▸ Part- and full-circle in one model
- ▸ Colour-coded nozzles
- ▸ Stainless steel riser
- ▸ Drain check valve (up to 3 m of elevation)

OPERATING SPECIFICATIONS

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

▸ = *Advanced Feature descriptions on page 20*

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

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

I-25 Reclaimed
Available as a factory installed option on all models

I-25 High Speed
Available as a factory installed option on all stainless steel models

I-25 (PLASTIC) - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Standard Features	3 Feature Options	4 Nozzle Options
I-25-04 = 10 cm Pop-up **I-25-06** = 15 cm Pop-up	Adjustable arc, plastic riser, check valve, and 5 nozzles	**B** = BSP inlet threads **R** = Reclaimed water ID	**#4 - #28** = Factory installed nozzle number

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

I-25 STANDARD NOZZLE PERFORMANCE DATA

Nozzle	Pressure bar	Pressure kPa	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
4 Yellow	2.5	250	11.9	0.82	13.6	12	13
	3.0	300	12.2	0.91	15.2	12	14
	3.5	350	12.5	0.98	16.4	13	15
	4.0	400	12.5	1.05	17.5	13	16
	4.5	450	12.8	1.11	18.6	14	16
	5.0	500	13.1	1.18	19.6	14	16
	5.5	550	13.4	1.24	20.7	14	16
5 White	2.5	250	12.8	0.95	15.9	12	13
	3.0	300	13.1	1.04	17.3	12	14
	3.5	350	13.4	1.11	18.5	12	14
	4.0	400	13.4	1.17	19.6	13	15
	4.5	450	13.7	1.24	20.6	13	15
	5.0	500	14.0	1.29	21.5	13	15
	5.5	550	14.3	1.35	22.6	13	15
7 Orange*	2.5	250	13.4	1.44	24.0	16	19
	3.0	300	14.0	1.54	25.6	16	18
	3.5	350	14.3	1.61	26.9	16	18
	4.0	400	14.3	1.68	28.0	16	19
	4.5	450	14.6	1.75	29.1	16	19
	5.0	500	14.9	1.81	30.1	16	19
	5.5	550	15.2	1.87	31.1	16	19
8 Lt. Brown	2.5	250	14.0	1.65	27.5	17	19
	3.0	300	14.3	1.81	30.1	18	20
	3.5	350	14.9	1.94	32.3	17	20
	4.0	400	15.2	2.05	34.2	18	20
	4.5	450	15.2	2.16	36.0	19	22
	5.0	500	15.5	2.27	37.8	19	22
	5.5	550	15.8	2.38	39.6	19	22
10 Lt. Green*	3.0	300	15.2	2.15	35.8	18	21
	3.5	350	15.5	2.32	38.6	19	22
	4.0	400	15.8	2.48	41.3	20	23
	4.5	450	16.2	2.63	43.9	20	23
	5.0	500	16.2	2.78	46.3	21	25
	5.5	550	16.5	2.94	48.9	22	25
	6.0	600	16.8	3.07	51.1	22	25
13 Lt. Blue	3.0	300	15.8	2.38	39.6	19	22
	3.5	350	16.2	2.57	42.8	20	23
	4.0	400	16.5	2.75	45.7	20	23
	4.5	450	16.5	2.91	48.5	21	25
	5.0	500	16.8	3.04	51.2	22	25
	5.5	550	16.8	3.24	54.0	23	27
	6.0	600	17.1	3.39	56.4	23	27
15 Grey*	3.0	300	16.8	2.86	47.7	20	24
	3.5	350	17.1	3.05	50.8	21	24
	4.0	400	17.4	3.22	53.7	21	25
	4.5	450	17.4	3.38	56.3	22	26
	5.0	500	17.4	3.53	58.8	23	27
	5.5	550	17.7	3.69	61.5	24	27
	6.0	600	18.0	3.82	63.7	24	27
	6.2	620	18.3	3.88	64.6	23	27
18 Red	3.0	300	17.4	30.8	51.4	20	24
	3.5	350	17.7	3.31	55.2	21	24
	4.0	400	18.0	3.52	58.7	22	25
	4.5	450	18.3	3.72	62.0	22	26
	5.0	500	18.9	3.91	65.2	22	25
	5.5	550	19.2	4.11	68.5	22	26
	6.0	600	19.5	4.28	71.4	23	26
	6.2	620	19.5	4.35	72.5	23	26
20 Dk. Brown*	3.5	350	18.0	3.72	62.1	23	27
	4.0	400	18.6	3.97	66.2	23	27
	4.5	450	18.9	4.20	70.1	24	27
	5.0	500	19.2	4.42	73.7	24	28
	5.5	550	19.5	4.66	77.7	25	28
	6.0	600	19.8	4.86	81.0	25	29
	6.5	650	20.1	5.05	84.2	25	29
	6.9	690	20.4	5.21	86.8	25	29
23 Dk. Green	3.5	350	18.6	4.56	76.0	26	30
	4.0	400	19.2	4.88	81.3	26	31
	4.5	450	19.5	5.18	86.3	27	31
	5.0	500	19.8	5.47	91.1	28	32
	5.5	550	20.1	5.78	96.3	29	33
	6.0	600	20.1	6.04	100.6	30	34
	6.5	650	20.4	6.29	104.8	30	35
	6.9	690	20.7	6.50	108.3	30	35
25 Dk. Blue*	3.5	350	19.2	4.86	80.9	26	30
	4.0	400	19.8	5.23	87.1	27	31
	4.5	450	20.1	5.58	93.1	28	32
	5.0	500	20.4	5.92	98.7	28	33
	5.5	550	21.0	6.29	104.9	28	33
	6.0	600	21.0	6.60	110.0	30	34
	6.5	650	21.3	6.90	115.1	30	35
	6.9	690	21.6	7.15	119.2	31	35
28 Black	3.5	350	18.3	5.31	88.5	32	37
	4.0	400	19.2	5.63	93.8	31	35
	4.5	450	20.1	5.93	98.8	29	34
	5.0	500	20.7	6.21	103.5	29	33
	5.5	550	21.3	6.52	108.6	29	33
	6.0	600	21.3	6.77	112.8	30	34
	6.5	650	21.6	7.01	116.9	30	35
	6.9	690	21.6	7.21	120.2	31	36

* 5 standard nozzles included with each sprinkler.

Note:
All precipitation rates calculated for 180° operation. For the precipitation rate for a 360° sprinkler, divide by 2.

I-25 NOZZLE

Standard

I-25 HIGH-SPEED NOZZLE PERFORMANCE DATA

Nozzle	Pressure bar	Pressure kPa	Radius m	Flow m^3/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
4 Yellow	2.5	250	11.0	0.81	13.6	14	16
	3.0	300	11.3	0.91	15.1	14	16
	3.5	350	11.6	0.99	16.4	15	17
	4.0	400	11.6	1.06	17.6	16	18
	4.5	450	11.6	1.13	18.8	17	19
	5.0	500	11.9	1.19	19.9	17	19
	5.5	550	11.9	1.26	21.1	18	21
5 White	2.5	250	11.3	0.93	15.5	15	17
	3.0	300	11.6	1.04	17.3	16	18
	3.5	350	11.9	1.13	18.9	16	18
	4.0	400	12.2	1.22	20.3	16	19
	4.5	450	12.2	1.30	21.6	17	20
	5.0	500	12.5	1.38	22.9	18	20
	5.5	550	12.5	1.46	24.4	19	22
7 Orange*	2.5	250	11.9	1.32	22.0	19	22
	3.0	300	12.2	1.46	24.3	20	23
	3.5	350	12.5	1.57	26.2	20	23
	4.0	400	12.8	1.68	27.9	20	24
	4.5	450	13.1	1.78	29.6	21	24
	5.0	500	13.4	1.87	31.1	21	24
	5.5	550	13.4	1.97	32.8	22	25
8 Lt. Brown	2.5	250	12.5	1.54	25.7	20	23
	3.0	300	12.8	1.72	28.6	21	24
	3.5	350	13.1	1.86	31.0	22	25
	4.0	400	13.4	2.00	33.3	22	26
	4.5	450	13.4	2.13	35.4	24	27
	5.0	500	13.7	2.25	37.5	24	28
	5.5	550	13.7	2.38	39.7	25	29
10 Lt. Green*	3.0	300	13.7	2.15	35.8	23	26
	3.5	350	14.0	2.32	38.6	24	27
	4.0	400	14.3	2.48	41.3	24	28
	4.5	450	14.6	2.63	43.9	25	28
	5.0	500	14.9	2.78	46.3	25	29
	5.5	550	15.2	2.94	48.9	25	29
	6.0	600	15.2	3.07	51.1	26	31
13 Lt. Blue	3.0	300	14.3	2.38	39.6	23	27
	3.5	350	14.6	2.57	42.8	24	28
	4.0	400	14.9	2.75	45.7	25	28
	4.5	450	15.2	2.91	48.5	25	29
	5.0	500	15.5	3.07	51.2	25	29
	5.5	550	15.5	3.24	54.0	27	31
	6.0	600	15.5	3.39	56.4	28	32
15 Grey*	3.0	300	14.6	2.86	47.7	27	31
	3.5	350	14.9	3.05	50.8	27	32
	4.0	400	15.2	3.22	53.7	28	32
	4.5	450	15.5	3.38	56.3	28	32
	5.0	500	16.2	3.53	58.8	27	31
	5.5	550	16.5	3.69	61.5	27	31
	6.0	600	16.5	3.82	63.7	28	33
	6.2	620	16.5	3.88	64.6	29	33
18 Red	3.0	300	14.9	3.08	51.4	28	32
	3.5	350	15.2	3.31	55.2	29	33
	4.0	400	15.5	3.52	58.7	29	34
	4.5	450	16.2	3.72	62.0	29	33
	5.0	500	16.8	3.91	65.2	28	32
	5.5	550	17.4	4.11	68.5	27	31
	6.0	600	17.4	4.28	71.4	28	33
	6.2	620	17.4	4.35	72.5	29	33
20 Dk. Brown*	3.5	350	15.5	3.72	62.1	31	36
	4.0	400	16.2	3.97	66.2	30	35
	4.5	450	16.5	4.20	70.1	31	36
	5.0	500	17.1	4.42	73.7	30	35
	5.5	550	17.7	4.66	77.7	30	34
	6.0	600	17.7	4.86	81.0	31	36
	6.5	650	18.0	5.05	84.2	31	36
	6.9	690	18.0	5.21	86.8	32	37
23 Dk. Green	3.5	350	16.5	4.56	76.0	34	39
	4.0	400	17.1	4.88	81.3	33	39
	4.5	450	17.4	5.18	86.3	34	40
	5.0	500	17.7	5.47	91.1	35	40
	5.5	550	18.3	5.78	96.3	35	40
	6.0	600	18.3	6.04	100.6	36	42
	6.5	650	18.6	6.29	104.8	36	42
	6.9	690	18.6	6.50	108.3	38	43
25 Dk. Blue*	3.5	350	17.1	4.86	80.9	33	38
	4.0	400	17.7	5.23	87.1	33	39
	4.5	450	18.3	5.58	93.1	33	39
	5.0	500	18.9	5.92	98.7	33	38
	5.5	550	19.5	6.29	104.9	33	38
	6.0	600	19.8	6.60	110.0	34	39
	6.5	650	20.1	6.90	115.1	34	39
	6.9	690	20.1	7.15	119.2	35	41
28 Black	3.5	350	17.4	5.31	88.5	35	41
	4.0	400	17.7	5.63	93.8	36	42
	4.5	450	18.0	5.93	98.8	37	42
	5.0	500	18.3	6.21	103.5	37	43
	5.5	550	18.9	6.52	108.6	36	42
	6.0	600	19.5	6.77	112.8	36	41
	6.5	650	19.8	7.01	116.9	36	41
	6.9	690	20.4	7.21	120.2	35	40

* 5 standard nozzles included with each sprinkler.

Notes:

All precipitation rates calculated for 180° operation. For the precipitation rate for a 360° sprinkler, divide by 2.

I-25 NOZZLE

High-Speed

I-40

Radius: **13.1 to 23.2 m**
Flow: **1.63 to 6.84 m³/hr; 27.2 to 114.1 l/min**
Inlet: **1" BSP**

FEATURES

- Models stainless steel riser: 10 cm to 15 cm
- Arc setting: 50° to 360°
- Factory installed rubber cover
- Nozzle choices: 12
- Nozzle ranges I-40: #8 to #25
- Nozzle ranges I-40-ON: #15 to #28
- Through-the-top arc adjustment
- QuickCheck™ arc mechanism
- Water lubricated gear-drive
- Warranty period: 5 years

- ▸ Opposing nozzle 360° model
- ▸ Automatic arc return
- ▸ Non-strippable drive
- ▸ Part- and full-circle in one model
- ▸ Colour-coded nozzles
- ▸ Optional reclaimed water ID
- ▸ Stainless steel riser
- ▸ Drain check valve (up to 4.5 m of elevation)

I-40-04
Overall height: 20 cm
Pop-up height: 10 cm
Exposed diameter: 5 cm
Inlet size: 1" BSP

OPERATING SPECIFICATIONS

- Radius I-40: 13.1 to 21.3 m
- Radius I-40-ON: 15.2 to 23.2 m
- Flow I-40: 1.63 to 6.84 m³/hr; 27.2 to 114.1 l/min
- Flow I-40-ON: 2.75 to 7.76 m³/hr; 45.8 to 129.4 l/min
- Recommended pressure range: 2.5 to 7.0 bar; 250 to 700 kPa
- Operating pressure range: 2.5 to 7.0 bar; 250 to 700 kPa
- Precipitation rates: 15 mm/hr approximately
- Nozzle trajectory: 25°

▸ = *Advanced Feature descriptions on page 20*

I-40-06
Overall height: 26 cm
Pop-up height: 15 cm
Exposed diameter: 5 cm
Inlet size: 1" BSP

I-40 Reclaimed
Available as a factory installed option on all models

I-40 High Speed
Available as a factory installed option on all models

I-40 – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Standard Features	3 Feature Options	4 Nozzle Options
I-40-04-SS = 10 cm Pop-up **I-40-06-SS** = 15 cm Pop-up	Adjustable arc, stainless steel riser, check valve and 6 nozzles	**B** = BSP inlet threads **R** = Reclaimed water ID **HS** = High speed **HS-R** = High speed and reclaimed water ID	**#8 to #25** = Factory installed nozzle number

I-40-ON – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Standard Features	3 Feature Options	4 Nozzle Options
I-40-04-SS-ON = 10 cm Pop-up **I-40-06-SS-ON** = 15 cm Pop-up	Full-circle, opposing nozzle, stainless steel riser, check valve and 6 nozzles	**B** = BSP inlet threads **R** = Reclaimed water ID **ON** = Full circle opposing nozzle **ON-R** = Full circle opposing nozzles, reclaimed water ID	**#15 to #28** = Factory installed nozzle number

Examples:
I-40-04-SS - B = 10 cm Pop-up, BSP inlet threads
I-40-04-SS - ON-R - B - 23 = 10 cm Pop-up, full-circle opposing nozzles, reclaimed water ID, #23 nozzle, BSP inlet threads
I-40-06-SS - 15 - B = 15 cm Pop-up, #15 nozzle, BSP inlet threads

I-40 STANDARD NOZZLE PERFORMANCE DATA

Nozzle	Pressure bar	Pressure kPa	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
8 (40) Lt. Brown	2.5	250	13.1	1.63	27.2	19	22
	3.0	300	13.4	1.80	30.0	20	23
	3.5	350	13.7	1.94	32.3	21	24
	4.0	400	14.0	2.06	34.4	21	24
	4.5	450	14.0	2.18	36.3	22	26
	5.0	500	14.3	2.29	38.2	22	26
	5.5	550	14.6	2.41	40.2	23	26
10 (41) Lt. Green	3.0	300	14.6	2.20	36.6	21	24
	3.5	350	14.9	2.37	39.4	21	24
	4.0	400	15.2	2.52	42.0	22	25
	4.5	450	15.5	2.67	44.5	22	25
	5.0	500	15.5	2.81	46.8	23	27
	5.5	550	15.8	2.96	49.3	24	27
	6.0	600	16.2	3.08	51.4	24	27
13 (42) Lt. Blue	3.0	300	14.9	2.36	39.4	21	24
	3.5	350	15.2	2.55	42.6	22	25
	4.0	400	15.5	2.73	45.5	23	26
	4.5	450	15.5	2.90	48.3	24	28
	5.0	500	15.8	3.06	51.0	24	28
	5.5	550	16.2	3.23	53.9	25	29
	6.0	600	16.5	3.38	56.3	25	29
15 (43) Grey	3.0	300	16.2	2.93	48.8	22	26
	3.5	350	16.5	3.19	53.2	24	27
	4.0	400	16.8	3.44	57.3	24	28
	4.5	450	17.1	3.67	61.2	25	29
	5.0	500	17.4	3.89	64.9	26	30
	5.5	550	18.0	4.14	68.9	26	30
	6.0	600	18.3	4.34	72.4	26	30
	6.2	620	18.3	4.43	73.8	26	31
23 (44) Dk. Green	3.5	350	18.6	4.48	74.6	26	30
	4.0	400	18.9	4.76	79.4	27	31
	4.5	450	19.2	5.03	83.9	27	32
	5.0	500	19.5	5.29	88.1	28	32
	5.5	550	19.8	5.56	92.7	28	33
	6.0	600	20.1	5.79	96.5	29	33
	6.2	620	20.1	5.89	98.1	29	34
	6.5	650	20.1	6.01	100.2	30	34
	6.9	690	20.4	6.19	103.2	30	34
25 (45) Dk. Blue	3.5	350	19.8	4.98	83.0	25	29
	4.0	400	20.1	5.33	88.7	26	30
	4.5	450	20.4	5.65	94.2	27	31
	5.0	500	20.7	5.96	99.3	28	32
	5.5	550	21.0	6.29	104.9	28	33
	6.0	600	21.0	6.57	109.6	30	34
	6.2	620	21.0	6.69	111.5	30	35
	6.5	650	21.3	6.84	114.1	30	35
	6.9	690	21.3	7.07	117.8	31	36

I-40 HIGH-SPEED NOZZLE PERFORMANCE DATA

Nozzle	Pressure bar	Pressure kPa	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
8 (40) Lt. Brown	2.5	250	12.2	1.63	27.2	22	25
	3.0	300	12.5	1.80	30.0	23	27
	3.5	350	12.8	1.94	32.3	24	27
	4.0	400	12.8	2.06	34.4	25	29
	4.5	450	13.1	2.18	36.3	25	29
	5.0	500	13.4	2.29	38.2	25	29
	5.5	550	13.4	2.41	40.2	27	31
10 (41) Lt. Green	3.0	300	13.4	2.20	36.6	34	28
	3.5	350	13.7	2.37	39.4	25	29
	4.0	400	14.0	2.52	42.0	26	30
	4.5	450	14.0	2.67	44.5	27	31
	5.0	500	14.3	2.81	46.8	27	32
	5.5	550	14.6	2.96	49.3	28	32
	6.0	600	14.6	3.08	51.4	29	33
13 (42) Lt. Blue	3.0	300	13.7	2.36	39.4	25	29
	3.5	350	14.0	2.55	42.6	26	30
	4.0	400	14.3	2.73	45.5	27	31
	4.5	450	14.3	2.90	48.3	28	33
	5.0	500	14.6	3.06	51.0	29	33
	5.5	550	14.9	3.23	53.9	29	33
	6.0	600	14.9	3.38	56.3	30	35
15 (43) Grey	3.0	300	15.2	2.93	48.8	25	29
	3.5	350	15.5	3.19	53.2	26	30
	4.0	400	15.8	3.44	57.3	27	32
	4.5	450	15.8	3.67	61.2	29	34
	5.0	500	16.2	3.89	64.9	30	34
	5.5	550	16.5	4.14	68.9	31	35
	6.0	600	16.5	4.34	72.4	32	39
	6.2	620	16.5	4.43	73.8	33	38
23 (44) Dk. Green	3.5	350	16.8	4.48	74.6	32	37
	4.0	400	17.4	4.76	79.4	32	36
	4.5	450	17.7	5.03	83.9	32	37
	5.0	500	17.7	5.29	88.1	34	39
	5.5	550	18.0	5.56	92.7	34	40
	6.0	600	18.3	5.79	96.5	35	40
	6.2	620	18.6	5.89	98.1	34	39
	6.5	650	18.6	6.01	100.2	35	40
	6.9	690	18.6	6.19	103.2	36	41
25 (45) Dk. Blue	3.5	350	17.4	4.98	83.0	33	38
	4.0	400	18.0	5.33	88.7	33	38
	4.5	450	18.3	5.65	94.2	34	39
	5.0	500	18.6	5.96	99.3	34	40
	5.5	550	18.9	6.29	104.9	35	41
	6.0	600	19.2	6.57	109.6	36	41
	6.2	620	19.5	6.69	111.5	35	41
	6.5	650	19.5	6.84	114.1	36	42
	6.9	690	19.5	7.07	117.8	37	43

I-40 NOZZLES

Standard/
High-Speed

Note:
All precipitation rates calculated for 180° operation. For the precipitation rate for a 360° sprinkler, divide by 2.

I-40 DUAL OPPOSING NOZZLE PERFORMANCE DATA

Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m^3/hr	l/min	■	▲
15 ● Grey	3.0	300	15.2	2.75	45.8	12	14
	3.5	350	15.8	2.91	48.5	12	13
	4.0	400	16.2	3.06	51.0	12	14
	4.5	450	16.8	3.20	53.3	11	13
	5.0	500	17.1	3.32	55.4	11	13
	5.5	550	17.4	3.46	57.7	11	13
	6.0	600	17.7	3.58	59.6	11	13
	6.2	620	17.7	3.62	60.4	12	13
18 ● Red	3.0	300	17.4	2.90	48.3	10	11
	3.5	350	17.7	3.15	52.5	10	12
	4.0	400	18.0	3.38	56.4	10	12
	4.5	450	18.0	3.61	60.1	11	13
	5.0	500	18.3	3.82	63.7	11	13
	5.5	550	18.9	4.05	67.5	11	13
	6.0	600	19.2	4.25	70.8	12	13
	6.2	620	19.2	4.33	72.1	12	14
	6.5	650	19.5	4.43	73.9	12	13
20 ● Dk. Brown	3.5	350	18.3	3.98	66.2	12	14
	4.0	400	18.9	4.26	71.1	12	14
	4.5	450	19.2	4.54	75.6	12	14
	5.0	500	19.5	4.80	80.0	13	15
	5.5	550	20.1	5.08	84.7	13	15
	6.0	600	19.8	5.32	88.7	14	16
	6.2	620	19.8	5.42	90.4	14	16
	6.5	650	20.1	5.55	92.5	14	16
	6.9	690	20.1	5.74	95.7	14	16
23 ● Dk. Green	3.5	350	18.9	4.23	70.6	12	14
	4.0	400	19.5	4.55	75.8	12	14
	4.5	450	19.8	4.85	80.8	12	14
	5.0	500	20.1	5.14	85.6	13	15
	5.5	550	20.4	5.45	90.8	13	15
	6.0	600	20.7	5.71	95.1	13	15
	6.2	620	20.7	5.82	97.0	14	16
	6.5	650	20.7	5.96	99.4	14	16
	6.9	690	21.0	6.17	102.9	14	16
25 ● Dk. Blue	3.5	350	19.5	4.60	76.7	12	14
	4.0	400	20.1	4.92	82.1	12	14
	4.5	450	20.4	5.23	87.2	13	14
	5.0	500	20.7	5.52	92.0	13	15
	5.5	550	21.0	5.84	97.3	13	15
	6.0	600	21.3	6.10	101.7	13	15
	6.2	620	21.3	6.22	103.6	14	16
	6.5	650	21.3	6.36	106.0	14	16
	6.9	690	21.6	6.57	109.5	14	16
28 ● Black	3.5	350	19.8	5.73	95.5	15	17
	4.0	400	20.4	6.07	101.1	15	17
	4.5	450	21.0	6.38	106.4	14	17
	5.0	500	21.3	6.68	111.3	15	17
	5.5	550	21.9	7.00	116.7	15	17
	6.0	600	22.3	7.27	121.1	15	17
	6.2	620	22.3	7.38	122.9	15	17
	6.5	650	22.6	7.52	125.3	15	17
	6.9	690	23.2	7.73	128.8	14	17

Note:
Precipitation rates for the ON-Opposing Nozzles models are calculated at 360°. For the precipitation rate for a 360° sprinkler, divide by 2.

I-40 NOZZLES

Opposing

Front

Back

I-40 Turf Cup Kit option
Available as a field installed option on all models

I-40 Opposing Nozzle 360° Model

I-90

Radius: **22.3 to 31.4 m**
Flow: **6.7 to 19.04 m³/hr; 111.7 to 317.2 l/min**
Inlet: **1½" BSP**

FEATURES

- Model: 8 cm
- Arc setting: 40° to 360°
- Dual trajectory nozzle choices:
  - 8 standard trajectory (22.5°)
  - 8 low angle trajectory (15°)
- Nozzle range: #25 to #73
- Exclusive Pressure Port™ nozzle technology
- Through-the-top arc adjustment
- QuickCheck™ arc mechanism
- Water lubricated gear-drive
- Standard factory installed nozzle: #53
- Factory installed rubber logo cap
- Warranty period: 5 years
- ▸ Opposing nozzle 360° model
- ▸ Dual trajectory colour-coded nozzles
- ▸ Optional reclaimed water ID
- ▸ Drain check valve (up to 2 m of elevation)

OPERATING SPECIFICATIONS

- Radius:
  - I90-ADV: 20.1 m to 29.6 m
  - 190-36V: 22.3 m to 31.4 m
- Flow:
  - I90-ADV: 6.70 to 19.04 m³/hr; 111.7 to 317.2 l/min
  - I90-36V: 6.93 to 18.92 m³/hr; 115.5 to 315.3 l/min
- Recommended pressure range: 5.5 to 8.0 bar; 550 to 800 kPa
- Operating pressure range: 5.0 to 8.0 bar; 500 to 800 kPa
- Precipitation rates: 19 mm/hr approximately (360°)

USER-INSTALLED OPTIONS

- Turf Cup Kit
  - I-90 all: P/N 467955
- Rubber Cover Kit
  - I-90-ADV: P/N 234200 (all)
  - I-90-36V: P/N 234200 (0711 date code and after)
  - I-90-36V: P/N 234201 (0611 date code and prior only)
- Low-Angle Nozzles: #25 to #73

▸ = *Advanced Feature descriptions on page 20*

I-90 Reclaimed
Available as a factory installed option on all models

I-90
Overall height:
ADV/36V: 28 cm
Pop-up height: 8 cm
Exposed diameter: 9 cm
Inlet size: 1½" (40 mm) BSP

Turf cup kit
P/N 467955

Rubber cover kits
I90-ADV: P/N 234200
I90-36V: P/N 234201

I-90 – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Standard Features	3 Feature Options	4 Nozzle Options
I-90 = 8 cm Pop-up	Plastic riser, check valve, and 8 standard trajectory nozzles	**ADV** = Adjustable arc **ARV** = Adjustable arc and reclaimed water ID **36V** = Full-circle, opposing nozzles **3RV** = Full-circle, opposing nozzles and reclaimed water ID **B** = BSP inlet threads	**#25 to #73** = Factory installed nozzle number

Examples:
I-90 - ADV - B = 8 cm Pop-up, adjustable arc, with BSP inlet threads
I-90 - 36V - B - 43 = 8 cm Pop-up, full-circle, opposing nozzles, with BSP inlet threads, and #43 nozzle
I-90 - 3RV - B - 63 = 8 cm Pop-up, full-circle, opposing nozzles, reclaimed water ID, with BSP inlet threads, and #63 nozzle

I-90-ADV NOZZLE PERFORMANCE DATA

Nozzle	Pressure bar	Pressure kPa	Radius m	Flow m^3/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
25 Lt. Blue	5.5	550	20.1	6.70	111.7	33.1	38.2
	6.0	600	20.4	7.16	119.2	34.3	39.6
	7.0	700	20.7	7.54	125.7	35.1	40.5
	7.5	750	21.0	8.09	134.8	36.6	42.2
33 Grey	5.5	550	20.7	8.22	137.0	38.3	44.2
	6.0	600	21.0	8.68	144.6	39.2	45.3
	7.0	700	21.3	9.18	152.9	40.3	46.6
	7.5	750	21.6	9.68	161.3	41.3	47.7
38 Red	5.5	550	21.9	9.22	153.7	38.3	44.2
	6.0	600	22.3	9.77	162.8	39.5	45.6
	7.0	700	22.9	10.31	171.9	39.5	45.6
	7.5	750	23.2	10.81	180.2	40.3	46.5
43 Dk. Brown	5.5	550	22.6	10.47	174.5	41.2	47.5
	6.0	600	22.6	11.02	183.6	43.3	50.0
	7.0	700	22.9	11.52	191.9	44.1	50.9
	7.5	750	23.5	12.13	202.1	44.0	50.9
48 Dk. Green	5.5	550	23.5	11.40	190.0	41.4	47.8
	6.0	600	24.1	11.95	199.1	41.2	47.6
	7.0	700	24.7	12.52	208.6	41.1	47.4
	7.5	750	25.0	13.06	217.7	41.8	48.3
53 Dk. Blue	5.5	550	24.7	12.47	207.8	40.9	47.2
	6.0	600	25.6	12.99	216.5	39.6	45.8
	7.0	700	26.2	13.52	225.2	39.3	45.4
	7.5	750	26.5	14.11	235.1	40.1	46.3
	8.0	800	26.8	14.63	243.8	40.7	47.0
63 Black	5.5	550	26.2	14.15	235.8	41.2	47.6
	6.0	600	26.8	14.88	247.9	41.4	47.8
	7.0	700	27.4	15.67	261.2	41.7	48.1
	7.5	750	27.7	16.33	272.2	42.5	49.0
	8.0	800	28.0	16.97	282.8	43.2	49.8
73 Orange	5.5	550	27.1	16.51	275.2	44.9	51.8
	6.0	600	27.7	17.13	285.4	44.5	51.4
	7.0	700	28.3	17.74	295.6	44.2	51.0
	7.5	750	29.0	18.38	306.2	43.8	50.6
	8.0	800	29.6	19.04	317.2	43.5	50.3

* Factory installed nozzle

Notes:
Precipitation rates for ADV models are calculated for 180° operation. Precipitation rates for 36V models are calculated for 360° operation. All triangular rates are equilateral. Complies to ASAE standard.

I-90-36V NOZZLE PERFORMANCE DATA

Nozzle	Pressure bar	Pressure kPa	Radius m	Flow m^3/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
25 Lt. Blue	5.5	550	22.3	6.93	115.5	14.0	16.2
	6.0	600	22.9	7.36	122.6	14.1	16.3
	7.0	700	23.2	7.79	129.8	14.5	16.8
	7.5	750	23.8	8.29	138.2	14.7	16.9
33 Grey	5.5	550	23.5	8.25	137.4	15.0	17.3
	6.0	600	23.8	8.72	145.4	15.4	17.8
	7.0	700	24.4	9.22	153.7	15.5	17.9
	7.5	750	24.7	9.70	161.6	15.9	18.4
38 Red	5.5	550	24.4	9.22	153.7	15.5	17.9
	6.0	600	25.0	9.75	162.4	15.6	18.0
	7.0	700	25.3	10.29	171.5	16.1	18.6
	7.5	750	25.9	10.84	180.6	16.1	18.6
43 Dk. Brown	5.5	550	25.3	10.49	174.9	16.4	18.9
	6.0	600	25.6	11.04	184.0	16.8	19.4
	7.0	700	25.9	11.56	192.7	17.2	19.9
	7.5	750	26.2	12.13	202.1	17.7	20.4
48 Dk. Green	5.5	550	26.2	11.27	187.8	16.4	18.9
	6.0	600	27.1	11.93	198.7	16.2	18.7
	7.0	700	27.4	12.45	207.4	16.5	19.1
	7.5	750	27.7	13.02	216.9	16.9	19.5
53 Dk. Blue*	5.5	550	27.1	12.31	205.2	16.7	19.3
	6.0	600	27.4	12.88	214.6	17.1	19.8
	7.0	700	28.0	13.45	224.1	17.1	19.7
	7.5	750	28.3	14.02	233.6	17.4	20.1
	8.0	800	28.7	14.58	243.0	17.8	20.5
63 Black	5.5	550	28.0	14.36	239.2	18.3	21.1
	6.0	600	28.7	14.97	249.5	18.2	21.1
	7.0	700	29.3	15.76	262.7	18.4	21.3
	7.5	750	29.6	16.36	272.5	18.7	21.6
	8.0	800	29.9	17.01	283.5	19.1	22.0
73 Orange	5.5	550	29.3	16.38	272.9	19.1	22.1
	6.0	600	29.9	17.04	283.9	19.1	22.0
	7.0	700	30.2	17.67	294.5	19.4	22.4
	7.5	750	31.1	18.29	304.7	18.9	21.8
	8.0	800	31.4	18.92	315.3	19.2	22.2

I-90 NOZZLE

ADV & 36V

Low Angle ADV & 36V**

** For low angle nozzle performance, reduce radius by 15%.

I-90

STK-1 / STK-2

ST SYSTEM FOR COOLING AND CLEANING SYNTHETIC TURF

Radius: **31.4 to 36.6 m**
Flow: **16.9 to 20.9 m³/hr; 282.0 to 348 l/min**
Inlet: **1½" BSP (ST-90), 1½" ACME (STG-900)**

FEATURES

- Standard installed nozzle: #83
- Arc setting: 40° to 360°
- QuickCheck™ arc mechanism
- Through-the-top arc adjustment
- Water lubricated gear-drive
- Factory installed rubber logo cap
- Nozzle trajectory: 22.5°
- Warranty period: 5 year component part

OPERATING SPECIFICATIONS

- Radius: 31.4 m to 36.6 m
- Flow: 16.9 to 20.9 m³/hr; 282 to 348 l/min
- Operating pressure range: 6.9 to 8.3 bar; 690 to 830 kPa
- Precipitation rate: 35 mm/hr approximately

USER INSTALLED OPTIONS

- Rubber Cover Kit ST-90: P/N 234200
- Rubber Cover Kit STG-900: P/N 473900

ST-90*
Overall height: 29 cm
Pop-up height: 8 cm
Diameter: 14 cm
Inlet size: 1½" (40 mm) BSP

* not for use with the ST Vault

STG-900*
Overall height: 36 cm
Pop-up height: 8 cm
Diameter: 20 cm
Inlet size: 1½" (40 mm) ACME

* for use with the ST173026B Vault

ST ROTOR	
Model	**Description**
ST-90-83	8 cm pop-up, jar top cap, adjustable arc, plastic riser, and BSP inlet threads
STG-900-83	8 cm pop-up, top service, adjustable arc, plastic riser, and ACME inlet threads

KIT CONFIGURATIONS

STK-1 / STK-2 COMPONENTS		
Kit Descriptions For specification ease and to ensure the correct product is installed, the ST System is available in kit configurations below.	**STK-1** STG-900 Block System (remotely located valve)	**STK-2** STG-900 VAH System (valve adjacent to head)
ST Rotor: Synthetic Turf Rotor without rubber cover kit	**STG-900**	**STG-900**
ST Vault: Vault with 3-piece polymer-concrete cover	**ST-173026B**	**ST-173026B**
ST Swing Joint: "VA" 2" (50mm) PVC swing joint with 7 pivot points	**ST-2008VA**	**ST-2008VA**
ST Valve & Fitting Kit: ICV-151 valve, high pressure rated ball valve & fitting kit	—	**ST-VBVFK**
ST Adapter Elbow Fitting*	**239800**	**239800**
ST Rotor Adapter Fitting**	**239300**	—
Rubber Cover Kit: STG-900 Rubber Cover Kit	**473900**	**473900**
Quick-Coupler Valve: 1" (25mm) inlet with 1¼" (32 mm) outlet for key	**HQ5RC-BSP**	**HQ5RC-BSP**
BSP Inlet Adapter: Converts swing joint to 2" (50 mm) male BSP threads	**241400**	**241400**

Notes:
*ST Adapter Elbow Fitting connects ST-2008VA swing joint to rotor adapter fitting (STK-1B) also connects ST-VBVFK to STG-900 rotor (STK-2B)
**ST Rotor Adapter Fitting connects 239800 adapter elbow fitting to STG-900 rotor's ACME inlet (STK-1B)

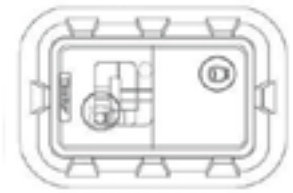
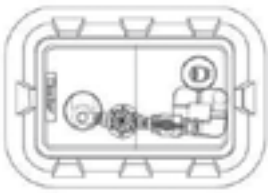
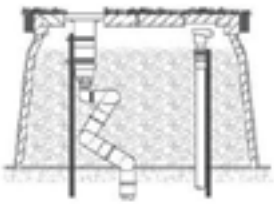
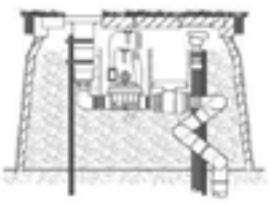
ST-90 / STG-900 NOZZLE PERFORMANCE DATA

Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲
73 ●	7.0	700	31.4	16.9	282	34.3	39.6
	7.5	750	33.2	17.5	291	31.7	36.6
Orange	8.0	800	35.1	18.1	301	29.4	34.0
83 ●	7.0	700	34.1	19.1	319	32.8	37.9
	7.5	750	35.4	20.0	333	32.0	37.0
Tan	8.0	800	36.6	20.9	348	31.2	36.1

Notes:
All precipitation rates calculated for 180° operation.
For precipitation rate of a 360° sprinkler, divide by 2.

Requires minimum 7.0 bar; 700 kPa dynamic pressure supplied to swing joint inlet.

INSTALLATION DETAILS

STK-1	STK-2
	
ON FIELD SIDE	ON FIELD SIDE
	
VIEW FROM ON FIELD SIDE	VIEW FROM ON FIELD SIDE

ST Rotor

ST SWING JOINTS

Multi-axis 22 bar; 2,200 kPa rated vertical alignment PVC swing joints with seven O-Ring sealed pivot points allow the rotor to be perfectly placed within the ST Vault's cover set opening.

ST2008VA: 2" (50 mm) for STG-900

Inlet: 2" (50 mm) Slip*
Outlet: 1½" ACME

* Use P/N 241400 adapter to male BSP threads

ST VALVE SETS

Heavy-duty control valves configured to complement the ST Rotors and ST Vaults.

STVBVFK: for STG-900 in STK-2 Kit

Valve: 1½" (40 mm) NPT ICV
Ball Valve: 22 bar (2,200 kPa) rating
Inlet: 1½" (40 mm) ACME
Outlet: 1½" (40 mm) ACME
Low Pressure Loss Design: 0.7 bar; 70 kPa at 22.7 m³/hr; 378 l/min from swing joint inlet through to rotor
Includes: 1½" (40 mm) connection fittings

ST VAULTS

Heavy-duty tapered fiberglass and polymer-concrete construction with pre-cast holes for rotor and quick coupler valve.

ST173026B for STG-900 includes 51 mm thick 3-piece PC cover set

Main Cover: 43 cm x 76 cm
Overall Height: 66 cm
Body Weight: 47 kg
Total Weight: 73 kg
Base Pad: 68 cm x 104 cm
Quick Access Ports: 1

All ST Vaults include convenient quick access ports. Quick-couplers provide a convenient source of water for washing down spills and water-soluble paint. Integrated in-vault design eliminates the need for additional quick-coupler enclosures.

① Quick-Coupler

STK-6V

ST SYSTEM FOR CLEANING, COOLING, FLUSHING AND PREPARING SYNTHETIC SPORTS FIELDS FOR PLAY

Radius: **32.5 to 50.3 m**
Flow: **21.8 to 74.2 m³/hr; 364 to 1,237 l/min**
Inlet: **2" (50 mm) BSP**

FEATURES

- Nozzle choices: 6
- Standard nozzle: #20
- Nozzle range: #16 to #26
- Nozzle trajectory: 22.5°
- Gear-drive: Isolated, grease lubricated gear-drive
- Factory installed rubber logo cap (ST-1600-B / ST-1600-HSB)
- Arc Adjustment: Moveable stops (left and right) arc adjustment
- Arc setting: 40° to non-reversing 360°
- Ratcheting nozzle turret
- Telescoping rubber infill barrier on riser
- Adjustable speed of rotation: 0 to 65 seconds (High speed models, 180° at 8 bar, 800 kPa)
- Internal construction: Brass, stainless steel and ball-bearings
- Optional Infill Barrier System (ST-1600-B / ST-1600-HSB)
- Warranty period: 5 year component part

ST-1600-B
ST-1600-HS-B (High Speed)
Overall height: 57 cm
Pop-up height: 13 cm
Diameter: 36 cm
Inlet size: 2" (50 mm) BSP*

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

ST-1600-BR
ST-1600-HS-BR (High Speed)
(Riser Mounted Model)
Overall height: 22 cm
Diameter: 21 cm
Inlet size: 2" (50 mm) BSP*

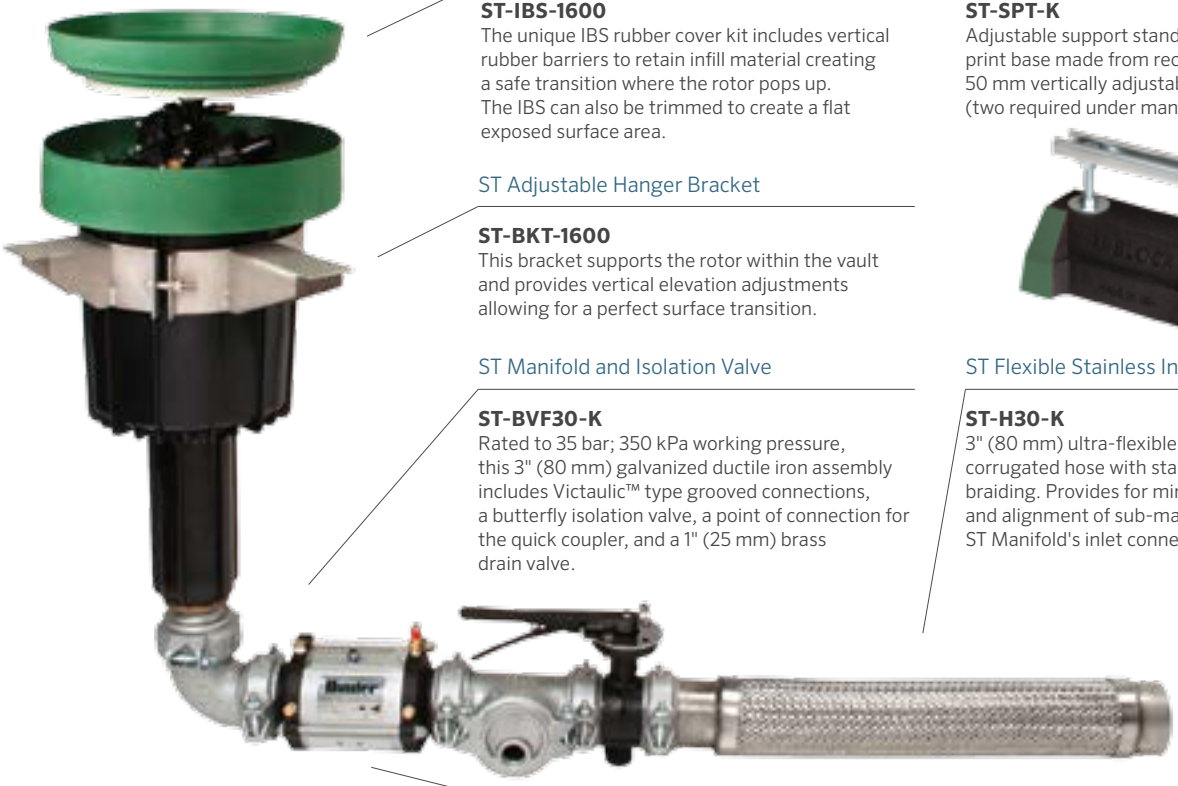
* Use P/N 241400 adapter to 2" (50 mm) PVC pipe if needed

OPERATING SPECIFICATIONS

- Radius: 32.5 to 50.3 m
- Flow: 21.8 to 74.2 m³/hr; 364 to 1,237 l/min
- Operating pressure range: 4.0 to 8.0 bar; 400 to 800 kPa
- Precipitation rate: 60 mm/hr approximately

KIT CONFIGURATIONS

STK-6V				
Kit Description (Components are ordered individually)	**STK-6V-B-2P** Standard Pop-Up 2" (50 mm) Plastic Valve	**STK-6V-HSB-2P** High Speed Pop-Up 2" (50 mm) Plastic Valve	**STK-6V-B-3M** Standard Pop-Up 3" (80 mm) Metal Valve	**STK-6V-HSB-3M** High Speed Pop-Up 3" (80 mm) Metal Valve
ST Rotor: Synthetic turf rotor	**ST-1600-B**	**ST-1600-HS-B**	**ST-1600-B**	**ST-1600-HS-B**
ST Infill Barrier System: Rubber cover kit	**ST-IBS-1600**	**ST-IBS-1600**	**ST-IBS-1600**	**ST-IBS-1600**
ST Bracket: Rotor hanger and elevation adjustment	**ST-BKT-1600**	**ST-BKT-1600**	**ST-BKT-1600**	**ST-BKT-1600**
ST Vault: 4-piece polymer-concrete cover set	**ST-243636-B**	**ST-243636-B**	**ST-243636-B**	**ST-243636-B**
ST Manifold: 3" (80 mm) fittings, isolation valve and drain valve	**ST-BVF30-K**	**ST-BVF30-K**	**ST-BVF30-K**	**ST-BVF30-K**
ST Valve: With remote on-off-auto selector	**ST-V20-KVP**	**ST-V20-KVP**	**ST-V30-KV**	**ST-V30-KV**
ST Variable Speed Valve: Regulates opening speed	**ST-NDL-K**	**ST-NDL-K**	**ST-NDL-K**	**ST-NDL-K**
ST Support: Adjustable manifold support (2 required)	**ST-SPT-K**	**ST-SPT-K**	**ST-SPT-K**	**ST-SPT-K**
ST Inlet Hose: Flexible stainless steel alignment hose	**ST-H30-K**	**ST-H30-K**	**ST-H30-K**	**ST-H30-K**
BSP Inlet Adapter: 3" (80 mm) NPT x BSP	**855000**	**855000**	**855000**	**855000**
BSP Inlet Adapter: 1" (25 mm) NPT x BSP male (2 required)	**855100**	**855100**	**855100**	**855100**
Quick Coupler Valve: 1" (25 mm) BSP inlet, 1¼" (32 mm) oulet for key	**HQ-5RC-BSP**	**HQ-5RC-BSP**	**HQ-5RC-BSP**	**HQ-5RC-BSP**



ST Infill Barrier System

ST-IBS-1600
The unique IBS rubber cover kit includes vertical rubber barriers to retain infill material creating a safe transition where the rotor pops up. The IBS can also be trimmed to create a flat exposed surface area.

ST Adjustable Hanger Bracket

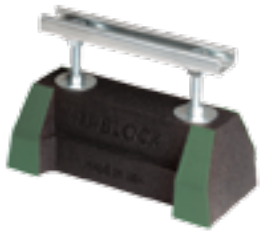
ST-BKT-1600
This bracket supports the rotor within the vault and provides vertical elevation adjustments allowing for a perfect surface transition.

ST Manifold and Isolation Valve

ST-BVF30-K
Rated to 35 bar; 350 kPa working pressure, this 3" (80 mm) galvanized ductile iron assembly includes Victaulic™ type grooved connections, a butterfly isolation valve, a point of connection for the quick coupler, and a 1" (25 mm) brass drain valve.

ST H-Block Manifold Supports

ST-SPT-K
Adjustable support stands include a large foot-print base made from recycled tire rubber and a 50 mm vertically adjustable support rail (two required under manifold).



ST Flexible Stainless Inlet Hose

ST-H30-K
3" (80 mm) ultra-flexible stainless steel corrugated hose with stainless steel support braiding. Provides for minor offset and alignment of sub-mainline to the ST Manifold's inlet connection.

ST Low-Loss, Slow-Opening Valve (Plastic)

For Flows Up to 45.0 m³/hr; 757 l/min

ST-V20-KVP: Heavy-duty plastic control valve
Valve: 2" (50 mm) Grooved Vic Type
Opening Speed: ST-NDL-K regulates/slows speed
Pressure Loss: Ultra Low (0.15 bar; 15 kPa at 45.0 m³/hr; 757 l/min)
Manual Control: Remote On-Off-Auto Selector and Solenoid (not shown)

ST Low-Loss, Slow-Opening Valve (Metal)

ST-V30-KV: Heavy-duty metal control valve
Valve: 3" (80 mm) Grooved Vic Type
Opening Speed: ST-NDL-K regulates/slows speed
Pressure Loss: Ultra Low (0.15 bar; 15 kPa at 65.0 m³/hr; 1,082 l/min)
Manual Control: Remote On-Off-Auto Selector and Solenoid (not shown)

ST Rotors have many uses

While ST Rotors are specifically designed for cleaning and cooling synthetic turf sports fields, they are also great for other applications such as pastures, horse arenas, dust control and even casual natural turf areas.

INSIDE THE ST SYSTEM

Open access to all components for ease of ongoing maintenance

FROM THE TOP

Smooth and safe surface area with quick-access ports

SEAMLESS INTEGRATION

Blends in perfectly with the surrounding synthetic surface

ST VAULTS

Heavy-duty tapered fiberglass and polymer-concrete construction with pre-cast holes for rotor, quick coupler valve, and remote manifold assembly.

Quick-couplers provide a convenient source of water for washing down spills and water-soluble paint. Integrated in-vault design eliminates the need for additional quick-coupler enclosures.

The ST-V30KV valve kit includes a remotely located On-Off-Auto selector and solenoid manifold assembly. These convenient features bring valve manual control functions and solenoid splice connections closer to the surface for easy access.

ST-243636B: includes 76 mm thick 4-piece PC cover set

Main Cover: 61 cm x 91 cm
Overall Height: 91 cm
Body Weight: 70 kg
Total Weight: 138 kg
Base Pad: 106 cm x 122 cm
Quick Access Ports: 2

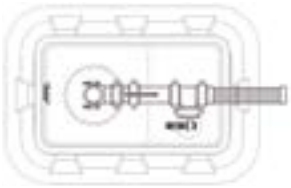
① Quick-Coupler

② On-Off-Auto Selector

ST-1600 Rotor in Action

INSTALLATION DETAILS

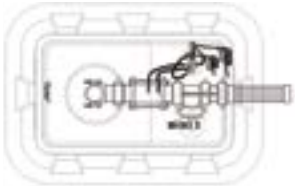
STK-5V



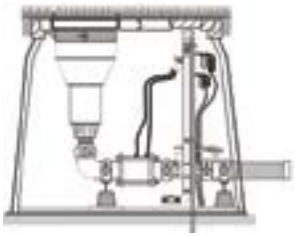
ON FIELD SIDE

VIEW FROM ON FIELD SIDE

STK-6V



ON FIELD SIDE



VIEW FROM ON FIELD SIDE

ST-1600 NOZZLE PERFORMANCE DATA

Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲
16 ● Black	4.0	400	32.5	21.8	364	41.4	47.8
	5.0	500	35.0	24.4	406	39.8	45.9
	6.0	600	37.0	26.8	446	39.1	45.1
	7.0	700	39.0	28.9	482	38.0	43.9
	8.0	800	41.0	31.2	520	37.1	42.9
18 ● Black	4.0	400	34.0	24.3	405	42.0	48.6
	5.0	500	37.0	27.1	452	39.6	45.8
	6.0	600	39.0	29.8	496	39.1	45.2
	7.0	700	40.5	32.1	535	39.1	45.2
	8.0	800	43.0	34.8	580	37.6	43.5
20 ● Black	4.0	400	35.0	32.7	545	53.4	61.7
	5.0	500	39.0	36.5	609	48.1	55.5
	6.0	600	43.0	40.1	668	43.4	50.1
	7.0	700	44.0	43.3	721	44.7	51.6
	8.0	800	45.0	46.4	773	45.8	52.9
22 ● Black	4.0	400	36.0	38.9	649	60.1	69.4
	5.0	500	39.5	43.6	726	55.8	64.5
	6.0	600	44.0	47.7	795	49.3	56.9
	7.0	700	47.0	51.5	859	46.7	53.9
	8.0	800	48.0	55.2	920	47.9	55.3
24 ● Black	4.0	400	37.0	45.9	765	67.1	77.4
	5.0	500	40.5	51.3	855	62.6	72.2
	6.0	600	45.0	56.2	937	55.5	64.1
	7.0	700	47.5	60.7	1012	53.8	62.2
	8.0	800	48.7	65.0	1084	54.9	63.3
26 ● Black	4.0	400	38.4	53.0	883	71.8	82.9
	5.0	500	41.4	59.2	986	68.8	79.5
	6.0	600	46.0	64.6	1077	61.0	70.4
	7.0	700	48.7	69.7	1162	58.6	67.7
	8.0	800	50.3	74.2	1237	58.7	67.8

SWING JOINTS

BY LASCO FITTINGS, INC.

FEATURES

- Heavy-duty prefabricated PVC swing joints with O-Ring seals
- Available in all popular inlet and outlet configurations
- Choose from 20, 30 or 46 cm lay arm lengths and Single Top-Out or Triple Top-Out designs
- Unique SnapLok™ outlet with brass threads offers excellent support and durability for quick coupler installations
- Match HSJ swing joint and Hunter golf rotor purchases to qualify for an upgraded 5-year component exchange golf rotor warranty*

* Must be purchased from authorised Hunter Golf distributor to qualify for extended warranty program.

Swing Joints
HSJ-0 = Model ¾"
HSJ-1 = Model 1"
HSJ-2 = Model 1¼"
HSJ-3 = Model 1½"

SWING JOINT – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4 + 5

1 Model	2 Inlet Type	3 Outlet Type	4 Outlet Style	5 Lay Length
HSJ-0 = ¾" Commercial Swing Joint	**3** = Male - NPT	**2** = Male - NPT	**2** = Single Top-Out	**8** = 20 cm Lay Arm*
	4 = Male - ACME*	**3** = Enlarging - to 1½" (40 mm) Male NPT*		
HSJ-1 = 1" Heavy-Duty Swing Joint	**5** = Spigot - Metric Short**	**5** = Male - BSP *(not available in HSJ-0)*	**4** = Triple Top-Out*	**12** = 30 cm Lay Arm
	6 = Male - BSP**	**6** = Enlarging - to 1½" (40 mm) Male BSP*		
HSJ-2 = 1¼" Heavy-Duty Swing Joint	**7** = Spigot - 10 cm Long**	**8** = Enlarging - to 1½" Male ACME*		**18** = 46 cm Lay Arm**
	M = Main ACME H-Connection ***	**0** = Male ACME		
HSJ-3 = 1½" Heavy-Duty Swing Joint	**P** = Main ACME V-Connection ****	**A** = Enlarging/Reducing - to 1¼" Male ACME**		
		S = Male - Brass NPT SnapLok™ ***		
	* *Not available in HSJ-0 or HSJ-3. Use "M" inlet for HSJ-3.*	**U** = Male - Brass BSP SnapLok™ ***		
	** *Not available in HSJ-0.*	* *Not available in HSJ-0 or HSJ-3*	* *Not available in S Outlet Type*	* *HSJ-0 only*
	*** *Horizontal connection reduces from 1½" ACME to swing joint size*	** *Not available in HSJ-0 and HSJ-2*		** *Not available in HSJ-0*
	**** *Vertical connection reduces from 1½" ACME to swing joint size*	*** *HSJ-1 model only - for quick coupler*		

Example:
HSJ - 3 - M - 0 - 2 - 12 = HSJ 1½" heavy-duty swing joint, 1½" Male ACME horizontal connection to mainline tee, 1½" Male ACME single top outlet, 12" lay arm length.

SECTION 02:

MP ROTATOR®

ADVANCED FEATURES

AUTOMATIC MATCHED PRECIPITATION

The MP Rotator® has the unique ability to control the amount of water flowing through the nozzle at various arc and radius settings, resulting in matched precipitation regardless of the nozzle setting.

DOUBLE-POP

The MP Rotator's nozzle pops up from its protected position only after the riser is fully extended, providing superior defence against dirt and debris.

DISTRIBUTION UNIFORMITY

The various streams of the MP Rotator allow it to target all areas of the landscape evenly, yielding superior uniformity over traditional spray nozzles. Each stream targets specific areas to achieve higher efficiency and even coverage.

LOW PRECIPITATION RATE

Since the vast majority of soils have an infiltration rate of less than 25 mm/hr, irrigating at a low precipitation rate is essential to achieve efficiency.

The standard MP Rotator line applies water at 10 mm/hr, while the MP800 Series has a precipitation rate of 20 mm/hr. Either choice will avoid runoff, saving water and preventing erosion.

MP800 SERIES

Achieve efficient irrigation in narrow spaces with the MP800 Series. MP800 Series allows for radius adjustment down to 1.8 m, providing opportunity for overhead irrigation in smaller spaces than ever before possible.

ECO ROTATOR

Radius: **2.5 to 9.1 m**

FEATURES

- Model: 10 cm
- Adjustable arc and radius offer precise settings
- Two-piece ratchet
- Warranty period: 2 years
- Nozzle choices:
  MP1000-90, MP2000-90
  MP3000-90, MP1000-360
  MP2000-360, MP3000-360
- ▸ Automatic matched precipitation
- ▸ Double-pop
- ▸ Distribution uniformity
- ▸ Low precipitation rate

Eco Rotator
Overall height: 19 cm
Exposed diameter: 3 cm
Inlet size: ½"

OPERATING SPECIFICATIONS

- Flow rate: 0.04 to 0.96 m^3/hr; 0.61 to 16.07 l/min
- Radius: 2.5 to 9.1 m
- Recommended pressure range: 1.7 to 3.8 bar; 170 to 380 kPa
- Precipitation rates: 10 mm/hr approximately

USER INSTALLED OPTIONS

- Drain check valve (up to 2 m of elevation; P/N 462237)

▸ = *Advanced Feature descriptions on page 49*

ECO ROTATOR	
Model	**Description**
ECO-04 - 1090	10 cm pop-up, MP1000 2.5 to 4.5 m radius, adjustable from 90° to 210°
ECO-04 - 10360	10 cm pop-up, MP1000 2.5 to 4.5 m radius, 360°
ECO-04 - 2090	10 cm pop-up, MP2000 4.0 to 6.4 m radius, adjustable from 90° to 210°
ECO-04 - 20360	10 cm pop-up, MP2000 4.0 to 6.4 m radius, 360°
ECO-04 - 3090	10 cm pop-up, MP3000 6.7 to 9.1 m radius, adjustable from 90° to 210°
ECO-04 - 30360	10 cm pop-up, MP3000 6.7 to 9.1 m radius, 360°

ECO ROTATOR PERFORMANCE DATA

ECO-04 MP1000
Radius: 2.5 to 4.5 m
Adjustable Arc and Full-Circle
● Maroon: 90° to 210°
● Olive: 360°

ECO-04 MP2000
Radius: 4.0 to 6.4 m
Adjustable Arc and Full-Circle
● Black: 90° to 210°
● Red: 360°

ECO-04 MP3000
Radius: 6.7 to 9.1 m
Adjustable Arc and Full-Circle
● Blue: 90° to 210°
● Grey: 360°

Arc	Pressure bar	Pressure kPa	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
90°	1.7	170	--	--	--	--	--	5.2	0.07	1.18	11	12	7.6	0.16	2.63	11	13
	2.0	200	3.7	0.04	0.61	11	12	5.5	0.07	1.23	10	11	8.2	0.17	2.77	10	11
	2.5	250	4.0	0.04	0.68	10	12	5.8	0.09	1.43	10	12	8.5	0.19	3.08	10	12
	2.8	**280**	**4.1**	**0.04**	**0.70**	**10**	**11**	**6.1**	**0.09**	**1.52**	**10**	**11**	**9.1**	**0.20**	**3.25**	**9**	**11**
	3.0	300	4.3	0.04	0.73	10	11	6.4	0.09	1.57	9	10	9.1	0.20	3.38	10	11
	3.5	350	4.4	0.05	0.78	10	11	6.4	0.10	1.68	10	11	9.1	0.22	3.67	11	12
	3.8	380	4.5	0.05	0.81	9	11	6.4	0.11	1.77	11	12	9.1	0.23	3.80	11	13
180°	1.7	170	--	--	--	--	--	4.9	0.13	2.22	11	12	7.6	0.32	5.48	11	13
	2.0	200	3.7	0.07	1.20	11	12	5.2	0.14	2.35	11	12	8.2	0.35	5.88	10	12
	2.5	250	4.0	0.08	1.35	10	12	5.5	0.16	2.67	11	12	8.5	0.40	6.55	11	12
	2.8	**280**	**4.1**	**0.08**	**1.40**	**10**	**11**	**5.8**	**0.17**	**2.80**	**10**	**12**	**9.1**	**0.41**	**6.88**	**10**	**11**
	3.0	300	4.3	0.09	1.46	10	11	6.1	0.17	2.90	10	11	9.1	0.43	7.18	10	12
	3.5	350	4.4	0.09	1.56	10	11	6.4	0.19	3.15	9	10	9.1	0.47	7.77	11	13
	3.8	380	4.5	0.10	1.62	9	11	6.4	0.19	3.22	9	11	9.1	0.45	8.02	12	13
210°	1.7	170	--	--	--	--	--	4.9	0.16	2.58	11	12	7.6	0.38	6.40	11	13
	2.0	200	3.7	0.09	1.41	11	13	5.2	0.17	2.75	11	13	8.2	0.41	6.85	10	12
	2.5	250	4.0	0.10	1.58	10	12	5.5	0.19	3.08	10	12	8.5	0.46	7.65	11	12
	2.8	**280**	**4.1**	**0.10**	**1.63**	**10**	**11**	**5.8**	**0.20**	**3.25**	**10**	**12**	**9.1**	**0.48**	**8.02**	**10**	**11**
	3.0	300	4.3	0.10	1.71	10	11	6.1	0.21	3.42	10	11	9.1	0.50	8.37	10	12
	3.5	350	4.4	0.11	1.82	10	11	6.4	0.22	3.70	9	10	9.1	0.54	9.03	11	13
	3.8	380	4.5	0.11	1.89	9	11	6.4	0.23	3.80	10	11	9.1	0.56	9.37	12	13
360°	1.7	170	--	--	--	--	--	4.9	0.27	4.42	11	12	7.6	0.66	10.98	11	13
	2.0	200	3.7	0.14	2.40	12	14	5.2	0.28	4.72	11	13	8.2	0.70	11.72	10	12
	2.5	250	4.0	0.16	2.69	10	12	5.5	0.32	5.28	10	12	8.5	0.79	13.10	11	12
	2.8	**280**	**4.1**	**0.17**	**2.81**	**10**	**12**	**5.8**	**0.33**	**5.55**	**10**	**12**	**9.1**	**0.83**	**13.75**	**10**	**11**
	3.0	300	4.3	0.18	2.94	10	11	6.1	0.35	5.80	10	11	9.1	0.87	14.37	10	12
	3.5	350	4.4	0.19	3.17	10	11	6.4	0.37	6.25	9	10	9.1	0.93	15.52	11	13
	3.8	380	4.5	0.20	3.25	10	11	6.4	0.38	6.40	9	10	9.1	0.96	16.07	12	13

Bold = Recommended pressure

MP ROTATOR®

Radius: **2.5 to 10.7 m**

FEATURES

- Radius can be reduced up to approximately 25% on all models
- Easy arc adjustment
- Colour-coded for easy identification
- Removable filter screen ensures hassle-free service
- Wind-resistant multi-stream technology
- Automatic matched precipitation
- Double-pop
- Distribution uniformity
- Low precipitation rate

OPERATING SPECIFICATIONS

- Recommended operating pressure: 2.8 bar; 280 kPa
- Recommended filtering when operating on dirty water

OPTIONS

- Pair with Pro-Spray® PRS40 to achieve pressure regulation at the head of 2.8 bar; 280 kPa
- Adding "HT" will specify male threaded nozzles

▸ = *Advanced Feature descriptions on page 49*

MP ROTATOR – SPECIFICATION BUILDER: ORDER 1 + 2

1 Model	2 Options
MP1000-90 = 2.5 to 4.5 m radius, adjustable from 90° to 210°	**(blank)** = No option
MP1000-210 = 2.5 to 4.5 m radius, adjustable from 210° to 270°	**HT** = Male threaded version *(Not available in 3500 and 1000-210)*
MP1000-360 = 2.5 to 4.5 m radius, 360°	
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 to 6.4 m radius, 360°	
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 to 9.1 m radius, 360°	
MP3500-90 = 9.4 to 10.7 m radius, adjustable from 90° to 210°	
MPLCS515 = Left corner strip, 1.5 m to 4.6 m	
MPRCS515 = Right corner strip, 1.5 m to 4.6 m	
MPSS530 = Side strip, 1.5 m to 9.1 m	
MPCORNER = 2.5 to 4.5 m radius, adjustable from 45° to 105°	

Examples:
MP1000-210 = 2.5 to 4.5 m radius, adjustable from 210° to 270°
PROS-06-PRS40-CV-MP2000-90 = 15 cm pop-up regulated at 2.8 bar; 280 kPa, drain check valve, with MP2000-90

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
360°

MP ROTATOR PERFORMANCE DATA

MP1000
Radius: 2.5 to 4.5 m
Adjustable Arc and Full-Circle
- Maroon: 90° to 210°
- Lt. Blue: 210° to 270°
- Olive: 360°

MP2000
Radius: 4.0 to 6.4 m
Adjustable Arc and Full-Circle
- Black: 90° to 210°
- Green: 210° to 270°
- Red: 360°

MP3000
Radius: 6.7 to 9.1 m
Adjustable Arc and Full-Circle
- Blue: 90° to 210°
- Yellow: 210° to 270°
- Grey: 360°

Arc	Pressure		MP1000					MP2000					MP3000				
			Radius	Flow	Flow	Precip mm/hr		Radius	Flow	Flow	Precip mm/hr		Radius	Flow	Flow	Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲	m	m³/hr	l/min	■	▲	m	m³/hr	l/min	■	▲
90°	1.7	170	-	-	-	-	-	5.2	0.08	1.29	12	13	7.6	0.16	2.69	11	13
	2	200	3.7	0.04	0.64	11	13	5.5	0.09	1.44	12	13	8.2	0.17	2.88	10	12
	2.5	250	4.0	0.04	0.72	11	13	5.8	0.09	1.52	11	13	8.5	0.19	3.11	10	12
	2.8	**280**	**4.1**	**0.05**	**0.80**	**11**	**13**	**6.1**	**0.10**	**1.63**	**11**	**12**	**9.1**	**0.20**	**3.26**	**10**	**11**
	3	300	4.3	0.05	0.87	11	13	6.4	0.11	1.74	10	12	9.1	0.21	3.41	10	12
	3.5	350	4.5	0.06	0.95	11	13	6.4	0.11	1.78	11	12	9.1	0.22	3.60	11	12
	3.8	380	4.5	0.06	1.02	12	14	6.4	0.11	1.82	11	12	9.1	0.23	3.83	11	13
180°	1.7	170	-	-	-	-	-	4.9	0.14	2.27	11	13	7.6	0.33	5.46	11	13
	2	200	3.7	0.08	1.29	11	13	5.2	0.15	2.43	11	13	8.2	0.36	5.99	11	12
	2.5	250	4.0	0.09	1.44	11	13	5.5	0.16	2.69	11	12	8.5	0.39	6.44	11	12
	2.8	**280**	**4.1**	**0.10**	**1.59**	**11**	**13**	**5.8**	**0.18**	**2.92**	**11**	**12**	**9.1**	**0.42**	**6.90**	**10**	**12**
	3	300	4.3	0.10	1.67	11	13	6.1	0.20	3.22	11	12	9.1	0.44	7.31	11	12
	3.5	350	4.5	0.12	1.90	11	13	6.4	0.21	3.45	10	12	9.1	0.47	7.73	11	13
	3.8	380	4.5	0.12	1.93	12	13	6.4	0.22	3.60	11	12	9.1	0.49	8.07	12	14
210°	1.7	170	-	-	-	-	-	4.9	0.17	2.73	12	14	7.6	0.39	6.37	11	13
	2	200	3.7	0.09	1.52	12	13	5.2	0.17	2.84	11	13	8.2	0.42	6.97	11	12
	2.5	250	4.0	0.10	1.71	11	13	5.5	0.19	3.07	11	12	8.5	0.46	7.54	11	13
	2.8	**280**	**4.1**	**0.11**	**1.86**	**11**	**13**	**5.8**	**0.20**	**3.26**	**10**	**12**	**9.1**	**0.49**	**8.03**	**10**	**12**
	3	300	4.3	0.12	1.93	11	13	6.1	0.21	3.45	10	11	9.1	0.52	8.53	11	12
	3.5	350	4.5	0.13	2.16	11	13	6.4	0.23	3.71	9	11	9.1	0.55	8.98	11	13
	3.8	380	4.5	0.14	2.24	11	13	6.4	0.23	3.83	10	11	9.1	0.57	9.44	12	14
270°	1.7	170	-	-	-	-	-	4.9	0.20	3.30	11	13	7.6	0.50	8.30	12	13
	2	200	3.7	0.11	1.82	11	12	5.2	0.22	3.60	11	12	8.2	0.55	8.98	11	12
	2.5	250	4.0	0.12	2.01	10	12	5.5	0.24	3.90	10	12	8.5	0.59	9.66	11	12
	2.8	**280**	**4.1**	**0.14**	**2.39**	**11**	**13**	**5.8**	**0.25**	**4.17**	**10**	**12**	**9.1**	**0.63**	**10.35**	**10**	**12**
	3	300	4.3	0.15	2.54	11	13	6.1	0.27	4.43	10	11	9.1	0.66	10.95	11	12
	3.5	350	4.5	0.17	2.73	11	13	6.4	0.28	4.66	9	11	9.1	0.70	11.60	11	13
	3.8	380	4.5	0.17	2.84	11	13	6.4	0.30	4.93	10	11	9.1	0.74	12.20	12	14
360°	1.7	170	-	-	-	-	-	4.9	0.28	4.55	11	13	7.6	0.66	10.92	11	13
	2	200	3.7	0.16	2.62	12	13	5.2	0.29	4.85	11	13	8.2	0.72	11.94	11	12
	2.5	250	4.0	0.18	2.92	11	13	5.5	0.32	5.19	10	12	8.5	0.78	12.89	11	12
	2.8	**280**	**4.1**	**0.19**	**3.18**	**11**	**13**	**5.8**	**0.34**	**5.61**	**10**	**12**	**9.1**	**0.84**	**13.80**	**10**	**12**
	3	300	4.3	0.20	3.34	11	13	6.1	0.36	5.95	10	11	9.1	0.89	14.63	11	12
	3.5	350	4.5	0.23	3.71	11	13	6.4	0.39	6.37	9	11	9.1	0.94	15.43	11	13
	3.8	380	4.5	0.23	3.83	11	13	6.4	0.40	6.59	10	11	9.1	0.98	16.18	12	14

Bold = Optimal pressure for the MP Rotator is 2.8 bar; 280 kPa. This can easily be achieved by using the MP Rotator with the Hunter PRS40 Spray Body, pressure regulated at 2.8 bar; 280 kPa.

Works best with PRS40

For PRS40 information see page 67

MP ROTATOR PERFORMANCE DATA

MP3500
Radius: 9.4 to 10.7 m
Adjustable Arc
● Light Brown: 90° to 210°

Arc	Pressure bar	Pressure kPa	Radius m	Flow m³/hr	Flow l/min	Precip. mm/hr ■	Precip. mm/hr ▲
90°	1.7	170	10.1	0.24	3.94	9	11
	2.0	200	10.4	0.26	4.28	10	11
	2.5	250	10.4	0.28	4.58	10	12
	2.8	**280**	**10.7**	**0.29**	**4.84**	**10**	**12**
	3.0	300	10.7	0.31	5.22	11	13
	3.5	350	10.7	0.33	5.41	11	13
	3.8	380	10.7	0.34	5.68	12	14
180°	1.7	170	10.1	0.50	8.36	10	11
	2.0	200	10.4	0.51	8.48	9	11
	2.5	250	10.4	0.60	10.03	11	13
	2.8	**280**	**10.7**	**0.65**	**10.83**	**11**	**13**
	3.0	300	10.7	0.70	11.73	12	14
	3.5	350	10.7	0.73	12.15	13	15
	3.8	380	10.7	0.75	12.41	13	15
210°	1.7	170	10.1	0.59	9.80	10	12
	2.0	200	10.4	0.65	10.75	10	12
	2.5	250	10.4	0.70	11.66	11	13
	2.8	**280**	**10.7**	**0.75**	**12.45**	**11**	**13**
	3.0	300	10.7	0.80	13.40	12	14
	3.5	350	10.7	0.85	14.23	13	15
	3.8	380	10.7	0.90	14.91	13	16

Bold = Optimal pressure for the MP Rotator is 2.8 bar; 280 kPa. This can easily be achieved by using the MP Rotator with the Hunter PRS40 Spray Body, pressure regulated at 2.8 bar; 280 kPa.

MP ROTATOR PERFORMANCE DATA

- **MPLCS515:** Ivory, MP Left Corner Strip
- **MPRCS515:** Copper, MP Right Corner Strip
- **MPSS530:** Brown, MP Side Strip

	Pressure bar	Pressure kPa	Radius m	Flow m³/hr	Flow l/min
MP Left Corner Strip	1.7	170	1.1 x 4.2	0.04	0.67
	2.0	200	1.2 x 4.3	0.04	0.72
	2.5	250	1.4 x 4.5	0.05	0.79
	2.8	**280**	**1.5 x 4.6**	**0.05**	**0.84**
	3.0	300	1.6 x 4.7	0.06	0.87
	3.5	350	1.7 x 4.8	0.06	0.94
	3.8	380	1.8 x 4.9	0.06	0.99
MP Right Corner Strip	1.7	170	1.1 x 4.2	0.04	0.67
	2.0	200	1.2 x 4.3	0.04	0.72
	2.5	250	1.4 x 4.5	0.05	0.79
	2.8	**280**	**1.5 x 4.6**	**0.05**	**0.84**
	3.0	300	1.6 x 4.7	0.05	0.87
	3.5	350	1.7 x 4.8	0.06	0.94
	3.8	380	1.8 x 4.9	0.06	0.99
MP Side Strip	1.7	170	1.1 x 8.3	0.08	1.34
	2.0	200	1.2 x 8.6	0.09	1.43
	2.5	250	1.4 x 8.9	0.09	1.57
	2.8	**280**	**1.5 x 9.1**	**0.10**	**1.66**
	3.0	300	1.6 x 9.3	0.10	1.72
	3.5	350	1.7 x 9.6	0.11	1.87
	3.8	380	1.8 x 9.9	0.12	1.96

Notes:
Strip pattern radius can be adjusted by 25%. MP Rotator is designed to maintain matched precipitation after radius adjustment. Optimal pressure for the MP Rotator is 2.8 bar; 280 kPa. This can easily be achieved by using the MP Rotator with the Hunter PRS40 Spray Body, pressure regulated at 2.8 bar; 280 kPa.

MP3500 9.4 to 10.7 m radius

MP3500-90
90° to 210°

MP Strips

MPLCS515
Left Corner Strip
1.5 x 4.6 m

MPRCS515
Right Corner Strip
1.5 x 4.6 m

MPSS530
Side Strip
1.5 x 9.1 m

MP ROTATOR PERFORMANCE DATA

MP Corner
Radius: 2.5 to 4.5 m
Adjustable Arc
● Turquoise: 45° to 105°

Arc	Pressure bar	Pressure kPa	Radius m	Flow m^3/hr	Flow l/min
45°	1.7	170	--	--	--
	2.0	200	3.5	0.04	0.61
	2.5	250	4.0	0.04	0.68
	2.8	**280**	**4.1**	**0.04**	**0.70**
	3.0	300	4.3	0.04	0.73
	3.5	350	4.4	0.05	0.78
	3.8	380	4.5	0.05	0.81
90°	1.7	170	3.2	0.07	1.15
	2.0	200	3.5	0.08	1.27
	2.5	250	4.0	0.08	1.40
	2.8	**280**	**4.1**	**0.09**	**1.44**
	3.0	300	4.3	0.09	1.57
	3.5	350	4.4	0.10	1.67
	3.8	380	4.5	0.10	1.73
105°	1.7	170	3.2	0.08	1.34
	2.0	200	3.5	0.09	1.48
	2.5	250	4.0	0.10	1.63
	2.8	**280**	**4.1**	**0.10**	**1.70**
	3.0	300	4.3	0.11	1.83
	3.5	350	4.4	0.12	1.94
	3.8	380	4.5	0.12	2.00

MP Corner

MPCORNER
Corner
2.5 to 4.5 m

Male Threaded

MP-HT
Male Threaded

MP Accessories

MPTOOL
Adjusts all MP Rotators

MPSTICK
Snaps onto any length of 1" (25 mm) PVC to allow standing adjustment.
PVC pipe not included.

MP Rotator

MP Tool for easy adjustments

MP ROTATOR® 800 SERIES

Radius: **1.8 to 3.5 m**

FEATURES

- Provides coverage from 1.8 to 3.5 m
- Colour-coded for easy identification
- Removable filter screen prevents large objects from clogging nozzle
- Wind-resistant multi-stream technology
- Adjustable arc and radius
- ▸ Automatic matched precipitation
- ▸ Double-pop
- ▸ Distribution uniformity
- ▸ Low precipitation rate

MP800SR 1.8 to 3.5 m radius

MP800SR-90
1.8 to 3.5 m radius adjustable from 90°-210°

MP800SR-360
1.8 to 3.5 m radius 360°

OPERATING SPECIFICATIONS

- Recommended operating pressure: 2.8 bar, 280 kPa - 2.1 bar; 210 kPa for min radius settings
- MP800SR-90 uses a 60 mesh; 250 microns built-in nozzle filter
- MP800SR-360 uses a 40 mesh; 420 microns built-in nozzle filter
- Recommended: use 150 mesh; 100 microns pre-filter arrangement with dirty water
- Hunter's HY filters are a great solution for zone-specific MP800SR arrangements

OPTIONS

- Specify Pro-Spray® PRS40 pop-up for accurate pressure regulation to achieve typical radius settings
- Specify Pro-Spray PRS30 for accurate pressure regulation to achieve minimum radius settings

▸ = *Advanced Feature descriptions on page 49*

MP ROTATOR PERFORMANCE DATA - MP800SR

MP800SR
Radius: 1.8 to 3.5 m
Adjustable Arc
Orange and Grey: 90° to 210°
Lime Green and Grey: 360°

Arc	Pressure bar	Pressure kPa	MAX RADIUS Radius m	MAX RADIUS Flow m³/hr	MAX RADIUS Flow l/min	MAX RADIUS Precip. mm/hr ■	MAX RADIUS Precip. mm/hr ▲	MIN RADIUS Radius m	MIN RADIUS Flow m³/hr	MIN RADIUS Flow l/min
90°	2.1	200	2.6	0.04	0.61	22	25	1.8	0.03	0.49
	2.5	250	2.9	0.04	0.72	21	24	2.1	0.03	0.55
	2.8	**280**	**3.1**	**0.05**	**0.87**	**21**	**24**	**2.4**	**0.04**	**0.61**
	3.0	300	3.4	0.06	0.95	20	23	2.4	0.04	0.68
	3.5	350	3.5	0.06	1.02	20	23	2.7	0.04	0.72
	3.8	380	3.5	0.06	1.06	20	23	3.0	0.05	0.76
180°	2.1	200	2.6	0.07	1.21	22	25	1.8	0.06	0.98
	2.5	250	2.8	0.08	1.40	21	24	2.1	0.07	1.10
	2.8	**280**	**3.0**	**0.10**	**1.59**	**21**	**24**	**2.4**	**0.07**	**1.21**
	3.0	300	3.3	0.10	1.74	19	22	2.4	0.08	1.36
	3.5	350	3.4	0.11	1.82	19	22	2.7	0.09	1.44
	3.8	380	3.5	0.11	1.89	18	21	3.0	0.09	1.51
210°	2.1	200	2.6	0.08	1.40	22	25	1.8	0.07	1.15
	2.5	250	2.8	0.10	1.67	22	25	2.1	0.08	1.28
	2.8	**280**	**3.0**	**0.11**	**1.85**	**21**	**24**	**2.4**	**0.08**	**1.41**
	3.0	300	3.2	0.12	2.01	20	23	2.4	0.10	1.59
	3.5	350	3.4	0.13	2.12	19	22	2.7	0.10	1.68
	3.8	380	3.5	0.13	2.20	18	21	3.0	0.11	1.77
360°	2.1	200	2.6	0.14	2.38	22	25	1.8	0.11	1.78
	2.5	250	2.8	0.16	2.65	20	23	2.1	0.12	1.97
	2.8	**280**	**3.0**	**0.18**	**2.95**	**20**	**23**	**2.4**	**0.13**	**2.12**
	3.0	300	3.1	0.19	3.22	20	23	2.4	0.13	2.23
	3.5	350	3.3	0.20	3.33	19	21	2.7	0.14	2.38
	3.8	380	3.5	0.22	3.71	18	21	3.0	0.16	2.65

Bold = Optimal pressure for the MP Rotator is 2.8 bar; 280 kPa. This can easily be achieved by using the MP Rotator with the Hunter PRS40 Spray Body, pressure regulated at 2.8 bar; 280 kPa.

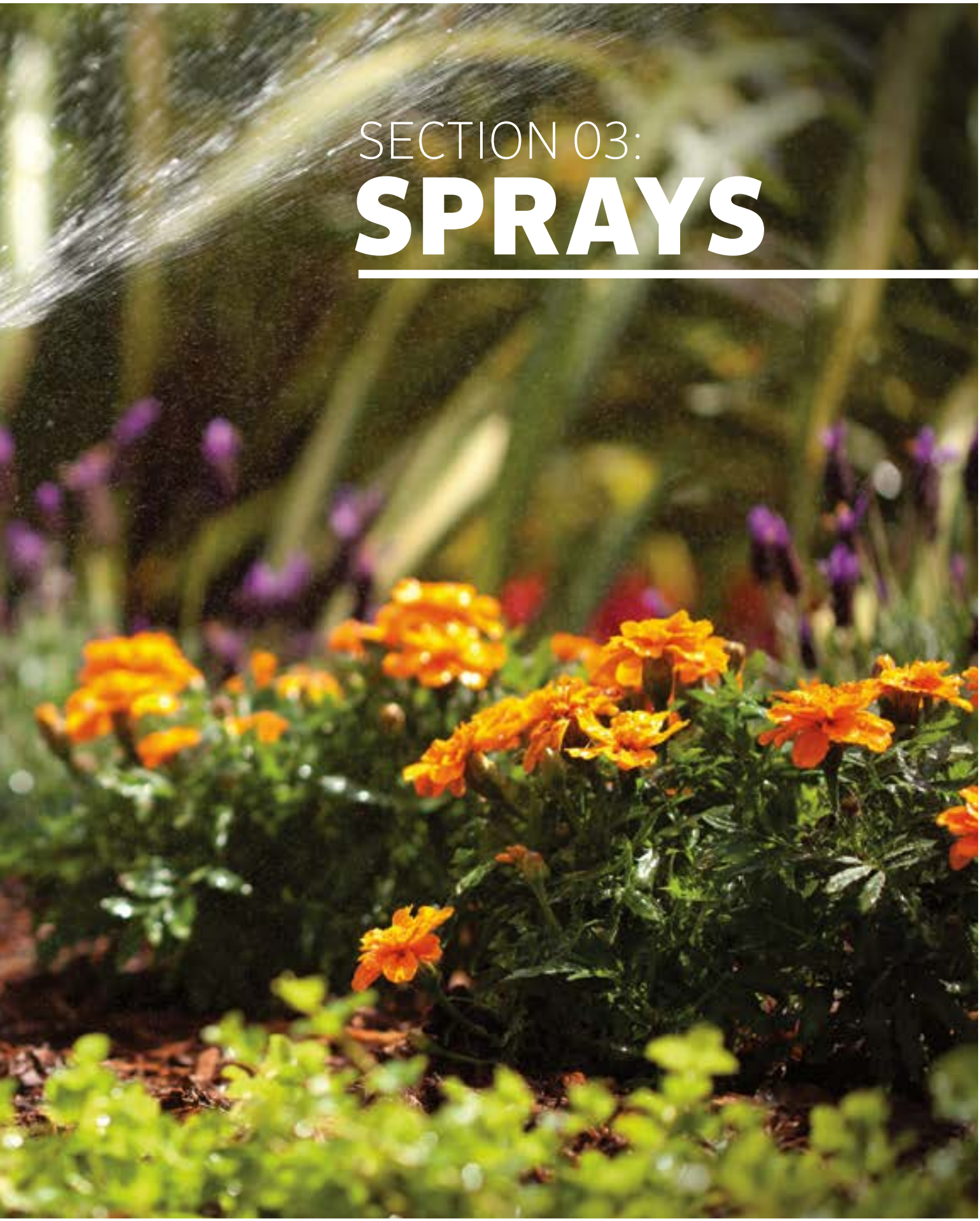
MP800 SERIES

Efficient Watering For Spaces Under 2.4 Metres

Efficiently simulating natural rainfall has always been a challenge in small spaces. Most spray nozzles with short radius capability apply water much faster than the soil can absorb (50 mm/hr or more), and typically have poor uniformity. Therefore, many users resort to drip irrigation which does not simulate rainfall, and cannot be used in turf applications. Up to now, high-volume, inefficient overhead sprays have been the only solution.

Now, Hunter introduces the MP800 Series, a high-efficiency overhead irrigation solution for small spaces. The MP800 Series will adjust down to 1.8 m, and uses a low precipitation rate of 20 mm/hr to help avoid runoff. Its superior distribution uniformity ensures that the least amount of water is used to get the job done.

To achieve its lowest radius setting of 1.8 m, an inlet pressure of 2.1 bar; 210 kPa is required. The MP800 Series should be paired with the PRS30 in this application.



SECTION 03: SPRAYS

SPRAYS
ADVANCED FEATURES

STRENGTH & DURABILITY

CO-MOLDED WIPER SEAL

The industry's most rugged wiper seal is co-molded from two types of chemical and chlorine-resistant materials. This pressure-activated, multi-function wiper seal reduces flow-by, operates at low pressures, and allows more sprinkler heads to be installed on the same zone. Its innovative design prevents debris from entering the seal when the riser is retracted, reducing riser stick-ups.

INNOVATIVE SEAL DESIGN

Pedestrian traffic, landscaping equipment, temperature changes, and cycling pressures can often cause body caps to loosen. Most spray bodies utilize an O-Ring, which breaks seal immediately after loosening. The Pro-Spray can withstand more than one full 360° turn and remain sealed at any pressure.

HEAVY-DUTY SPRING

The industry's strongest spring for positive retraction under any conditions.

PRO-SPRAY® CHECK VALVE

Optional check valves eliminate leaks and puddles at the lower heads, protecting landscapes from damage and erosion while reducing water waste. Choose from the convenience of factory-installed check valves or the flexibility of field installation.

PRESSURE REGULATED TO 2.1 & 2.8 BAR

Hunter's pressure regulated pop-up sprays are calibrated for the needs of any installation. The PRS30 with the brown cap optimises performance of traditional sprays at 2.1 bar; 210 kPa. The grey-capped 2.8 bar; 280 kPa PRS40 is designed for the efficient MP Rotator and is the only 2.8 bar; 280 kPa regulated pop-up on the market today.

INDUSTRY'S STRONGEST SPRAY BODY

The Pro-Spray line incorporates a heavy-duty ribbed body and durable cap engineered to withstand the harshest environments, including the rigors of foot traffic and the abuses of heavy machinery. In addition, the buttress thread design provides superior strength in cap-to-body gripping capacity helping the head to withstand high inlet surge pressures.

COMPETITOR

PRO-SPRAY

Competitor: Significant leaking at the body cap.
Pro-Spray: Seal remains intact.

SPRAY BODY COMPARISON CHART

QUICK SPECS		PS ULTRA	PRO-SPRAY®	PRS30	PRS40
		Good	Better	Best for Sprays	Best for MP Rotator®
POP-UP HEIGHT	cm	5, 10, 15	Shrub, 5, 7.5, 10, 15, 30	Shrub, 10, 15, 30	Shrub, 10, 15, 30
PRESSURE REGULATED	bar	N/A	N/A	2.1	2.8
	kPa	N/A	N/A	210	280
FEATURES					
PRE-INSTALLED NOZZLE		5SS, 10A, 12A, 15A, 17A	N/A	N/A	N/A
CAP COLOUR		Black	Black	Brown	Grey
CHECK VALVES		Field Installed	Field Installed or Factory Installed	Field Installed or Factory Installed	Factory Installed
WARRANTY		2 Years	5 Years	5 Years	5 Years
ADVANCED FEATURES					
BODY STYLE		Slim Line	Rugged Body	Rugged Body	Rugged Body
SPRING		Standard	Heavy Duty	Heavy Duty	Heavy Duty
CO-MOLDED WIPER SEAL			●	●	●
RECLAIMED CAP			●	●	●
PRESSURE REGULATION				●	●
APPLICATIONS					
TURFGRASS		●	●	●	●
TURFGRASS: TALL MOWING HEIGHT		●	●	●	●
SHRUBS: SPRINKLERS ON RISERS			●	●	●
SHRUBS: TALL POP-UP SPRINKLERS			●	●	●
RESIDENTIAL		●	●	●	●
COMMERCIAL/MUNICIPALITIES			●	●	●
HIGH TRAFFIC AREAS			●	●	●
RECLAIMED WATER			●	●	●

PS ULTRA

Models: **5 cm, 10 cm, 15 cm**
Inlet: **½"**

FEATURES

- Models: 5 cm, 10 cm, 15 cm
- Durable cap
- Two-piece ratcheting riser
- Male threaded riser to accept all female nozzles
- Available with flush plug (large filter screen not included)
- Extra large filter screen
- Warranty period: 2 years
- ▸ Optional check valve
- ▸ Heavy-duty spring

OPERATING SPECIFICATIONS

- Operational pressure range: 1.0 to 4.8 bar; 100 to 480 kPa

FACTORY INSTALLED OPTIONS

- Nozzles: 3.0 m, 3.7 m, 4.6 m, 5.2 m, 1.5 x 9.1 m side strip (side strip pattern available on 5 cm and 10 cm models only)
- Flush plug (large filter screen not included)
- Optional extra large filter screen

USER INSTALLED OPTIONS

- Drain check valve: 10 cm and 15 cm models (up to 2 m of elevation; P/N 462237)
- Large inlet filter screen (replacement; P/N 162900)

▸ = *Advanced Feature descriptions on page 60*

PSU-02
Retracted height: 13 cm
Pop-up height: 5 cm
Exposed diameter: 3 cm
Inlet size: ½"

PSU-04
Retracted height: 18 cm
Pop-up height: 10 cm
Exposed diameter: 3 cm
Inlet size: ½"

PSU-06
Retracted height: 24 cm
Pop-up height: 15 cm
Exposed diameter: 3 cm
Inlet size: ½"

PS ULTRA – SPECIFICATION BUILDER: ORDER 1 + 2

1 Model	2 Nozzles	3 Optional
PSU-02 = 5 cm Pop-up	**(blank)** = Flush plug, no large filter screen	**NFO** = Nozzle filter only *(Available for 10 cm model only)* Substitute standard installation of large inlet filter screen and receive unit with the nozzle filter only
PSU-04 = 10 cm Pop-up	**10A** = 3.0 m adjustable nozzle	
PSU-06 = 15 cm Pop-up	**12A** = 3.7 m adjustable nozzle	
	15A = 4.6 m adjustable nozzle	
	17A = 5.2 m adjustable nozzle	
	5SS = 1.5 m x 9.1 m side strip *(02 and 04 only)*	

Examples:
PSU-02 - 5SS = 5 cm Pop-up, with a 1.5 m x 9.1 m side strip
PSU-06 - 10A = 15 cm Pop-up, with a 3.0 m adjustable nozzle
PSU-04 = 10 cm Pop-up, with flush plug
PSU-04 - 12A - NFO = 10 cm Pop-up, with a 3.7 m adjustable nozzle, large inlet filter screen not included

PS ULTRA STANDARD NOZZLES PERFORMANCE DATA

10A — Red — 3.0 m radius, Adjustable from 0° to 360°, Trajectory: 15°

12A — Green — 3.7 m radius, Adjustable from 0° to 360°, Trajectory: 28°

Arc	Pressure		10A Radius	10A Flow		10A Precip mm/hr		12A Radius	12A Flow		12A Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲	m	m³/hr	l/min	■	▲
45°	1.0	100	2.6	0.04	0.68	49	56	3.2	0.04	0.73	34	40
	1.5	150	2.8	0.05	0.80	49	57	3.4	0.06	0.97	40	46
	2.1	**210**	**3.0**	**0.06**	**0.94**	**49**	**56**	**3.7**	**0.07**	**1.23**	**44**	**51**
	2.5	250	3.2	0.06	1.06	48	56	3.9	0.09	1.44	46	54
	3.0	300	3.5	0.07	1.18	47	54	4.1	0.10	1.68	48	56
90°	1.0	100	2.6	0.08	1.35	49	56	3.2	0.09	1.46	34	40
	1.5	150	2.8	0.10	1.61	49	57	3.4	0.12	1.93	40	46
	2.1	**210**	**3.0**	**0.11**	**1.89**	**49**	**56**	**3.7**	**0.15**	**2.46**	**44**	**51**
	2.5	250	3.2	0.13	2.11	48	56	3.9	0.17	2.88	46	54
	3.0	300	3.5	0.14	2.37	47	54	4.1	0.20	3.36	48	56
120°	1.0	100	2.6	0.11	1.80	49	56	3.2	0.12	1.94	34	40
	1.5	150	2.8	0.13	2.14	49	57	3.4	0.15	2.58	40	46
	2.1	**210**	**3.0**	**0.15**	**2.52**	**49**	**56**	**3.7**	**0.20**	**3.28**	**44**	**51**
	2.5	250	3.2	0.17	2.82	48	56	3.9	0.23	3.84	46	54
	3.0	300	3.5	0.19	3.16	47	54	4.1	0.27	4.48	48	56
180°	1.0	100	2.6	0.16	2.71	49	56	3.2	0.17	2.91	34	40
	1.5	150	2.8	0.19	3.21	49	57	3.4	0.23	3.86	40	46
	2.1	**210**	**3.0**	**0.23**	**3.78**	**49**	**56**	**3.7**	**0.30**	**4.92**	**44**	**51**
	2.5	250	3.2	0.25	4.23	48	56	3.9	0.35	5.76	46	54
	3.0	300	3.5	0.28	4.73	47	54	4.1	0.40	6.71	48	56
240°	1.0	100	2.6	0.22	3.61	49	56	3.2	0.23	3.88	34	40
	1.5	150	2.8	0.26	4.28	49	57	3.4	0.31	5.15	40	46
	2.1	**210**	**3.0**	**0.30**	**5.03**	**49**	**56**	**3.7**	**0.39**	**6.56**	**44**	**51**
	2.5	250	3.2	0.34	5.64	48	56	3.9	0.46	7.68	46	54
	3.0	300	3.5	0.38	6.31	47	54	4.1	0.54	8.95	48	56
270°	1.0	100	2.6	0.24	4.06	49	56	3.2	0.26	4.37	34	40
	1.5	150	2.8	0.29	4.82	49	57	3.4	0.35	5.80	40	46
	2.1	**210**	**3.0**	**0.34**	**5.66**	**49**	**56**	**3.7**	**0.44**	**7.38**	**44**	**51**
	2.5	250	3.2	0.38	6.34	48	56	3.9	0.52	8.65	46	54
	3.0	300	3.5	0.43	7.10	47	54	4.1	0.60	10.07	48	56
360°	1.0	100	2.6	0.32	5.41	49	56	3.2	0.35	5.83	34	40
	1.5	150	2.8	0.39	6.43	49	57	3.4	0.46	7.73	40	46
	2.1	**210**	**3.0**	**0.45**	**7.55**	**49**	**56**	**3.7**	**0.59**	**9.84**	**44**	**51**
	2.5	250	3.2	0.51	8.45	48	56	3.9	0.69	11.53	46	54
	3.0	300	3.5	0.57	9.47	47	54	4.1	0.81	13.43	48	56

Bold = Recommended pressure

PS ULTRA STANDARD NOZZLES PERFORMANCE DATA

15A ● Black — 4.6 m radius, Adjustable from 0° to 360°, Trajectory: 28°

17A ● Grey — 5.2 m radius, Adjustable from 0° to 360°, Trajectory: 28°

Arc	Pressure bar	Pressure kPa	15A Radius m	15A Flow m³/hr	15A Flow l/min	15A Precip mm/hr ■	15A Precip mm/hr ▲	17A Radius m	17A Flow m³/hr	17A Flow l/min	17A Precip mm/hr ■	17A Precip mm/hr ▲
45°	1.0	100	4.0	0.08	1.27	38	43	4.6	0.10	1.68	38	43
	1.5	150	4.3	0.09	1.51	39	45	4.9	0.12	1.94	38	44
	2.1	**210**	**4.6**	**0.11**	**1.79**	**40**	**46**	**5.2**	**0.13**	**2.23**	**39**	**45**
	2.5	250	4.9	0.12	2.00	40	46	5.5	0.15	2.46	39	45
	3.0	300	5.2	0.14	2.25	40	46	5.8	0.16	2.72	39	45
90°	1.0	100	4.0	0.15	2.53	38	43	4.6	0.20	3.36	38	43
	1.5	150	4.3	0.18	3.03	39	45	4.9	0.23	3.88	38	44
	2.1	**210**	**4.6**	**0.21**	**3.57**	**40**	**46**	**5.2**	**0.27**	**4.45**	**39**	**45**
	2.5	250	4.9	0.24	4.01	40	46	5.5	0.30	4.92	39	45
	3.0	300	5.2	0.27	4.50	40	46	5.8	0.33	5.44	39	45
120°	1.0	100	4.0	0.20	3.38	38	43	4.6	0.27	4.48	38	43
	1.5	150	4.3	0.24	4.03	39	45	4.9	0.31	5.17	38	44
	2.1	**210**	**4.6**	**0.29**	**4.76**	**40**	**46**	**5.2**	**0.36**	**5.94**	**39**	**45**
	2.5	250	4.9	0.32	5.34	40	46	5.5	0.39	6.56	39	45
	3.0	300	5.2	0.36	6.00	40	46	5.8	0.43	7.25	39	45
180°	1.0	100	4.0	0.30	5.07	38	43	4.6	0.40	6.71	38	43
	1.5	150	4.3	0.36	6.05	39	45	4.9	0.47	7.75	38	44
	2.1	**210**	**4.6**	**0.43**	**7.14**	**40**	**46**	**5.2**	**0.53**	**8.91**	**39**	**45**
	2.5	250	4.9	0.48	8.02	40	46	5.5	0.59	9.83	39	45
	3.0	300	5.2	0.54	9.00	40	46	5.8	0.65	10.87	39	45
240°	1.0	100	4.0	0.41	6.76	38	43	4.6	0.54	8.95	38	43
	1.5	150	4.3	0.48	8.07	39	45	4.9	0.62	10.34	38	44
	2.1	**210**	**4.6**	**0.57**	**9.52**	**40**	**46**	**5.2**	**0.71**	**11.88**	**39**	**45**
	2.5	250	4.9	0.64	10.69	40	46	5.5	0.79	13.11	39	45
	3.0	300	5.2	0.72	12.00	40	46	5.8	0.87	14.50	39	45
270°	1.0	100	4.0	0.46	7.60	38	43	4.6	0.60	10.07	38	43
	1.5	150	4.3	0.54	9.08	39	45	4.9	0.70	11.63	38	44
	2.1	**210**	**4.6**	**0.64**	**10.71**	**40**	**46**	**5.2**	**0.80**	**13.36**	**39**	**45**
	2.5	250	4.9	0.72	12.03	40	46	5.5	0.89	14.75	39	45
	3.0	300	5.2	0.81	13.50	40	46	5.8	0.98	16.31	39	45
360°	1.0	100	4.0	0.61	10.13	38	43	4.6	0.81	13.43	38	43
	1.5	150	4.3	0.73	12.10	39	45	4.9	0.93	15.51	38	44
	2.1	**210**	**4.6**	**0.86**	**14.28**	**40**	**46**	**5.2**	**1.07**	**17.82**	**39**	**45**
	2.5	250	4.9	0.96	16.03	40	46	5.5	1.18	19.67	39	45
	3.0	300	5.2	1.08	18.00	40	46	5.8	1.30	21.75	39	45

Bold = Recommended pressure

STRIP PATTERN NOZZLE PERFORMANCE DATA

Model	Pressure bar	Pressure kPa	Width x Length m	Flow m³/hr	Flow l/min
SS-530	1.0	100	1.2 x 8.5	0.21	3.5
	1.5	150	1.5 x 9.0	0.25	4.2
	2.0	200	1.5 x 9.0	0.29	4.9
	2.1	**210**	**1.5 x 9.1**	**0.30**	**5.0**
	2.5	250	1.5 x 9.1	0.33	5.5

Bold = Recommended pressure

PRO-SPRAY®

Models: **Shrub, 5 cm, 7.5 cm, 10 cm, 15 cm, 30 cm**
Inlet: **½"**

FEATURES

- Models: Shrub, 5 cm, 7.5 cm, 10 cm, 15 cm, 30 cm
- Compatible with all female threaded nozzles
- Side inlet (SI) version available in 15 cm and 30 cm
- Innovative directional flush plug design
- Warranty period: 5 years
- ▸ Co-molded wiper seal
- ▸ Heavy-duty spring
- ▸ Industry's strongest spray body
- ▸ Innovative seal design
- ▸ Pro-Spray check valve

OPERATING SPECIFICATIONS

- Operational pressure range: 1.0 to 7.0 bar; 100 to 700 kPa

FACTORY INSTALLED OPTIONS

- Drain check valve (up to 3 m of elevation)
- Check valve available on 10 cm, 15 cm, 30 cm
- Reclaimed water ID cap

USER INSTALLED OPTIONS

- Drain check valve (up to 3 m of elevation; P/N 437400)
- Reclaimed water ID cap (P/N 458520)
- Snap-on reclaimed cover (P/N PROSRCCAP)

▸ = *Advanced Feature descriptions on page 60*

Pro-Spray Reclaimed
Pro-Spray models include optional factory-installed purple reclaimed caps.

PRO-SPRAY – SPECIFICATION BUILDER: ORDER 1 + 2

1 Model	2 Options
PROS-00 = Shrub Adapter	**(blank)** = No option
PROS-02 = 5 cm Pop-up	**CV** = Factory-installed drain check valve *(Pop-up models only, 15 cm and 30 cm models ordered as CV will come as no side inlet)*
PROS-03 = 7.5 cm Pop-up	
PROS-04 = 10 cm Pop-up	
PROS-06-SI = 15 cm Pop-up with side inlet	**R** = Factory-installed reclaimed body cap *(shrub molded in purple)*
PROS-06 = 15 cm Pop-up (no side inlet)	
PROS-12-SI = 30 cm Pop-up with side inlet	
PROS-12 = 30 cm Pop-up (no side inlet)	

Examples:
PROS-04 = 10 cm Pop-up
PROS-06 - CV = 15 cm Pop-up, drain check valve
PROS-12 - CV - R = 30 cm Pop-up, drain check valve, reclaimed body cap

PROS-00
Retracted height: 4 cm
Inlet size: ½"

PROS-02
Retracted height: 10 cm
Pop-up height: 5 cm
Exposed diameter: 5.7 cm
Inlet size: ½"

PROS-03
Retracted height: 12.5 cm
Pop-up height: 7.5 cm
Exposed diameter: 5.7 cm
Inlet size: ½"

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

[A] **PROS-06-SI**
[B] **PROS-06**
Retracted height: 22.5 cm
Pop-up height: 15 cm
Exposed diameter: 5.7 cm
Inlet size: ½"

[A] **PROS-12-SI**
[B] **PROS-12**
Retracted height: 41 cm
Pop-up height: 30 cm
Exposed diameter: 5.7 cm
Inlet size: ½"

PRS30

PRESSURE REGULATED

Models: **Shrub, 10 cm, 15 cm, 30 cm**
Pressure Regulation: **2.1 bar; 210 kPa**

FEATURES

- Models: Shrub, 10 cm, 15 cm, 30 cm
- Side inlet (SI) version available in 15 cm and 30 cm
- Identification cap is brown for easy field ID
- Innovative directional flush plug design
- Warranty period: 5 years
- ▸ Co-molded wiper seal
- ▸ Heavy-duty spring
- ▸ Industry's strongest spray body
- ▸ Innovative seal design
- ▸ Pro-Spray® check valve
- ▸ Pressure regulated to 2.1 bar

OPERATING SPECIFICATIONS

- Operational pressure range: 1.0 to 7.0 bar; 100 to 700 kPa

FACTORY INSTALLED OPTIONS

- Drain check valve (up to 4.3 m of elevation)
- Check valve available on 10 cm, 15 cm, 30 cm
- Reclaimed water ID cap

USER INSTALLED OPTIONS

- Vandal-proof cap (P/N PROS-PRS30-VPC)
- Drain check valve (up to 4.3 m of elevation; P/N 457400)
- Reclaimed water ID cap (P/N 458560)
- Snap-on reclaimed cover (P/N PROSRCCAP)

▸ = *Advanced Feature descriptions on page 60*

PRS30 – SPECIFICATION BUILDER: ORDER 1 + 2

1 Model	2 Options
PROS-00-PRS30 = 2.1 bar regulated shrub adapter	**(blank)** = No option
PROS-04-PRS30 = 2.1 bar regulated 10 cm Pop-up	**CV** = Factory-installed drain check valve *(pop-up models only 15 cm and 30 cm models ordered as CV will come as no side inlet)*
PROS-06-SI-PRS30 = 2.1 bar regulated 15 cm Pop-up with side inlet	**R** = Factory-installed reclaimed body cap *(shrub molded in purple)*
PROS-06-PRS30 = 2.1 bar regulated 15 cm Pop-up (no side inlet)	
PROS-12-SI-PRS30 = 2.1 bar regulated 30 cm Pop-up with side inlet	
PROS-12-PRS30 = 2.1 bar regulated 30 cm Pop-up (no side inlet)	

Examples:
PROS-04-PRS30 = 10 cm Pop-up regulated at 2.1 bar; 210 kPa
PROS-06-PRS30 - CV = 15 cm Pop-up regulated at 2.1 bar; 210 kPa, drain check valve
PROS-12-PRS30 - CV - R = 30 cm Pop-up regulated at 2.1 bar; 210 kPa, drain check valve, and reclaimed body cap

PROS-00-PRS30
Retracted height: 11 cm
Inlet size: ½"

PROS-04-PRS30
Retracted height: 15.5 cm
Pop-up height: 10 cm
Exposed diameter: 5.7 cm
Inlet size: ½"

[A] **PROS-06-SI-PRS30**
[B] **PROS-06-PRS30**
Retracted height: 22.5 cm
Pop-up height: 15 cm
Exposed diameter: 5.7 cm
Inlet size: ½"

[A] **PROS-12-SI-PRS30**
[B] **PROS-12-PRS30**
Retracted height: 41 cm
Pop-up height: 30 cm
Exposed diameter: 5.7 cm
Inlet size: ½"

PRS30 Reclaimed

PRS30 models include optional factory-installed purple reclaimed caps.

Related Solutions: Works Best With

Pro-Spray Fixed Arc Nozzles and Precision Distribution Control™ Adjustable Nozzles work best with the PRS30.

PRS40

PRESSURE REGULATED

Models: **Shrub, 10 cm, 15 cm, 30 cm**
Pressure Regulation: **2.8 bar; 280 kPa**

FEATURES

- Models: Shrub, 10 cm, 15 cm, 30 cm
- Grey identification cap for easy field ID
- Innovative directional flush plug design
- Drain check valve installed with up to 4.3 m of elevation comes standard
- 15 cm and 30 cm models come standard as no side inlet, ensuring proper installation with check valve
- Warranty period: 5 years
- ▸ Co-molded wiper seal
- ▸ Heavy-duty spring
- ▸ Industry's strongest spray body
- ▸ Innovative seal design
- ▸ Pro-Spray® check valve
- ▸ Pressure regulated to 2.8 bar

OPERATING SPECIFICATIONS

- Operational pressure range: 1.0 to 7.0 bar; 100 to 700 kPa

FACTORY INSTALLED OPTIONS

- Reclaimed water ID cap

USER INSTALLED OPTIONS

- Reclaimed water ID cap (P/N 458562)
- Snap-on reclaimed cover (P/N PROSRCCAP)

▸ = *Advanced Feature descriptions on page 60*

PRS40 Reclaimed

PRS40 models include optional factory-installed purple reclaimed caps.

Related Solutions: MP Rotator

PRS40 is designed specifically for the MP Rotator.

PRS40 – SPECIFICATION BUILDER: ORDER 1 + 2

1 Model	2 Options
PROS-00-PRS40 = 2.8 bar regulated shrub adapter	**(blank)** = No option
PROS-04-PRS40 = 2.8 bar regulated 10 cm Pop-up	**CV** = Factory-installed drain check valve *(pop-up models only)*
PROS-06-PRS40 = 2.8 bar regulated 15 cm Pop-up	**R** = Factory-installed reclaimed body cap *(shrub molded in purple)*
PROS-12-PRS40 = 2.8 bar regulated 30 cm Pop-up	

Examples:

PROS-04-PRS40 = 10 cm Pop-up regulated at 2.8 bar
PROS-06-PRS40 - CV = 15 cm Pop-up regulated at 2.8 bar and drain check valve
PROS-12-PRS40 - CV - R = 30 cm Pop-up regulated at 2.8 bar, drain check valve and reclaimed body cap

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"

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"

NOZZLES

PRECISION DISTRIBUTION CONTROL™ ADJUSTABLE NOZZLES

FEATURES

- Crisp, well-defined edges
- Matched precipitation rate on each nozzle from 8A to 17A
- Easy grip top for simple adjustment
- Large water droplets cut through wind
- Even distribution results in better coverage
- 1.2 m and 1.8 m models provide additional flexibility
- Colour-coded for easy field identification
- Adjustable from 0° to 360°

OPERATING SPECIFICATIONS

- Recommended operating pressure: 2.1 bar and 210 kPa
- Specify the Pro-Spray® PRS30 pop-up for accurate pressure regulation of 2.1 bar; 210 kPa

4A Nozzle
Radius: 1.2 m

6A Nozzle
Radius: 1.8 m

8A Nozzle
Radius: 2.4 m

10A Nozzle
Radius: 3.0 m

12A Nozzle
Radius: 3.7 m

15A Nozzle
Radius: 4.6 m

17A Nozzle
Radius: 5.2 m

PRECISION DISTRIBUTION CONTROL™ ADJUSTABLE NOZZLES PERFORMANCE DATA

4A — Lt. Green — 1.2 m radius, Adjustable from 0° to 360°, Trajectory: 0°

6A — Lt. Blue — 1.8 m radius, Adjustable from 0° to 360°, Trajectory: 0°

8A — Brown — 2.4 m radius, Adjustable from 0° to 360°, Trajectory: 0°

Arc	Pressure		4A Radius	4A Flow		4A Precip mm/hr		6A Radius	6A Flow		6A Precip mm/hr		8A Radius	8A Flow		8A Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲	m	m³/hr	l/min	■	▲	m	m³/hr	l/min	■	▲
45°	1.0	100	0.9	0.02	0.31	187	216	1.5	0.03	0.54	117	136	2.0	0.04	0.62	77	89
	1.5	150	1.0	0.02	0.39	178	206	1.6	0.04	0.60	108	124	2.2	0.04	0.72	72	83
	2.1	**210**	**1.2**	**0.03**	**0.48**	**167**	**193**	**1.8**	**0.04**	**0.65**	**98**	**114**	**2.4**	**0.05**	**0.83**	**67**	**77**
	2.5	250	1.3	0.03	0.56	158	183	1.9	0.04	0.70	92	106	2.6	0.05	0.91	63	73
	3.0	300	1.4	0.04	0.64	149	172	2.1	0.05	0.75	86	99	2.9	0.06	1.01	59	68
90°	1.0	100	0.9	0.02	0.31	93	108	1.5	0.06	1.08	116	134	2.0	0.07	1.24	77	89
	1.5	150	1.0	0.02	0.39	89	103	1.6	0.07	1.21	109	126	2.2	0.09	1.44	72	83
	2.1	**210**	**1.2**	**0.03**	**0.48**	**84**	**97**	**1.8**	**0.08**	**1.35**	**102**	**118**	**2.4**	**0.10**	**1.65**	**67**	**77**
	2.5	250	1.3	0.03	0.56	79	91	1.9	0.09	1.47	97	112	2.6	0.11	1.82	63	73
	3.0	300	1.4	0.04	0.64	75	86	2.1	0.10	1.61	92	106	2.9	0.12	2.02	59	68
120°	1.0	100	0.9	0.06	0.97	221	255	1.5	0.08	1.26	102	118	2.0	0.10	1.66	77	89
	1.5	150	1.0	0.07	1.10	188	217	1.6	0.09	1.43	97	112	2.2	0.11	1.92	72	83
	2.1	**210**	**1.2**	**0.07**	**1.25**	**162**	**187**	**1.8**	**0.10**	**1.61**	**91**	**105**	**2.4**	**0.13**	**2.20**	**67**	**77**
	2.5	250	1.3	0.08	1.36	146	168	1.9	0.11	1.76	87	100	2.6	0.15	2.43	63	73
	3.0	300	1.4	0.09	1.49	131	151	2.1	0.12	1.93	82	95	2.9	0.16	2.69	59	68
180°	1.0	100	0.9	0.07	1.18	178	206	1.5	0.10	1.70	92	106	2.0	0.15	2.49	77	89
	1.5	150	1.0	0.08	1.38	157	181	1.6	0.12	1.96	88	102	2.2	0.17	2.87	72	83
	2.1	**210**	**1.2**	**0.10**	**1.60**	**139**	**160**	**1.8**	**0.13**	**2.24**	**84**	**97**	**2.4**	**0.20**	**3.30**	**67**	**77**
	2.5	250	1.3	0.11	1.78	127	146	1.9	0.15	2.47	81	94	2.6	0.22	3.65	63	73
	3.0	300	1.4	0.12	1.98	115	133	2.1	0.16	2.72	78	90	2.9	0.24	4.03	59	68
240°	1.0	100	0.9	0.12	1.94	220	254	1.5	0.15	2.44	99	114	2.0	0.20	3.32	77	89
	1.5	150	1.0	0.13	2.24	192	221	1.6	0.17	2.83	96	111	2.2	0.23	3.83	72	83
	2.1	**210**	**1.2**	**0.16**	**2.59**	**168**	**194**	**1.8**	**0.20**	**3.28**	**92**	**107**	**2.4**	**0.26**	**4.40**	**67**	**77**
	2.5	250	1.3	0.17	2.86	153	177	1.9	0.22	3.63	89	103	2.6	0.29	4.86	63	73
	3.0	300	1.4	0.19	3.17	139	160	2.1	0.24	4.03	86	99	2.9	0.32	5.38	59	68
270°	1.0	100	0.9	0.13	2.09	211	244	1.5	0.18	3.08	111	128	2.0	0.22	3.73	77	89
	1.5	150	1.0	0.14	2.40	183	211	1.6	0.21	3.52	106	122	2.2	0.26	4.31	72	83
	2.1	**210**	**1.2**	**0.16**	**2.75**	**159**	**183**	**1.8**	**0.24**	**4.02**	**101**	**116**	**2.4**	**0.30**	**4.95**	**67**	**77**
	2.5	250	1.3	0.18	3.02	144	166	1.9	0.27	4.42	97	112	2.6	0.33	5.47	63	73
	3.0	300	1.4	0.20	3.33	130	150	2.1	0.29	4.87	92	107	2.9	0.36	6.05	59	68
360°	1.0	100	0.9	0.14	2.26	171	197	1.5	0.21	3.57	96	111	2.0	0.30	4.97	77	89
	1.5	150	1.0	0.16	2.60	148	171	1.6	0.24	4.07	92	106	2.2	0.34	5.75	72	83
	2.1	**210**	**1.2**	**0.18**	**2.98**	**129**	**149**	**1.8**	**0.28**	**4.62**	**87**	**100**	**2.4**	**0.40**	**6.61**	**67**	**77**
	2.5	250	1.3	0.20	3.29	117	135	1.9	0.30	5.06	83	96	2.6	0.44	7.29	63	73
	3.0	300	1.4	0.22	3.63	106	122	2.1	0.33	5.56	79	92	2.9	0.48	8.07	59	68

Bold = Recommended pressure

Note: The Pro-Spray PRS30's built-in pressure regulator controls output to a maximum of 2.1 bar; 210 kPa. Adjusting the radius reduction screw may be required to achieve catalogue radius and flow.

PRECISION DISTRIBUTION CONTROL™ ADJUSTABLE NOZZLES PERFORMANCE DATA

10A — 3.0 m radius, Adjustable from 0° to 360°, Trajectory: 15°
● Red

12A — 3.7 m radius, Adjustable from 0° to 360°, Trajectory: 28°
● Green

15A — 4.6 m radius, Adjustable from 0° to 360°, Trajectory: 28°
● Black

Arc	Pressure		10A Radius	10A Flow		10A Precip mm/hr		12A Radius	12A Flow		12A Precip mm/hr		15A Radius	15A Flow		15A Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲	m	m³/hr	l/min	■	▲	m	m³/hr	l/min	■	▲
45°	1.0	100	2.6	0.04	0.68	49	56	3.2	0.04	0.73	34	40	4.0	0.08	1.27	38	43
	1.5	150	2.8	0.05	0.80	49	57	3.4	0.06	0.97	40	46	4.3	0.09	1.51	39	45
	2.1	**210**	**3.0**	**0.06**	**0.94**	**49**	**56**	**3.7**	**0.07**	**1.23**	**44**	**51**	**4.6**	**0.11**	**1.79**	**40**	**46**
	2.5	250	3.2	0.06	1.06	48	56	3.9	0.09	1.44	46	54	4.9	0.12	2.00	40	46
	3.0	300	3.5	0.07	1.18	47	54	4.1	0.10	1.68	48	56	5.2	0.14	2.25	40	46
90°	1.0	100	2.6	0.08	1.35	49	56	3.2	0.09	1.46	34	40	4.0	0.15	2.53	38	43
	1.5	150	2.8	0.10	1.61	49	57	3.4	0.12	1.93	40	46	4.3	0.18	3.03	39	45
	2.1	**210**	**3.0**	**0.11**	**1.89**	**49**	**56**	**3.7**	**0.15**	**2.46**	**44**	**51**	**4.6**	**0.21**	**3.57**	**40**	**46**
	2.5	250	3.2	0.13	2.11	48	56	3.9	0.17	2.88	46	54	4.9	0.24	4.01	40	46
	3.0	300	3.5	0.14	2.37	47	54	4.1	0.20	3.36	48	56	5.2	0.27	4.50	40	46
120°	1.0	100	2.6	0.11	1.80	49	56	3.2	0.12	1.94	34	40	4.0	0.20	3.38	38	43
	1.5	150	2.8	0.13	2.14	49	57	3.4	0.15	2.58	40	46	4.3	0.24	4.03	39	45
	2.1	**210**	**3.0**	**0.15**	**2.52**	**49**	**56**	**3.7**	**0.20**	**3.28**	**44**	**51**	**4.6**	**0.29**	**4.76**	**40**	**46**
	2.5	250	3.2	0.17	2.82	48	56	3.9	0.23	3.84	46	54	4.9	0.32	5.34	40	46
	3.0	300	3.5	0.19	3.16	47	54	4.1	0.27	4.48	48	56	5.2	0.36	6.00	40	46
180°	1.0	100	2.6	0.16	2.71	49	56	3.2	0.17	2.91	34	40	4.0	0.30	5.07	38	43
	1.5	150	2.8	0.19	3.21	49	57	3.4	0.23	3.86	40	46	4.3	0.36	6.05	39	45
	2.1	**210**	**3.0**	**0.23**	**3.78**	**49**	**56**	**3.7**	**0.30**	**4.92**	**44**	**51**	**4.6**	**0.43**	**7.14**	**40**	**46**
	2.5	250	3.2	0.25	4.23	48	56	3.9	0.35	5.76	46	54	4.9	0.48	8.02	40	46
	3.0	300	3.5	0.28	4.73	47	54	4.1	0.40	6.71	48	56	5.2	0.54	9.00	40	46
240°	1.0	100	2.6	0.22	3.61	49	56	3.2	0.23	3.88	34	40	4.0	0.41	6.76	38	43
	1.5	150	2.8	0.26	4.28	49	57	3.4	0.31	5.15	40	46	4.3	0.48	8.07	39	45
	2.1	**210**	**3.0**	**0.30**	**5.03**	**49**	**56**	**3.7**	**0.39**	**6.56**	**44**	**51**	**4.6**	**0.57**	**9.52**	**40**	**46**
	2.5	250	3.2	0.34	5.64	48	56	3.9	0.46	7.68	46	54	4.9	0.64	10.69	40	46
	3.0	300	3.5	0.38	6.31	47	54	4.1	0.54	8.95	48	56	5.2	0.72	12.00	40	46
270°	1.0	100	2.6	0.24	4.06	49	56	3.2	0.26	4.37	34	40	4.0	0.46	7.60	38	43
	1.5	150	2.8	0.29	4.82	49	57	3.4	0.35	5.80	40	46	4.3	0.54	9.08	39	45
	2.1	**210**	**3.0**	**0.34**	**5.66**	**49**	**56**	**3.7**	**0.44**	**7.38**	**44**	**51**	**4.6**	**0.64**	**10.71**	**40**	**46**
	2.5	250	3.2	0.38	6.34	48	56	3.9	0.52	8.65	46	54	4.9	0.72	12.03	40	46
	3.0	300	3.5	0.43	7.10	47	54	4.1	0.60	10.07	48	56	5.2	0.81	13.50	40	46
360°	1.0	100	2.6	0.32	5.41	49	56	3.2	0.35	5.83	34	40	4.0	0.61	10.13	38	43
	1.5	150	2.8	0.39	6.43	49	57	3.4	0.46	7.73	40	46	4.3	0.73	12.10	39	45
	2.1	**210**	**3.0**	**0.45**	**7.55**	**49**	**56**	**3.7**	**0.59**	**9.84**	**44**	**51**	**4.6**	**0.86**	**14.28**	**40**	**46**
	2.5	250	3.2	0.51	8.45	48	56	3.9	0.69	11.53	46	54	4.9	0.96	16.03	40	46
	3.0	300	3.5	0.57	9.47	47	54	4.1	0.81	13.43	48	56	5.2	1.08	18.00	40	46

Bold = Recommended pressure
Note: The Pro-Spray PRS30's built-in pressure regulator controls output to a maximum of 2.1 bar; 210 kPa. Adjusting the radius reduction screw may be required to achieve catalogue radius and flow.

PRECISION DISTRIBUTION CONTROL™ ADJUSTABLE NOZZLES PERFORMANCE DATA

17A
● Grey

5.2 m radius
Adjustable from 0° to 360°
Trajectory: 28°

Arc	Pressure bar	Pressure kPa	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
45°	1.0	100	4.6	0.10	1.68	38	43
	1.5	150	4.9	0.12	1.94	38	44
	2.1	**210**	**5.2**	**0.13**	**2.23**	**39**	**45**
	2.5	250	5.5	0.15	2.46	39	45
	3.0	300	5.8	0.16	2.72	39	45
90°	1.0	100	4.6	0.20	3.36	38	43
	1.5	150	4.9	0.23	3.88	38	44
	2.1	**210**	**5.2**	**0.27**	**4.45**	**39**	**45**
	2.5	250	5.5	0.30	4.92	39	45
	3.0	300	5.8	0.33	5.44	39	45
120°	1.0	100	4.6	0.27	4.48	38	43
	1.5	150	4.9	0.31	5.17	38	44
	2.1	**210**	**5.2**	**0.36**	**5.94**	**39**	**45**
	2.5	250	5.5	0.39	6.56	39	45
	3.0	300	5.8	0.43	7.25	39	45
180°	1.0	100	4.6	0.40	6.71	38	43
	1.5	150	4.9	0.47	7.75	38	44
	2.1	**210**	**5.2**	**0.53**	**8.91**	**39**	**45**
	2.5	250	5.5	0.59	9.83	39	45
	3.0	300	5.8	0.65	10.87	39	45
240°	1.0	100	4.6	0.54	8.95	38	43
	1.5	150	4.9	0.62	10.34	38	44
	2.1	**210**	**5.2**	**0.71**	**11.88**	**39**	**45**
	2.5	250	5.5	0.79	13.11	39	45
	3.0	300	5.8	0.87	14.50	39	45
270°	1.0	100	4.6	0.60	10.07	38	43
	1.5	150	4.9	0.70	11.63	38	44
	2.1	**210**	**5.2**	**0.80**	**13.36**	**39**	**45**
	2.5	250	5.5	0.89	14.75	39	45
	3.0	300	5.8	0.98	16.31	39	45
360°	1.0	100	4.6	0.81	13.43	38	43
	1.5	150	4.9	0.93	15.51	38	44
	2.1	**210**	**5.2**	**1.07**	**17.82**	**39**	**45**
	2.5	250	5.5	1.18	19.67	39	45
	3.0	300	5.8	1.30	21.75	39	45

Bold = Recommended pressure
Note: The Pro-Spray PRS30's built-in pressure regulator controls output to a maximum of 2.1 bar; 210 kPa. Adjusting the radius reduction screw may be required to achieve catalogue radius and flow.

Precision Distribution Control™ Adjustable Nozzle

PRO-SPRAY® FIXED ARC NOZZLES

FEATURES

- Colour-coded for easy field identification
- Optimum droplet size minimises misting while maximising uniformity

OPERATING SPECIFICATIONS

- Recommended operating pressure: 2.1 bar; 210 kPa
- Specify the Pro-Spray® PRS30 pop-up for accurate pressure regulation of 2.1 bar; 210 kPa

PRO-SPRAY® FIXED ARC NOZZLES

ARC	5	8	10	12	15	17
Q						
T	Use 4A/6A Nozzle					Use 17A Nozzle
H						
TT	Use 4A/6A Nozzle	Use 8A Nozzle	Use 10A Nozzle			Use 17A Nozzle
TQ	Use 4A/6A Nozzle	Use 8A Nozzle	Use 10A Nozzle			Use 17A Nozzle
F						Use 17A Nozzle
	(1.5 m)	(2.4 m)	(3.0 m)	(3.7 m)	(4.6 m)	(5.2 m)

PRO-SPRAY® FIXED ARC NOZZLES PERFORMANCE DATA

5 Blue — 1.5 m radius, Fixed: ¼, ½, Full, Trajectory: 0°

8 Brown — 2.4 m radius, Fixed: ¼, ⅓, ½, Full, Trajectory: 0°

10 Red — 3.0 m radius, Fixed: ¼, ⅓, ½, Full, Trajectory: 15°

Arc	Position	Pressure		5 Radius	5 Flow		5 Precip mm/hr		8 Radius	8 Flow		8 Precip mm/hr		10 Radius	10 Flow		10 Precip mm/hr	
		bar	kPa	m	m³/hr	l/min	■	▲	m	m³/hr	l/min	■	▲	m	m³/hr	l/min	■	▲
90°	Q	1.0	100	1.1	0.02	0.30	60	69	1.7	0.04	0.62	51	59	2.4	0.07	1.08	45	52
		1.5	150	1.3	0.02	0.38	54	62	2.1	0.05	0.84	46	53	2.7	0.08	1.33	44	50
		2.0	200	1.5	0.03	0.45	48	55	2.4	0.06	1.00	42	48	3.0	0.09	1.53	41	47
		2.1	**210**	**1.5**	**0.03**	**0.46**	**49**	**57**	**2.4**	**0.06**	**1.03**	**43**	**49**	**3.0**	**0.09**	**1.57**	**42**	**48**
		2.5	250	1.7	0.03	0.51	42	49	2.7	0.07	1.13	37	43	3.3	0.10	1.71	38	44
120°	T	1.0	100						1.7	0.05	0.83	51	59	2.4	0.09	1.44	45	52
		1.5	150						2.1	0.07	1.12	46	53	2.7	0.11	1.77	44	50
		2.0	200	**Use 4A or 6A Nozzle**					2.4	0.08	1.33	42	48	3.0	0.12	2.04	41	47
		2.1	**210**						**2.4**	**0.08**	**1.37**	**43**	**49**	**3.0**	**0.13**	**2.09**	**42**	**48**
		2.5	250						2.7	0.09	1.51	37	43	3.3	0.14	2.28	38	44
180°	H	1.0	100	1.1	0.04	0.60	60	69	1.7	0.08	1.33	55	64	2.4	0.13	2.17	45	52
		1.5	150	1.3	0.05	0.76	54	62	2.1	0.10	1.69	46	53	2.7	0.16	2.65	44	50
		2.0	200	1.5	0.05	0.90	48	55	2.4	0.12	1.99	42	48	3.0	0.18	3.06	41	47
		2.1	**210**	**1.5**	**0.06**	**0.92**	**49**	**57**	**2.4**	**0.12**	**2.05**	**43**	**49**	**3.0**	**0.19**	**3.14**	**42**	**48**
		2.5	250	1.7	0.06	1.02	42	49	2.7	0.14	2.27	37	43	3.3	0.21	3.43	38	44
240°	TT	1.0	100															
		1.5	150															
		2.0	200	**Use 4A or 6A Nozzle**					**Use 8A Nozzle**					**Use 10A Nozzle**				
		2.1	**210**															
		2.5	250															
270°	TQ	1.0	100															
		1.5	150															
		2.0	200	**Use 4A or 6A Nozzle**					**Use 8A Nozzle**					**Use 10A Nozzle**				
		2.1	**210**															
		2.5	250															
360°	F	1.0	100	1.1	0.07	1.20	60	69	1.7	0.16	2.67	55	64	2.4	0.26	4.33	45	52
		1.5	150	1.3	0.09	1.52	54	62	2.1	0.20	3.37	46	53	2.7	0.32	5.31	44	50
		2.0	200	1.5	0.11	1.79	48	55	2.4	0.24	3.99	42	48	3.0	0.37	6.13	41	47
		2.1	**210**	**1.5**	**0.11**	**1.85**	**49**	**57**	**2.4**	**0.25**	**4.10**	**43**	**49**	**3.0**	**0.38**	**6.28**	**42**	**48**
		2.5	250	1.7	0.12	2.04	42	49	2.7	0.27	4.54	37	43	3.3	0.41	6.85	38	44

Bold = Recommended pressure

PRO-SPRAY® FIXED ARC NOZZLES PERFORMANCE DATA

12 Green — 3.7 m radius; Fixed: ¼, ⅓, ½, ⅔, ¾, Full; Trajectory: 28°

15 Black — 4.6 m radius; Fixed: ¼, ⅓, ½, ⅔, ¾, Full; Trajectory: 28°

17 Grey — 5.2 m radius; Fixed: ¼, ½; Trajectory: 28°

Arc	Position	Pressure bar	Pressure kPa	12 Radius m	12 Flow m³/hr	12 Flow l/min	12 Precip mm/hr ■	12 Precip mm/hr ▲	15 Radius m	15 Flow m³/hr	15 Flow l/min	15 Precip mm/hr ■	15 Precip mm/hr ▲	17 Radius m	17 Flow m³/hr	17 Flow l/min	17 Precip mm/hr ■	17 Precip mm/hr ▲
90°	Q	1.0	100	3.0	0.10	1.58	42	49	3.9	0.15	2.50	39	46	4.7	0.19	3.17	34	40
		1.5	150	3.4	0.12	2.00	42	48	4.2	0.18	3.06	42	48	4.9	0.23	3.88	39	45
		2.0	200	3.7	0.14	2.37	41	48	4.6	0.21	3.54	40	46	5.2	0.27	4.48	40	46
		2.1	**210**	**3.7**	**0.15**	**2.43**	**43**	**49**	**4.6**	**0.22**	**3.62**	**41**	**47**	**5.2**	**0.28**	**4.59**	**41**	**47**
		2.5	250	4.0	0.16	2.69	40	47	4.9	0.24	3.95	40	46	5.5	0.30	5.01	40	46
120°	T	1.0	100	3.0	0.13	2.11	42	49	3.9	0.20	3.33	39	46					
		1.5	150	3.4	0.16	2.67	42	48	4.2	0.24	4.08	42	48					
		2.0	200	3.7	0.19	3.16	41	48	4.6	0.28	4.71	40	46	**Use 17A Nozzle**				
		2.1	**210**	**3.7**	**0.19**	**3.25**	**43**	**49**	**4.6**	**0.29**	**4.83**	**41**	**47**					
		2.5	250	4.0	0.22	3.59	40	47	4.9	0.32	5.27	40	46					
180°	H	1.0	100	3.0	0.19	3.17	42	49	3.9	0.30	5.00	39	46	4.7	0.38	6.33	34	40
		1.5	150	3.4	0.24	4.01	42	48	4.2	0.37	6.12	42	48	4.9	0.47	7.76	39	45
		2.0	200	3.7	0.28	4.73	41	48	4.6	0.42	7.07	40	46	5.2	0.54	8.96	40	46
		2.1	**210**	**3.7**	**0.29**	**4.87**	**43**	**49**	**4.6**	**0.43**	**7.25**	**41**	**47**	**5.2**	**0.55**	**9.18**	**41**	**47**
		2.5	250	4.0	0.32	5.39	40	47	4.9	0.47	7.91	40	46	5.5	0.60	10.01	40	46
240°	TT	1.0	100	3.0	0.25	4.22	42	49	3.9	0.40	6.67	39	46					
		1.5	150	3.4	0.32	5.34	42	48	4.2	0.49	8.16	42	48					
		2.0	200	3.7	0.38	6.31	41	48	4.6	0.57	9.43	40	46	**Use 17A Nozzle**				
		2.1	**210**	**3.7**	**0.39**	**6.49**	**43**	**49**	**4.6**	**0.58**	**9.66**	**41**	**47**					
		2.5	250	4.0	0.43	7.18	40	47	4.9	0.63	10.54	40	46					
270°	TQ	1.0	100	3.0	0.29	4.75	42	49	3.9	0.45	7.50	39	46					
		1.5	150	3.4	0.36	6.01	42	48	4.2	0.55	9.19	42	48					
		2.0	200	3.7	0.43	7.10	41	48	4.6	0.64	10.61	40	46	**Use 17A Nozzle**				
		2.1	**210**	**3.7**	**0.44**	**7.30**	**43**	**49**	**4.6**	**0.65**	**10.87**	**41**	**47**					
		2.5	250	4.0	0.48	8.08	40	47	4.9	0.71	11.86	40	46					
360°	F	1.0	100	3.0	0.38	6.33	42	49	3.9	0.60	10.00	39	46					
		1.5	150	3.4	0.48	8.01	42	48	4.2	0.73	12.25	42	48					
		2.0	200	3.7	0.57	9.47	41	48	4.6	0.85	14.14	40	46	**Use 17A Nozzle**				
		2.1	**210**	**3.7**	**0.58**	**9.74**	**43**	**49**	**4.6**	**0.87**	**14.49**	**41**	**47**					
		2.5	250	4.0	0.65	10.78	40	47	4.9	0.95	15.81	40	46					

Bold = Recommended pressure

SHORT RADIUS NOZZLES

FEATURES

- Specifically designed for controlled irrigation of close-in spaces
- Built to last in harsh conditions
- Available in 0.6 m, 1.2 m and 1.8 m radius versions

SHORT RADIUS NOZZLES PERFORMANCE DATA

Nozzle Lt. Brown

Arc	Pressure bar	Pressure kPa	Position	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
90°	1.0	100	2Q	0.6	0.01	0.23	153	177
	1.5	150		0.6	0.02	0.28	188	217
	2.0	200		0.6	0.02	0.33	217	250
	2.1	**210**		**0.6**	**0.02**	**0.33**	**222**	**257**
	2.5	250		0.6	0.02	0.36	242	280
180°	1.0	100	2H	0.6	0.03	0.46	153	177
	1.5	150		0.6	0.03	0.56	188	217
	2.0	200		0.6	0.04	0.65	217	250
	2.1	**210**		**0.6**	**0.04**	**0.67**	**222**	**257**
	2.5	250		0.6	0.04	0.73	242	280

Nozzle Lt. Green

Arc	Pressure bar	Pressure kPa	Position	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
90°	1.0	100	4Q	1.2	0.04	0.69	115	133
	1.5	150		1.2	0.05	0.77	128	147
	2.0	200		1.2	0.05	0.82	137	158
	2.1	**210**		**1.2**	**0.05**	**0.84**	**139**	**160**
	2.5	250		1.2	0.05	0.87	145	168
180°	1.0	100	4H	1.2	0.08	1.39	115	133
	1.5	150		1.2	0.09	1.54	128	147
	2.0	200		1.2	0.10	1.65	137	158
	2.1	**210**		**1.2**	**0.10**	**1.67**	**139**	**160**
	2.5	250		1.2	0.10	1.74	145	168

Nozzle Lt. Blue

Arc	Pressure bar	Pressure kPa	Position	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
90°	1.0	100	6Q	1.8	0.11	1.84	136	157
	1.5	150		1.8	0.11	1.93	143	165
	2.0	200		1.8	0.12	2.00	148	171
	2.1	**210**		**1.8**	**0.12**	**2.01**	**149**	**172**
	2.5	250		1.8	0.22	2.06	152	176
180°	1.0	100	6H	1.8	0.22	3.67	136	157
	1.5	150		1.8	0.22	3.86	143	165
	2.0	200		1.8	0.22	4.00	148	171
	2.1	**210**		**1.8**	**0.22**	**4.03**	**149**	**172**
	2.5	250		1.8	0.23	4.12	152	176

Bold = Recommended pressure

2Q Nozzle
Radius: 0.6 m

2H Nozzle
Radius: 0.6 m

4Q Nozzle
Radius: 1.2 m

4H Nozzle
Radius: 1.2 m

6Q Nozzle
Radius: 1.8 m

6H Nozzle
Radius: 1.8 m

STRIP PATTERN NOZZLES

FEATURES

- Specifically designed for accurate coverage of strip areas
- Available in an array of models built to water unique spaces
- Built to last in harsh conditions

STRIP PATTERN NOZZLE PERFORMANCE DATA

Arc	Pressure bar	Pressure kPa	Width x Length m	Flow m^3/hr	Flow l/min
LCS-515	1.0	100	1.2 x 4.2	0.10	1.7
	1.5	150	1.2 x 4.3	0.13	2.1
	2.0	200	1.5 x 4.5	0.15	2.4
	2.1	**210**	**1.5 x 4.5**	**0.15**	**2.5**
	2.5	250	1.5 x 4.5	0.16	2.7
RCS-515	1.0	100	1.2 x 4.2	0.10	1.7
	1.5	150	1.2 x 4.3	0.13	2.1
	2.0	200	1.5 x 4.5	0.15	2.4
	2.1	**210**	**1.5 x 4.5**	**0.15**	**2.5**
	2.5	250	1.5 x 4.5	0.16	2.7
SS-530	1.0	100	1.2 x 8.5	0.21	3.5
	1.5	150	1.5 x 9.0	0.25	4.2
	2.0	200	1.5 x 9.0	0.29	4.9
	2.1	**210**	**1.5 x 9.1**	**0.30**	**5.0**
	2.5	250	1.5 x 9.1	0.33	5.5
ES-515	1.0	100	1.1 x 4.2	0.10	1.7
	1.5	150	1.2 x 4.3	0.13	2.1
	2.0	200	1.5 x 4.5	0.15	2.4
	2.1	**210**	**1.5 x 4.5**	**0.15**	**2.5**
	2.5	250	1.5 x 4.5	0.16	2.7
CS-530	1.0	100	1.2 x 8.5	0.21	3.5
	1.5	150	1.5 x 9.0	0.25	4.2
	2.0	200	1.5 x 9.0	0.29	4.9
	2.1	**210**	**1.5 x 9.1**	**0.30**	**5.0**
	2.5	250	1.5 x 9.1	0.33	5.5
SS-918	1.0	100	2.4 x 5.2	0.27	4.5
	1.5	150	2.7 x 5.5	0.33	5.5
	2.0	200	2.7 x 5.5	0.38	6.4
	2.1	**210**	**2.7 x 5.5**	**0.39**	**6.5**
	2.5	250	2.7 x 5.5	0.43	7.1

Bold = Recommended pressure

Left Corner Strip
Rectangle: 1.5 m x 4.5 m

Right Corner Strip
Rectangle: 1.5 m x 4.5 m

Side Strip
Rectangle: 1.5 m x 9.1 m

Side Strip
Rectangle: 2.7 m x 5.5 m

Center Strip
Rectangle: 1.5 m x 9.1 m

End Strip
Rectangle: 1.5 m x 4.5 m

STREAM NOZZLES

FEATURES

- Adjustable Arc from 25°-360°
- Offered in 2 adjustable radius options
- Lower application rate to avoid runoff
- Multiple streams provide even coverage

MODEL S-8A STREAM SPRAY NOZZLE PERFORMANCE DATA

Arc	Pressure bar	Pressure kPa	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
90°	1.0	100	2.1	0.05	0.9	52	60
	1.5	150	2.2	0.07	1.1	55	64
	2.0	200	2.4	0.08	1.4	57	66
	2.1	**210**	**2.4**	**0.09**	**1.4**	**57**	**66**
	2.5	250	2.6	0.10	1.6	58	67
180°	1.0	100	2.1	0.12	1.9	55	63
	1.5	150	2.2	0.13	2.1	51	58
	2.0	200	2.4	0.14	2.3	47	54
	2.1	**210**	**2.4**	**0.14**	**2.3**	**46**	**53**
	2.5	250	2.6	0.15	2.4	44	50
360°	1.0	100	2.1	0.24	4.0	56	65
	1.5	150	2.2	0.25	4.2	50	58
	2.0	200	2.4	0.26	4.4	45	52
	2.1	**210**	**2.4**	**0.26**	**4.4**	**44**	**51**
	2.5	250	2.6	0.27	4.6	41	47

Bold = Recommended pressure

MODEL S-16A STREAM SPRAY NOZZLE PERFORMANCE DATA

Arc	Pressure bar	Pressure kPa	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
90°	1.0	100	4.3	0.08	1.4	18	21
	1.5	150	4.6	0.10	1.6	18	21
	2.0	200	5.0	0.11	1.9	18	21
	2.1	**210**	**5.0**	**0.11**	**1.9**	**18**	**21**
	2.5	250	5.3	0.13	2.1	18	21
180°	1.0	100	4.3	0.14	2.3	14	17
	1.5	150	4.6	0.17	2.8	15	18
	2.0	200	5.0	0.20	3.3	16	18
	2.1	**210**	**5.0**	**0.20**	**3.4**	**16**	**19**
	2.5	250	5.3	0.23	3.8	16	19
360°	1.0	100	4.3	0.23	3.9	12	14
	1.5	150	4.6	0.30	5.0	14	16
	2.0	200	5.0	0.36	6.1	15	17
	2.1	**210**	**5.0**	**0.38**	**6.3**	**15**	**17**
	2.5	250	5.3	0.43	7.2	16	18

Bold = Recommended pressure

STREAM NOZZLES

S-8A
Radius: 2.1 m to 2.6 m

S-16A
Radius: 4.3 m to 5.3 m

S-8A

BUBBLER NOZZLES

FEATURES

- Pressure compensation ensures uniform output across various pressures
- Provides the correct amount of water, reducing runoff or waste
- Nozzle threaded for use with Pro-Spray®

MULTI-STREAM BUBBLER PERFORMANCE DATA

Arc		Model	Flow m³/hr	Flow l/min	Radius m
		MSBN-25Q	0.06	0.9	0.30
		MSBN-50Q	0.11	1.9	0.46
		MSBN-50H	0.11	1.9	0.30
		MSBN-10H	0.23	3.8	0.46
		MSBN-10F	0.23	3.8	0.30
		MSBN-20F	0.45	7.6	0.46

Notes:
Typical spacing 0.6 to 1.2 m. Flows shown for pressures between 1.0 and 4.8 bar; 100 and 480 kPa.

Multi-Stream Bubbler

MULTI-STREAM BUBBLER NOZZLES

MSBN-25Q
Flow: 0.06 m³/hr; 0.9 l/min

MSBN-50Q/50H
Flow: 0.11 m³/hr; 1.9 l/min

MSBN-10H/10F
Flow: 0.23 m³/hr; 3.8 l/min

MSBN-20F
Flow: 0.45 m³/hr; 7.6 l/min

PCN PERFORMANCE DATA

	Model	Flow m³/hr	Flow l/min	Pattern Type
	25	0.06	0.9	Trickle
	50	0.11	1.9	Trickle
	10	0.23	3.8	Umbrella
	20	0.46	7.6	Umbrella

Notes:
Typical spacing 0.3 to 0.9 m. Flows shown for pressures between 1.0 and 4.8 bar; 100 and 480 kPa.

PCN

PRESSURE COMPENSATING BUBBLER NOZZLES

PCN-25
Flow: 0.06 m³/hr; 0.9 l/min

PCN-50
Flow: 0.11 m³/hr; 1.9 l/min

PCN-10
Flow: 0.23 m³/hr; 3.8 l/min

PCN-20
Flow: 0.46 m³/hr; 7.6 l/min

MSBN Installed on PROS-04

Combining Hunter Bubbler Nozzles with the Pro-Spray provides the watering precision of pressure compensating bubblers paired with the benefit of retracting the nozzle out of sight.

BUBBLERS

FEATURES

- Pressure compensation ensures uniform output across various pressures
- ½" inlet
- Flow marked top for easy identification

PCB PERFORMANCE DATA

	Model	Flow m³/hr	Flow l/min	Pattern Type
	25	0.06	0.9	Trickle
	50	0.11	1.9	Trickle
	10	0.23	3.8	Umbrella
	20	0.45	7.6	Umbrella

Notes:
Typical spacing 0.6 to 1.2 m. Flows shown for pressures between 1.0 and 4.8 bar; 100 and 480 kPa.

PCB

PRESSURE COMPENSATING BUBBLERS

PCB

PCB-R

AFB PERFORMANCE DATA

	Model	Flow m³/hr	Flow l/min	Pattern Type
	AFB	< 0.45	< 7.6	Trickle/ Umbrella

AFB

ADJUSTABLE FLOOD BUBBLER

AFB

5-CST-B BUBBLER NOZZLE PERFORMANCE DATA

	Pressure bar	Pressure kPa	Radius m	Flow m³/hr	Flow l/min
	1.0	100	1.5	0.07	1.1
	1.5	150	1.5	0.07	1.2
	2.0	200	1.5	0.09	1.4
	2.1	**210**	**1.5**	**0.09**	**1.5**
	2.5	250	1.5	0.10	1.6

5-CST-B

DUAL-STREAM BUBBLER NOZZLE

5-CST-B

HUNTER SPRAY NOZZLES

Built to Last

SPRAY BODIES:

Always Perform Under Pressure
With an industry-leading 34.5 bar; 3,450 kPa burst pressure, the Pro-Spray® is built to perform in the most demanding irrigation systems in the world.

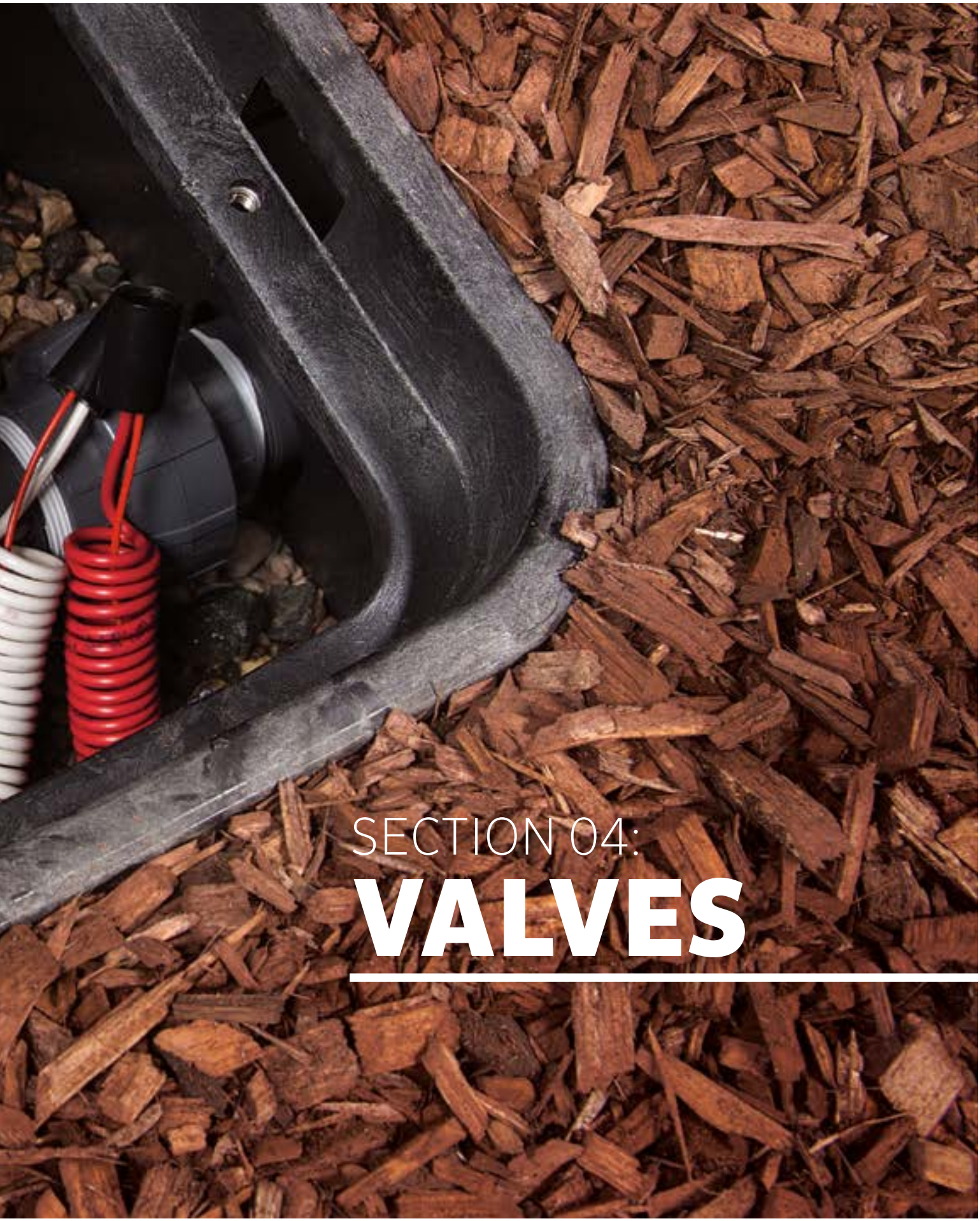
Innovative Seal Design Prevents Leaks
Most spray bodies leak when the cap is loosened only a quarter turn. The Pro-Spray can handle over one full turn of the cap with no leak or loss of performance.

SPRAY NOZZLES:

Designed for Complete Coverage
The industry's strongest edges and uniform coverage at full radius means no section of landscape is missed.

Thick Droplets Get the Job Done Right
Hunter spray nozzles disperse the largest water droplets of any spray nozzle on the market, so water is not deflected by wind or held back by thick turf.


OFF
ON
¼ TURN



SECTION 04:

VALVES

VALVES
ADVANCED FEATURES

PRESSURE REGULATION

FLOW CONTROL

Available on:
PGV, ICV, IBV

Maximise efficiency and prolong the life of a system by fine tuning flow and pressure for each zone.

RECLAIMED WATER IDENTIFICATION

Available on:
PGV, ICV, IBV

Purple tags and handles are an option for a clear, quick, and simple method of identifying the use of non-potable water.

ACCU-SYNC® PRESSURE REGULATION

Available on:
PGV, ICV, IBV

Avoid sprinkler over-pressure conditions and experience significant water savings with Hunter's Accu-Sync pressure regulator. This option is available in adjustable pressure or fixed pressure models.

FILTER SENTRY™

Available on:
ICV, IBV

Filter Sentry disk scours the filter clean twice during each valve cycle. Since it is attached to the diaphragm, the Filter Sentry feature can be easily added after a valve has been installed.

VALVES COMPARISON CHART

QUICK SPECS	1" PGV & JAR TOP	PGV	ICV	ICV FILTER SENTRY™	IBV FILTER SENTRY™
SIZE	1" BSP	1½", 2" BSP	1", 1½", 2", 3" BSP	1", 1½", 2", 3" BSP	1", 1½", 2", 3" BSP
FLOW (m^3/hr)	0.05-9.00	0.05-34.00	0.05-68.00	0.05-68.00	0.05-68.00
FLOW (l/min)	0.7-150	0.7-570	0.4-1135	0.4-1135	0.4-1135
FEATURES					
CAPTIVE BONNET BOLTS	●	●	●	●	
EPDM DIAPHRAGM AND SEAT			Standard	Standard	Standard
WARRANTY	2 Years	2 Years	5 Years	5 Years	5 Years
ADVANCED FEATURES					
FLOW CONTROL	Optional	●	●	●	●
FILTER SENTRY™			User Installed	Factory Installed	Factory Installed
ACCU-SYNC® CAPABLE	●	●	●	●	●
RECLAIMED WATER ID HANDLE	User Installed	User Installed	User Installed	Factory Installed	
RECLAIMED WATER ID TAG			User Installed	Factory Installed	Factory Installed
APPLICATIONS					
RESIDENTIAL	●	●	●		
COMMERCIAL		●	●	●	●
POTABLE WATER	●	●	●	●	●
RECLAIMED WATER			●	●	●
SECONDARY WATER				●	●
PRESSURE REGULATION	●	●	●	●	●
HIGH PRESSURE SYSTEMS			●	●	●
LOW PRESSURE SYSTEMS	●	●	●	●	●
HIGH TEMPERATURE LOCATIONS			●	●	●

1" PGV & PGV JAR TOP

Inlet: **1" (25 mm)**
Flow: **0.05 to 9 m³/hr; 0.7 to 150 l/min**

FEATURES

- Size: 1" (25 mm)
- External and internal manual bleed allows quick and easy "at the valve" activation
- Double-beaded diaphragm seal design for superior leak-free performance
- Durable glass-filled nylon threaded bonnet ring allows easy access without tools (Jar Top)
- Optional: DC latching solenoids enable Hunter's battery-powered controllers
- Captive bonnet bolts provide hassle-free valve maintenance
- Low flow capability allows use of Hunter's micro-irrigation products
- Encapsulated 24 VAC solenoid with captive plunger for hassle-free service
- Temperature rating: 66° C
- Warranty period: 2 years
- ▸ Flow control
- ▸ Accu-Sync® pressure regulation
- ▸ Optional reclaimed water ID

OPERATING SPECIFICATIONS

- Flow: 0.05 to 9 m³/hr; 0.7 to 150 l/min
- Recommended pressure range: 1.5 to 10 bar; 150 to 1,000 kPa

SOLENOID SPECIFICATIONS

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

FACTORY INSTALLED OPTIONS

- Valve without solenoid
- DC latching solenoid

USER INSTALLED OPTIONS

- Solenoid conduit cover (P/N 464322)
- DC latching solenoid (P/N 458200)
- Accu-Sync pressure regulator*
- Reclaimed water ID handle for PGV-101 models (P/N 269205)

▸ = *Advanced Feature descriptions on page 84*

* Accu-Sync product information on page 96

PGV-100G
Inlet Diameter: 1" (25 mm)
Height: 13 cm
Length: 11 cm
Width: 6 cm

PGV-101G
Inlet Diameter: 1" (25 mm)
Height: 13 cm
Length: 11 cm
Width: 6 cm

PGV-100JT - G
Inlet Diameter: 1" (25 mm)
Height: 14 cm
Length: 11 cm
Width: 8 cm

PGV-101JT - G
Inlet Diameter: 1" (25 mm)
Height: 14 cm
Length: 11 cm
Width: 8 cm

PGV Jar Top

PGV 1" – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Inlet/Outlet	3 Options (Factory Installed)	4 Options (User Installed)
PGV-100G = 1" (25 mm) Globe valve, without flow control **PGV-101G** = 1" (25 mm) Globe valve, with flow control **PGV-100A** = 1" (25 mm) Angle valve, without flow control **PGV-101A** = 1" (25 mm) Angle valve, with flow control	**(blank)** = NPT threads **B** = BSP threads	**(blank)** = No Option **DC** = DC latching solenoid **LS** = Valve without solenoid	**(blank)** = No option **R** = Reclaimed water ID handle *(Except for PGV-100)* **CC** = Solenoid conduit cover **DC** = DC latching solenoid **AS-ADJ** = Accu-Sync® adjustable pressure regulator **AS-xx*** = Accu-Sync pressure regulator **20 *** = *1.4 bar*, **30 *** = *2.1 bar*, **40 *** = *2.8 bar* **50 *** = *3.5 bar*, **70 *** = *4.8 bar*
PGV-100 = 1" (25 mm) Globe valve, without flow control **PGV-101** = 1" (25 mm) Globe valve, with flow control	**MM** = Male x male (NPT) **MMB** = Male x male (BSP)		

Example:
PGV-101G - B - DC = 1" (25 mm) Globe valve, with flow control, BSP threads, and DC latching solenoid

PGV JAR TOP – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Inlet/Outlet	3 Options (Factory Installed)	4 Options (User Installed)
PGV-100JT = 1" (25 mm) Globe jar top valve, without flow control **PGV-101JT** = 1" (25 mm) Globe jar top valve, with flow control	**GB** = BSP threads **MM** = Male x male (NPT) **MMB** = Male x male (BSP)	**(blank)** = No option **LS** = Less solenoid **DC** = DC latching solenoid	**(blank)** = No option **R** = Reclaimed water ID handle *(Except for PGV-100JT)* **CC** = Solenoid conduit cover **DC** = DC latching solenoid **AS-ADJ** = Accu-Sync adjustable pressure regulator **AS-xx*** = Accu-Sync pressure regulator **20 *** = *1.4 bar*, **30 *** = *2.1 bar*, **40 *** = *2.8 bar* **50 *** = *3.5 bar*, **70 *** = *4.8 bar*

Examples:
PGV-100JT - GB = 1" (25 mm) Globe jar top valve, without flow control, and BSP threads
PGV-100JT - MMB = 1" (25 mm) Globe jar top valve, without flow control, and male BSP threads

1" (25 MM) PGV VALVE

Flow m^3/hr	Pressure Loss bar
0.3	0.08
1.0	0.11
2.5	0.13
3.5	0.16
4.5	0.23
5.5	0.43
6.5	0.62
8.0	1.10
9.0	1.48

1" (25 MM) PGV VALVE

Flow l/min	Pressure Loss kPa
4	8
20	11
40	13
55	16
75	23
95	43
115	62
135	110
150	148

PGV-100-G Installed

PGV

Inlet: **1½" (40 mm), 2" (50 mm)**
Flow: **5 to 34 m³/hr; 75 to 570 l/min**

FEATURES

- Sizes: 1½" (40 mm), 2" (50 mm)
- External and internal manual bleed allows quick and easy "at the valve" activation
- Double-beaded diaphragm seal design assures leak-free performance
- Optional: DC latching solenoids enable Hunter's battery-powered controllers
- Captive bonnet bolts provide hassle-free valve maintenance
- Encapsulated 24 VAC solenoid with captive plunger for hassle-free service
- Temperature rating: 66° C
- Warranty period: 2 years
- ▸ Flow control
- ▸ Accu-Sync® pressure regulation
- ▸ Optional reclaimed water ID handle

OPERATING SPECIFICATIONS

- Flow:
  - PGV-151: 5 to 27 m³/hr; 75 to 450 l/min
  - PGV-201: 5 to 34 m³/hr; 75 to 570 l/min
- Recommended pressure range: 1.5 to 10 bar; 150 to 1000 kPa

SOLENOID SPECIFICATIONS

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

FACTORY INSTALLED OPTIONS

- Valve without solenoid
- DC latching solenoid

USER INSTALLED OPTIONS

- Solenoid conduit cover (P/N 464322)
- DC latching solenoid (P/N 458200)
- Accu-Sync pressure regulator
- Reclaimed water ID (P/N 607105)

▸ = *Advanced Feature descriptions on page 84*

PGV-151
Inlet Diameter: 1½" (40 mm)
Height: 19 cm
Length: 15 cm
Width: 11 cm

PGV-201
Inlet Diameter: 2" (50 mm)
Height: 20 cm
Length: 17 cm
Width: 13 cm

PGV Installed

PGV 1.5" & 2" – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Inlet/Outlet	3 Options (Factory Installed)	4 Options (User Installed)
PGV-151 = 1½" (40 mm) Globe/angle valve, with flow control **PGV-201** = 2" (50 mm) Globe/angle valve, with flow control	**(blank)** = NPT threads **B** = BSP threads	**(blank)** = No Option **DC** = DC latching solenoid **LS** = Valve w/o solenoid	**(blank)** = No option **R** = Reclaimed water ID handle **CC** = Solenoid conduit cover **DC** = DC latching solenoid **AS-ADJ** = Accu-Sync® adjustable pressure regulator **AS-xx*** = Accu-Sync pressure regulator **20 *** = *1.4 bar*, **30 *** = *2.1 bar* **40 *** = *2.8 bar*, **50 *** = *3.5 bar* **70 *** = *4.8 bar*

Examples:
PGV-151 - B - AS-ADJ = 1½" (40 mm) Globe valve, with flow control, BSP threads, and Accu-Sync adjustable pressure regulator

PGV PRESSURE LOSS IN BAR

Flow m^3/hr	1½" Globe	1½" Angle	2" Globe	2" Angle
4.5	0.2	0.2	0.1	0.1
5.5	0.2	0.2	0.1	0.1
6.5	0.2	0.2	0.1	0.1
8.0	0.2	0.2	0.1	0.1
9.0	0.2	0.2	0.1	0.1
11.0	0.3	0.2	0.1	0.1
13.5	0.3	0.3	0.1	0.1
18.0	0.4	0.4	0.2	0.1
22.5	0.6	0.5	0.3	0.2
27.0	0.8	0.8	0.4	0.3
30.5			0.6	0.5
34.0			0.7	0.6

PGV PRESSURE LOSS IN kPa

Flow l/min	1½" Globe	1½" Angle	2" Globe	2" Angle
75	20	22	4	9
95	20	21	5.5	9
115	21	21	7.5	9.5
135	22	21	9	10
150	25	23	12	11
200	27	24	14	12
325	47	41	26	19
400	65	59	33	24
500	96	92	43	32
625			56	45
775			74	64

Filter Sentry

ICV

Inlet: **1" (25 mm), 1½" (40 mm) 2" (50 mm), 3" (80 mm)**
Flow: **0.06 to 68 m³/hr; 0.4 to 1,135 l/min**

FEATURES

- Inlet: 1" (25 mm), 1½" (40 mm), 2" (50 mm), 3" (80 mm)
- External and internal manual bleed allows quick and easy "at the valve" activation
- Glass-filled nylon construction resulting in the highest pressure rating
- Double-beaded diaphragm seal design assures leak-free performance
- Fabric-reinforced EPDM diaphragm and EPDM seat ensure greater performance in all conditions
- Optional: DC latching solenoids enable Hunter's battery-powered controllers
- Captive bonnet bolts provide hassle-free valve maintenance
- Low flow capability allows use of Hunter's micro-irrigation products
- Encapsulated 24 VAC solenoid with captive plunger for hassle-free service
- Temperature rating: 66° C
- Warranty period: 5 years
- ▸ Flow control
- ▸ Filter Sentry™
- ▸ Accu-Sync® pressure regulation
- ▸ Optional reclaimed water ID

OPERATING SPECIFICATIONS

- Flow:
  - ICV-101G: 0.06 to 9 m³/hr; 0.4 to 150 l/min
  - ICV-151G: 4 to 34 m³/hr; 75 to 568 l/min
  - ICV-201G: 9 to 45 m³/hr; 150 to 757 l/min
  - ICV-301: 34 to 68 m³/hr; 570 to 1,135 l/min
- Recommended pressure range: 1.5 to 15.0 bar; 150 to 1500 kPa

SOLENOID SPECIFICATIONS

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

FACTORY INSTALLED OPTIONS

- DC latching solenoid
- Filter Sentry

USER INSTALLED OPTIONS

- Solenoid conduit cover (P/N 464322)
- DC latching solenoid (P/N 458200)
- Accu-Sync pressure regulator
- Reclaimed water ID handle for ICV101, 151, 201 (P/N 561205) and 301 (P/N 515005)
- Reclaimed water ID Tag for all ICV valves (P/N 700392) (Included on Filter Sentry Models)

▸ = *Advanced Feature descriptions on page 84*

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

Filter Sentry

ICV – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Inlet/Outlet	3 Options (Factory Installed)	4 Options (User Installed)
ICV-101G = 1" (25 mm) Globe valve **ICV-151G** = 1½" (40 mm) Globe valve **ICV-201G** = 2" (50 mm) Globe valve **ICV-301** = 3" (80 mm) Globe/Angle valve	**(blank)** = NPT threads **B** = BSP threads	**(blank)** = No option **FS** = Filter Sentry™ **DC** = DC latching solenoid	**(blank)** = No option **R** = Reclaimed water ID handle **CC** = Solenoid conduit cover **DC** = DC latching solenoid **AS-ADJ** = Accu-Sync® adjustable pressure regulator **AS-xx*** = Accu-Sync pressure regulator **20 *** = *1.4 bar*, **30 *** = *2.1 bar* **40 *** = *2.8 bar*, **50 *** = *3.5 bar* **70 *** = *4.8 bar*

Examples:
ICV-101G = 1" (25 mm) Globe valve, NPT threads
ICV-151G - FS - R = 1½" (40 mm) Globe valve, NPT threads, Filter Sentry, and reclaimed water ID handle
ICV-301B = 3" (80 mm) Globe/Angle valve, BSP threads

ICV PRESSURE LOSS IN BAR

Flow m³/hr	1" Globe	1½" Globe	2" Globe	3" Globe	3" Angle
0.05	0.1				
0.1	0.1				
0.3	0.1				
1.0	0.2				
2.5	0.2				
3.5	0.2				
4.5	0.2	0.1			
7.0	0.4	0.1			
9.0	1.0	0.1	0.1		
11.0		0.2	0.1		
13.5		0.2	0.1		
17.0		0.3	0.1		
20.5		0.4	0.2		
23.0		0.5	0.3		
27.0		0.7	0.4		
30.5		0.9	0.5		
34.0		1.2	0.6	0.2	0.1
40.0			0.9	0.2	0.2
45.5			1.2	0.3	0.2
51.0				0.3	0.3
57.0				0.4	0.4
62.5				0.5	0.5
68.0				0.6	0.6

ICV PRESSURE LOSS IN kPa

Flow l/min	1" Globe	1½" Globe	2" Globe	3" Globe	3" Angle
1	14				
2	14				
4	14				
20	17				
40	20				
60	20				
75	20	9.6			
115	62	10			
150	139	12	5.0		
190		15	7.0		
225		18	9.3		
280		26	14		
340		37	20		
380		46	26		
450		65	36		
510		84	47		
565		104	57	16	12
660			79	22	17
750			103	29	23
850				38	30
950				47	38
1,050				58	47
1,135				69	56

IBV

Inlet: **1" (25 mm), 1½" (40 mm) 2" (50 mm), 3" (80 mm)**
Flow: **0.06 to 68 m³/hr; 0.4 to 1,135 l/min**

FEATURES

- Factory-installed Filter Sentry™ diaphragm
- External and internal manual bleed allows quick and easy "at the valve" activation
- Double-beaded diaphragm seal design assures leak-free performance
- Fabric-reinforced EPDM diaphragm and EPDM seat ensure superior performance in all conditions
- Optional DC latching solenoids enable Hunter's battery-powered controllers
- Low flow capability allows use of Hunter's micro irrigation products
- Encapsulated 24 VAC solenoid with captive plunger for hassle-free service
- Temperature rating: 66° C
- Warranty period: 5 years
- ▸ Heavy-duty flow control
- ▸ Accu-Sync® pressure regulation

OPERATING SPECIFICATIONS

- Flow rate:
  - IBV-101G-FS: 0.06 to 9 m³/hr; 0.4 to 150 l/min
  - IBV-151G-FS: 4 to 34 m³/hr; 75 to 568 l/min
  - IBV-201G-FS: 9 to 45 m³/hr; 150 to 757 l/min
  - IBV-301G-FS: 34 to 68 m³/hr; 570 to 1,135 l/min
- Recommended pressure range: 1.5 to 15 bar; 150 to 1500 kPa

SOLENOID SPECIFICATIONS

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

FACTORY INSTALLED OPTIONS

- DC latching solenoid

USER INSTALLED OPTIONS

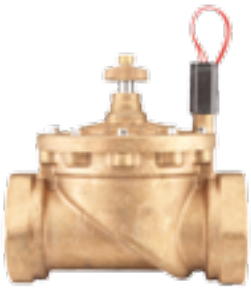
- Solenoid conduit cover (P/N 464322)
- DC latching solenoid (P/N 458200)
- Accu-Sync pressure regulator
- Reclaimed water ID tag (P/N 700392)

▸ = *Advanced Feature descriptions on page 84*

IBV-101G-FS
Inlet Diameter: 1" (25 mm)
Height: 11.5 cm
Length: 9 cm
Width: 13 cm

IBV-151G-FS
Inlet Diameter: 1½" (40 mm)
Height: 16 cm
Length: 13 cm
Width: 16 cm

IBV-201G-FS
Inlet Diameter: 2" (50 mm)
Height: 15 cm
Length: 13 cm
Width: 17 cm



IBV-301G-FS
Inlet Diameter: 3" (80 mm)
Height: 24 cm
Length: 23 cm
Width: 18 cm

Filter Sentry

IBV – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Inlet/Outlet	3 Options (Factory Installed)	4 Options (User Installed)
IBV-101G-FS = 1" (25 mm) Globe valve **IBV-151G-FS** = 1½" (40 mm) Globe valve **IBV-201G-FS** = 2" (50 mm) Globe valve **IBV-301G-FS** = 3" (80 mm) Globe/Angle valve	**B** = BSP threads	**(blank)** = No option **DC** = DC latching solenoid	**(blank)** = No option **R** = Reclaimed water ID tag **CC** = Solenoid conduit cover **DC** = DC latching solenoid **AS-ADJ** = Accu-Sync® adjustable pressure regulator **AS-xx*** = Accu-Sync pressure regulator **20 *** = *1.4 bar*, **30 *** = *2.1 bar* **40 *** = *2.8 bar*, **50 *** = *3.5 bar* **70 *** = *4.8 bar*

Examples:
IBV-151G - B - FS - R = 1½" (40 mm) Globe valve, BSP threads, Filter Sentry, and reclaimed water ID tag
IBV-201G - B - FS = 2" (50 mm) Globe valve , BSP threads, Filter Sentry

IBV PRESSURE LOSS IN BAR

Flow m³/hr	1" Globe	1½" Globe	2" Globe	3" Globe
0.05	0.1			
0.1	0.1			
0.3	0.1			
1.0	0.2			
2.5	0.2			
3.5	0.2			
4.5	0.2	0.1		
7.0	0.4	0.1		
9.0	1.0	0.1	0.1	
11.0		0.2	0.1	
13.5		0.2	0.1	
17.0		0.3	0.2	
20.5		0.4	0.2	
23.0		0.5	0.3	
27.0		0.7	0.4	
30.5		0.9	0.5	
34.0			0.6	0.2
40.0				0.2
45.5				0.3
51.0				0.3
57.0				0.4
62.5				0.5
68.0				0.6

IBV PRESSURE LOSS IN kPa

Flow l/min	1" Globe	1½" Globe	2" Globe	3" Globe
0.1	14			
0.5	14			
4	14			
20	17			
40	20			
60	20			
75	20	9.6		
115	62	10		
150	139	12	5	
190		15	7	
225		18	9.3	
280		26	14	
340		37	20	
380		46	26	
450		65	36	
510		84	47	
565			57	16
660				22
750				29
850				38
950				47
1,050				58
1,135				69

QUICK COUPLERS

Size: **¾" (20 mm), 1" (25 mm)**
Pressure Rating: **10 bar; 1,000 kPa**

FEATURES

- 100% interchangeable with major brands*
- Red brass and stainless steel construction
- TuffTop™ thermoplastic locking and non-locking covers
- Optional WingThing™ stabilisation and ACME key connection
- Stainless steel lug on 1" (25 mm) and 1¼" (32 mm) keys
- Spring-loaded covers with stainless steel springs for positive closing and protection of valve's sealing components
- Warranty period: 5 years

* HQ compatibility information on page 203

Quick Couplers

Reclaimed Water Option

All locking models have an optional purple TuffTop™ cover for sites using reclaimed water.

HQ PRESSURE LOSS IN BAR

Flow m^3/hr	HQ-3	HQ-33	HQ-44	HQ-5
1	0.06	0.07		
2.3	1.12	0.14		
3.4	0.28	0.30	0.15	
4.5	0.50	0.52	0.30	0.07
6.8			0.79	0.21
9.1				0.43
11.4				0.63
13.6				0.90
15.9				1.37

HQ PRESSURE LOSS IN kPa

Flow l/min	HQ-3	HQ-33	HQ-44	HQ-5
18.9	5.5	6.9		
37.9	12.4	13.8		
56.8	28.3	29.6	15.2	
75.7	49.6	52.4	30.3	6.9
113.6			79.3	20.7
151.4				43.4
189.3				63.4
227.1				89.6
265.0				136.5

QUICK COUPLER, KEY AND HOSE SWIVEL CHARTS

Model	Inlet Threads	Slots	Body	Colour*	Locking	Key	Swivels
HQ-3RC	¾"	2	1 - Piece	Yellow	No	HK-33	HS-0
HQ-33DRC	¾"	2	2 - Piece	Yellow	No	HK-33	HS-0
HQ-33DLRC	¾"	2	2 - Piece	Yellow	Yes	HK-33	HS-0
HQ-44RC	1" (25 mm) NPT	1	2 - Piece	Yellow	No	HK-44	HS-1 or HS-2
HQ-44LRC	1" (25 mm) NPT	1	2 - Piece	Yellow	Yes	HK-44	HS-1 or HS-2
HQ-44RC-AW	1" (25 mm) NPT	ACME	2 - Piece Wing**	Yellow	No	HK-44A	HS-1 or HS-2
HQ-44LRC-AW	1" (25 mm) NPT	ACME	2 - Piece Wing**	Yellow	Yes	HK-44A	HS-1 or HS-2
HQ-5RC	1" (25 mm) NPT	2	1 - Piece	Yellow	No	HK-55	HS-1 or HS-2
HQ-5LRC	1" (25 mm) NPT	2	1 - Piece	Yellow	Yes	HK-55	HS-1 or HS-2

Notes:
* All locking cover models are available with purple covers for reclaimed water applications
** Anti-rotation stabilisation wings

HQ QUICK COUPLER – SPECIFICATION BUILDER: ORDER 1 + 2 + 3

1 Model	2 Cover Options	3 Additional Options
HQ3 = ¾" Inlet, 1-piece body, 2 slots	**RC** = Yellow rubber cover	**(blank)** = No option
HQ5 = 1" (25 mm) Inlet, 1-piece body, 2 slots	**LRC** = Yellow locking rubber cover	**AW** = ACME key with anti-rotation wings
HQ33D = ¾" Inlet, 2-piece body, 2 slots	*(Not available for HQ3 body)*	*(Only available for HQ44 body)*
HQ44 = 1" (25 mm) Inlet, 2-piece body, 1 slot or ACME		**BSP** = BSP threads
		(Only available for HQ5 body)
		R = Purple locking cover *(reclaimed water ID; only available) for LRC models)*

Examples:
HQ3 - RC = HQ3 valve with rubber cover
HQ44 - LRC = HQ44 valve with locking rubber cover
HQ44 - LRC - R = HQ44 valve with locking rubber cover and purple locking cover
HQ44 - LRC - AW - R = HQ valve, with locking rubber cover, ACME key socket, anti-rotation wings and purple locking cover
HQ5 - LRC - BSP = HQ5 valve with locking rubber cover and BSP threads

HK KEYS

Key Model	Compatible Valve	Compatible Swivel
HK33 = ¾" valve, ¾" key inlet	HQ3, HQ33	HS0
HK44 = 1" (25 mm) valve, 1" (25 mm) key inlet	HQ44	HS1, HS2, HS1B, HS2B
HK44A = 1" (25 mm) valve, ACME key inlet	HQ44AW	HS1, HS2, HS1B, HS2B
HK55 = 1" (25 mm) valve, 1¼" (32 mm) key inlet	HQ5	HS1, HS2, HS1B, HS2B

HS HOSE SWIVELS

Hose Swivel	Compatible Key
HS0 = ¾" inlet, ¾" hose outlet	HK33
HS1 = 1" (25 mm) inlet, ¾" hose outlet	HK44, HK44A, HK55
HS2 = 1" (25 mm) inlet, 1" (25 mm) hose outlet	HK44, HK44A, HK55
HS1B = 1" (25 mm) inlet, ¾" BSP outlet	HK44, HK44A, HK55
HS2B = 1" (25 mm) inlet, 1" (25 mm) BSP outlet	HK44, HK44A, HK55

① HQ5LRC Quick Coupler with HSJ-1 SnapLok™ equipped swing joint

Introducing Hunter's new full line of HSJ heavy-duty swing joints with configurations for every need and every project. There is even a version specifically designed for quick coupler applications. The SnapLok outlet on HSJ-1 models is equipped with accommodations for both rebar and pipe stabilisation, as well as heavy-duty brass outlet threads with a unique anti-rotation locking feature.

See the HSJ swing joints on page 47

ACCU-SYNC®

Type: **Pressure Regulator**

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 AC and DC latching solenoids
- Works with any Hunter valve

ACCU-SYNC VALVE RECOMMENDED FLOW RANGE

Valve	Flow	
	m^3/hr	l/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

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 Hunter's MP Rotator and large in-line drip systems, pressure regulated to 2.8 bar; 280 kPa
●	**Fixed 3.5 bar**	Ideal for mid-range rotors, pressure regulated to 3.5 bar; 350 kPa
●	**Fixed 4.8 bar**	Ideal for larger rotors, pressure regulated to 4.8 bar; 480 kPa

ADJUSTABLE

AS-ADJ
Height with solenoid: 8 cm

ADAPTER

SOLENOID ADAPTER

FIXED

AS-30
Height with solenoid: 8 cm

AS-40
Height with solenoid: 8 cm

AS-50
Height with solenoid: 8 cm

AS-70
Height with solenoid: 8 cm

Installation
Accu-Sync shown installed on ICV and PGV valves.

HUNTER VALVES

Built to Thrive Under Pressure

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

RELIABLE:

- Fewer parts means greater longevity and simple operation
- AC and DC models for flexibility
- Residential models handle up to 10 bar; 1,000 kPa
- Commercial models handle up to 15 bar; 1,500 kPa

SIMPLE PRESSURE REGULATION:

- Regulating at the valve greatly enhances efficiency
- Accu-Sync® provides simple regulation from 1.4 to 7.0 bar; 140 to 700 kPa

SECTION 05:

CONTROLLERS

THE NEW HC CONTROLLER

TOUCHSCREEN INTERFACE

The HC controller has a full graphical touchscreen interface, making programming without Wi-Fi connectivity a breeze. Install and program within minutes with this controller.

WI-FI CONTROLLER

Use our mobile device app as a remote control for increased efficiency or manage your customer controllers from a smart device or your web-based home or office.

PREDICTIVE WATERING™ ADJUSTMENTS

Daily schedule adjustments, based on local weather data; monitor past; current and forecasted temperature, rainfall, humidity, and wind speed. This allows for adjustments of watering times and schedules to balance water savings with water efficiency for plants.

FLOW METER DETECTION AND ALERTS

Monitor the state of the piping system with an optional flow meter. Receive automatic alerts when a pipe is broken to prevent property damage.

WIRING DETECTION AND ALERTS

HC 12 zone (station) controller continuously monitors the electrical current flowing to your solenoid valves. If the current is too high or too low, Hydrawise™ will alert you and tell you which valve is not working properly. This allows you to correct a failed valve before damage is done to plant materials.

ADVANCED SENSOR PORTS

Two general purpose sensor ports can be used for many different functions. Sensor port works with the Hunter HC flow meters, the Hunter Clik sensor range and standard rain and soil sensors to stop irrigation. The sensor ports can also start an irrigation cycle. This allow you to create custom starts based on sensor readings.

Water-Saving Features

BUILT IN SOLAR SYNC®

Includes logic for optional Solar Sync weather sensor. The smart sensor automatically adjusts watering for weather conditions, and provides shutdowns during rain or freeze events. Qualifies for many USA and International water-savings programs.

SOLAR SYNC DELAY

Solar Sync Delay allows the installer to specify a number of days before automatic weather adjustment begins. This allows a period of non-adjusted irrigation for grow-in or plant establishment purposes, without requiring a return visit to the site to enable the Solar Sync water-saving feature.

SEASONAL ADJUSTMENT

This feature allows for quick adjustments to irrigation run times through a percentage scale. During peak season, set the seasonal adjust to 100%. If weather conditions require less water, enter the appropriate percentage value (i.e. 50%) to cut down irrigation run times without the need to adjust each station in the program.

Seasonal Adjustments may be made manually at the controller dial position, or automatically with a connected Solar Sync smart sensor.

PROGRAMMABLE CLIK DELAY

This allows the user to delay programmed watering for a designated period after a Clik event (such as rain) ends. At the end of the programmed Clik Delay period, the controller will resume the normally programmed irrigation schedule.

CYCLE AND SOAK

Cycle and Soak splits a station's run time into smaller amounts of watering, with a delay before applying more water. This prevents waste and run off. The controller can run other stations during the soak time, for efficient use of time.

Diagnostic Features

QUICKCHECK™

QuickCheck is a diagnostic mode that automatically detects field wiring shorts by station number.

AUTOMATIC SHORT CIRCUIT PROTECTION

Detects field wiring faults and skips faulty stations, without damage to the controller. Allows watering to continue with unaffected stations.

REAL TIME FLOW MONITORING

Allows the controller with a connected flow meter to recognize high and low flow conditions, react automatically to alarms, and report flow totals. Faulty stations are recorded for repair, and the controller continues water with the next station.

Advanced & Special Features

NON-WATER DAYS

Prevents certain days of the week from ever watering, regardless of the schedule type. Useful for weekly mowing days or other planned events.

TOTAL RUN TIME CALCULATOR

This calculates the total duration of a program, based on all of its station run times. This can be used to calculate the end time of a program.

PROGRAMMABLE DECODERS

Each decoder is programmed with its actual station (valve) numbers for simplicity and reliability. Decoders may be re-programmed at any time if desired. Hunter decoders do not require lengthy serial numbers.

SIMULTANEOUS STATION GROUPS

Simultaneous Station Groups allow groups of stations to run together within a program. This permits consolidation of large systems into fewer items to program, and can be used to control system flow in high capacity installations.

SENSOR PROGRAMMABILITY

This feature allows the user to specify which program or stations will be shut down in response to a specific sensor alarm. Stations or programs not affected by the sensor continue to run automatically.

DELAY BETWEEN STATIONS

Users can program a delay between stations as the controller advances from one station to the next. This delay can range from a few seconds (to permit slow-closing valves additional time to close) to a much longer period of time (to allow pressure tanks time to recharge), based on user requirements.

MULTI-LANGUAGE PROGRAMMING

Users can choose to program Hunter controllers in various different languages including English, Spanish, French, Italian, German and Portuguese.

CONTROLLERS COMPARISON CHART

QUICK SPECS	ECO LOGIC	X-CORE®	XC-HYBRID	PRO-C®	PCC	HC	ICC2	I-CORE®	ACC	NODE	WVS
NUMBER OF STATIONS	4, 6	2, 4, 6, 8	6, 12	4 to 16	6, 12	6,12, 24, 36	8 to 54	6 to 42 Up to 48 with Decoders	6 to 42 Up to 99 with Decoders	1, 2, 4, 6	1, 2, 4
TYPE*	Fixed	Fixed	Fixed	Modular	Fixed	Fixed & Modular	Modular	Modular	Modular	Fixed	Fixed
NUMBER OF PROGRAMS	2	3	3	3	3	---	4	4	6	3	---
START TIMES PER PROGRAM	4	4	4	4	4	---	8	8 (16 for program D)	10	4	---
NUMBER OF SIMULTANEOUS PROGRAMS	---	---	---	---	---	---	2	2	6	---	---
WARRANTY	2 Years	2 Years	2 Years	2 Years	2 Years	2 Years	5 Years	5 Years	5 Years	2 Years	2 Years
FEATURES											
ENCLOSURE TYPE	Plastic Indoor	Plastic Indoor Plastic Outdoor	Plastic Indoor/ Outdoor Stainless Indoor/ Outdoor	Plastic Indoor Plastic Outdoor	Plastic Indoor Plastic Outdoor	Plastic Indoor	Plastic/ Metal Stainless Indoor/ Outdoor Plastic Pedestal	Plastic/ Metal Stainless Outdoor Plastic Pedestal Stainless Pedestal	Metal Outdoor Stainless Outdoor Plastic Pedestal Stainless Pedestal	Water-proof	Water-proof
SOLAR SYNC® COMPATIBLE		●		●	●		●	●	●		
CENTRAL CONTROL COMPATIBLE				●	●	●	●	●	●		
REMOTE CONTROL COMPATIBLE		●		●	●	●	●	●	●		
FLOW METER COMPATIBLE						●		●	●		
RAIN-CLIK® FREEZE-CLIK® FLOW-CLIK COMPATIBLE	●	●	●	●	●	●	●	●	●	●	●
BATTERY OPERATED			●							●	●
NUMBER OF SENSOR INPUTS	1	1	1	1	1	2	1	2 (Plastic Models) 3 (Metal & Ped Models)	4 + Dedicated Flow Input	1	1
MAX. STATION RUN TIMES (hours)	4	4	4	6	6	24	12	12	6	6	4

* Fixed or modular indicates the controllers ability to expand the number of stations from a base count.

ECO LOGIC

Number of Stations: **4, 6**
Type: **Fixed**

FEATURES

- Number of stations: 4, 6
- Type: Fixed
- Enclosure: Indoor
- Independent programs: 2
- Start times per program: 4
- Max station run time: 4 hours
- Compatible with Hunter Clik sensors and other micro-switch type weather sensors
- Rain sensor bypass
- Programmable rain delay: 1 to 7 days
- Manual cycle
- Test program allows for quick system checks
- Warranty period: 2 years
- Easy Retrieve™ memory
- Quick Check™
- Solar Sync® Delay
- Automatic short circuit protection
- Seasonal Adjustment: Global or automatic updates with Solar Sync
- Delay between stations
- Sensor programmability

Plastic Indoor
Height: 12.6 cm
Width: 12.6 cm
Length: 3.2 cm

ELECTRICAL SPECIFICATIONS

- Transformer input: 230 VAC 50/60 Hz
- Transformer output (24 VAC): 0.625 A
- Station output (24 VAC): 0.28 A
- P/MV output (24 VAC): 0.28 A
- Sensor input: 1

APPROVALS

- CE, cUL

ECO LOGIC

Model	Description
ELC-401i - E	4-Station indoor controller, 230 VAC, with European connections
ELC-601i - E	6-Station indoor controller, 230 VAC, with European connections

X-CORE®

Number of Stations: **2, 4, 6, 8**
Type: **Fixed**

FEATURES

- Number of stations: 2, 4, 6, 8
- Type: Fixed
- Enclosures: Indoor and outdoor plastic
- Independent programs: 3
- Start times per program: 4
- Max. station run time: 4 hours
- Built in Solar Sync®
- Programmable rain delay
- Non-volatile memory
- Warranty period: 2 years
- ▸ Easy Retrieve™ memory
- ▸ QuickCheck™
- ▸ Solar Sync Delay
- ▸ Automatic short circuit protection
- ▸ Seasonal Adjustment: Global or automatic updates with Solar Sync
- ▸ Delay between stations
- ▸ Sensor programmability

ELECTRICAL SPECIFICATIONS

- Transformer input: 120 VAC or 230 VAC (international model)
- Transformer output (24 VAC): 1 A
- Station output (24 VAC): 0.56 A
- P/MV: (24 VAC): 0.28 A
- Sensor inputs: 1
- Operating temperature: -18° C to 60° C

APPROVALS

- CE, UL, cUL, C-tick, FCC

▸ = *Advanced Feature descriptions on page 100*

Plastic Indoor
Height: 16.5 cm
Width: 14.6 cm
Depth: 5 cm

Plastic Outdoor
Height: 22 cm
Width: 17.8 cm
Depth: 9.5 cm

X-CORE – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Models	2 Transformer	3 Indoor/Outdoor	4 Options
XC-2 = 2-Station *(indoor model only)*	**00** = 120 VAC	**(blank)** = Outdoor model	**(blank)** = No option
XC-4 = 4-Station	**01** = 230 VAC	**i** = Indoor model	**E** = 230 VAC with European connections
XC-6 = 6-Station			**A** = 230 VAC with Australian connections *(Australian outdoor models have internal transformer with cord)*
XC-8 = 8-Station			

Examples:
XC-201i - E = 2-Station 230 VAC indoor controller, with plastic cabinet
XC-401 - E = 4-Station 230 VAC outdoor controller, with plastic cabinet
XC-601i - E = 6-Station 230 VAC indoor controller, with plastic cabinet
XC-801 - E = 8-Station 230 VAC outdoor controller, with plastic cabinet

XC HYBRID

Number of Stations: **6, 12**
Type: **Battery Operated, Fixed**

FEATURES

- Battery or AC powered
- Type: Fixed
- Number of stations: 6, 12
- Operates DC latching solenoids only
- Enclosures: Indoor and outdoor plastic; outdoor stainless steel
- Independent programs: 3
- Start times per program: 4
- Max. station run time: 4 hours
- Optional Solar Panel SPXCH provides maintenance-free operation
- Compatible with Solar Panel Kit
- One touch manual start and advance
- Warranty period: 2 years
- ▸ Easy Retrieve™ memory
- ▸ Rain sensor bypass
- ▸ Programmable rain delay
- ▸ Non-volatile memory
- ▸ Seasonal Adjustment: Global
- ▸ Delay between stations
- ▸ Sensor programmability

ELECTRICAL SPECIFICATIONS

- Operates DC latching solenoids (only) 9-11 VDC
- P/MV
- Sensor inputs: 1
- Operating temperature: -18° C to 60° C

POWER SOURCE

- Operates on battery power or 24 VAC plug in transformer or optional Solar Panel
- Plastic model uses 6 AA batteries
- Stainless steel model uses 6 C batteries

APPROVALS

- CE, UL, cUL, C-tick
- Plastic model: IP-24

▸ = *Advanced Feature descriptions on page 100*

Plastic Indoor/Outdoor
Height: 22 cm
Width: 18 cm
Depth: 10 cm

Stainless Steel Outdoor
Height: 25 cm
Width: 19 cm
Depth: 11 cm

XCHSPOLE
with XCHSPB installed pole for stainless steel model
Height: 1 m

SPXCH
Optional solar panel
Height: 8 cm
Width: 8 cm
Depth: 2 cm

MAXIMUM WIRE RUNS	
Wire Size	**Max. Distance** (m)
1 mm²	152
1.5 mm²	244
2 mm²	396
2.5 mm²	610

XC HYBRID	
Model	**Description**
XCH-600	6-Station indoor/outdoor controller
XCH-600-SS	6-Station outdoor controller, stainless steel
XCH-1200	12-Station indoor/outdoor controller
XCH-1200-SS	12-Station outdoor controller, stainless steel

OPTIONS (SPECIFY SEPERATELY)	
Options	**Description**
XCHSPOLE	Steel mounting pole (1.2 m)
XCHSPB	Stainless steel mounting bracket (required for pole)
458200*	DC latching solenoid
SPXCH	Solar Panel Kit for XC Hybrid

Notes:
* Use DC latching Solenoids only

PRO-C® & PCC

Number of Stations: **4 - 16, 6 and 12**
Type: **Modular & Fixed**

FEATURES

- Number of stations:
  - Pro-C: 4-16
  - PCC: 6 & 12
- Type:
  - Pro-C: Modular
  - PCC: Fixed
- Enclosures: Indoor and outdoor plastic
- Independent irrigation programs: 3
- Independent lighting programs: 3
- Start times per program: 4
- Max. station run time: 6 hours
- Solar Sync® Delay feature allows adjustments to be postponed for up to 99 days
- Cycle and Soak feature built in: reduces runoff
- Added knockouts for additional flexibility
- Non-volatile memory
- Rain sensor bypass
- One touch manual start and advance
- Warranty period: 2 years

- ▸ Built in Solar Sync
- ▸ Easy Retrieve™ memory
- ▸ QuickCheck™
- ▸ Automatic short circuit protection
- ▸ Seasonal Adjustment: Global or automatic updates with Solar Sync
- ▸ Delay between stations
- ▸ Sensor programmability
- ▸ Non-Water Days

ELECTRICAL SPECIFICATIONS

- Transformer input: 120 VAC or 230 VAC (international model)
- Transformer output (24 VAC): 1 A
- Station output (24 VAC): 0.56 A
- P/MV output (24 VAC): 0.28 A
- Sensor inputs: 1
- Operating temperature: -18° C to 60° C

APPROVALS

- CE, UL, cUL, C-tick, FCC

▸ = *Advanced Feature descriptions on page 100*

Plastic Indoor
Height: 20.9 cm
Width: 24.3 cm
Depth: 9.7 cm

Plastic Outdoor
Height: 22.5 cm
Width: 25 cm
Depth: 11 cm

PCM-300 and PCM-900 Expansion Modules
These modules are compatible with the new Pro-C 400 series.

PRO-C SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Models	2 Transformer	3 Indoor/Outdoor	4 Options
PC-4 = 4-station base module controller **PCC-6** = 6-Station **PCC-12** = 12-Station	**00** = 120 VAC **01** = 230 VAC	**(blank)** = Outdoor Model *(internal transformer)* **i** = Indoor Model *(plug-in transformer)*	**(blank)** = No option **E** = 230 VAC with European Connections **A** = 230 VAC with Australian Connections *(outdoor models have internal transformer with cord)*

Examples:
PC-400 = Modular 4-Station outdoor base unit, internal 120 VAC transformer, and plastic cabinet
PCC-601i - E = Fixed 6-Station indoor controller, plug-in 230 VAC transformer with European connections, and plastic cabinet
PCC-1200 = Fixed 12-Station outdoor controller, Internal 120 VAC transformer, and plastic cabinet

PC-SERIES STATION EXPANSION

Modules	Description
PCM-300	3-Station plug-in module: Use to increase station count from 4 to 7, 7 to 10, and 10 to 13
PCM-900	9-Station plug-in module: Use to increase station count from 7 to 16

HC

Number of Stations: **6, 12**
Expands up to 36 stations
Wi-Fi Enabled

FEATURES

- New style full-functioning controller with touchscreen
- Wi-Fi enabled for simple connection to the internet
- 6 and 12 station standard controllers
- 12 station expansion module allows for expansion to 36 stations
- 2 sensor ports
- Warranty 2 years
- ▸ Touchscreen Interface
- ▸ Wi-Fi Controller
- ▸ Predictive Watering Adjustments
- ▸ Flow Meter Detection And Alerts
- ▸ Wiring Detection And Alerts
- ▸ Advanced Sensor Ports

ELECTRICAL SPECIFICATIONS

- Transformer input: 120 VAC or 230 VAC (international model)
- Transformer output (24 VAC): 1 A
- Station output (24 VAC): 0.56 A
- Pump/master valve (24 VAC): 0.28 A
- Sensor inputs: 2
- Operating temperature: 0°F to 140°F

APPROVALS

- CE, C-tick, FCC

▸ = *Advanced Feature descriptions on page 99*
* Hydrawise software information on page 120

Plastic Indoor
Height: 15.2 cm
Width: 17.8 cm
Depth: 3.3 cm

Flow Meter - ¾" BSP thread
Height: 13 cm
Length: 23.5 cm
Depth: 8 cm

Flow Meter - 1" (25 mm) BSP thread
Height: 16 cm
Length: 23.5 cm
Depth: 8 cm

Compatible with Hydrawise software

HC – OPTIONS

Models	Description
HC-1200M	12 station expansion module
HC-075-FLOW-B	Flow meter with ¾" BSP thread
HC-100-FLOW-B	Flow meter with 1" (25 mm) BSP thread

HC – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Models	2 Transformer	3 Indoor/Outdoor	4 Options
HC-6 = 6 station controller with Wi-Fi connection	**00** = 120 VAC	**i** = Indoor model	**(Blank)** = No option
HC-12 = 12 station indoor controller with Wi-Fi connection	**01** = 230 VAC		**E** = 230 VAC with European connections
			A = 230 VAC with Australian connections *(outdoor model has internal transformer with cord)*

Examples:
HC-600i-A = 6-Station 230 VAC indoor plastic controller, and with Australian cord
HC-1200i-E = 12-Station 120 VAC indoor plastic controller, and with European cord

ICC2

Number of Stations: **8 - 54**
Type: **Modular**

FEATURES

- Number of stations: 8 to 54 (metal), 8 to 38 (plastic)
- Type: Modular
- Enclosure: Outdoor plastic, metal, stainless steel, plastic pedestal
- Backlit display
- Independent programs: 4
- Start Times per program: 8
- Max station run time: 12 hours
- Simultaneous program operation: 2
- Warranty period: 5 years
- ▸ Built in Solar Sync®
- ▸ Solar Sync Delay feature
- ▸ Cycle and Soak
- ▸ Easy Retrieve™ Memory
- ▸ QuickCheck™
- ▸ Automatic short circuit protection
- ▸ Seasonal Adjustment: Manual or automatic via Solar Sync
- ▸ Delay between stations
- ▸ Sensor programmability
- ▸ Programmable Clik Delay
- ▸ Non-Water Days
- ▸ Added knockouts for mounting flexibility
- ▸ Non-volatile memory
- ▸ Rain Sensor bypass
- ▸ One touch manual start and advance

ELECTRICAL SPECIFICATIONS

- Transformer input: 120/230 VAC, 50/60 Hz
- Transformer output: 24 VAC, 1.4 A
- Station output: (24V) 0.56 A
- P/MV (24 VAC): Up to 0.56 A
- Sensor inputs: 1
- Operating temperature: 0°F/-17°C to 140°F/60°C

APPROVALS

- CE, UL, cUL, C-tick, FCC
- Plastic Wall Mount: IP-54
- Metal Wall Mount (includes stainless): IP-55
- Plastic Pedestal: IP-24

▸ = *Advanced Feature descriptions on page 100*

Plastic
Height: 30 cm
Width: 35 cm
Depth: 13 cm

Metal (Grey or Stainless)
Height: 41 cm
Width: 33 cm
Depth: 13 cm

Expansion Modules
These enhanced station output modules expand both old and new versions of ICC, and include additional surge suppression, in increments of 4, 8 or 22 stations.

CONTROLLERS

ICC2

Model	Description
I2C-800-PL	8 station base model, plastic outdoor wall mount
I2C-800-M	8 station base model, gray metal outdoor, wall mount
I2C-800-SS	8 station base model, stainless steel, wall mount
I2C-800-PP	8 station base model, plastic pedestal
ICC-PED	Gray pedestal for metal wall mount
ICC-PED-SS	Stainless steel pedestal for stainless wall mount
ICC-PWB	Optional Pedestal Wiring Board for metal pedestals

ICC 2 SERIES STATION EXPANSION

Model	Description
ICM-400	4-Station plug-in module with enhanced surge suppression
ICM-800	8-station plug-in module with enhanced surge suppression
ICM-2200*	22-station expansion module (one per controller)

Note
Newer ICM modules are backward compatible with the original ICC controller.
*Available early 2017.

I-CORE®

Number of Stations: **6 to 42**
Type: **Modular**

FEATURES

- Number of stations: 6 to 42
- Type: Modular
- Enclosure: Outdoor plastic or metal
- Independent programs: 4
- Built in Solar Sync®
- Start times per program: 8 (A, B, C); 16 (D)
- Max. station run time: 12 hours
- One touch manual start and advance
- Programmable rain delay
- Non-volatile memory
- Warranty period: 5 years

- ▸ Real time flow monitoring
- ▸ Easy Retrieve™ memory
- ▸ QuickCheck™
- ▸ Automatic short circuit protection
- ▸ Total run time calculator
- ▸ Seasonal Adjustment: Global, Monthly, by program and Solar Sync
- ▸ Delay between stations
- ▸ Sensor programmability
- ▸ Cycle and Soak
- ▸ No Water Window
- ▸ Non-Water Days
- ▸ Solar Sync Delay
- ▸ Multi-language programming

ELECTRICAL SPECIFICATIONS

- Transformer input: 120/230 VAC, 50/60 Hz
- Transformer output (24 VAC): 1.4 A
- Station output (24 VAC): 0.56 A
- P/MV output (24 VAC): 0.28 A
- Simultaneous program operation: 2
- Sensor inputs: Plastic: 2; Metal: 3
- Operating temperature: -18° C to 60° C

APPROVALS

- CE, UL, cUL, C-tick, FCC
- Steel wall mounts: IP-56
- Plastic pedestal: IP-24
- Plastic wall mount: IP-44

▸ = *Advanced Feature descriptions on page 100*

Plastic Outdoor
Height: 28 cm
Width: 34 cm
Depth: 16 cm

Metal Wall Mount
(grey or stainless steel)
Height: 31 cm
Width: 39 cm
Depth: 15 cm

Plastic Pedestal
Height: 97 cm
Width: 55 cm
Depth: 40 cm

Metal Pedestal
(grey or stainless steel)
Height: 92 cm
Width: 39 cm
Depth: 13 cm

ICM-600 Expansion Module
I-Core's unique "bridge" modules activate the existing terminal strips

I-CORE	
Model	**Description**
IC-600-PL	6-Station controller, indoor/outdoor, plastic cabinet
IC-601-PL	International version, 6-Station controller, indoor/outdoor, plastic cabinet
IC-600-M	6-Station controller, indoor/outdoor, metal cabinet
IC-600-PP	6-Station controller, indoor/outdoor, plastic pedestal
IC-600-SS	6-Station controller, indoor/outdoor, stainless steel cabinet
ICM-600	6-Station plug-in expansion module
ACC-PED	Metal pedestal, gray powder-coated, for use with I-Core and ACC metal controllers
PED-SS	Stainless steel pedestal for use with I-Core and ACC stainless steel controllers

ENCLOSURE TYPES & EXPANSION	
Enclosure Type	**Expands To**
Plastic cabinet	30-Stations
Metal/stainless steel cabinet	42-Stations
Plastic pedestal	42-Stations
Metal/stainless steel pedestal	42-Stations

DUAL®

Number of Stations: **Up to 48**
Type: **Decoder**

FEATURES

- Two-wire decoder system for I-Core controllers
- Decoder station sizes available: 1, 2
- Field programmable decoders (no serial numbers to enter)
- DUAL-S external surge protection module
- DUAL decoder module display and push button programming make it easy to program decoders at the controller itself
- Decoder module displays decoder operation and diagnostic information
- Can operate up to 48 stations of combined decoder and conventional control making system retrofit easy
- Waterproof connectors for connection to two-wire path included with all DUAL decoders and DUAL-S surge protection
- Number of two-wire paths: 3
- Solenoid finder feature assists in locating valves in the field
- Wireless programming with ICD-HP
- Warranty period: 5 years

▸ Programmable decoders

DUAL48M Decoder Output Module
Height: 3.5 cm
Width: 11 cm
Depth: 10 cm

DUAL SPECIFICATIONS

- Max. recommended distance, decoder to solenoid: 30 m
- Max. distance to decoder:
  - 2 mm² wire path: 1,500 m
  - 3.3 mm² wire path: 2,300 m

APPROVALS

- CE, UL, cUL, C-tick, FCC

▸ = *Advanced Feature descriptions on page 100*

DUAL Decoders
Height: 7.6 cm
Width: 4.4 cm
Depth: 5 cm

Surge Arrestor
Height: 7 cm
Width: 4.4 cm
Depth: 5 cm

DUAL

Base Model	Plus	Description
IC-600-PL	DUAL48M	48-Station controller, indoor/outdoor, plastic cabinet (USA)
IC-601-PL	DUAL48M	48-Station controller, indoor/outdoor, plastic cabinet (international)
IC-600-M	DUAL48M	48-Station controller, indoor/outdoor, metal cabinet
IC-600-PP	DUAL48M	48-Station controller, indoor/outdoor, plastic pedestal
IC-600-SS	DUAL48M	48-Station controller, indoor/outdoor, stainless steel cabinet

DUAL Model	Description
DUAL48M	Dual decoder output module. Plug-in module converts any I-Core controller to two-wire decoder system (up to 48-Station maximum)
DUAL-1	DUAL 1-Station decoder (includes 2 DBRY-6 connectors)
DUAL-2	DUAL 2-Station decoder (includes 2 DBRY-6 connectors)
DUAL-S	Dual surge arrestor (includes 4 DBRY-6 connectors)

ID WIRE MODEL GUIDE

2 mm² Decoder Cable		3.3 mm² Long Range, Heavy-duty Decoder Cable	
ID1GRY	Grey jacket	ID2GRY	Grey jacket
ID1PUR	Purple jacket	ID2PUR	Purple jacket
ID1YLW	Yellow jacket	ID2YLW	Yellow jacket
ID1ORG	Orange jacket	ID2ORG	Orange jacket
ID1BLU	Blue jacket	ID2BLU	Blue jacket
ID1TAN	Tan jacket	ID2TAN	Tan jacket

MAXIMUM WIRE RUNS

ID 1 Wire	ID 2 Wire
1500 m with I-Core/DUAL systems	2300 m with I-Core/DUAL systems
3 km with ACC/ICD systems	4.5 km with ACC/ICD systems

ACC

Number of Stations: **12 to 42**
Type: **Modular**

FEATURES

- Number of stations: 12 to 42
- Type: Modular
- Enclosure: Outdoor plastic and stainless steel
- Independent programs: 6
- Start times per program: 10
- Max. station run time: 6 hours
- Built in Solar Sync®
- One touch manual start and advance
- Non-volatile memory
- Programmable rain delay
- Warranty period: 5 years

- ▸ Real time flow monitoring
- ▸ Solar Sync Delay
- ▸ Easy Retrieve™ memory
- ▸ Automatic short circuit protection
- ▸ Total run time calculator
- ▸ Seasonal Adjustment: Global, by Program, and/or by Solar Sync
- ▸ Delay between stations
- ▸ Sensor programmability
- ▸ Cycle and Soak
- ▸ No Water Window
- ▸ Simultaneous station groups

ELECTRICAL SPECIFICATIONS

- Transformer input: 120/230 VAC, 50/60 Hz
- Max. AC Current Draw: 120 VAC, 2 Amps; 230 VAC, 1 Amp (max. computed with all programs running and optional accessories installed)
- Transformer output (24 VAC): 4.0 A
- Station output (24 VAC): 0.56 A
- P/MV output (24 VAC): 0.32 A
- P/MV: 2, normally-closed
- Sensor inputs: 4 + Flow
- Operating temperature: -18° C to 60° C

APPROVALS

- CE, UL, cUL, C-tick, FCC
- Metal wall mounts: IP-56
- Plastic pedestal: IP-24

ALL STAINLESS STEEL (SS) MODELS

- American-made Type 316 Stainless Steel 1.45 mm gauge steel
- Passivated for corrosion resistance

▸ = *Advanced Feature descriptions on page 100*

Metal Enclosures
(grey or stainless steel)
Height: 31 cm
Width: 39 cm
Depth: 16 cm

Metal Pedestals
(grey or stainless steel)
Height: 92 cm
Width: 38 cm
Depth: 13 cm

Plastic Pedestal
Height: 97 cm
Width: 55 cm
Depth: 40 cm

ACM-600
Standard 6-Station output module with heavy-duty surge protection

AGM-600
Optional Extreme Service high-lightning 6-Station output module

ACC

Model	Description
ACC-1200	12-Station base unit controller, expands to 42-Station, metal cabinet
ACC-1200-SS	12-Station base unit controller, expands to 42-Station, stainless steel wall mount cabinet
ACC-1200-PP	12-Station base unit controller, expands to 42-Station, plastic pedestal
ACC-PED	Metal pedestal, grey powder-coated, for use with I-Core and ACC metal controllers
PED-SS	Stainless steel pedestal for use with I-Core and ACC stainless steel controllers

STATION EXPANSION MODULES

Modules	Description
ACM-600	6-Station plug-in module for use with the ACC-1200 series controllers
AGM-600	6-Station plug-in module for use with the ACC-1200 series controllers (extreme service lightning protection version)

ACC-99D

Number of Stations: **1 to 99**
Type: **Decoder**

FEATURES

- Includes all features of the ACC controller, plus decoder operations
- Built in Solar Sync®
- Decoder station sizes available: 1, 2, 4, 6
- Sensor decoder available with Flow and Clik inputs
- Max. recommended distance, decoder to solenoid: 45 m
- ICD-HP wireless handheld programmer compatible
- Two-way communications
- Surge suppression: Internal (ground wire included)
- Dual P/MV outputs may be assigned to decoders
- Wire path connectors included with each decoder
- Number of wire paths: 6
- Automatic daily weather-based scheduling with optional Hunter Solar Sync sensor
- ▸ Seasonal Adjustment: Global, by Program, or Solar Sync
- ▸ Programmable decoders
- ▸ Solar Sync Delay

ICD-100, 200, ICD-SEN
Height: 92 mm
Width: 38 mm
Depth: 12.7 mm

ICD-400, 600
Height: 92 mm
Width: 46 mm
Depth: 38 mm

ELECTRICAL SPECIFICATIONS

- Transformer input: 120/230 VAC, 50/60 Hz
- Max. AC Current Draw: 120 VAC, 2 Amps; 230 VAC, 1 Amp (max. computed with all programs running and optional accessories installed)
- Transformer output: 24 VAC, 4 A, at 120 VAC
  - Decoder Line (path) output: 34 V peak-to-peak
  - Decoder Power draw: 40 mA per active output
  - Solenoid capacity: 2 standard 24 VAC Hunter solenoids per output within 45 m runs, up to 14 solenoids max. simultaneous
- Wiring, Decoder to solenoid: 45 m max.
- 6 two-wire output paths to field decoders
- Diagnostic LEDs with line status, signal activity, decoder and status

▸ = *Advanced Feature descriptions on page 100*

ID WIRE MODEL GUIDE

2 mm² Decoder Cable		3,3 mm² Long Range, Heavy-duty Decoder Cable	
ID1GRY	Grey jacket	ID2GRY	Grey jacket
ID1PUR	Purple jacket	ID2PUR	Purple jacket
ID1YLW	Yellow jacket	ID2YLW	Yellow jacket
ID1ORG	Orange jacket	ID2ORG	Orange jacket
ID1BLU	Blue jacket	ID2BLU	Blue jacket
ID1TAN	Tan jacket	ID2TAN	Tan jacket

ID WIRE MAXIMUM WIRE RUNS

ID 1 Wire	ID 2 Wire
1500 m with I-Core®/DUAL® systems	2300 m with I-Core/DUAL systems
3 km with ICD systems	4.5 km with ICD systems

ACC-99D DECODER

Model	Description
ACC-99D	2-Wire decoder controller with 99-Station capacity, metal cabinet
ACC-99D-SS	2-Wire decoder controller with 99-Station capacity, stainless wall mount
ACC-99D-PP	2-Wire decoder controller with 99-Station capacity, plastic pedestal
ACC-PED	Metal pedestal, grey powder-coated, for use with I-Core and ACC metal controllers
PED-SS	Stainless steel pedestal for use with I-Core and ACC stainless controllers

DECODER MODELS

Model	Description
ICD-100	Single-station decoder with surge suppression and ground wire
ICD-200	2-Station decoder with surge suppression and ground wire
ICD-400	4-Station decoder with surge suppression and ground wire
ICD-600	6-Station decoder with surge suppression and ground wire
ICD-SEN	2-input sensor decoder with surge suppression and ground wire

NODE

Number of Stations: **1, 2, 4, 6**
Type: **Battery Operated, Fixed**

FEATURES

- Type: Fixed
- Battery Operated
- Number of stations: 1, 2, 4, 6
- Enclosure: Outdoor plastic
- Independent programs: 3
- Start times per program: 4
- Max. station run time: 6 hours
- One touch manual start and advance
- Master Valve operation (available in 2, 4, 6 station models)
- Solar Panel Kit (SPNODE) provides maintenance-free operation
- Accepts single or double 9 V batteries for extended battery life
- Solenoid wire length up to 30 m (use 1 mm^2 wire)
- Programmable off mode
- Submersible to 4 m (IP68 rated)
- Battery life indicator
- Protective rubber cover
- Warranty period: 2 years
- ▸ Easy Retrieve™ memory
- ▸ Seasonal Adjustment: Global

ELECTRICAL SPECIFICATIONS

- Sensor inputs: 1
- Operates DC latching solenoids only (P/N 458200)
- Operating temperature: -18° C to 60° C
- Power source: 9 V battery (up to two) or Solar Panel
- Solar Panel Kit SPNODE eliminates the need for batteries and provides maintenance-free operation

APPROVALS

- CE

▸ = *Advanced Feature descriptions on page 100*

NODE-100
NODE-100-LS
(less solenoid)
Diameter: 9 cm
Height: 6 cm

NODE-200
NODE-400
NODE-600
Diameter: 9 cm
Height: 6 cm

NODE-100-Valve
Diameter: 9 cm
Height: 6 cm

SPNODE
Height: 8 cm
Width: 8 cm
Depth: 2 cm

NODE	
Model	**Description**
NODE-100	Single station controller (DC latching solenoid included)
NODE-100-LS	Single station controller (DC latching solenoid not included)
NODE-200	2-Station controller (DC latching solenoid ordered separately)
NODE-400	4-Station controller (DC latching solenoid ordered separately)
NODE-600	6-Station controller (DC latching solenoid ordered separately)
NODE-100-VALVE	Single station controller with PGV-101-G valve and DC latching solenoid (NPT threads)
NODE-100-VALVE-B	Single station controller with PGV-101-GB valve and DC latching solenoid (BSP threads)

MAXIMUM WIRE RUNS	
Wire Size	**Max. Distance (m)**
1 mm^2	30

OPTIONS (SPECIFY SEPARATELY)	
Model*	**Description**
458200	DC latching solenoid
SPNODE	Solar Panel Kit for Node

PSR

PUMP START RELAY

Type: **Accessory**

FEATURES

- Choice of three models sized accordingly to fit your particular application
- NEMA 3R rated locking plastic enclosure rated for outdoor use, weather resistance and security
- 24 VAC flying leads make it quick and easy to wire to controller
- The PSR-22 meets demanding electrical requirements for UL approval, and the PSR-52/-53 contains UL-approved relays
- Warranty period: 2 Years

Pump Start Relay
Height: 17 cm
Width: 19 cm
Depth: 12 cm

PUMP START RELAY

Model	Description
PSR-22	Double pole/single throw pump start relay for 120 VAC pumps up to 1.5 kW or 230 VAC pumps up to 2.2 kW
PSR-52	Double pole/single throw pump start relay for 120 VAC pumps up to 2.2 kW or 230 VAC pumps up to 5.6 kW
PSR-53	Triple pole/single throw pump start relay for 120 VAC pumps up to 2.2 kW, 230 VAC pumps up to 5.6 kW, or 230 VAC pumps up to 7.5 kW (3 phase)

PUMP START RELAY ELECTRICAL SPECIFICATIONS

Model	Single Phase		3 Phase	Max. Full Load	Max. Resistive	Coil VA				Coil VA			
	kW AT 120 VAC	kW AT 230 VAC	kW AT 230 VAC	AMPS	AMPS	INRUSH		AMPS		HOLDING		AMPS	
						50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
PSR-22	1.5*	2.2*	N/A	30	40	33	30	1.38	1.25	8	6.5	0.33	0.27
PSR-52	2.2	5.6	N/A	40	50	65	60	2.71	2.50	7.5	5	0.31	0.21
PSR-53	2.2	5.6	7.5	40	50	65	60	2.71	2.50	7.5	5	0.31	0.21

Note:
* Approximate power

PSRB

PUMP START RELAY BOOSTER

FEATURES

- Solves long distance pump start relay power challenges
- Suitable for conventional or ICD decoder connections
- Includes easily activated solid state relay, and local 24V transformer for PSR activation
- Easy wiring with labeled wire connections
- NEMA 3R enclosure with standard key lock

ELECTRICAL SPECIFICATIONS

- Primary AC Power: 120/230 VAC, 50/60 Hz, 50W
- Output (to PSR): 25V, 1600 mA
- MV Input: Dual pole, double throw solid state relay (10 A)

PSRB Pump Start Relay Booster
Height: 22 cm
Width: 18 cm
Depth: 9.5 cm

ROAM

Range: **Up to 300 m**
Type: **Remote**

FEATURES

- Works with Hunter X-Core®, Pro-C®, PCC, ICC2, I-Core® and ACC controllers through a SmartPort® connection
- 128 programmable addresses for use of multiple Roam remotes in the same neighborhood
- Manually run watering cycles without modifying regular program
- Programmable run times: 1 to 90 minutes
- Range: 300 m (line of sight)
- Warranty period: 2 years

REMOTE SPECIFICATION

- Transmitter power source: 4 AAA batteries included
- Receiver power source: 24 VAC, from controller through a SmartPort connector
- System operating frequency: 433 MHz band
- SmartPort connector can be mounted up to 15 m (max.) from controller (use ROAM-SCWH shielded cable wiring harness)
- FCC approved: No FCC licence required

Transmitter and Receiver
Height: 18 cm
Width: 6 cm
Depth: 3 cm

ROAM	
Model	**Description**
ROAM-KIT	Transmitter, receiver, SmartPort wiring harness, and 4 AAA batteries included
ROAM-R	Receiver unit
ROAM-TR	Transmitter unit, and 4 AAA batteries included

OPTIONS	
Model	**Description**
ROAM-WH	SmartPort wiring harness (length: 1.8 m)
ROAM-SCWH	Shielded SmartPort wiring harness (length: 7.6 m)
258200	Wall mount bracket for SmartPort

SmartPort
Hunter remotes require the installation of a SmartPort wiring harness. The SmartPort is a connector that is wired to the terminals on the controller, and allows quick connection to any Hunter receiver.

Wall Mount Bracket for SmartPort
P/N 258200

ROAM XL

Range: **Up to 3 km**
Type: **Remote**

FEATURES

- Works with Hunter X-Core®, Pro-C®, PCC, ICC2, I-Core® and ACC controllers through a SmartPort® connection
- Up to 3 km (line of sight) range for remote manual operation of Hunter irrigation systems
- 128 different programmable addresses
- Display shows remaining battery life
- Programmable run times: 1 to 90 minutes
- Large LCD display, push-button operation
- Manually run watering cycles without modifying regular program
- Rugged plastic carrying case included
- Warranty period: 3 years

REMOTE SPECIFICATION

- Transmitter power source: 4 AAA batteries included
- Receiver power source: 24 VAC, from controller through a SmartPort connector
- System operating frequency: 27 MHz band
- SmartPort connector can be mounted up to 15 m (max.) from controller (use ROAM-SCWH shielded cable wiring harness)
- FCC approved: No FCC licence required

* Not available in all countries.

ROAM XL	
Model	**Description**
ROAMXL-KIT	Transmitter, receiver, SmartPort wiring harness, 4 AAA batteries and plastic carrying case included
ROAMXL-R	Receiver unit (SmartPort wiring harness included)
ROAMXL-TR	Handheld transmitter, and 4 AAA batteries included

OPTIONS	
Model	**Description**
258200	Wall Mount Bracket for SmartPort
ROAMXL-CASE	Plastic carrying case
ROAM-WH	SmartPort wiring harness (length: 1.8 m)
ROAM-SCWH	Shielded SmartPort wiring harness (length: 7.6 m)

Roam XL
(w/o antenna)
Height: 16 cm
Width: 8 cm
Depth: 3 cm

SmartPort
Hunter remotes require the installation of a SmartPort wiring harness. The SmartPort is a connector that is wired to the terminals on the controller, and allows quick connection to any Hunter receiver.

Wall Mount Bracket for SmartPort
P/N 258200

WVP & WVC

Number of Stations: **1, 2, 4**
Type: **Battery Operated, Fixed**

FEATURES

- Type: Fixed
- Battery Operated
- Number of stations: 1, 2, 4
- Enclosure: Outdoor plastic
- Independent station programming
- Start times per program: 9
- Max. station run time: 4 hours
- WVC submersible to 3 m (IP68 rated)
- Battery life indicator
- Wireless remote programming
- Max. solenoid wire run 30 m (use 1 mm^2 wire)
- Warranty period: 2 years

WVP
Height: 29 cm
Width: 8 cm
Length: 5 cm

ELECTRICAL SPECIFICATIONS

- Simultaneous station operation
- Sensor inputs: 1
- Power source: 9 V battery
- Operates DC latching solenoids only (P/N 458200)
- Operating temperature: -18° C to 60° C
- Frequency: 869 MHz ISM band
- No FCC licence required

WVC
Diameter: 8 cm
Height: 13 cm

APPROVALS

- CE

WVP / WVC

Model	Description
WVC-100	Single station wireless controller (DC latching solenoid ordered separately) 900 MHz ISM band (US/Australia)
WVC-200	2-Station wireless controller (DC latching solenoid ordered separately) 900 MHz ISM band (US/Australia)
WVC-400	4-Station wireless controller (DC latching solenoid ordered separately) 900 MHz ISM band (US/Australia)
WVC-100-E	Single station wireless controller (DC latching solenoid ordered separately) 869 MHz (Europe)
WVC-200-E	2-Station wireless controller (DC latching solenoid ordered separately) 869 MHz (Europe)
WVC-400-E	4-Station wireless controller (DC latching solenoid ordered separately) 869 MHz (Europe)
WVP	Wireless valve programmer to be used with wireless valve controllers
WVPE	Wireless valve programmer to be used with wireless valve controllers (Europe)

MAXIMUM WIRE RUNS

Wire Size	Max Distance (m)
1 mm^2	30

ICD-HP

Type: **Decoder Programmer**

FEATURES

- Program or re-program decoder stations, whether new or installed
- Program any station numbers in any order, or skip stations for future expansion
- Simplifies setup and diagnostics for sensor decoders
- Sensor test functions for Clik and Flow sensors, plus built-in multimeter
- Communicates with decoder through plastic case: wireless electro-magnetic induction saves waterproof connectors
- Compatible with Hunter ICD-HP, DUAL®, and Pilot® series decoders
- USB powered for shop or office use; 4 AA batteries for field use
- All test leads and cables included in durable, foam-padded carrying case
- Turn decoder stations on and view solenoid status, current in milliamps, and more
- Waterproof programming cup
- Backlit adjustable display
- 6 operating languages

ELECTRICAL SPECIFICATIONS

- Power input: 4 AA batteries, or standard USB connector (included)
- Communications: Wireless induction, range 25 mm
- Fused test leads for unpowered decoder functions

APPROVALS

- FCC, CE, C-tick (no licence required)

ICD-HP	
Model	**Description**
ICD-HP	Wireless handheld decoder programmer, includes all test and power leads, programming cup, and rugged carrying case

ICD-HP
Height: 21 cm
Width: 9 cm
Depth: 5 cm

Packaged in an outdoor carrying case, this complete kit includes probes, induction cup, cable, USB power cable for bench use, and 4 AA batteries for field work.

ICD-HP

CONTROLLERS

SECTION 06:

WATER MANAGEMENT SOFTWARE

ADVANCED FEATURES

CONTRACTOR MANAGEMENT SYSTEM

Hydrawise™ software provides the ultimate irrigation and customer management solution. The Hydrawise Contractor Portal provides a simple-to-use, yet extremely versatile system for managing customer irrigation controllers without having to visit the site.

PROVEN WATER SAVER

Hydrawise software combines internet weather adjustments with professional programming features. These combined features allow for up to 50 percent in water savings vs. a controller base that is programmed and not adjusted throughout the year.

PREDICTIVE WATERING™ ADJUSTMENTS

Daily schedule adjustments, based on local weather data; monitor past, current and forecasted temperature, rainfall, humidity, and wind speed. This allows for adjustments of watering times and schedules to balance water savings with water efficiency for plants.

WEATHER STATIONS

Hydrawise allows you to use any local airport weather station at no cost or add up to five (5) weather stations from Weather Underground with an Enthusiast Plan for hyper-local weather data. With this flexible web-based weather system, you can even add your own weather station, if there is no weather station nearby.

USER MANAGEMENT

If you want to be able to have different users log into your controller, like your significant other, the Enthusiast Plan lets you add multiple users to your account. Users can even be 'read only,' so that they can't make any changes to your configuration.

ENHANCED REPORTING

See how much water you have used in the last day or month and see how much water you have saved. The full reporting package allows you to summarize minimum, maximum, average and totals for all reports. You can even share these reports with your clients, so they can be in the know.

CONTROLLER LOGS

Get a clear picture of the controller's history such as faulty wiring issues, flow meter alerts, program changes and watering events that are all logged.

IRRIGATION LAYOUTS AND SCHEDULES

Save time on the job site by attaching your site plans to the controller. This allows you to quickly locate piping and valves.

HYDRAWISE™ SOFTWARE

Maximum **Controllers: Unlimited**
Platform: **Computer, mobile devices**
Type: **Water Management**

Hydrawise™ cloud software is a user-friendly water management software. Each homeowner can use Predictive Watering™ Adjustments to achieve water savings. Hydrawise software is also a powerful tool for professional contractors to do in-depth water management for their client's landscape, piping system and valves electrical system. It is a professional cloud-based irrigation software that works for everyone.

FEATURES

- Contractor management system allows access to multiple controllers any time
- Predictive Watering Adjustments based on web-based weather data brings up to 50% in water savings
- Extensive system reporting keeps you in the know
- Monitor internet connection, flow and electrical current
- Get automatic notifications via text and app to alert you of broken pipes or sprinklers

- Contractor Management System
- Proven Water Saver
- Predictive Watering Adjustments
- Weather Stations
- User Management
- Enhanced Reporting
- Controller Logs
- Irrigation Layouts And Schedules

SOFTWARE PLANS (1 YEAR)

Plan	Description
HC-PLAN-HOME	Home Plan (Free) - Our standard plan offers free weather station connection, App alerts, reporting and 1 user account
HC-PLAN-ENTHUSIAST	Enthusiast Plan - Use multiple weather stations for hyper-local weather, receive SMS alerts, 5 user accounts
HC-PLAN-CONTRACTOR STARTER	Contractor Starter (Free) - Manage up to 5 controllers and up to 5 contractor staff users
HC-PLAN-CONTRACTOR	Contractor Plan - Manage up to 50 controllers and up to 5 contractor staff users
HC-PLAN-BRONZE	Bronze Plan - Manage up to 100 controllers and up to 15 contractor staff users
HC-PLAN-SILVER	Silver Plan - Manage up to 150 controllers and up to 30 contractor staff users
HC-PLAN-GOLD	Gold Plan - Manage up to 200 controllers and up to 45 contractor staff users
HC-PLAN-PLATINUM	Platinum Plan - Manage over 200 controllers and more than 45 contractor staff users

Try it now with a free demo at hydrawise.com/demo

Easy to Use

Simple and straightforward installation with step-by-step setup wizard. Dashboard control from smartphone, tablet, and PC apps. Touchscreen interface on the HC controller.

Save Water

Uses weather station information and localized forecasts to predict, change, monitor, measure, and report on your irrigation.

Save Time

Remote access anytime via phone, tablet or computer. Contractor management access via account login.

Monitor Water Usage

Optional flow meter to detect broken pipes and spray heads, faulty wiring, or leaky valves. View the water usage for each watering cycle with a flow meter and discover when a zone's water usage is abnormal.

HC Controller
Compatible 6 and 12 station controller

Flow Meter
Add optional flow meter for flow alerts and monitoring water consumption

Rain-Clik®
Improve water consumption with onsite shutoff

IMMS®

Platform: **Windows**
Type: **Central Control Software**
Controllers: **Up to 10,000**

Hunter's Irrigation Management & Monitoring Software (IMMS) is a PC-based software package that makes central control of large-scale irrigation systems affordable, usable, and comprehensible. IMMS is optimized for the Hunter ACC controller and accessories (including decoder controllers).

FEATURES

- Windows®-based programming and communications software
- Total control of each controller's functions
- Graphical user interface with customizable map-based navigation
- Map utility allows direct import of linework and layers
- Flow monitoring and reporting with Hunter ACC controllers
- Alarm reporting and detailed irrigation history reports
- Wireless and hardwired communication options, including Ethernet and GPRS
- Controller sharing of communications channels to reduce communications costs
- Compatible with water-saving Hunter Solar Sync® sensors, or optional ET Sensors

KEY SPECIFICATIONS

- Operating system: Microsoft Windows XP, Vista, Windows 7, Windows 8*
- Minimum RAM: 512 MB
- Minimum screen resolution: 1,024 x 768
- Storage: At least 100 MB disk space

* Windows is a registered trademark of the Microsoft Corporation

COMPATIBLE SENSORS

- **Flow-Sync®:** Hunter Flow-Sync sensor for ACC controllers (one per controller). Provides flow monitoring with diagnostic shutdowns in real time
- **Clik Sensors:** Each controller requires its own rain sensor for fast rain shutdowns. All Hunter Clik sensors are compatible with ACC and other Hunter controllers
- **ET Sensor:** ET Sensor platform is for use with IMMS-ET software
- **Solar Sync Sensor** (wired or wireless): Each controller can use its own SOLARSYNCSEN or WSS-SEN for smart, water-saving self-adjustment
  - Solar Sync sensors also provide rain and freeze shutoff functions
  - Solar Sync compatibility is included with the basic IMMS4CD software

ET Sensor
Height: 27 cm
Width: 18 cm
Depth: 31 cm

Wireless Solar Sync Sensor
(w/mounting arm)
Height: 11 cm
Width: 22 cm
Depth: 2.5 cm

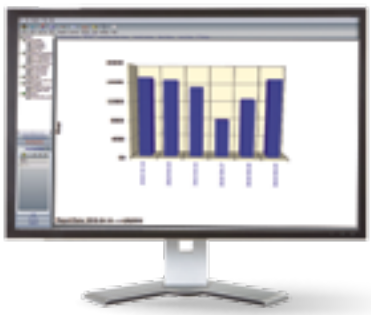
COMMUNICATION OPTIONS

- ACC-COM-HWR, LAN, GPRS, GPRS-E
- Mounted internally to ACC controller
- RAD3: 450-470 MHz, UHF Radios, Power Output: 1 Watt, Bandwidth: 12.5 kHz narrowband
- ACC-HWIM: Hardwire interface module for 4-20 mA loop communications, installs inside ACC controller cabinets or pedestals
- ACC-COM-LAN requires fixed IP address from system administrators
- ACC-COM-GPRS requires a monthly service plan

HARDWIRE COMMUNICATIONS CABLE

- GCBL shielded, two twisted-pair 1 mm wire with ground wire, up to 3 km between each device

Add a visual dimension to central control with background map graphics



Track flow and other vital statistics in both charts and spreadsheets

IMMS SOFTWARE

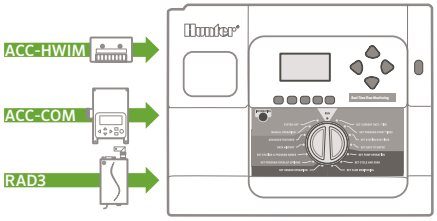
Model	Description
IMMS4CD	IMMS Graphics central control software
IMMS-ET-CD	Optional ET automatic weather adjustment software *(requires IMMS4CD base model)*

Note:
* Requires an ET Sensor at one or more ACC controller locations

COMMUNICATION OPTIONS FOR ACC INTERFACE

Model	Purpose
ACC-COM-HWR = Hardwire/radio module*	Supports hardwire and radio communication options
ACC-COM-LAN = Ethernet module*	Supports TCP/IP in Ethernet networks in addition to hardwire and radio sharing with local controllers
ACC-COM-GPRS-E = GPRS cellular data module*	Supports mobile data connection via GPRS phone in addition to hardwire and radio sharing with local controllers

Note:
* Also supports radio and hardwire



ACC wall mount communication components

USER-INSTALLED OPTIONS (SPECIFY SEPARATELY)

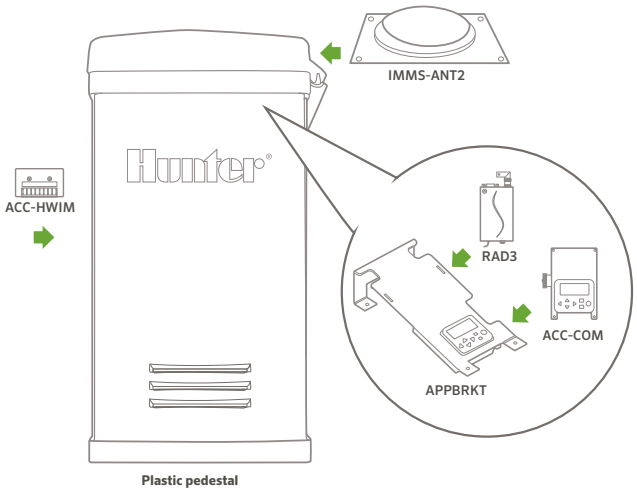
Model	Description	Purpose
ACC-HWIM	Hardwire interface module required for hardwire connections	Provides surge protected terminals for hardwired cable connections
RAD3	UHF radio module (North America), 450-470 MHz	UHF radio module for wireless connections (licence and antenna required and not included)
RAD460INT	UHF radio module (International), 440-480 MHz "Consult factory for other international frequency ranges"	UHF radio module for wireless connections, international only (licence and antenna required and not included)
APPBRKT	Communication bracket for plastic pedestals	Holds com modules and accessories in plastic pedestal (not required in wall mounts)

Model	Description	Options	Purpose
IMMS-CCC	Hardwire Central Interface	None = 120 VAC (North America) E = 230 VAC (Europe/international power) A = 230 VAC (Australia)	Hardwired central interface for connection to site via direct wire (GCBL cable), supplied with USB cable for connection to central computer, and plug-in transformer
GCBL*	100 = 30 m 300 = 90 m 500 = 150 m		Cable for all IMMS hardwired communications

Note:
* GCBL available in 300 m increments (up to 1,200 m)

RADIO ANTENNA OPTIONS (SPECIFY SEPARATELY)

Model	Description
IMMS-ANT2	Omni-directional antenna fits ACC plastic pedestal lid
IMMS-ANT3	Omni-directional antenna for wall- or pole-mount
IMMS-ANTYAGI3	High efficiency directional antenna for pole-mount
RA5M	High gain omni-directional mast antenna for roof- or pole-mount



ACC plastic pedestal communication components

SECTION 07:
SENSORS

SOLAR SYNC®

Sensor: **ET/Rain/Freeze**

FEATURES

- Provides automatic daily weather adjustment to program run times
- Wired and wireless models available
- Solar Sync may be used in IMMS central installations
- Rain and Freeze shutoff
- Gutter mount bracket included
- Compatible with all Hunter AC powered controllers
- Warranty period: 5 years (10 year battery warranty for wireless model)

SPECIFICATIONS

- Maximum distance sensor to module: 60 m (wired model) or 240 m (wireless model)
- 12 m of wire included in kit (wired model)
- Rain and Freeze sensor shutdown capability included

APPROVALS

- FCC, CE

Solar Sync Sensor
(w/mounting arm)
Height: 8 cm
Width: 22 cm
Depth: 2 cm

Solar Sync Module
Height: 4 cm
Width: 13 cm
Depth: 2 cm

Wireless Solar Sync Sensor
(w/mounting arm)
Height: 11 cm
Width: 22 cm
Depth: 2.5 cm

Wireless Solar Sync Receiver
Height: 14 cm
Width: 4 cm
Depth: 4 cm

SOLAR SYNC		
Model	**Description**	
SOLAR-SYNC	Solar Sync kit for use with PCC and Pro-C 300 controllers. *Includes Solar Sync Sensor and module.*	
SOLAR-SYNC-SEN	Wired Solar Sync for use with ACC, I-Core®, ICC2, new Pro-C® 400/PCC Series, and X-Core® controllers. *Includes Solar Sync Sensor only.*	
WSS	Wireless Solar Sync for use with PCC and Pro-C 300 controllers. *Includes Wireless Solar Sync Sensor, Wireless receiver, and module.*	
WSS-SEN	Wireless Solar Sync for use with ACC, I-Core, ICC2, new Pro-C 400/PCC Series, and X-Core controllers. *Includes wireless Solar Sync Sensor and wireless receiver.*	

SOIL-CLIK®

Sensor: **Soil Moisture**

FEATURES

- Soil moisture level and status at a glance
- Shuts down irrigation when desired moisture level has been reached
- One-touch override allows soil moisture bypass for special conditions
- Low voltage outdoor enclosure powered by host controller
- Simple installation allows probe to be up to 300 m from controller
- Connect to Hunter sensor inputs, or use to interrupt common wires in virtually any 24 VAC irrigation system
- Use with X-Core®, Pro-C®, ICC2 and I-Core®, and ACC Clik sensor inputs
- Ideal companion sensor to Solar Sync®
- Warranty period: 5 years

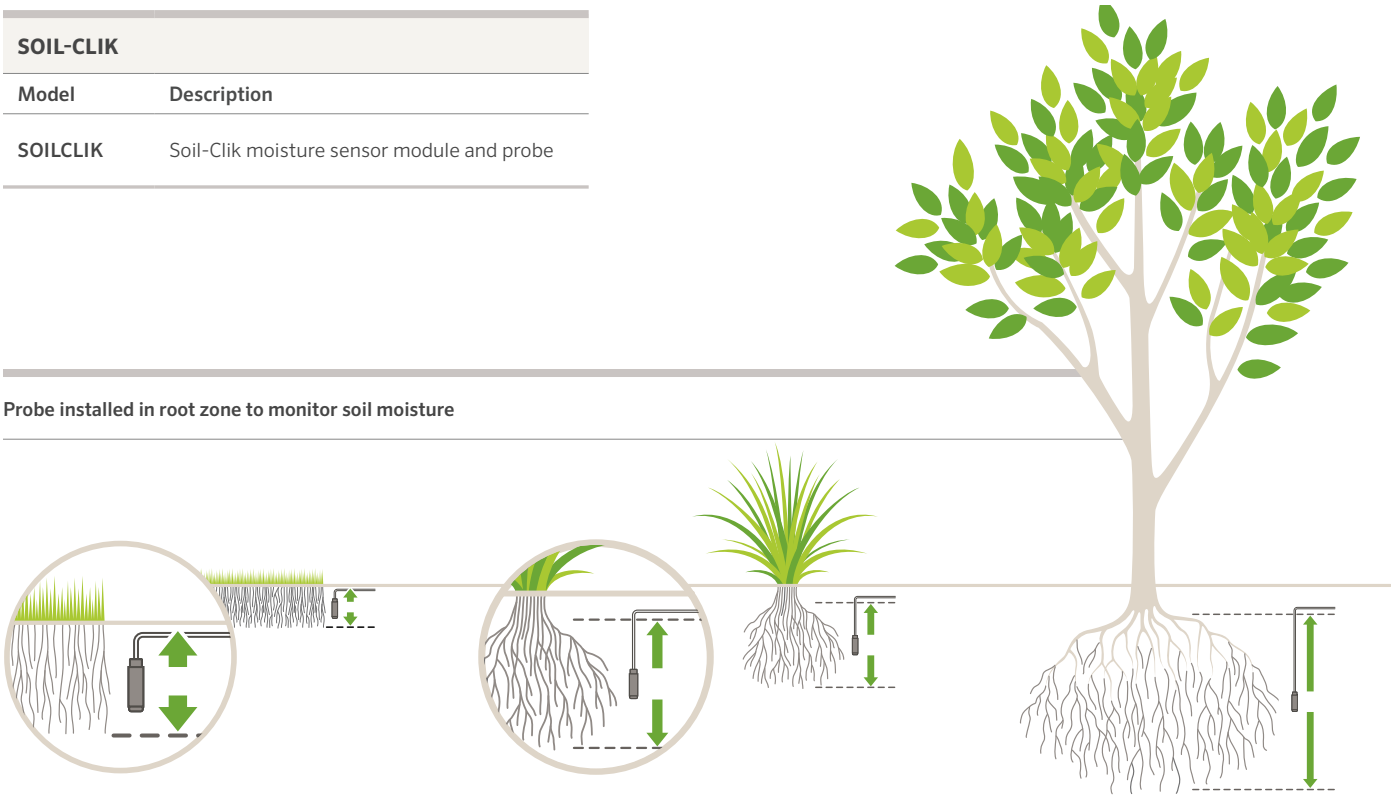
SOIL-CLIK Module
Height: 11.4 cm
Width: 8.9 cm
Depth: 3.2 cm
Power: 24 VAC, 100mA max.
Wire Leads: 80 cm

SPECIFICATIONS

- Max distance, control module to controller: 2 m
- Max distance, control module to sensor probe: 300 m
- Input power: 24 VAC, 100mA max.
- Output: Normally-closed dry contact closure
- Enclosure: NEMA 3R, indoor/outdoor

SOIL-CLIK Probe
Diameter: 2 cm
Height: 8.3 cm
Wire to Probe: 300 m max.
1 mm² Direct Burial Wire
Wire Leads: 80 cm

SOIL-CLIK	
Model	**Description**
SOILCLIK	Soil-Clik moisture sensor module and probe



Probe installed in root zone to monitor soil moisture

In turf applications, the probe should be placed in the root zone, approximately 15 cm deep (adjust for actual turf conditions).

For shrubs or trees, select a deeper depth that matches the root zone. For new plantings, choose a spot halfway down the root ball, adjacent to native soil.

RAIN-CLIK®

Sensor: **Rain**

FEATURES

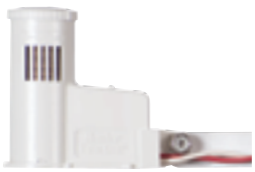
- Quick Response™ feature shuts the system off as soon as it starts raining
- Maintenance-free design with 10-year battery life for Wireless Rain-Clik
- Adjustable vent ring allows for setting of reset delay
- Rugged polycarbonate housing and metal extension arm
- Rain-Clik includes 7.6 m of 0.5 mm^2 sheathed, two-conductor, UL-approved wire
- Wireless unit available with 244 m range from wireless sensor to receiver
- Compatible with most controllers
- Warranty period: 5 years (10 year battery warranty for wireless model)

SPECIFICATIONS

- Wiring: “normally-open” or “normally-closed”
- Time to turn off irrigation system: 2 to 5 minutes approx. for Quick Response
- Time to reset Quick Response: 4 hours approx. under dry, sunny conditions
- Time to reset when fully wet: 3 days approx. under dry, sunny conditions
- Switch rating: 24 VAC, 3 A
- Freeze sensor shuts system off when temperatures fall below 3° C (Rain/Freeze-Clik model)
- System operating frequency: 433 MHz (wireless model)
- Communication range up to 240 m line of sight (wireless model)
- Receiver input power: 24 VAC (from controller)

APPROVALS

- UL listed, FCC approved, cUL, CSA, CE, suitable for use in Australia



RAIN-CLIK
Height: 6 cm
Length: 18 cm

WR-CLIK-TR
Height: 7.6 cm
Length: 20 cm

WR-CLIK-R
(Receiver)
Height: 8.3 cm
Length: 10 cm

SGM
Optional gutter mount

RAIN-CLIK	
Model	**Description**
RAIN-CLIK	Rain-Clik sensor
RFC	Rain/Freeze-Clik sensor
WR-CLIK	Wireless Rain-Clik system
WR-CLIK-TR	Wireless Rain-Clik Transmitter (only)
WRF-CLIK	Wireless Rain/Freeze-Clik system
WR-CLIK-R	Wireless Rain Receiver (only)

USER INSTALLED OPTION (SPECIFY SEPARATELY FROM CONTROLLER)	
Model	**Description**
SGM	Optional gutter mount (included in the WRF-CLIK)

MINI-CLIK®

Sensor: **Rain**

FEATURES

- Easily installs on any automatic irrigation system
- Debris tolerant for reliable operation without unnecessary shutdowns
- Can be set to shut system off from 3 mm to 19 mm of rainfall
- Includes 7.6 m of 0.5 mm^2 sheathed, two-conductor, UL-approved wire
- Optional user-installed metal gutter mount for Mini-Clik (order SGM, Includes Mini-Clik)
- Warranty period: 5 years

SPECIFICATIONS

- Switch rating: 24 VAC, 5 A
- Wiring: 0.5 mm^2, typically interrupts the common ground wire between the solenoid valves and controller

MINI-CLIK®	
Model	**Description**
MINI-CLIK	Rain Sensor
MINI-CLIK-NO	Rain Sensor with “normally-open” switch
MINI-CLIK-C	Rain Sensor with conduit mount
MINI-CLIK-HV	Rain Sensor for high voltage application (120/230 VAC)

MINI-CLIK
Height: 5 cm
Length: 15 cm

SG-MC
Stainless steel sensor guard enclosure for Mini-Clik.
Includes Mini-Clik.

SGM
Optional gutter mount

FREEZE-CLIK®

Sensor: **Freeze**

FEATURES

- Installs easily with no adjustment needed
- Accurate temperature sensing shuts system off when air temperature reaches 3° C
- Used with other sensors to enhance overall efficiency of irrigation systems
- Warranty period: 5 years

SPECIFICATIONS

- Switch rating: 24 VAC, 5 A
- Wiring: Typically interrupts the common ground wire between the solenoid valves and the controller
- UL listed

* *Not intended for agricultural applications*

FREEZE-CLIK®	
Model	**Description**
FREEZE-CLIK	Freeze sensor interrupts irrigation when temperatures drop below 3° C
FREEZE-CLIK REV	Freeze sensor allows irrigation when temperatures drop below 3° C

FREEZE-CLIK
Height: 5 cm
Length: 11 cm

SENSORS

MINI WEATHER STATION

Sensor: **Wind, Rain, Freeze**

FEATURES

- Compact sensor that monitors wind, rain, freezing temperatures, and shuts the irrigation system off as weather conditions require
- Installs easily on any automatic irrigation system
- Set wind speed shutdown from 19 to 56 km/hr
- Set rain shutdown from 3 mm to 19 mm of rainfall
- Automatically shuts off system when temperatures fall below 3° C
- Warranty period: 5 years

SPECIFICATIONS

- Electrical rating: 24 VAC, 5 A maximum
- Wind vane diameter: 13 cm
- Wind speed adjustments: Actuation speed: 19 to 56 km/hr
- Reset speed: 13 to 39 km/hr
- Mounts: Slip fits over 55 mm PVC pipe or attaches to 1 cm conduit with adapter (supplied with unit)

MWS-FR
Height: 20 cm
Wind Vane Diameter: 13 cm

MINI WEATHER STATION	
Model	**Description**
MWS	Weather station combines wind and rain sensors
MWS-FR	Weather station combines wind and rain sensors with a freeze sensor

WIND-CLIK®

Sensor: **Wind**

FEATURES

- Adjusts to activate and reset at various wind speeds
- Wiring: normally-closed or normally-open
- Works with fountain systems to eliminate overspray in windy conditions
- Wind sensor interrupts/returns irrigation when programmed wind speed is measured
- Warranty period: 5 years

SPECIFICATIONS

- Switch rating: 24 VAC, 5 A maximum
- Wind speed adjustment
- Actuation speed: 19 to 56 km/hr
- Reset speed: 13 to 39 km/hr
- Mounts: Slip fits over 50 mm PVC pipe or attaches to 1 cm conduit with adapter (supplied with unit)

WIND-CLIK
Height: 10 cm
Wind Vane Diameter: 13 cm

WIND-CLIK®	
Model	**Description**
WIND-CLIK	Wind sensor interrupts or returns irrigation when programmed wind speed is measured.

FLOW-CLIK®

Sensor: **Flow**

FEATURES

- Automatically shuts down system if an overflow condition occurs
- Helps protect from flooding damage and erosion
- Calibration for precise system control: Single button allows each system to be programmed at a specified flow level
- Works with most Hunter and most non-Hunter controllers
- Multi-colour LED provides system status to display when power is applied and indicates if flow is within limits
- Compatible with most commercial and residential piping systems: Large flow range provides complete flexibility
- One button system calibration to set highest flow zone
- Warranty period: 5 years

Flow-Clik sensor and module shown with receptacle tees

SPECIFICATIONS

- Flow-Clik Interface Panel: 90 cm leads provided for easy wiring to controller (2 wires to controller, 24 VAC terminals and 2 wires to sensor and terminals)
- Current draw: 24 VAC, 0.025 A
- Switching current: 2 A maximum
- Max. distance between interface panel and sensor: 300 m
- Sensor Wiring: 2 x direct burial, 0.82 mm^2 or greater, colour-coded or marked for polarity, up to 300 m from controller
- Programmable start up delay: 0 to 300 seconds
- Programmable interrupt period: 2 to 60 minutes

FLOW-CLIK®

Model	Description
FLOW-CLIK*	Standard kit for all 24 VAC controllers. *Includes sensor and interface module, sensor requires FCT for pipe installation.*

REQUIRED USER INSTALLED OPTION (SPECIFY SEPARATELY)

Model	Description
FCT-100	1" (25 mm) Schedule 40 sensor receptacle tee
FCT-150	1½" (40 mm) Schedule 40 sensor receptacle tee
FCT-158	1½" (40 mm) Schedule 80 sensor receptacle tee
FCT-200	2" (50 mm) Schedule 40 sensor receptacle tee
FCT-208	2" (50 mm) Schedule 80 sensor receptacle tee
FCT-300	3" (80 mm) Schedule 40 sensor receptacle tee
FCT-308	3" (80 mm) Schedule 80 sensor receptacle tee
FCT-400	4" (100 mm) Schedule 40 sensor receptacle tee

Notes:
* FCT for pipe installation sold separately

BSP ADAPTERS FOR FCT FITTINGS

Diameter	Model
1" (25 mm)	795700
1½" (40 mm)	795800
2" (50 mm)	241400
3" (80 mm)	477800

FLOW RANGE

Pipe Diameter	Operating Range			
	Minimum		Suggested Maximum*	
	l/min	m^3/hr	l/min	m^3/hr
1" (25 mm)	7.6	0.45	64	3.84
1½" (40 mm)	19	1.14	132	8.0
2" (50 mm)	37.8	2.26	208	12.5
3" (80 mm)	106	6.36	450	27.0
4" (100 mm)	129	7.74	750	45.0

Notes:
* Good design practice dictates the maximum flow not to exceed 1.5 m/sec. Suggested maximum flow is based upon Class 200 IPS plastic pipe.

FLOW-SYNC®

Sensor: **Flow**

FEATURES

- Simple two-wire connection to ACC and I-Core® controllers (up to 300 m)
- Feeds flow data (gallons or liters) to controller, for flow recording and monitoring purposes
- Robust waterproof construction
- Provides station level flow monitoring for reaction to high or low flow conditions
- Helps prevent damage and waste from leaks and breaks in piping system

SPECIFICATIONS

- Recommended pressure range: 1.5 to 15.0 bar; 150 to 1500 kPa
- Pressure Loss: < 0.009 bar; 0.9 kPa
- Wiring: 2 x direct burial, 0.82 mm^2 or greater, colour-coded or marked for polarity, up to 300 m from controller.

Impeller-type flow meter, requires FCT for pipe installation (sold separately)

FLOW-SYNC

Model	Description
HFS*	Hunter Flow-Sync sensor, use with ACC and I-Core controllers, sensor requires FCT for pipe installation

REQUIRED USER INSTALLED OPTION (SPECIFY SEPARATELY)

Model	Description
FCT-100	1" (25 mm) Schedule 40 sensor receptacle tee
FCT-150	1½" (40 mm) Schedule 40 sensor receptacle tee
FCT-158	1½" (40 mm) Schedule 80 sensor receptacle tee
FCT-200	2" (50 mm) Schedule 40 sensor receptacle tee
FCT-208	2" (50 mm) Schedule 80 sensor receptacle tee
FCT-300	3" (80 mm) Schedule 40 sensor receptacle tee
FCT-308	3" (80 mm) Schedule 80 sensor receptacle tee
FCT-400	4" (100 mm) Schedule 40 sensor receptacle tee

Note:
* Flow-Sync (sensor only) for use with ACC and I-Core controllers. Requires FCT for pipe installation (sold separately).

BSP ADAPTERS FOR FCT FITTINGS

Diameter	Model
1" (25 mm)	795700
1½" (40 mm)	795800
2" (50 mm)	241400
3" (80 mm)	477800

FLOW RANGE

Pipe Diameter	Operating Range			
	Minimum		Suggested Maximum*	
	l/min	m^3/hr	l/min	m^3/hr
1" (25 mm)	7.6	0.45	64	3.84
1½" (40 mm)	19	1.14	132	8.0
2" (50 mm)	37.8	2.26	208	12.5
3" (80 mm)	106	6.36	450	27.0
4" (100 mm)	129	7.74	750	45.0

Notes:
* Good design practice dictates the maximum flow not to exceed 1.5 m/sec. Suggested maximum flow is based upon Class 200 IPS plastic pipe.

WIRELESS FLOW SENSOR

Sensor: **Flow**

FEATURES

- Feeds flow data (gallons or liters) to controller, for flow recording and monitoring purposes
- Robust waterproof construction
- Provides station level flow monitoring for reaction to high or low flow conditions
- Helps prevent damage and waste from leaks and breaks in piping system

SPECIFICATIONS

- Maximum distance sensor to module: 152 m
- Recommended pressure range: 0 to 15.0 bar; 0 to 1500 kPa
- Pressure Loss: < 0.07 bar; 0.7 kPa

APPROVALS

- FCC and CE approved

WFS

WIRELESS FLOW SENSOR	
Model	**Description**
WFS	Wireless Flow Sensor Kit 900 mHz
WFS-INT	Wirelss Flow Sensor Kit - International 868 mHz
WFS-T	Wireless Flow Sensor Kit Transmitter Only
WFS-R	Wireless Flow Sensor Kit Receiver Only
WFS-T-INT	Wireless Flow Sensor Kit Transmitter Only - International 868 mHz
WFS-R-INT	Wireless Flow Sensor Kit Receiver Only - International 868 mHz
WFS-SEN	Wireless Flow Sensor Kit Sensor Only
WFS-LITHBATT	Wireless Flow Sensor Lithium Battery
WFS-ALKBATT	Wireless Flow Sensor Alkaline Battery with Cage

REQUIRED USER INSTALLED OPTION (SPECIFY SEPARATELY)	
Model	**Description**
FCT-100	1" (25 mm) Schedule 40 sensor (white) receptacle tee
FCT-150	1½" (40 mm) Schedule 40 sensor (white) receptacle tee
FCT-158	1½" (40 mm) Schedule 80 sensor (gray) receptacle tee
FCT-200	2" (50 mm) Schedule 40 sensor (white) receptacle tee
FCT-208	2" (50 mm) Schedule 80 sensor (gray) receptacle tee
FCT-300	3" (80 mm) Schedule 40 sensor (white) receptacle tee
FCT-308	3" (80 mm) Schedule 80 sensor (gray) receptacle tee
FCT-400	4" (100 mm) Schedule 40 sensor (white) receptacle tee

FLOW RANGE

Wireless Flow Sensor Diameter	Operating Range			
	Minimum		Suggested Max*	
	l/min	m^3/hr	l/min	m^3/hr
1" (25 mm)	7.6	0.45	64	3.84
1½" (40 mm)	19	1.14	132	8.0
2" (50 mm)	37.8	2.26	208	12.5
3" (80 mm)	106	6.36	450	27.0
4" (100 mm)	129	7.74	750	45.0

Notes:

* Good design practice dictates the maximum flow not to exceed 1.5 m/sec. Suggested maximum flow is based upon Class 200 IPS plastic pipe.

SENSORS


Hunter IH RISER

SECTION 07:

MICRO

ADVANCED FEATURES

Hunter now has a complete system of commercial-grade micro irrigation products for any application. Whether you're designing micro irrigation projects for dense or sparse plantings, narrow beds, small spaces, or even green roofs, you can get everything you need from Hunter. Many of the components are available in a brown color for an aesthetically-pleasing look that blends into the landscape.

SUBSURFACE

ECO-MAT®

Designed to suit a variety of hard-to-irrigate areas, the Eco-Mat uses an engineered combination of Hunter's fleece-wrapped professional landscape dripline attached to a specialized fleece blanket, which evenly disperses water within the root zone.

ECO-WRAP™

Eco-Wrap is Hunter's fleece-wrapped professional landscape dripline, which transports water quickly and more efficiently than bare dripline.

ECO-INDICATOR

The Eco-Indicator provides a visual signal that the system is operating. Pair with Eco-Mat and Eco-Wrap subsurface systems or any drip system where emitters are obscured.

PLD-LOC FITTINGS

PLD-Loc Fittings are easier and faster than other fittings with easy push-on installation. Threads lock them into place. Fits all dripline inside diameters: 16 mm, 17 mm, 18 mm and ½" black poly tubing. Reusable - perfect for drip irrigation maintenance.

RZWS - ROOT ZONE WATERING SYSTEM

The Root Zone Watering System features Hunter's patented StrataRoot design, which is a series of internal baffles that deliver water to all levels of the root zone. The RZWS is pre-assembled to save time, and the enclosed design and grate protect irrigation hardware from vandalism.

ABOVE GROUND

PLD - PROFESSIONAL LANDSCAPE DRIPLINE

Hunter's PLD provides a pressure compensation system with built-in check valve to help prevent emitter clogging and water loss and ensure even flows on all terrains and lateral lengths.

POINT SOURCE EMITTERS

A wide range of flow rates offers you the flexibility to give individual plants and trees the right amount of water from a single emitter. Colour-coded for flow identification with coined edges for easy gripping during installation.

MULTI-PORT EMITTERS

Pressure-compensating commercial-grade emitters for all PVC systems. Perfect for mixed plantings or a series of shrubs. Colour-coded to match other Hunter emitters.

RIGID RISERS

Designed for rugged system designs. Accept 10-32 threaded components. A perfect solution for annual flower beds and planters.

IH RISERS

Heavy duty commercial-grade risers with a vandal-resistant design. Available in 30 or 60 cm blank or emitter style. Emitter style includes screens with check valves. Brown components blend in with the landscape.

APPLICATION COMPARISON

From Professional Landscape Dripline to our root zone watering system, Hunter's micro irrigation solutions are designed to apply water efficiently and precisely where it's needed. Choose the combination of products best suited for your application and plant type using the chart below.

QUICK SPECS	ECO-MAT	ECO-WRAP	PLD	MLD	IH RISER	PSE	MULTI-PORT	MICRO SPRAYS	RZWS
EMITTER SPACING	30 cm	30 cm	30, 45, 60 cm	30, 45 cm	-	-	-	-	-
FLOW RATES	2.2 l/hr	2.2 l/hr	1.4–3.8 l/hr	1.5–3.2 l/hr	1.9–22.7 l/hr	2, 4, 8, 15, 23 l/hr	2, 4, 8, 15 l/hr	0–119 l/hr	0.9–1.9 l/min
NON-DRAINING (CHECK VALVE)	●	●	●		●				
WARRANTY	5 Years	5 Years	5 Years	1 Year	2 Years	2 Years	2 Years	1 Year	2 Years
ADVANCED FEATURES									
FLEECE TECHNOLOGY	●	●							
PRESSURE COMPENSATION	●	●	●		●	●	●		●
STRATA ROOT SYSTEM									●
ADJUSTABLE RADIUS								●	
PLANT TYPE									
TEMPORARY IRRIGATION			●	●				●	
GROUNDCOVER, SHRUBS, TREES AT GRADE (LESS THAN 15 CM DEEP)			●		●	●	●	●	
TURF	●	●							
SMALL SHRUBS, PLANTS AND GROUNDCOVER	●	●		●	●	●	●	●	
TREES AND LARGE SHRUBS		●			●	●	●	●	●
SPREADING SUCCULENTS, MOSS, AND MAT PLANTS	●	●		●					
APPLICATION									
USE WITH RECLAIMED WATER	●	●	●		●	●	●		●
SUBSURFACE INSTALLATION	●	●	●		●				●
POTTED PLANTS		●	●	●		●		●	
HEDGE ROWS	●	●	●						
DENSE MIXED PLANTINGS	●	●	●				●	●	
RESIDENTIAL GARDENING	●	●	●	●		●	●	●	
ROADWAY MEDIANS	●	●	●		●	●	●		●
GREEN ROOF	●	●							
TREES	●	●	●		●	●	●		●

ECO-MAT®

UNMATCHED UNIFORMITY AND WATER SAVINGS

Subsurface Irrigation: **Under Turf, Gardens, Small Shrubs**

FEATURES

- Water-saving with nearly 100% distribution uniformity
- Promotes healthier plant roots
- Eliminates overspray onto sidewalks, buildings, or vehicles
- Perfect for irrigating difficult areas
- Use with PLD-Loc or barbed PLD fittings
- The polypropylene wrap protects against root intrusion without using toxic chemicals or metal byproducts
- Water holding capacity of 1.89 l/m²
- Pressure compensating
- Check valves keep the line charged up to 1.5 m and prevent low point drainage
- Recommended for use with all Hunter Drip Control Zone Kits
- For maximum water savings, use with Hunter Soil-Clik®
- Warranty period: 5 years (2 additional years for environmental stress cracking)

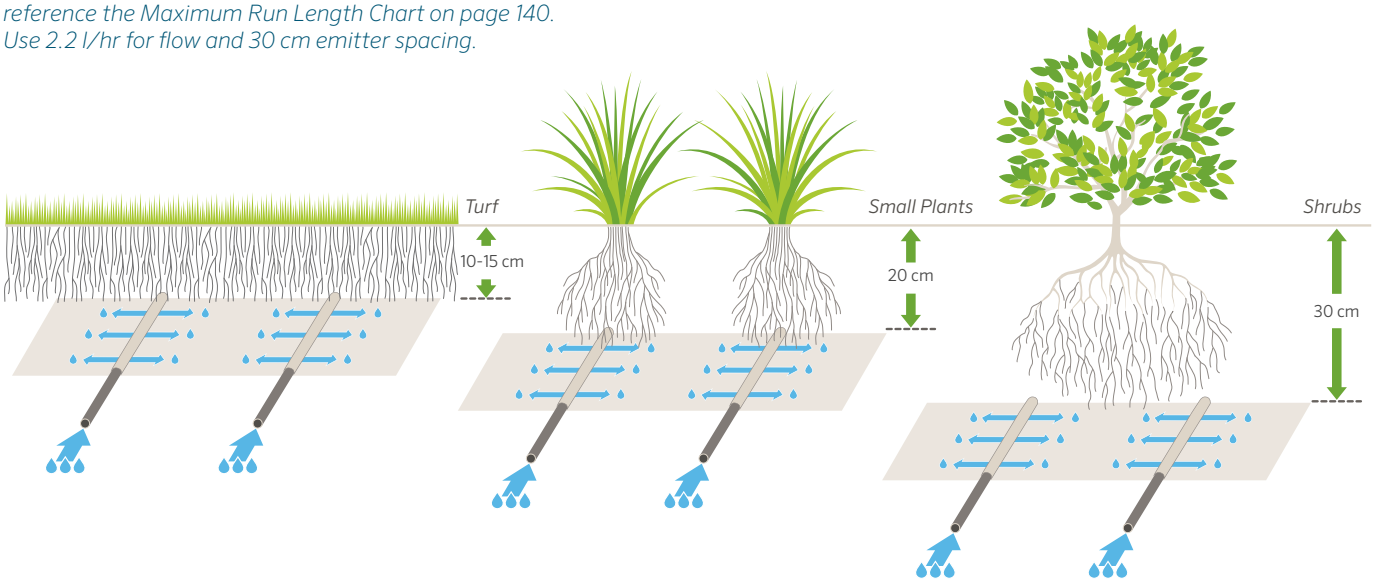
ECO-MAT TECHNICAL SPECIFICATIONS

	16 MM	17 MM
Flow	2.2 l/hr; 0.13 m³/hr	2.2 l/hr; 0.13 m³/hr
Roll Length	100 m	90 m
Width	0.80 m	0.80 m
m²	80	60
Operating Pressure	1.0 to 3.5 bar; 100 to 350 kPa	1.0 to 3.5 bar; 100 to 350 kPa
Minimum Filtration	120 mesh; 125 microns	120 mesh; 125 microns
Emitter Spacing	30 cm	30 cm
Lateral Row Spacing	35 cm	35 cm

OPERATING SPECIFICATIONS

- Minimum flitration 120 mesh; 125 microns
- Operating pressure range: 1.0 to 3.5 bar; 100 to 350 kPa
- Compatible with 16 mm and 17 mm insert barb fittings
- Recommended installation depth range 10 cm to 30 cm

For maximum run length distances for the Eco-Mat or Eco-Wrap, reference the Maximum Run Length Chart on page 140. Use 2.2 l/hr for flow and 30 cm emitter spacing.



Eco-Indicator

Pair with Eco-Mat and Eco-Wrap subsurface systems. Offers a visual signal that the system is operating. Requires 0.83 bar; 8.3 kPa minimum. Yellow, easy-to-see indicator stem with 15 cm pop up height.

ECO-WRAP™

Subsurface Irrigation: **Under Turf, Gardens, Shrubs, Trees**

FEATURES

- High distribution uniformity surpassed only by the Eco-Mat
- Promotes healthier plant roots
- Eliminates overspray onto sidewalks, buildings, or vehicles
- Ideal for difficult areas between flagstone and pavers
- Use with PLD-Loc or barbed PLD fittings
- Fleece-wrapped professional landscape dripline
- Transports water faster and more efficiently than bare dripline
- Pressure compensating
- Check valves keep the line charged up to 1.5 m and prevent low point drainage
- Fleece fully moistens in less than 3 minutes allowing far better uniformity than bare dripline
- Recommended for use with all Hunter Drip Control Zone Kits
- Warranty period: 5 years (2 additional years for environmental stress cracking)

OPERATING SPECIFICATIONS

- Minimum filtration 120 mesh; 125 microns
- Operating pressure range: 1.0 to 3.5 bar; 100 to 350 kPa
- Compatible with 16 mm and 17 mm insert barb fittings

ECO-WRAP TECHNICAL SPECIFICATIONS

	16 MM	17 MM
Flow	2.2 l/hr; 0.13 m^3/hr	2.2 l/hr; 0.13 m^3/hr
Roll Length	100 m	76 m
Operating Pressure	1.0 to 3.5 bar; 100 to 350 kPa	1.0 to 3.5 bar; 100 to 350 kPa
Minimum Filtration	120 mesh; 125 microns	120 mesh; 125 microns
Emitter Spacing	30 cm	30 cm

Eco-Wrap

APPLICATION RATE

16 MM EMITTER FLOW RATE – 2.2 l/hr

Row Spacing (m)	Emitter Spacing (m) 0.30	0.50
0.30	24	15
0.35	21	13
0.40	18	11
0.45	16	10
0.50	15	9
0.55	13	8
0.60	12	7

16 MM EMITTER FLOW RATE – 3.8 l/hr

Row Spacing (m)	Emitter Spacing (m) 0.30	0.50
0.30	42	25
0.35	36	22
0.40	32	19
0.45	28	17
0.50	25	15
0.55	23	14
0.60	21	13

16 MM QUICK REFERENCE CHART – l/min PER 100 M

Emitter (l/hr)	Emitter Spacing (m) 0.30	0.50
1.5	12.2	7.3
3.8	21.1	12.7

Notes

Eco-Mat has two lateral lines; calculating l/hr per 30.5 m should reflect two lines, not just one.

17 MM EMITTER FLOW RATE – 1.5 l/hr

Row Spacing (m)	Emitter Spacing (m) 0.30	0.45	0.61
0.30	17	11	8
0.35	14	10	7
0.40	13	8	6
0.45	11	7	5
0.50	10	7	5
0.55	9	6	4
0.60	8	6	4

17 MM EMITTER FLOW RATE – 2.2 l/hr

Row Spacing (m)	Emitter Spacing (m) 0.30	0.45	0.61
0.30	26	17	13
0.35	22	15	11
0.40	19	13	9
0.45	17	11	8
0.50	15	10	8
0.55	14	9	7
0.60	13	9	6

17 MM EMITTER FLOW RATE – 3.8 l/hr

Row Spacing (m)	Emitter Spacing (m) 0.30	0.45	0.61
0.30	42	28	21
0.35	36	24	18
0.40	32	21	16
0.45	28	19	14
0.50	25	17	12
0.55	23	15	11
0.60	21	14	10

17 MM QUICK REFERENCE CHART – l/min PER 100 M

Emitter (l/hr)	Emitter Spacing (m) 0.30	0.50	0.60
1.5	8.1	5.4	4.2
2.3	12.6	8.5	6.4
3.8	20.2	13.6	10.2

Notes

Eco-Mat has two lateral lines; calculating l/hr per 30.5 m should reflect two lines, not just one.

Notes

Application rates in m per hour

PLD

PROFESSIONAL LANDSCAPE DRIPLINE

Flow: **1.4, 2.2, 3.8 l/hr**
Surface Irrigation: **Shrub Rows, Gardens, Tree Rings**

FEATURES

- Check valves keep the line charged up to 1.5 m and prevent low point drainage
- Pressure compensating emitters
- Flow rates of 1.4, 2.2, 3.8 l/hr
- Emitter spacing at 30 cm, 45 cm, 60 cm
- Anti-siphon prevents debris from entering emitters when used subsurface
- Available without emitters (blank)
- Use with PLD-Loc or barbed PLD fittings
- Strong UV resistance
- Warranty period: 5 years (2 additional years for environmental stress cracking)

OPERATING SPECIFICATIONS

- Pressure compensating, non-draining emitters
- Operating pressure range: 1.0 to 3.5 bar; 100 to 350 kPa
- Minimum filtration: 120 mesh

Precipitation Rate charts on page 139

PLD

PLD Reclaimed
Optional colour for reclaimed water sources, available for 17 mm only

PLD 16 MM – SPECIFICATION BUILDER: ORDER 1 + 2 + 3

1 Model	2 Spacing	3 Length
PLD-22 = 2.2 l/hr Flow	**30 cm**	**100 m**
PLD-38 = 3.8 l/hr Flow	**50 cm**	**200 m**
		400 m

Examples:
PLD-22 - 30 - 100 = 2.2 l/hr dripline with 30 cm spacing in a 100 m roll
PLD-22 - 50 - 200 = 2.2 l/hr dripline with 50 cm spacing in a 200 m roll
PLD-38 - 50 - 400 = 3.8 l/hr dripline with 50 cm spacing in a 400 m roll

PLD 17 MM – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Spacing	3 Length	4 Options
PLD-04 = 1.4 l/hr Flow	**12** = 30 cm	**100** = 30 m*	**(blank)** = Female NPT
PLD-06 = 2.2 l/hr Flow	**18** = 45 cm	**250** = 75 m	**R** = Reclaimed (available in 2.3 and 3.8 l/hr models only)
PLD-10 = 3.8 l/hr Flow	**24** = 60 cm	**500** = 150 m	
PLD-BLNK = No Emitters		**1K** = 300 m	

Example:
PLD-04 - 12 - 250 = 1.4 l/hr landscape dripline with 30 cm spacing in a 75 m roll

* 30 m rolls available only in models PLD-BLNK-100, PLD-06-12-100, PLD-10-12-100, and PLD-10-18-100

EMITTER LINE MAXIMUM RUN LENGTH

16 MM EMITTER LINE MAX LENGTH – 2.2 l/hr

Pressure (bar)	Emitter Spacing (m) 0.30	0.50
1.0	47	73
2.0	84	131
3.0	104	162

16 MM EMITTER LINE MAX LENGTH – 3.8 l/hr

Pressure (bar)	Emitter Spacing (m) 0.30	0.50
1.0	35	54
2.0	59	91
3.0	72	112

17 MM EMITTER LINE MAX LENGTH – 1.5 l/hr

Pressure (bar)	Emitter Spacing (m) 0.30	0.50	0.60
1.0	86	119	149
2.0	132	185	232
3.0	159	223	281

17 MM EMITTER LINE MAX LENGTH – 2.2 l/hr

Pressure (bar)	Emitter Spacing (m) 0.30	0.50	0.60
1.0	51	71	88
2.0	89	124	156
3.0	108	152	191

17 MM EMITTER LINE MAX LENGTH – 3.8 l/hr

Pressure (bar)	Emitter Spacing (m) 0.30	0.50	0.60
1.0	37	52	65
2.0	65	92	115
3.0	80	112	142

PLD FITTINGS

Fittings: **16-18 mm Dripline**
Uses: **Barbed and Premium Fittings**

BARBED FITTINGS

- Acetal material
- Dual barb provides stronger hold than single barb
- Ideal for use with Eco-Mat®, Eco-Wrap™, PLD
- Fits 17 mm dripline and tubing
- Brown colour to match PLD dripline
- No clamps necessary
- Warranty period: 1 year

OPERATING SPECIFICATIONS

- Maximum pressure: 4.1 bar; 410 kPa

PLD-LOC

- High quality glass-filled polypropylene
- Easy push-on installation, threads lock it into place
- Easier and faster than other fittings
- Fits multiple sizes of dripline and tubing (Inside diameter range from 13.3 mm to 15.8 mm)
- Brown colour blends in with dripline and landscape
- Reusable and ideal for drip irrigation maintenance
- Warranty period: 2 years

OPERATING SPECIFICATIONS

- Maximum pressure: 4.1 bar; 410 kPa

16 MM FITTINGS

PLD-CPL-16
16 mm Barb x Barb

PLD-050-16
½" MPT x 16 mm Barb

PLD-ELB-16
16 mm Barb x Barb Elbow

PLD-TEE-16
16 mm Barb x Barb Tee

PLD-BV-16
16 mm Barb x Barb Ball Valve

17 MM FITTINGS

PLD-075
¾" MPT x 17 mm Barb

PLD-050
½" MPT x 17 mm Barb

PLD-ELB
17 mm Barb Elbow

PLD-CPL
17 mm Barb Coupling

PLD-CAP
17 mm Barb x ½" MPT with Cap

PLD-TEE
17 mm Barb Tee

PLD-075-TBTEE
17 mm Barb Tee x ¾" Thread

PLD-BV
17 mm Barb Shut-off Valve

PLD-AVR
½" Air/Vacuum Relief Valve

FITTINGS

PLD-LOC 075
¾" Male Pipe Thread x Loc

PLD-LOC 050
½" Male Pipe Thread x Loc

PLD-LOC ELB
Locking Elbow

PLD-LOC CPL
Locking Coupler

PLD-LOC CAP
End Cap x Loc

PLD-LOC TEE
Locking Tee

PLD-LOC FHS
¾" Female Hose Swivel x Loc

MICRO

MLD

MINI LANDSCAPE DRIPLINE

Flow: **1.5-3.2 l/hr**
Surface Irrigation: **Short Runs and Planters**
Fittings: **All ¼" barb fittings**

FEATURES

- Perfect for short runs and planters
- 30.5 and 76.2 m rolls
- 15 or 30 cm emitter spacing
- 76 m rolls uncoil from the inside of the roll for easy, no-hassle dispensing
- Offered in both brown or black
- Use with standard 6 mm barb fittings
- Warranty period: 2 years

OPERATING SPECIFICATIONS

- 6.4 mm outside diameter x 4.5 mm inside diameter
- Operating Pressure: 0.7 to 2.8 bar; 70 to 280 kPa
- Materials: LLDPE
- Minimum bending radius: 30 cm
- Minimum Filtration: 150 mesh; 100 microns

▸ = *Flow chart available on page 208*

MLD

MLD Installed

MLD – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Spacing	3 Length	4 Options
MLD-05	**06** = 15 cm **12** = 30 cm	**100** = 30 m **250** = 76 m	**BL** = Black **(blank)** = Brown

Example:
MLD-05 - 12 - 250 = 1.9 l/hr mini dripline with 30 cm spacing in a 76 m roll

MAXIMUM RUN LENGTH

Pressure (bar)	(kPa)	Emitter Spacing (cm) 15	30
1.7	**170**	4.6 m	9.2 m
2.8	**280**	4.6 m	9.2 m

Notes
Run lengths based on maintaining consistent flows.

FITTINGS

6 mm Barb Fittings

4.6 mm barb use with MLD or any vinyl or PE ¼" tubing, UV stabilised materials, and durable single barb connection.

QB-TEE
6 mm Barb Tee

QB-ELB
6 mm Barb Elbow

QB-CPL
6 mm Barb Coupling

QB-CRS
6 mm Barb Cross

GP-025
Goof Plug

IH RISERS

Flow: **2, 4, 8, 15, 23 l/hr**
Surface Irrigation: **Commercial-Grade**

FEATURES

- Heavy duty commercial-grade vandal-resistant design
- Made of flexible PVC for durability
- Brown components blend in with landscape
- Accepts any ½" FPT emitter
- Ideal for slopes
- Pre-assembly reduces labor by up to 50%
- On grade or below grade installation
- Available in both 30 and 61 cm cut lengths pre-assembled with two ½" MPT adapters
- Available in 30 cm lengths pre-assembled with ½" MPT adapter and specified emitter with check valve
- Available as components only for self-assembly
- Check valve holds back up to 2.7 m of head
- Warranty period: 2 years

IH RISERS

OPERATING SPECIFICATIONS

- Maximum Flow: 26.5 l/min
- Maximum Pressure: 4.1 bar; 410 kPa

IH RISER FLEXIBLE PVC	
Model	**Description**
IH-RISER-12	30 cm flexible PVC riser
IH-RISER-24	61 cm flexible PVC riser
IH-12-05-CV	30 cm flexible PVC riser with 2 l/hr emitter
IH-12-10-CV	30 cm flexible PVC riser with 4 l/hr emitter
IH-12-20-CV	30 cm flexible PVC riser with 8 l/hr emitter
IH-12-40-CV	30 cm flexible PVC riser with 15 l/hr emitter
IH-12-60-CV	30 cm flexible PVC riser with 23 l/hr emitter
IH-250	76 m length of irrigation hose
IH-FIT-3850	⅜" x ½" MPT IH fitting
IH-FIT-3850-NP	⅜" x ½" MPT IH fitting (purple reclaimed)
IPS-050250	76 m length of ½" IPS
SCREEN-CV	Screen with 2.7 m check valve

SCREEN-CV
Filter screen with 2.7 m check valve.

IH-FIT-3850
⅜" x ½" MPT IH Fitting

IH-FIT-3850-NP
⅜" x ½" MPT IH Fitting (purple reclaimed)

POINT SOURCE EMITTERS

Pressure Compensating Flow: **2, 4, 8, 15, 23 l/hr**

FEATURES

- Pressure compensating
- Colour-coded by flow
- Three inlet variations: 6 mm barb, 10-32 thread, ½" FPT
- Coined edges for easy grip
- Self-piercing barb
- Optional diffuser cap
- Self-flushing diaphragm
- Warranty period: 2 years

OPERATING SPECIFICATIONS

- Recommended pressure range: 1.4 to 3.5 bar; 140 to 350 kPa
- Minimum filtration: 150 mesh; 100 microns

POINT SOURCE EMITTERS – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Flow Rate	3 Inlet	4 Qty./Bag
HE	**050** = 2 l/hr	**B** = Self-piercing Barb*	25
HEB	**10** = 4 l/hr	**T** = 10-32 Threaded*	100
	20 = 8 l/hr	**(blank)** = ½" Female Thread	
	40 = 15 l/hr		
	60 = 23 l/hr		

* For HE only (not HEB)

Example:
HE-20 - T - 25 = 8 l/hr Point Source Emitter with 10-32 thread in a bag of 25
HEB-050 - 100 = 2 l/hr Point Source Emitter with ½" female thread in a bag of 100

Inlet Options

① Self-piercing Barb

② 10-32 Thread

③ ½" Female Thread

EMITTER MODEL CHART

	Model	Inlet Type	Flow (l/hr)
Blue	HE-050-B	Self-piercing Barb	2.0
Black	HE-10-B	Self-piercing Barb	4.0
Red	HE-20-B	Self-piercing Barb	8.0
Tan	HE-40-B	Self-piercing Barb	15.0
Orange	HE-60-B	Self-piercing Barb	23.0
Blue	HE-050-T	10-32 Thread	2.0
Black	HE-10-T	10-32 Thread	4.0
Red	HE-20-T	10-32 Thread	8.0
Tan	HE-40-T	10-32 Thread	15.0
Orange	HE-60-T	10-32 Thread	23.0
Blue	HEB-05	½" Female Thread	2.0
Black	HEB-10	½" Female Thread	4.0
Red	HEB-20	½" Female Thread	8.0
Tan	HEB-40	½" Female Thread	15.0
Orange	HEB-60	½" Female Thread	23.0

DIFFUSER CAP
Gently diffuses water on higher flow emitters to prevent erosion.

MULTI-PORT EMITTER

Pressure Compensating Flow: **2.0, 4.0, 8.0, 15.0 l/hr**

FEATURES

- Unused ports may be closed using vinyl emitter caps
- Pressure-compensating
- Perfect for mixed plantings or series of shrubs
- Flows are colour-coded to match other Hunter emitters
- ½" FPT
- Commercial-grade for all PVC systems
- Manifold available
- Warranty period: 2 years

OPERATING SPECIFICATIONS

- Recommended Pressure: 0.4 to 4.5 bar; 4 to 450 kPa
- Minimum Filtration: 150 mesh; 100 microns

MULTI-PORT EMITTER MODEL CHART

	Model	Flow (l/hr)
Blue	MPE-05	2.0
Black	MPE-10	4.0
Red	MPE-20	8.0
Tan	MPE-40	15.0
Grey	MPM-050	N/A

Multi-Port Emitter

MULTI-PORT MANIFOLD
(MPM-050)
Unrestricted flow through outlets as indicated by grey colour. Use with 6 mm distribution tubing and a barbed emitter at the end (Available in ½" FPT). Allows water to be directed to as many as six different locations.

EMITTER CAPS
(MPE-CAPS)
Plugs unused 6 mm barbed emitter outlets. Use with Hunter Multi-Port Emitters.

RIGID RISER

Surface Irrigation: **Height Adjustment**

FEATURES

- For rugged system designs
- Accepts 10-32 threaded components
- Perfect for annual flower beds and planters
- Inlet configurations: ½" FPT, 6 mm barb, or blank
- HDPE construction
- Warranty period: 1 year

RIGID RISER MODEL CHART

Model	Description
RR12	30 cm rigid riser
RR12-T	30 cm rigid riser with ½" threaded base
RR12-B	30 cm rigid riser with 6 mm barb base
RR18	45 cm rigid riser
RR18-T	45 cm rigid riser with ½" threaded base
RR18-B	45 cm rigid riser with 6 mm barb base

30 cm Rigid Riser

45 cm Rigid Riser

MICRO

DRIP CONTROL ZONE KITS

Kits: **Residential and Light Commercial**
Flow: **2 to 55 l/min**

FEATURES

- Convenient kit with all necessary parts
- Highest quality components
- Saves on installation time
- Factory assembled
- Warranty period: 2 years

FACTORY INSTALLED OPTIONS

- 1.7 or 2.8 bar; 170 or 280 kPa regulator

USER INSTALLED OPTIONS

- Reclaimed water ID handle for PCZ-101 (P/N 269205)

PCZ-101

- Pressure regulation: 1.7 or 2.8 bar; 170 or 280 kPa
- Flow: 2 to 55 l/min
- Operating pressure: 1.4 to 8.0 bar; 140 to 800 kPa
- Operating temperature: up to 66° C
- 150 mesh; 100 microns stainless steel screen

SOLENOID OPERATING SPECIFICATIONS

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

* PCZ performance chart on page 208

PCZ-101
Height: 18 cm
Width: 7 cm
Length: 26 cm
1" BSP (25 mm) inlet x ¾" outlet

DRIP ZONE CONTROL KITS – SPECIFICATION BUILDER: ORDER 1 + 2

1 Model	2 Options
PCZ-101-B = 1" BSP (25mm) PGV globe valve with HFR-100-075 filter and regulator system	**25** = 1.7 bar; 170 kPa regulator **40** = 2.8 bar; 280 kPa regulator

Examples:
PCZ-101-B-25 = 1" BSP (25mm) PGV globe valve with HFR-100-075 filter and regulator, 1.7 bar; 170 kPa regulator
PCZ-101-B-40 = 1" BSP (25mm) PGV globe valve with HFR-100-075 filter and regulator, 2.8 bar; 280 kPa regulator

PCZ-101 Installed

FILTER REGULATOR

System: **Regulation and Filtration, All in One Component**

FEATURES

- Factory-assembled and water-tested
- Highest quality components (stainless steel filter screen, standard flush cap, top-of-the-line regulator)
- Wide flow range to cover most micro irrigation applications
- Warranty period: 2 years

HFR-075

- Pressure regulation: 1.7 or 2.8 bar; 170 or 280 kPa
- Flow: 2 to 55 l/min
- Operating pressure: 1.4 to 8.0 bar; 140 to 800 kPa
- Operating temperature: up to 66° C
- 150 mesh; 100 microns stainless steel screen

HUNTER Y-FILTER

- Filter HY-075 ¾" Male

HUNTER FILTER REGULATOR KIT MODELS

Model	Description
HFR-075-25	¾" filter system, and 1.7 bar; 170 kPa regulator, ¾" outlet
HFR-075-40	¾" filter system, and 2.8 bar; 280 kPa regulator, ¾" outlet

HFR-075-25
HFR-075-40
Height: 18 cm
Width: 7 cm
Length: 16 cm
¾" inlet x ¾" outlet

HY-075
Height: 15 cm
Width: 7 cm
Length: 13 cm

SUPPLY TUBING

17 MM POLYETHYLENE PROFESSIONAL TUBING

Uses: **Water transportation**
Size: **OD 17.8 mm x ID 15.2 mm**

FEATURES

- 17.8 mm outside diameter x 15.2 mm inside diameter
- Connect using PLD-Loc fittings
- Made with linear low density UV-resistant polyethylene
- Thicker wall, commercial grade
- Warranty period: 2 years

OPERATING PRESSURE

- 0 to 4.1 bar; 0 to 410 kPa

17 mm PE Tubing

17 MM PE TUBING – SPECIFICATION BUILDER: ORDER 1 + 2 + 3

1 Model	2 Tubing Diameter	3 Length
TWPE = Thick-Walled Polyethylene Tubing	**700** = 17.8 mm outside diameter	**100** = 30 m **250** = 76 m **500** = 152 m **1K** = 305 m

Example:
TWPE-700 - 250 = 17 mm polyethylene tubing in a 76 m roll

DISTRIBUTION TUBING

6 MM POLYETHYLENE AND VINYL TUBING

Uses: **Water transportation**
Size: **OD 6.4 mm x ID 4.3 mm**

FEATURES

- 6.4 mm outside diameter x 4.3 mm inside diameter
- Connect using standard 6 mm fittings
- Offered in vinyl or polyethylene
- UV Resistant materials
- Polyethylene is better choice in warm climates
- Vinyl is more flexible and useful in cold climates
- Warranty: 2 years

OPERATING PRESSURE

- 0 to 4.1 bar; 0 to 410 kPa

6 mm Tubing

6 MM TUBING – SPECIFICATION BUILDER: ORDER 1 + 2 + 3

1 Model	2 Tubing Diameter	3 Length
HQPE = Polyethylene Tubing **HQV** = Vinyl Tubing	**250** = 6.4 mm outside diameter	**100** = 30 m **250** = 76 m **1K** = 305 m

Example:
HQPE-250 - 1K = 6 mm polyethylene tubing in a 305 m roll

MICRO SPRAYS

Uses: **Trees, Shrubs, Containers, and Flower Beds**

SOLO-DRIP

- Eight streams of water for accurate watering
- Fingertip cap control for flow and radius adjustment
- Operating specifications: 1.0 to 2.5 bar; 100 to 250 kPa
- Warranty period: 1 year

SOLO-DRIP PERFORMANCE DATA

Pressure bar	Flow l/hr	Throw Diameter (m)
1.0	0 - 40	0 - 0.5
1.5	0 - 50	0 - 0.6
2.0	0 - 60	0 - 0.8

Note: Adjustable to Maximum (approx. 20 clicks)

HALO-SPRAY

- Large diameter, umbrella of water
- Adjust radius as needed
- Combine several for a “blanket” of water
- Operating specifications: 1.0 to 2.5 bar; 100 to 250 kPa
- Warranty period: 1 year

HALO-SPRAY PERFORMANCE DATA

Pressure bar	Flow l/hr	Throw Diameter (m)
1.0	0 - 52	0 - 1.7
1.5	0 - 65	0 - 2.8
2.0	0 - 74	0 - 3.4

Note: Adjustable to Maximum (approx. 14 clicks)

TRIO-SPRAY

- Full-, half-, and quarter-circle configurations
- Functions like big sprays on a micro level
- Control knob for specific adjustment
- Operating specifications: 0.5 to 2.5 bar; 50 to 250 kPa
- Warranty period: 1 year

TRIO-SPRAY PERFORMANCE DATA

Pressure bar	Flow l/hr	Spray Pattern (m) Diameter in Throw 360° x 18 Hole	Radius of Throw 180°	Radius of Throw 90°
0.5	0 - 54	0 - 5.0	0 - 2.0	0 - 1.5
1.0	0 - 77	0 - 5.8	0 - 2.5	0 - 2.1
1.5	0 - 94	0 - 6.4	0 - 2.9	0 - 2.6
2.0	0 - 105	0 - 7.0	0 - 3.2	0 - 3.0
2.5	0 - 119	0 - 7.5	0 - 3.5	0 - 3.3

Accessories

Pair with 6 mm tubing or with Rigid Risers for added flexibility and better water application.

SD-T
Height: 2.4 cm
Width: 2.0 cm
Length: 1.6 cm
Radius: 360°

SD-B
Height: 2.4 cm
Width: 2.0 cm
Length: 1.6 cm
Radius: 360°

SD-B-STK
Height: 15.2 cm
Width: 4.3 cm
Length: 1.6 cm
Radius: 360°

HS-T
Height: 2.4 cm
Width: 2.0 cm
Length: 1.6 cm
Radius: 360°

HS-B
Height: 2.4 cm
Width: 2.0 cm
Length: 1.6 cm
Radius: 360°

HS-B-STK
Height: 15.2 cm
Width: 4.3 cm
Length: 1.6 cm
Radius: 360°

TS-T-F
Height: 3.8 cm
Width: 2.3 cm
Length: 1.5 cm
Radius: 360°

TS-T-F
Height: 3.8 cm
Width: 2.3 cm
Length: 1.5 cm
Radius: 180°

TS-T-F
Height: 3.8 cm
Width: 2.3 cm
Length: 1.5 cm
Radius: 90°

RZWS & RZWS-E

Size: **25, 45, 90 cm**
Flow: **0.9 l/min or 1.9 l/min**

FEATURES

- Built-in Hunter Swing Joint for direct installation to ½" PVC fitting
- Hunter pressure-compensating bubbler for precise watering
- Pre-assembled watering system for fast installation

RZWS

- Patented StrataRoot™ baffles divert water to root zone while adding strength to the unit
- Locking cap

FACTORY INSTALLED OPTIONS

- Check valve
- Locking reclaimed purple cap

USER INSTALLED OPTIONS

- Sleeve: Fabric sleeve that helps prevent soil intrusion in sandy areas For 45 cm and 90 cm models (P/N RZWS-SLEEVE)
- Replacement cap for 45 and 90 cm models:
  - New style snap-on locking cap (P/N 913300SP)
  - Screw locking cap (P/N RZWS-CAP)
- Locking reclaimed water purple cap for 45 and 90 cm models:
  - New style snap-on locking cap (P/N 913301SP)
  - Screw locking cap (P/N RZWS-RCCAP)
- Reclaimed water purple cap for 25 cm (P/N RZWS10-RCC)

RZWS-E

- Top serviceable cap design

OPERATING SPECIFICATIONS

- Bubbler flow rates: 0.9 l/min or 1.9 l/min
- Recommended pressure range: 1.0 to 4.8 bar; 100 to 480 kPa

RZSW-10
Diameter: 5.1 cm
Length: 25 cm

RZWS-18
Diameter: 12.2 cm
Length: 45 cm

RZWS-36
Diameter: 12.2 cm
Length: 90 cm

RZSW-E-18
Diameter: 7.6 cm
Length: 45 cm

RZWS-E-36
Diameter: 7.6 cm
Length: 90 cm

RZWS – SPECIFICATION BUILDER: Order 1 + 2 + 3

1 Model	2 Bubbler Flow Rate	3 Options
RZWS-10 = 25 cm Root zone watering system	**25** = 0.9 l/min	**(blank)** = No option
RZWS-18 = 45 cm Root zone watering system	**50** = 1.9 l/min	**CV** = Check valve
RZWS-36 = 90 cm Root zone watering system	**(blank)** = no bubbler or swing joint	**R** = Reclaimed cap
		CV-R = Check valve with reclaimed cap

Examples:
RZWS-18 - 25 - CV = 45 cm Root zone watering system at 0.9 l/min, with check valve
RZWS-10 - 50 - R = 25 cm Root zone watering system at 1.9 l/min, with reclaimed cap
RZWS-36 - 25 - CV-R = 90 cm Root zone watering system at 0.9 l/min, with check valve and reclaimed cap

RZWS-E – SPECIFICATION BUILDER: Order 1 + 2

1 Model	2 Bubbler Flow Rate
RZWS-E-18 = 45 cm Root zone watering system	**25** = 0.9 l/min
RZWS-E-36 = 90 cm Root zone watering system	**50** = 1.9 l/min

Examples:
RZWS-E-18 - 50 = 45 cm root zone watering system, 1.9 L/min bubbler
RZWS-E-36 - 25 = 90 cm root zone watering system, 0.9 L/min bubbler reclaimed cap

ADDITIONAL OPTIONS (SPECIFY SEPARATELY)

RZWS-SLEEVE = Field installed sleeve made from filter fabric

Reclaimed models available

EFFICIENT WATERING SOLUTIONS

For the Most Challenging Spaces

Narrow landscaping beds, green roofs, grass pavers, and more can present irrigation design challenges. Our latest micro irrigation products are a flexible solution for difficult areas. From professional landscape dripline and emitters to subsurface solutions, our products give you the flexibility to design around obstacles and hardscape limitations without sacrificing any beauty.

SECTION 09:

ACCESSORIES

ACCESSORIES

DBRY-6

Models
- DBRY100: Bulk 100 connectors
  (100 tubes loose in box, plus inner box with 100 wire nuts)
- DBRY2X25: 25 x 2-packs
  (2 tubes and wire nuts in a plastic bag, x 25 units)

Features
- UL Listed for 600 Volts direct burial
- Improved red-and-yellow wire nut, eliminating the need for two different sizes
- A snap-lock feature that secures the wire nut in the bottom of the light blue waterproof tube
- 3 wire exit cutouts in the strain relief cap, to ease wire routing
- Meets Directive 2006/95/EC and IEC standards EN61984:2009, EN60998- 1:2004, and EN60998-2-4:2005

Waterproof Wire Connectors
DBRY100, DBRY2X25

HCV

Models
- HC-50F-50F: ½" Female inlet x ½" Female outlet
- HC-50F-50M: ½" Female inlet x ½" Male outlet
- HC-75F-75M: ¾" Female inlet x ¾" Male outlet

Features
- Adjustment access from top of valve
- Adjusts to compensate for elevational changes up to 11 m: Maximum flexibility
- Variety of inlet and outlet options: Reduces need for additional fittings
- Meets schedule 80 specifications: Durable under high pressure

Pressure loss charts for HCV products on page 217

HCV
Overall height: 7.5 cm

HUNTER SPIRAL BARB ELBOWS

Models
- HSBE-050: ½" male x spiral barb elbow
- HSBE-075: ¾" male x spiral barb elbow
- HSBE TOOL: Insert tool

Features
- For use with FLEXSG Tubing
- Acetal material for sharp barbs
- Operating pressure up to 5.5 bar; 550 kPa
- Compatible with FLEXSG and other brands

Spiral Barb Elbows
HSBE-TOOL, HSBE-050, HSBE-075

FLEXSG TUBING

Models
- FLEXSG: 30 m roll
- FLEXSG-18: 45 cm pre-cut lengths

Features
- Engineered to resist kinking
- Inside diameter: 1.2 cm
- Operating pressure: up to 5.5 bar; 550 kPa
- Linear low-density polyethylene material

FLEXSG Tubing
30 m and 45 cm pre-cut lengths

ACCESSORIES

SJ SWING JOINTS

Models
- SJ-506: ½" threaded x 15 cm length
- SJ-7506: ½" x ¾" threaded x 15 cm length
- SJ-706: ¾" threaded x 15 cm length
- SJ-512: ½" threaded x 30 cm length
- SJ-7512: ½" x ¾" threaded x 30 cm length
- SJ-712: ¾" threaded x 30 cm length

Features
- Unique leak-free swivel ells on both ends can be installed in any position for maximum versatility
- Pressure rated to 10 bar; 1000 kPa

Pressure loss charts for SJ products on page 217

SJ Swing Joint
15 cm or 30 cm links

SPOTSHOT HOSE-END NOZZLE

Models
- ¾" Hose thread inlet – P/N 160700
- 1" (25 mm) Hose thread inlet – P/N 160705

Features
- Variable nozzle stream choices:
- Fan – Broad light stream for turf hot spots
- Soak – Medium stream for dust control areas
- Jet – Tight focused stream for power washing

Operating Specifications
- Flow – 132 l/min; 8 m^3/hr at 5.5 bar; 551 kPa*

* Not recommended for residential use with regulated, low pressure or low flow conditions.

SpotShot Hose-End Nozzle
¾" P/N 160700
1" (25 mm) P/N 160705

RZB

Models
- RZB: 6 cm diameter x 23 cm length

Features
- Solid mesh tube with perforated top to complement overhead or drip irrigation systems
- Allows oxygen and natural precipitation to reach the root zone
- Easy installation that directs overhead and drip irrigation to the root zone

RZB

TOOLS

Hunter Wrench
P/N 172000

"T" Handle Tool
P/N 053191

Pitot Gauge
P/N 280100

MP Gauge Assembly
P/N MPGAUGE
(For use with MP Rotators or standard nozzles)

Hand Pump
P/N 460302

MP Tool
P/N MPTOOL

Nozzle Insertion Collar
P/N 123200

ST1600 Tool
P/N 517600

Pocket Punch
P/N POCKETPUNCH
(Punches, inserts, and removes emitters)

Hunter Emitter Multi-Tool
P/N HEMT
(Punches pilot holes and pellets, inserts and removes emitters, cuts tubing)

GOLF TOOLS

Arc Adjustment/ Riser Hold-up Tool
P/N 382800
G85B/G885

Valve Insertion/Removal Tool
P/N 604000
G800 Series

Valve Insertion/Removal Tool
P/N 052805
G900/G90 Series

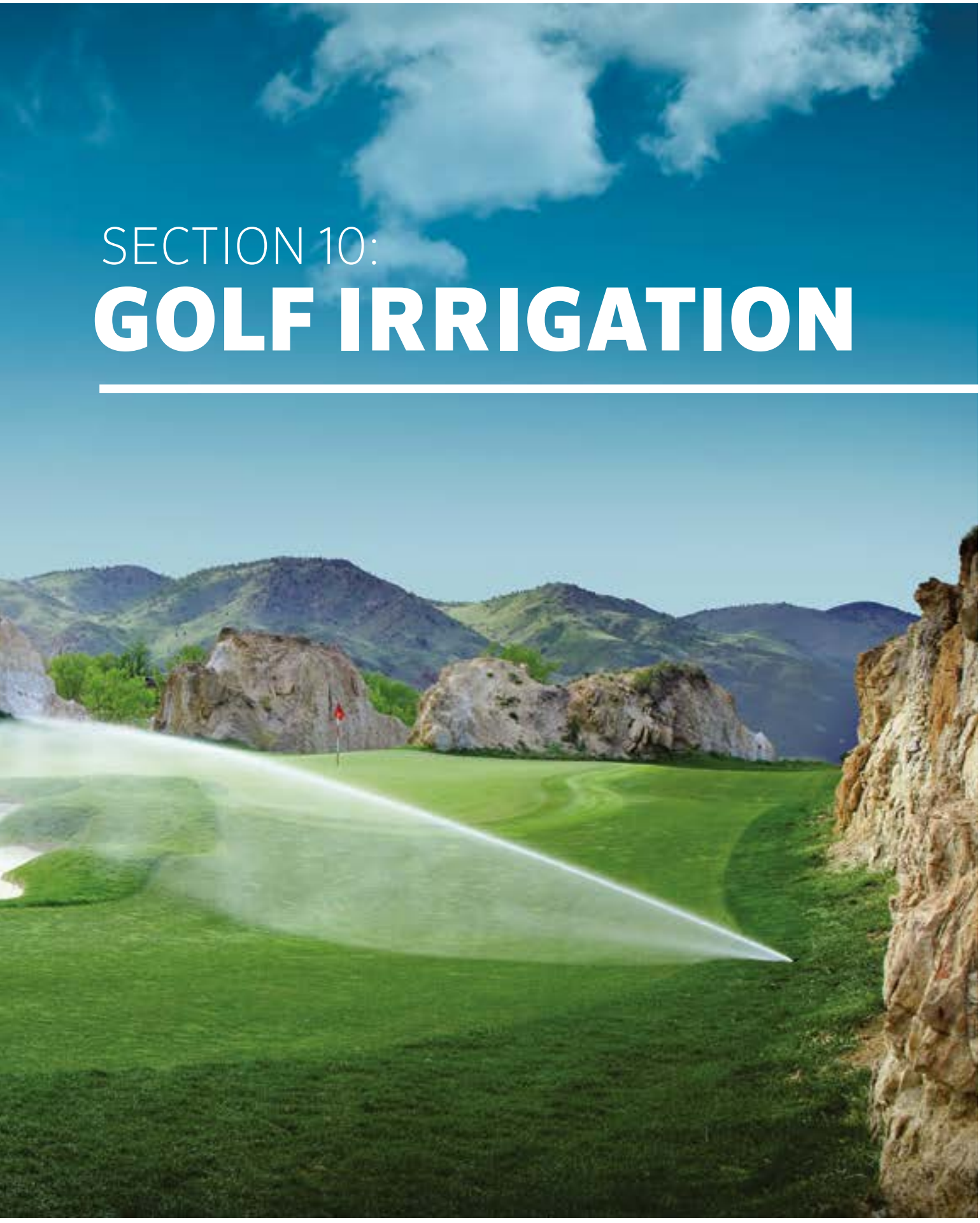
Valve & Snap Ring Insertion/Removal Pliers
P/N 475600
G800 Series

Snap Ring Removal Tool
P/N 052510
All Golf Models

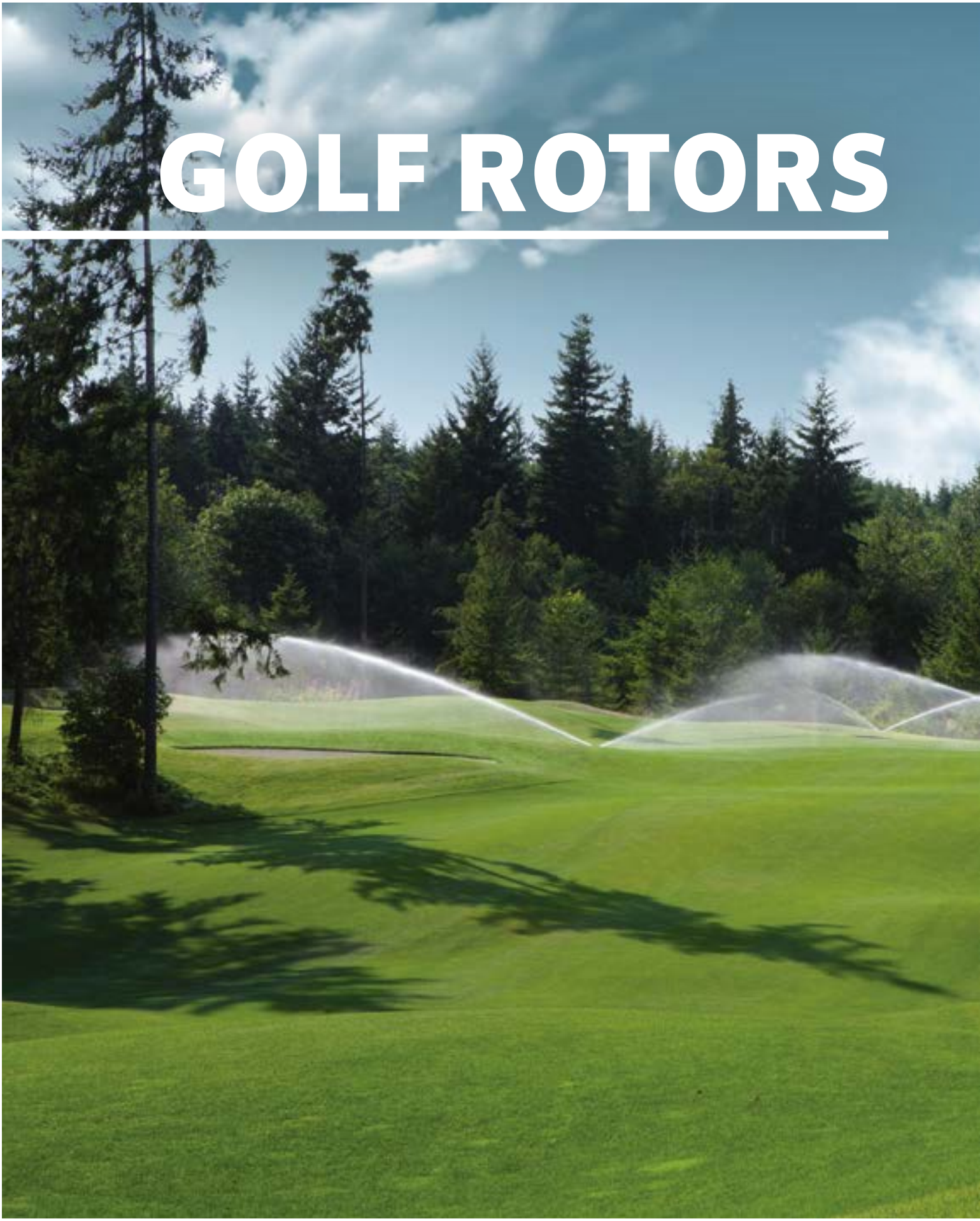
Nozzle Removal/ Installation Tool
P/N 803700
G85B, G885 Short and Mid-Range Nozzles

SECTION 10:

GOLF IRRIGATION



GOLF ROTORS



GOLF ROTORS
ADVANCED FEATURES

GOLF IRRIGATION

THE G885 HAS POWER TO SPARE

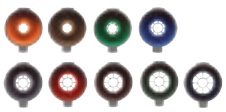
Boasting the highest torque output of any golf rotor on the market, the G885's patented gear drive will push through anything that gets in its way. Try it yourself and see. With just one rotation of the turret by hand, you can clearly feel this rotor's formidable durability. With such a powerful core, an array of efficient nozzles, and true full circle and part circle capabilities, the G885 is the golf rotor you can always count on.

EASY ARC ADJUSTMENT WITH OR WITHOUT A TOOL

With the G885, the arc is adjustable anytime; uninstalled, installed or while in operation. The convenient adjustment ring can be rotated by hand, or with the easy-to-use arc adjustment tool. This combination tool can also be used as a means to hold the riser in the popped-up position for nozzle changes.

DUAL TRAJECTORY FLEXIBILITY

Choose from the wide assortment of efficient wind-fighting 22.5° standard trajectory nozzles, or the 15° low-angle trajectory nozzles. Either way, there is a perfect match for your unique course conditions and problem-solving needs. Regardless of the version you choose, changing nozzles is fast and easy with Hunter's exclusive QuickChange technology.



CONTOUR "BACK-NOZZLE" CAPABILITY

Whether you want a little extra green behind your adjustable arc G885 rotors or a more "modeled" look to your fairway's hard edges, contour "Back-Nozzles" are here to make your vision a reality. They are also great for reducing water use along perimeter housing areas and other unique situations around the course. Choose from six short-range or seven mid-range nozzles to suit your needs.

RATCHETING RISER WITH QUICKSET-360 ADJUSTABILITY

Setting up your adjustable arc G885 is fast and simple. The integrated ratcheting mechanism allows a simple twist of the riser to align the right-side reversing point. Then, the adjustment ring is used to quickly set the arc and left-side reversing point. The G885 is also easily convertible to a true non-reversing full circle rotor with our exclusive QuickSet-360 feature.

PRIMARY NOZZLE ADAPTER

Unique irrigation problems exist on nearly every golf course. This is especially true in tight, hard-to-irrigate areas. The G885 primary nozzle adapter can solve many of these problems quickly and easily by allowing you to mix and match nozzles to get the coverage needed, or to plug the primary flow completely.

ALSO AVAILABLE, THE NEW G85B BLOCK ROTOR

If you're looking for a cost-effective golf rotor with a wide-range of radius and feature capabilities, including a recessed area for a yardage marker, the G85B block rotor is here. It includes all the great features of the G885 rotor at a fraction of the cost.

TTS GOLF ROTORS
ADVANCED FEATURES

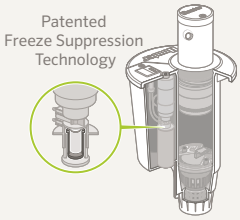
Total-Top-Service (TTS)

Access Everything Through the Top

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

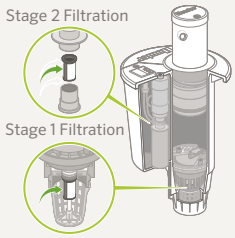
Large and Flexible Yardage Marker Capabilities

Recessed area for placard markers; optional raised marker for popular engraved and paint-filled markers



Pilot Valve Freeze Suppression Unit

Patented FST technology prevents freeze damage—another TTS exclusive



Two-Stage Filtration in Valve Circuitry

Anti-contamination filters in pilot valve and inlet valve protect critical valve-in-head passages

Unitised Inlet Valve Assembly

Easy one-step removal of rock screen, valve seat and valve assembly

Convenient Circular Flange Design

Offset riser and compartment allows quick and easy trimming around the rotor with motorised equipment

Upper Snap Rings with Integrated Wiper Seal

Protects rotor's riser seal from external contamination such as sand top-dressing

Through-the-Top Servicing of On-Off-Auto Selector

Simple and inexpensive to replace, should damage occur

Through-the-Top Solenoid Connections

Keeps wire splices protected in valve-box conditions with easy solenoid servicing

Stainless Steel Seat in Pilot Valve

Durable and corrosion-free, helps prevent slow leaks and weeping in the rotor

Concealed Adjustable Pressure Regulation

Stored within the flange compartment, prevents accidental adjustments

Proudly Manufactured in the USA

Hunter is the only leading irrigation manufacturer making golf rotors in the United States of America

Made in the USA

DIH GOLF ROTORS
ADVANCED FEATURES

Decoder-In-Head (DIH)

Decoders Are Built Into Rotors

Perfect package to complement decoder control systems. All DIH rotors include two DBR/Y-6 splice connectors

State-of-the-Art Surge Suppression

Earth grounding is easily added with the Pilot SG surge protector

Individual Decoder and Solenoid Components Within Flange Compartment

Isolated configuration minimises maintenance costs year after year and into the future

Seamless No-Splice Connection Between Decoder and Solenoid

With no connectors, maintains ongoing electrical continuity and peace of mind

Made in the USA

New Two-Station DIH Rotor Option

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

Program Decoders from the Surface with No Disassembly

Simple, fast, and easy to program before or after installation with the wireless ICD-HP

Access Decoders Through the Top with No Digging Required

Servicing is easy - there's no mess with TTS DIH rotors

Durability, Efficiency, and Reliability Housed in the Industry's First TTS DIH Rotor

Peace of mind from the #1 producer of gear-driven rotors in the world

Decoders Are Housed in the DIH Rotor's Unique Flange Compartment

Improves playability and eliminates hundreds of unsightly decoder enclosures course-wide

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

When you can access everything through the top, you never have to touch the turf

Built Strong in the United States of America

Among the top three irrigation manufacturers, Hunter is the only one making golf rotors in the USA

G900 SERIES

Models: **G990 & G995**
Radius: **22.3 to 31.4 m**
Flow: **6.7 to 19.04 m³/hr; 111.7 to 317.2 l/min**

FEATURES

- Models:
  - G990 – Full circle
  - G995 – Adjustable arc (40°-360°)
- QuickCheck™ arc mechanism
- Dual trajectory nozzle choices:
  - 8 standard trajectory (22.5°)
  - 8 low angle trajectory (15°)
- Nozzle range: #25 to #73
- Exclusive PressurePort™ nozzle technology
- Contour "Back-Nozzle" capabilities
- Water lubricated gear-drive
- ▸ All TTS advanced features
- ▸ Decoder-In-Head (DIH) capable

OPERATING SPECIFICATIONS

- G990
  - Radius: 22.3 to 31.4 m
  - Flow: 6.93 to 18.92 m³/hr; 115.5 to 315.3 l/min
  - Pressure range: 5.5 to 8.3 bar; 550 to 830 kPa
- G995
  - Radius: 20.1 to 29.6 m
  - Flow: 6.7 to 19.04 m³/hr; 111.7 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

OPTIONS

- C – Check-O-Matic 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 with all "E" specifications below*
- DD – Two-station Decoder Valve-In-Head with all "E" specifications below*
- E – Electric Valve-In-Head with adjustable pressure regulation, on-off-auto selector, 210 mA (370 mA inrush) 50Hz; 190 mA (350 mA inrush) 60Hz solenoid with captive plunger and internal downstream bleed

* All DIH rotors include two IBM DBRY-6 splices for connection to the 2-wire path. See page 193 for critical recommendations on grounding DIH rotors.

▸ = *TTS and DIH Advanced Features detailed on pages 162 and 164*

G990C
Pop-up height: 8 cm
Overall height: 34 cm
Flange diameter: 19 cm
Female Inlet: 1½" ACME

G995E
Pop-up height: 8 cm
Overall height: 34 cm
Flange diameter: 19 cm
Female Inlet: 1½" ACME

G990 & G995 – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4 + 5

1 Model	2 Valve Options	3 Nozzle	4 Regulation*	5 Options
G990 = Full Circle	**C** = Check-O-Matic* **D** = Decoder Valve-In-Head **DD** = Two-station Decoder Valve-In-Head **E** = Electric Valve-In-Head	**25 to 73** = Installed G990 Nozzle*	**P8** = 80 PSI (nozzles 25 to 53) **P1** = 100 PSI (nozzles 53 to 73) **P2** = 120 PSI (nozzle 73)	**S** = SSU*
G995 = Adjustable Arc 40° - 360°	**C** = Check-O-Matic* **D** = Decoder Valve-In-Head **DD** = Two-station Decoder Valve-In-Head **E** = Electric Valve-In-Head ** Converts to N.O. Hydraulic Valve-In-Head*	**25 to 73** = Installed G995 Nozzle* ** SSU = #25 or #53*	**P8** = 80 PSI (nozzles 25 to 53) **P1** = 100 PSI (nozzles 53 to 73) **P2** = 120 PSI (nozzle 73) ** SSU = P8/#25 P8/#53*	**S** = SSU* ** Standard Stocking Unit*

Example:
G990 - E - 53 - P8 - S = G990 full circle electric valve-in-head, installed #53 nozzle, 80 PSI regulation, standard stocking unit model

G990 NOZZLE PERFORMANCE DATA*

Nozzle	Pressure bar	Pressure kPa	Radius** m	Flow m³/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
25 Lt. Blue	5.5	550	22.3	6.93	115.2	14.0	16.2
	6.2	620	22.9	7.36	122.6	14.1	16.3
	6.9	690	23.2	7.79	129.8	14.5	16.8
	7.6	760	23.8	8.29	138.2	14.7	16.9
	8.3	830	24.1	8.72	145.4	15.0	17.4
33 Grey	5.5	550	23.5	8.25	137.4	15.0	17.3
	6.2	620	23.8	8.72	145.4	15.4	17.8
	6.9	690	24.4	9.22	153.7	15.5	17.9
	7.6	760	24.7	9.70	161.6	15.9	18.4
	8.3	830	25.0	10.20	170.0	16.3	18.9
38 Red	5.5	550	24.4	9.22	153.7	15.5	17.9
	6.2	620	25.0	9.75	162.4	15.6	18.0
	6.9	690	25.3	10.29	171.4	16.1	18.6
	7.6	760	25.9	10.84	180.6	16.1	18.6
	8.3	830	26.2	11.40	190.0	16.6	19.2
43 Dk. Brown	5.5	550	25.3	10.49	174.9	16.4	18.9
	6.2	620	25.6	11.04	184.0	16.8	19.4
	6.9	690	25.9	11.56	192.7	17.2	19.9
	7.6	760	26.2	12.13	202.1	17.7	20.4
	8.3	830	26.5	12.70	211.6	18.1	20.8
48 Dk. Green	5.5	550	26.2	11.27	187.8	16.4	18.9
	6.2	620	27.1	11.93	198.7	16.2	18.7
	6.9	690	27.4	12.45	207.4	16.5	19.1
	7.6	760	27.7	13.02	216.9	16.9	19.5
	8.3	830	28.0	13.52	225.2	17.2	19.8
53 Dk. Blue	5.5	550	27.1	12.31	205.2	16.7	19.3
	6.2	620	27.4	12.88	214.6	17.1	19.8
	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
63 Black	5.5	550	28.0	14.36	23.92	18.3	21.1
	6.2	620	28.7	14.97	249.5	18.2	21.1
	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
73 Orange	5.5	550	29.3	16.38	272.9	19.1	22.1
	6.2	620	29.9	17.04	283.9	19.1	22.0
	6.9	690	30.2	17.67	297.5	19.4	22.4
	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

G995 NOZZLE PERFORMANCE DATA*

Nozzle	Pressure bar	Pressure kPa	Radius** m	Flow m³/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
25 Lt. Blue	5.5	550	20.1	6.70	111.7	16.6	19.1
	6.2	620	20.4	7.16	119.2	17.2	19.8
	6.9	690	20.7	7.54	125.7	17.6	20.3
	7.6	760	21.0	8.09	134.8	18.3	21.1
	8.3	830	21.0	8.52	142.0	19.3	22.2
33 Grey	5.5	550	20.7	8.22	137.0	19.1	22.1
	6.2	620	21.0	8.68	144.6	19.6	22.7
	6.9	690	21.3	9.18	152.9	20.2	23.3
	7.6	760	21.6	9.68	161.3	20.7	23.9
	8.3	830	21.9	10.18	169.6	21.1	24.4
38 Red	5.5	550	21.9	9.22	153.7	19.1	22.1
	6.2	620	22.3	9.77	162.8	19.7	22.8
	6.9	690	22.9	10.31	171.9	19.7	22.8
	7.6	760	23.2	10.81	180.2	20.1	23.3
	8.3	830	23.5	11.36	189.3	20.6	23.8
43 Dk. Brown	5.5	550	22.6	10.47	174.5	20.6	23.8
	6.2	620	22.6	11.02	183.6	21.7	25.0
	6.9	690	22.9	11.52	191.9	22.0	25.4
	7.6	760	23.5	12.13	202.1	22.0	25.4
	8.3	830	23.8	12.65	210.8	22.4	25.8
48 Dk. Green	5.5	550	23.5	11.40	190.0	20.7	23.9
	6.2	620	24.1	11.95	199.1	20.6	23.8
	6.9	690	24.7	12.52	208.6	20.5	23.7
	7.6	760	25.0	13.06	217.7	20.9	24.1
	8.3	830	25.3	13.74	229.0	21.5	24.8
53 Dk. Blue	5.5	550	24.7	12.47	207.8	20.5	23.6
	6.2	620	25.6	12.99	216.5	19.8	22.9
	6.9	690	26.2	13.52	225.2	19.7	22.7
	7.6	760	26.5	14.11	235.1	20.1	23.2
	8.3	830	26.8	14.63	243.8	20.3	23.5
63 Black	5.5	550	26.2	14.15	235.8	20.6	23.8
	6.2	620	26.8	14.88	247.9	20.7	23.9
	6.9	690	27.4	15.67	261.2	20.8	24.0
	7.6	760	27.7	16.33	272.2	21.2	24.5
	8.3	830	28.0	16.97	282.8	21.6	24.9
73 Orange	5.5	550	27.1	16.51	275.2	22.4	25.9
	6.2	620	27.7	17.13	285.4	22.3	25.7
	6.9	690	28.3	17.74	295.6	22.1	25.5
	7.6	760	29.0	18.38	306.2	21.9	25.3
	8.3	830	29.6	19.04	317.2	21.8	25.1

* 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.

G900 NOZZLES

G990 & G995

G900 LOW-ANGLE NOZZLES

G990 & G995**

** Low-angle nozzles reduce radius by 15%

Contour "Back-Nozzle" Capabilities

Choose any nozzle from the PGP, I-40, and G70 nozzle racks, or from the short and mid-range G900 nozzles.

GOLF ROTORS

G800 SERIES

Model: **G880**
Radius: **20.4 to 26.8 m**
Flow: **5.11 to 13.15 m³/hr; 85.2 to 219.2 l/min**

FEATURES

- Model: G880 – Full circle
- Nozzle choices: 7 standard trajectory (25°)
- Nozzle range: #23 to #53
- Exclusive PressurePort™ nozzle technology
- Water lubricated gear-drive
- ▸ All TTS advanced features
- ▸ Decoder-In-Head (DIH) capable

OPERATING SPECIFICATIONS

- Radius: 20.4 to 26.8 m
- Flow: 5.11 to 13.15 m³/hr; 85.2 to 219.2 l/min
- Pressure range: 4.5 to 6.9 bar; 450 to 690 kPa
- All TTS rotors are pressure rated at 10 bar; 1,000 kPa

OPTIONS

- C – Check-O-Matic 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 with all "E" specifications below*
- DD – Two-station Decoder Valve-In-Head with all "E" specifications below*
- E – Electric Valve-In-Head with adjustable pressure regulation, on-off-auto selector, 210 mA (370 mA inrush) 50Hz; 190 mA (350 mA inrush) 60Hz solenoid with captive plunger and internal downstream bleed

* All DIH rotors include two IBM DBRY-6 splices for connection to the 2-wire path. See page 193 for critical recommendations on grounding DIH rotors.

▸ = *TTS and DIH Advanced Features detailed on pages 162 and 164*

G880C
Pop-up height: 8 cm
Overall height: 30 cm
Flange diameter: 18 cm
Female Inlet: 1½" ACME

G880E
Pop-up height: 8 cm
Overall height: 30 cm
Flange diameter: 18 cm
Female Inlet: 1½" ACME

G880 – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4 + 5

1 Model	2 Valve Options	3 Nozzle	4 Regulation*	5 Options
G880 = Full Circle	**C** = Check-O-Matic* **D** = Decoder Valve-In-Head **DD** = Two-station Decoder Valve-In-Head **E** = Electric Valve-In-Head ** Converts to N.O. Hydraulic Valve-In-Head*	**23 to 53** = Installed G880 Nozzle* ** SSU = #23, #25 or #48*	**P6** = 65 PSI (nozzles 23 and 25) **P8** = 80 PSI (nozzles 23 to 53) ** SSU = P6/#23, P6/#25 P8/#25, P8/#48*	**S** = SSU* ** Standard Stocking Unit*

Example:
G880 - E - 48 - P8 - S = G880 full circle electric valve-in-head, installed #48 nozzle, 80 PSI regulation, standard stocking unit model

G880 NOZZLE PERFORMANCE DATA*

Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	Bar	kPa	m	m³/hr	l/min	■	▲
23 ● Green	4.5	450	20.4	5.11	85.2	12.3	14.1
	4.8	480	21.0	5.43	90.5	12.3	14.2
	5.5	550	21.6	5.91	98.4	12.6	14.6
	6.2	620	21.9	6.34	105.6	13.2	15.2
	6.9	690	22.3	6.77	112.8	13.7	15.8
25 ● Blue	4.5	450	21.6	6.54	109.0	14.0	16.1
	4.8	480	22.3	6.79	113.2	13.7	15.8
	5.5	550	22.6	7.29	121.5	14.3	16.5
	6.2	620	22.9	7.79	129.8	14.9	17.2
	6.9	690	23.2	8.18	136.3	15.2	17.6
33 ● Grey	4.5	450	22.3	7.04	117.3	14.2	16.4
	4.8	480	22.6	7.31	121.9	14.4	16.6
	5.5	550	23.2	7.88	131.4	14.7	17.0
	6.2	620	23.5	8.40	140.1	15.3	17.6
	6.9	690	23.8	8.81	146.9	15.6	18.0
38 ● Red	4.5	450	23.2	7.97	132.9	14.9	17.2
	4.8	480	23.5	8.25	137.4	15.0	17.3
	5.5	550	24.1	8.75	145.7	15.1	17.4
	6.2	620	24.4	9.20	153.3	15.5	17.9
	6.9	690	24.7	9.75	162.4	16.0	18.5
43 ● Dk. Brown	4.5	450	23.8	8.90	148.4	15.8	18.2
	4.8	480	24.1	9.27	154.4	16.0	18.5
	5.5	550	25.0	9.93	165.4	15.9	18.3
	6.2	620	25.3	10.56	176.0	16.5	19.1
	6.9	690	25.6	11.09	184.7	16.9	19.5
48 ● Dk. Green	4.5	450	25.0	9.95	165.8	15.9	18.4
	4.8	480	25.3	10.52	175.3	16.4	19.0
	5.5	550	25.9	11.13	185.5	16.6	19.1
	6.2	620	26.2	11.79	196.5	17.2	19.8
	6.9	690	26.5	12.36	205.9	17.6	20.3
53 ● Dk. Blue	4.5	450	25.3	10.65	177.5	16.6	19.2
	4.8	480	25.6	11.15	185.9	17.0	19.6
	5.5	550	26.5	11.95	199.1	17.0	19.6
	6.2	620	26.8	12.45	207.4	17.3	20.0
	6.9	690	26.8	13.15	219.2	18.3	21.1

* Complies to ASAE standard. All precipitation rates calculated for 360˚ operation. All triangular rates are equilateral.

G880 NOZZLES

TTS EQUALS CONVENIENCE AND VERSATILITY

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

GOLF ROTORS

G800 SERIES

Model: **G884**
Radius: **14.9 to 28.3 m**
Flow: **3.28 to 13.24 m³/hr; 54.6 to 220.6 l/min**

FEATURES

- Model: G884 – Full circle
- Dual trajectory colour-coded nozzles:
  - 10 standard trajectory (22.5°)
  - 9 low-angle trajectory (15°)
- Nozzle range: #15 to #53
- Exclusive PressurePort™ nozzle technology
- Stainless steel riser
- Water lubricated gear-drive
- ▸ All TTS advanced features
- ▸ Decoder-In-Head (DIH) capable

OPERATING SPECIFICATIONS

- Radius: 14.9 to 28.3 m
- Flow: 3.28 to 13.24 m³/hr; 54.6 to 220.6 l/min
- Pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
- All TTS rotors are pressure rated at 10 bar; 1000 kPa

OPTIONS

- C – Check-O-Matic 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 with all "E" specifications below*
- DD – Two-station Decoder Valve-In-Head with all "E" specifications below*
- E – Electric Valve-In-Head with adjustable pressure regulation, on-off-auto selector, 210 mA (370 mA inrush) 50Hz; 190 mA (350 mA inrush) 60Hz solenoid with captive plunger and internal downstream bleed

* All DIH rotors include two IBM DBRY-6 splices for connection to the 2-wire path. See page 193 for critical recommendations on grounding DIH rotors.

▸ = *TTS and DIH Advanced Features detailed on pages 162 and 164*

G884C
Pop-up height: 9.5 cm
Overall height: 30 cm
Flange diameter: 18 cm
Female Inlet: 1½" ACME

G884E
Pop-up height: 9.5 cm
Overall height: 30 cm
Flange diameter: 18 cm
Female Inlet: 1½" ACME

G884 – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4 + 5

1 Model	2 Valve Options	3 Nozzle	4 Regulation*	5 Options
G884 = Full Circle (convertible to forward-facing adjustable arc rotor)	**C** = Check-O-Matic*	**15 to 53** = Installed G880 Nozzle*	**P5** = 50 PSI (nozzles 15 to 18)	**S** = SSU*
	D = Decoder Valve-In-Head		**P6** = 65 PSI (nozzles 18 to 25)	
	DD = Two-station Decoder Valve-In-Head		**P8** = 80 PSI (nozzles 25 to 35)	
	E = Electric Valve-In-Head			
	** Converts to N.O. Hydraulic Valve-In-Head*	** SSU = #18, #23, #25 or #48*	** SSU = P5/#18, P6/#23 P8/#25, P8/#48*	** Standard Stocking Unit*

Example:
G884 - E - 48 - P8 - S = G884 full circle electric valve-in-head, installed #48 nozzle, 80 PSI regulation, standard stocking unit model

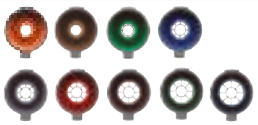
G884 NOZZLE PERFORMANCE DATA*

Nozzle Set			Pressure		Radius	Flow		Precip mm/hr	
			bar	kPa	m	m³/hr	l/min	■	▲
● Tan		● Grey	3.4	340	14.9	3.28	54.6	14.7	17.0
			4.1	410	15.5	3.65	60.8	15.1	17.4
	15		4.5	450	15.9	3.81	63.5	15.2	17.5
			4.8	480	16.2	3.90	65.1	15.0	17.3
803611	White	315317	5.5	550	16.8	4.13	68.9	14.7	17.0
● Tan		● Grey	3.4	340	16.8	3.97	66.1	14.1	16.3
			4.1	410	17.1	4.28	71.3	14.7	17.0
	18		4.5	450	17.4	4.45	74.1	14.7	17.0
			4.8	480	18.0	4.66	77.6	14.4	16.6
803611	Orange	315317	5.5	550	18.6	4.94	82.4	14.3	16.5
● Tan		● Grey	3.4	340	17.4	3.91	65.2	13.0	15.0
			4.1	410	18.6	4.28	71.3	12.4	14.3
	20		4.5	450	18.9	4.47	74.4	12.5	14.4
			4.8	480	19.2	4.67	77.9	12.7	14.6
803611	Brown	315317	5.5	550	19.5	5.02	83.6	13.2	15.2
● Tan		● Lt. Blue	3.4	340	19.2	4.49	74.8	12.2	14.1
			4.1	410	19.8	4.99	83.2	12.7	14.7
	23		4.5	450	20.1	5.19	86.5	12.8	14.8
			4.8	480	20.4	5.41	90.1	13.0	15.0
803611	Green	315311	5.5	550	20.4	5.81	96.9	13.9	16.1
● Tan		● Lt. Blue	4.5	450	21.6	6.50	108.3	13.9	16.0
			4.8	480	22.3	6.75	112.5	13.6	15.7
	25		5.5	550	22.6	7.19	119.8	14.1	16.3
			6.2	620	22.9	7.65	127.5	14.6	16.9
803611	Blue	315311	6.9	690	22.9	8.12	135.3	15.5	17.9
● Tan		● Lt. Blue	4.5	450	22.3	7.02	117.0	14.2	16.4
			4.8	480	22.9	7.30	121.7	14.0	16.1
	33		5.5	550	23.2	7.81	130.1	14.6	16.8
			6.2	620	23.5	8.24	137.3	15.0	17.3
803611	Grey	315311	6.9	690	24.1	8.65	144.1	14.9	17.2
● Tan		● Lt. Blue	4.5	450	22.9	7.96	132.6	15.2	17.6
			4.8	480	23.2	8.29	138.1	15.4	17.8
	38		5.5	550	23.8	8.85	147.5	15.7	18.1
			6.2	620	24.1	9.38	156.3	16.2	18.7
803611	Red	315311	6.9	690	25.0	9.87	164.4	15.8	18.2
● Tan		● Blue	-	-	-	-	-	-	-
			-	-	-	-	-	-	-
	43		5.5	550	25.3	9.85	164.1	15.4	17.8
			6.2	620	25.9	10.52	175.3	15.7	18.1
803611	Dk. Brown	315300	6.9	690	26.5	11.04	183.9	15.7	18.1
● Dk. Brown		● Dk. Blue	-	-	-	-	-	-	-
			-	-	-	-	-	-	-
	48		5.5	550	25.9	10.88	181.2	16.2	18.7
			6.2	620	27.1	11.46	191.0	15.6	18.0
803610	Dk. Green	833500	6.9	690	27.7	12.08	201.4	15.7	18.1
● Dk. Brown		● Dk. Blue	-	-	-	-	-	-	-
			-	-	-	-	-	-	-
	53		5.5	550	27.1	11.86	197.7	16.1	18.6
			6.2	620	27.7	12.58	209.6	16.3	18.9
803610	Dk. Blue	833500	6.9	690	28.3	13.24	220.6	16.5	19.0

* Preliminary performance data. 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.

G884 STANDARD NOZZLES

G884 LOW-ANGLE NOZZLES**



** Low-angle nozzles reduce radius by 15%

G885 Decoder-In-Head TTS Rotor

G885 TTS Rotor Spacious TTS Flange Compartment

All TTS rotors include ample room for solenoid splice connections and a decoder module when needed.

GOLF ROTORS

G800 SERIES

Model: **G885**
Radius: **13.1 to 27.7 m**
Flow: **1.86 to 13.06 m³/hr; 31.0 to 217.7 l/min**

FEATURES

- Model: G885 – True full circle/adjustable part circle (60° to 360°)
- QuickCheck™ arc mechanism
- QuickSet-360 arc mechanism
- Dual trajectory colour-coded nozzles:
  - 12 standard trajectory (22.5°)
  - 9 low-angle trajectory (15°)
- Nozzle range: #10 to #53
- Exclusive PressurePort™ nozzle technology
- Contour "Back-Nozzle" capabilities
- Ratcheting stainless steel riser
- Water lubricated gear-drive
- ▸ All TTS advanced features
- ▸ Decoder-In-Head (DIH) capable

G885C
Pop-up height: 9.5 cm
Overall height: 30 cm
Flange diameter: 18 cm
Female Inlet: 1½" ACME

G885E
Pop-up height: 9.5 cm
Overall height: 30 cm
Flange diameter: 18 cm
Female Inlet: 1½" ACME

OPERATING SPECIFICATIONS

- Radius: 13.1 to 27.7 m
- Flow: 1.86 to 13.06 m³/hr; 31.0 to 217.7 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

OPTIONS

- C – Check-O-Matic 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 with all "E" specifications below*
- DD – Two-station Decoder Valve-In-Head with all "E" specifications below*
- E – Electric Valve-In-Head with adjustable pressure regulation, on-off-auto selector, 210 mA (370 mA inrush) 50Hz; 190 mA (350 mA inrush) 60Hz solenoid with captive plunger and internal downstream bleed

* All DIH rotors include two IBM DBRY-6 splices for connection to the 2-wire path. See page 193 for critical recommendations on grounding DIH rotors.

▸ = *TTS and DIH Advanced Features detailed on pages 162 and 164*

G885 – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4 + 5

1 Model	2 Valve Options	3 Nozzle	4 Regulation*	5 Options
G885 = Full/Part Circle 60°-360° Arc Range	**C** = Check-O-Matic*	**10 to 53** = Installed G885 Nozzle*	**P5** = 50 PSI (nozzles 10 to 18)	**S** = SSU*
	D = Decoder Valve-In-Head		**P6** = 65 PSI (nozzles 18 to 25)	
	DD = Two-station Decoder Valve-In-Head		**P8** = 80 PSI (nozzles 25 to 53)	
	E = Electric Valve-In-Head			
	** Converts to N.O. Hydraulic Valve-In-Head*	** SSU = #18, #23, #25 or #48*	** SSU = P5/#18, P6/#23 P8/#25, P8/#48*	** Standard Stocking Unit*

Example:
G885 - E - 48 - P8 - S = G885 full/part circle electric valve-in-head, installed #48 nozzle, 80 PSI regulation, standard stocking unit model

G885 NOZZLE PERFORMANCE DATA*

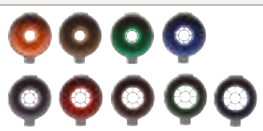
Nozzle Set			Pressure		Radius	Flow		Precip mm/hr	
			bar	kPa	m	m³/hr	l/min	■	▲
Orange	Dk. Green		3.4	340	13.1	1.86	31.0	10.8	12.5
			4.1	410	13.4	2.23	37.1	12.4	14.3
803603	10	315312	4.5	450	13.7	2.29	38.2	12.2	14.1
			-	-	-	-	-	-	-
●	Lt. Green	●	-	-	-	-	-	-	-
Orange	White		3.4	340	14.6	2.66	44.3	12.4	14.3
			4.1	410	15.2	2.91	48.5	12.5	14.5
803603	13	315314	4.5	450	15.5	3.04	50.7	12.6	14.5
			-	-	-	-	-	-	-
●	Lt. Blue	●	-	-	-	-	-	-	-
Orange	White		3.4	340	15.9	3.02	50.3	12.0	13.9
			4.1	410	16.2	3.34	55.6	12.8	14.8
803603	15	315314	4.5	450	16.5	3.45	57.5	12.7	14.7
			-	-	-	-	-	-	-
●	White	●	-	-	-	-	-	-	-
Orange	Lt. Green		3.4	340	16.8	3.79	63.2	13.5	15.6
			4.1	410	17.4	4.04	67.4	13.4	15.5
803603	18	315313	4.5	450	17.7	4.13	68.9	13.2	15.3
			-	-	-	-	-	-	-
●	Orange	●	-	-	-	-	-	-	-
Orange	Lt. Green		3.4	340	17.7	4.18	69.7	13.4	15.4
			4.1	410	18.3	4.45	74.2	13.3	15.4
			4.5	450	18.6	4.66	77.6	13.5	15.6
803603	20	315313	4.8	480	18.6	4.88	81.4	14.1	16.3
●	Tan	●	5.5	550	18.9	5.13	85.6	14.4	16.6
Orange	Lt. Green		3.4	340	18.6	4.78	79.6	13.8	16.0
			4.1	410	19.2	5.18	86.3	14.0	16.2
			4.5	450	19.8	5.43	90.5	13.8	16.0
803603	23	315313	4.8	480	20.1	5.86	97.7	14.5	16.7
●	Green	●	5.5	550	20.4	6.34	105.6	15.2	17.5
Red	Green		4.5	450	21.0	6.68	111.3	15.1	17.4
			4.8	480	21.3	6.92	115.3	15.2	17.6
			5.5	550	21.6	7.37	122.8	15.7	18.2
803602	25	315310	6.2	620	21.9	7.77	129.5	16.1	18.6
●	Blue	●	6.9	690	22.3	8.25	137.4	16.7	19.2
Red	Green		-	-	-	-	-	-	-
			-	-	-	-	-	-	-
			5.5	550	22.3	7.83	130.4	15.8	18.3
803602	33	315310	6.2	620	22.6	8.34	138.9	16.4	18.9
●	Grey	●	6.9	690	23.2	8.75	145.7	16.3	18.8
Red	Green		-	-	-	-	-	-	-
			-	-	-	-	-	-	-
			5.5	550	24.1	8.94	149.0	15.4	17.8
803602	38	315310	6.2	620	24.1	9.36	156.0	16.1	18.6
●	Red	●	6.9	690	24.4	9.75	162.4	16.4	18.9
Red	Green		-	-	-	-	-	-	-
			-	-	-	-	-	-	-
			5.5	550	24.4	9.88	164.7	16.6	19.2
803602	43	315310	6.2	620	24.7	10.54	175.6	17.3	20.0
●	Dk. Brown	●	6.9	690	25.3	11.06	184.3	17.3	20.0
Dk. Red	Dk. Green		-	-	-	-	-	-	-
			-	-	-	-	-	-	-
			5.5	550	25.9	11.20	186.6	16.7	19.3
803601	48	315312	6.2	620	26.2	11.86	197.6	17.3	19.9
●	Dk. Green	●	6.9	690	26.8	12.43	207.1	17.3	19.9
Dk. Red	Dk. Green		-	-	-	-	-	-	-
			-	-	-	-	-	-	-
			5.5	550	27.1	11.98	199.7	16.3	18.8
803601	53	315312	6.2	620	27.4	12.54	209.0	16.7	19.2
●	Dk. Blue	●	6.9	690	27.7	13.06	217.7	17.0	19.6

● = Nozzle plug P/N 315300 installed in the back side of the nozzle housing.

* 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.

G885 STANDARD NOZZLES

G885 LOW-ANGLE NOZZLES**



** Low-angle nozzles reduce radius by 15%

Contour "Back-Nozzle" Capabilities

Whether you want a little extra green behind your adjustable-arc G885 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 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

G885 CONTOUR BACK-NOZZLES

QuickSet-360 with Ratcheting Riser

Setting up your adjustable arc G885 is fast and simple. The integrated ratcheting mechanism allows a simple twist of the riser to align the right-side reversing point. The G885 is also easily convertible to a true non-reversing full circle rotor with our exclusive QuickSet-360 feature.

G800 SERIES

Model: **G835**
Radius: **5.5 to 15.2 m**
Flow: **0.43 to 2.91 m³/hr; 7.2 to 48.5 l/min**

FEATURES

- Model: G835: Full/Part circle (50° to 360°)
- QuickCheck™ arc mechanism
- QuickSet-360 arc mechanism
- Nozzle choices: 8 multi-trajectory (15° to 25°)
- Nozzle range: #2 to #12
- Water lubricated gear-drive
- ▸ All TTS advanced features
- ▸ Decoder-In-Head (DIH) capable

OPERATING SPECIFICATIONS

- Radius: 5.5 to 15.2 m
- Flow: 0.43 to 2.91 m³/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

OPTIONS

- C – Check-O-Matic 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 with all "E" specifications below*
- DD – Two-station Decoder Valve-In-Head with all "E" specifications below*
- E – Electric Valve-In-Head with adjustable pressure regulation, on-off-auto selector, 210 mA (370 mA inrush) 50Hz; 190 mA (350 mA inrush) 60Hz solenoid with captive plunger and internal downstream bleed

* All DIH rotors include two IBM DBRY-6 splices for connection to the 2-wire path. See page 193 for critical recommendations on grounding DIH rotors.

▸ = *TTS and DIH Advanced Features detailed on pages 162 and 164*

G835C
Pop-up height: 8 cm
Overall height: 30 cm
Flange diameter: 18 cm
Female Inlet: 1½" ACME

G835E
Pop-up height: 8 cm
Overall height: 30 cm
Flange diameter: 18 cm
Female Inlet: 1½" ACME

G835 – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4 + 5

1 Model	2 Valve Options	3 Nozzle	4 Regulation*	5 Options
G835 = Full/Part Circle 50 to 360°	**C** = Check-O-Matic * **D** = Decoder Valve-in-Head **E** = Electric Valve-in-Head ** Converts to N.O. Hydraulic Valve-in-Head*	**6** = Installed G835 Nozzle * includes 8-nozzle rack ** SSU = #6*	**P5** = 50 PSI **P6** = 65 PSI ** SSU = P5*	**S** = SSU * ** Standard Stocking Unit*

Examples:
G835E - 6 - P5 - S = G835 full/part-circle electric valve-in-head, installed #6 nozzle, 50 PSI regulation, standard stocking unit model

G835 NOZZLE PERFORMANCE DATA*

Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲
2 Yellow	2.8	280	5.5	0.43	7.2	14.3	16.6
	3.4	340	6.1	0.48	7.9	12.8	14.8
	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
3 Yellow	2.8	280	7.0	0.68	11.4	13.9	16.0
	3.4	340	7.6	0.73	21.1	12.5	14.5
	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 Yellow	2.8	280	7.6	0.89	14.8	15.3	17.6
	3.4	340	8.5	0.93	15.5	12.8	14.8
	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
5 Yellow	2.8	280	8.8	1.07	17.8	13.7	15.8
	3.4	340	9.8	1.14	18.9	11.9	13.8
	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 Yellow	2.8	280	9.8	1.36	22.7	14.3	16.5
	3.4	340	10.7	1.43	23.8	12.6	14.5
	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
8 Yellow	2.8	280	11.0	1.77	29.5	14.7	17.0
	3.4	340	11.9	1.82	30.3	12.9	14.8
	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 Yellow	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
	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 Yellow	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
	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

G835 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 B Series and G800 Series adjustable arc rotors.

B SERIES

Models: **G80B**
Radius: **20.4 to 26.8 m**
Flow: **5.11 to 13.15 m³/hr; 85.2 to 219.2 l/min**

FEATURES

- Full circle opposing nozzles
- Colour-coded nozzles: 7 standard trajectory (25°)
- Nozzle range: #23 to #53
- Exclusive PressurePort™ nozzle technology
- Water lubricated gear-drives
- Check height up to 3 m in elevation change

OPERATING SPECIFICATIONS

- Radius: 20.4 to 26.8 m
- Flow: 5.11 to 13.15 m³/hr; 85.2 to 219.2 l/min
- Pressure range: 4.5 to 6.9 bar; 450 to 690 kPa
- All B Series rotors are pressure rated at 10 bar; 1,000 kPa

G80B
Pop-up height: 8 cm
Overall height: 24.5 cm
Flange diameter: 13.7 cm
Female Inlet: 1¼" ACME

G80B – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Valve Options	3 Nozzle	4 Options*
G80 = Full Circle	**B** = Block rotor with check valve	**23 to 53** = Installed G80 Nozzle* ** SSU = #23, #25 or #48*	**S** = SSU* ** Standard Stocking Unit*

Example:
G80 - B - 25 - S = G80 full circle block rotor, installed #25 nozzle, standard stocking unit model

G80B NOZZLE PERFORMANCE DATA*

Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲
23 ● Green	4.5	450	20.4	5.11	85.2	12.3	14.1
	4.8	480	21.0	5.43	90.5	12.3	14.2
	5.5	550	21.6	5.91	98.4	12.6	14.6
	6.2	620	21.9	6.34	105.6	13.2	15.2
	6.9	690	22.3	6.77	112.8	13.7	15.8
25 ● Blue	4.5	450	21.6	6.54	109.0	14.0	16.1
	4.8	480	22.3	6.79	113.2	13.7	15.8
	5.5	550	22.6	7.29	121.5	14.3	16.5
	6.2	620	22.9	7.79	129.8	14.9	17.2
	6.9	690	23.2	8.18	136.3	15.2	17.6
33 ● Grey	4.5	450	22.3	7.04	117.3	14.2	16.4
	4.8	480	22.6	7.31	121.9	14.4	16.6
	5.5	550	23.2	7.88	131.4	14.7	17.0
	6.2	620	23.5	8.40	140.1	15.3	17.6
	6.9	690	23.8	8.81	146.9	15.6	18.0
38 ● Red	4.5	450	23.2	7.97	132.9	14.9	17.2
	4.8	480	23.5	8.25	137.4	15.0	17.3
	5.5	550	24.1	8.75	145.7	15.1	17.4
	6.2	620	24.4	9.20	153.3	15.5	17.9
	6.9	690	24.7	9.75	162.4	16.0	18.5
43 ● Dk. Brown	4.5	450	23.8	8.90	148.4	15.8	18.2
	4.8	480	24.1	9.27	154.4	16.0	18.5
	5.5	550	25.0	9.93	165.4	15.9	18.3
	6.2	620	25.3	10.56	176.0	16.5	19.1
	6.9	690	25.6	11.09	184.7	16.9	19.5
48 ● Dk. Green	4.5	450	25.0	9.95	165.8	15.9	18.4
	4.8	480	25.3	10.52	175.3	16.4	19.0
	5.5	550	25.9	11.13	185.5	16.6	19.1
	6.2	620	26.2	11.79	196.5	17.2	19.8
	6.9	690	26.5	12.36	205.9	17.6	20.3
53 ● Dk. Blue	4.5	450	25.3	10.65	177.5	16.6	19.2
	4.8	480	25.6	11.15	185.9	17.0	19.6
	5.5	550	26.5	11.95	199.1	17.0	19.6
	6.2	620	26.8	12.45	207.4	17.3	20.0
	6.9	690	26.8	13.15	219.2	18.3	21.1

* Complies to ASAE standard. All precipitation rates calculated for 360° operation. All triangular rates are equilateral.

G80B NOZZLES

G80B

B SERIES

Models: **G84B & G85B**
Radius: **13.1 to 28.3 m**
Flow: **1.86 to 13.24 m³/hr; 31.0 to 220.6 l/min**

FEATURES

- Models:
  - G84B: Full circle opposing nozzles
  - G85B: True full circle/adjustable part circle (60° to 360°)
- QuickCheck™ arc mechanism (G85B)
- QuickSet-360 arc mechanism (G85B)
- Dual trajectory colour-coded nozzles:
  - G84B: 10 standard trajectory (22.5°)
  - G85B: 12 standard trajectory (22.5°)
- G84B & G85B: 9 low-angle trajectory (15°)
- Nozzle range:
  - G84B: #15 to #53
  - G85B: #10 to #53
- Exclusive PressurePort™ nozzle technology
- Contour "Back-Nozzle" capabilities (G85B)
- Ratcheting stainless steel riser
- Water lubricated gear-drives
- Check height up to 3 m in elevation change

OPERATING SPECIFICATIONS

- G84B
  - Radius: 14.9 to 28.3 m
  - Flow: 3.28 to 13.24 m³/hr; 54.6 to 220.6 l/min
  - Pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
- G85B
  - Radius: 13.1 to 27.7 m
  - Flow: 1.86 to 13.06 m³/hr; 31,0 to 217.7 l/min
  - Pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
- All B Series rotors are pressure rated at 10 bar; 1,000 kPa

G84B
Pop-up height: 9.5 cm
Overall height: 24.5 cm
Flange diameter: 13.7 cm
Female Inlet: 1¼" ACME

G85B
Pop-up height: 9.5 cm
Overall height: 24.5 cm
Flange diameter: 13.7 cm
Female Inlet: 1¼" ACME

G84B & G85B – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Valve Options	3 Nozzle	4 Options*
G84 = Full Circle	**B** = Block rotor with check valve	**15 to 53** = Installed G84 Nozzle* ** SSU = #18, #25 & #48*	**S** = SSU* ** Standard Stocking Unit*
G85 = Full/Part Circle 60° - 360°	**B** = Block rotor with check valve	**10 to 53** = Installed G85 Nozzle** *** SSU = #18, #25 & #48*	**S** = SSU* ** Standard Stocking Unit*

Example:
G84 - B - 25 - S = G80 full circle block rotor, installed #25 nozzle, standard stocking unit model

G84B NOZZLE PERFORMANCE DATA*

Nozzle Set			Pressure		Radius	Flow		Precip mm/hr	
			bar	kPa	m	m³/hr	l/min	■	▲
● Tan 803611	15	● Grey 315317	3.4	340	14.9	3.28	54.6	14.7	17.0
	White		4.1	410	15.5	3.65	60.8	15.1	17.4
			4.5	450	15.9	3.81	63.5	15.2	17.5
			4.8	480	16.2	3.90	65.1	15.0	17.3
			5.5	550	16.8	4.13	68.9	14.7	17.0
● Tan 803611	18	● Grey 315317	3.4	340	16.8	3.97	66.1	14.1	16.3
	Orange		4.1	410	17.1	4.28	71.3	14.7	17.0
			4.5	450	17.4	4.45	74.1	14.7	17.0
			4.8	480	18.0	4.66	77.6	14.4	16.6
			5.5	550	18.6	4.94	82.4	14.3	16.5
● Tan 803611	20	● Grey 315317	3.4	340	17.4	3.91	65.2	13.0	15.0
	Brown		4.1	410	18.6	4.28	71.3	12.4	14.3
			4.5	450	18.9	4.47	74.4	12.5	14.4
			4.8	480	19.2	4.67	77.9	12.7	14.6
			5.5	550	19.5	5.02	83.6	13.2	15.2
● Tan 803611	23	● Lt. Blue 315311	3.4	340	19.2	4.49	74.8	12.2	14.1
	Green		4.1	410	19.8	4.99	83.2	12.7	14.7
			4.5	450	20.1	5.19	86.5	12.8	14.8
			4.8	480	20.4	5.41	90.1	13.0	15.0
			5.5	550	20.4	5.81	96.9	13.9	16.1
● Tan 803611	25	● Lt. Blue 315311	4.5	450	21.6	6.50	108.3	13.9	16.0
	Blue		4.8	480	22.3	6.75	112.5	13.6	15.7
			5.5	550	22.6	7.19	119.8	14.1	16.3
			6.2	620	22.9	7.65	127.5	14.6	16.9
			6.9	690	22.9	8.12	135.3	15.5	17.9
● Tan 803611	33	● Lt. Blue 315311	4.5	450	22.3	7.02	117.0	14.2	16.4
	Grey		4.8	480	22.9	7.30	121.7	14.0	16.1
			5.5	550	23.2	7.81	130.1	14.6	16.8
			6.2	620	23.5	8.24	137.3	15.0	17.3
			6.9	690	24.1	8.65	144.1	14.9	17.2
● Tan 803611	38	● Lt. Blue 315311	4.5	450	22.9	7.96	132.6	15.2	17.6
	Red		4.8	480	23.2	8.29	138.1	15.4	17.8
			5.5	550	23.8	8.85	147.5	15.7	18.1
			6.2	620	24.1	9.38	156.3	16.2	18.7
			6.9	690	25.0	9.87	164.4	15.8	18.2
● Tan 803611	43	● Blue 315300	-	-	-	-	-	-	-
	Dk. Brown		-	-	-	-	-	-	-
			5.5	550	25.3	9.85	164.1	15.4	17.8
			6.2	620	25.9	10.52	175.3	15.7	18.1
			6.9	690	26.5	11.04	183.9	15.7	18.1
● Dk. Brown 803610	48	● Dk. Blue 833500	-	-	-	-	-	-	-
	Dk. Green		-	-	-	-	-	-	-
			5.5	550	25.9	10.88	181.2	16.2	18.7
			6.2	620	27.1	11.46	191.0	15.6	18.0
			6.9	690	27.7	12.08	201.4	15.7	18.1
● Dk. Brown 803610	53	● Dk. Blue 833500	-	-	-	-	-	-	-
	Dk. Blue		-	-	-	-	-	-	-
			5.5	550	27.1	11.86	197.7	16.1	18.6
			6.2	620	27.7	12.58	209.6	16.3	18.9
			6.9	690	28.3	13.24	220.6	16.5	19.0

G85B NOZZLE PERFORMANCE DATA

Nozzle Set			Pressure		Radius	Flow		Precip mm/hr	
			bar	kPa	m	m³/hr	l/min	■	▲
Orange 803603	10	Dk. Green 315312	3.4	340	13.1	1.86	31.0	10.8	12.5
			4.1	410	13.4	2.23	37.1	12.4	14.3
			4.5	450	13.7	2.29	38.2	12.2	14.1
			-	-	-	-	-	-	-
●	Lt. Green	●	-	-	-	-	-	-	-
Orange 803603	13	White 315314	3.4	340	14.6	2.66	44.3	12.4	14.3
			4.1	410	15.2	2.91	48.5	12.5	14.5
			4.5	450	15.5	3.04	50.7	12.6	14.5
			-	-	-	-	-	-	-
●	Lt. Blue	●	-	-	-	-	-	-	-
Orange 803603	15	White 315314	3.4	340	15.9	3.02	50.3	12.0	13.9
			4.1	410	16.2	3.34	55.6	12.8	14.8
			4.5	450	16.5	3.45	57.5	12.7	14.7
			-	-	-	-	-	-	-
●	White	●	-	-	-	-	-	-	-
Orange 803603	18	Lt. Green 315313	3.4	340	16.8	3.79	63.2	13.5	15.6
			4.1	410	17.4	4.04	67.4	13.4	15.5
			4.5	450	17.7	4.13	68.9	13.2	15.3
			-	-	-	-	-	-	-
●	Orange	●	-	-	-	-	-	-	-
Orange 803603	20	Lt. Green 315313	3.4	340	17.7	4.18	69.7	13.4	15.4
			4.1	410	18.3	4.45	74.2	13.3	15.4
			4.5	450	18.6	4.66	77.6	13.5	15.6
			4.8	480	18.6	4.88	81.4	14.1	16.3
●	Tan	●	5.5	550	18.9	5.13	85.6	14.4	16.6
Orange 803603	23	Lt. Green 315313	3.4	340	18.6	4.78	79.6	13.8	16.0
			4.1	410	19.2	5.18	86.3	14.0	16.2
			4.5	450	19.8	5.43	90.5	13.8	16.0
			4.8	480	20.1	5.86	97.7	14.5	16.7
●	Green	●	5.5	550	20.4	6.34	105.6	15.2	17.5
Red 803602	25	Green 315310	4.5	450	21.0	6.68	111.3	15.1	17.4
			4.8	480	21.3	6.92	115.3	15.2	17.6
			5.5	550	21.6	7.37	122.8	15.7	18.2
			6.2	620	21.9	7.77	129.5	16.1	18.6
●	Blue	●	6.9	690	22.3	8.25	137.4	16.7	19.2
Red 803602	33	Green 315310	-	-	-	-	-	-	-
			-	-	-	-	-	-	-
			5.5	550	22.3	7.83	130.4	15.8	18.3
			6.2	620	22.6	8.34	138.9	16.4	18.9
●	Grey	●	6.9	690	23.2	8.75	145.7	16.3	18.8
Red 803602	38	Green 315310	-	-	-	-	-	-	-
			-	-	-	-	-	-	-
			5.5	550	24.1	8.94	149.0	15.4	17.8
			6.2	620	24.1	9.36	156.0	16.1	18.6
●	Red	●	6.9	690	24.4	9.75	162.4	16.4	18.9
Red 803602	43	Green 315310	-	-	-	-	-	-	-
			-	-	-	-	-	-	-
			5.5	550	24.4	9.88	164.7	16.6	19.2
			6.2	620	24.7	10.54	175.6	17.3	20.0
●	Dk. Brown	●	6.9	690	25.3	11.06	184.3	17.3	20.0
Dk. Red 803601	48	Dk. Green 315312	-	-	-	-	-	-	-
			-	-	-	-	-	-	-
			5.5	550	25.9	11.20	186.6	16.7	19.3
			6.2	620	26.2	11.86	197.6	17.3	19.9
●	Dk. Green	●	6.9	690	26.8	12.43	207.1	17.3	19.9
Dk. Red 803601	53	Dk. Green 315312	-	-	-	-	-	-	-
			-	-	-	-	-	-	-
			5.5	550	27.1	11.98	199.7	16.3	18.8
			6.2	620	27.4	12.54	209.0	16.7	19.2
●	Dk. Blue	●	6.9	690	27.7	13.06	217.7	17.0	19.6

● = Nozzle plug P/N 315300 installed in the back side of the nozzle housing.

* Preliminary performance data.

G84B NOZZLES

G85B NOZZLES

LOW-ANGLE NOZZLES**

** Low-angle nozzles reduce radius by 15%

GOLF ROTORS

B SERIES

Models: **G70B & G75B**
Radius: **14.3 to 22.9 m**
Flow: **1.75 to 7.66 m³/hr; 29.1 to 127.6 l/min**

FEATURES

- Models:
  - G70B: Full circle
  - G75B: Full/Part circle (50° to 360°)
- QuickCheck™ arc mechanism (G75B)
- QuickSet-360 arc mechanism (G75B)
- Nozzle choices:
  - G70B: 6 standard trajectory (25°)
  - G75B: 9 standard trajectory (25°)
- Nozzle range:
  - G70B: #15 to #28
  - G75B: #8 to #28
- Exclusive PressurePort™ nozzle technology
- Water lubricated gear-drive
- Check height up to 3 m in elevation change

OPERATING SPECIFICATIONS

- G70B
  - Radius: 16.2 to 22.9 m
  - Discharge rate: 2.95 to 7.66 m³/hr; 49.2 to 127.6 l/min
  - Pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
- G75B
  - Radius: 14.3 to 21.6 m
  - Discharge rate: 1.75 to 7.34 m³/hr; 29.1 to 122.3 l/m
  - Pressure range: 2.8 to 6.9 bar; 280 to 690 kPa
- All B Series rotors are pressure rated at 10 bars; 1,000 kPa

G70B
Pop-up height: 8 cm
Overall height: 23 cm
Flange diameter: 12 cm
Female Inlet: 1¼" ACME

G75B
Pop-up height: 8 cm
Overall height: 23 cm
Flange diameter: 12cm
Female Inlet: 1¼" ACME

G70B & G75B - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Valve Options	3 Nozzle	4 Options
G70 = Full Circle	**B** = Block Rotor with Check Valve	**25** = Installed G70 Nozzle * ** Available in SSU model only* *SSU = #25* *Includes nozzle pack*	**S** = SSU * ** Standard Stocking Unit*
G75 = Full/Part Circle, 50° - 360° Arc Range	**B** = Block Rotor with Check Valve	**25** = Installed G75 Nozzle ** *** Available in SSU model only* *SSU = #25* *Includes nozzle pack*	**S** = SSU * ** Standard Stocking Unit*

Example:
G70 - B - 25 - S = G70 full circle block rotor, installed #25 nozzle with nozzle pack, standard stocking unit model

G70B NOZZLE PERFORMANCE DATA*

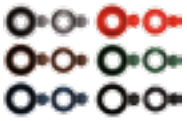
Nozzle	Pressure bar	Pressure kPa	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
15 ● Grey	3.4	340	16.2	2.95	49.2	11.3	13.1
	4.1	410	16.5	3.20	53.4	11.8	13.7
	4.5	450	16.8	3.36	56.0	12.0	13.8
	4.8	480	17.1	3.52	58.7	12.1	14.0
	5.5	550	17.7	3.70	61.7	11.8	13.7
18 ● Red	3.4	340	17.7	3.23	53.8	10.3	11.9
	4.1	410	18.0	3.61	60.2	11.2	12.9
	4.5	450	18.3	3.70	61.7	11.1	12.8
	4.8	480	18.3	3.84	64.0	11.5	13.3
	5.5	550	18.6	4.04	67.4	11.7	13.5
20 ● Dk. Brown	3.4	340	18.6	4.27	71.2	12.4	14.3
	4.1	410	18.9	4.45	74.2	12.5	14.4
	4.5	450	19.2	4.66	77.6	12.6	14.6
	4.8	480	19.5	5.00	83.3	13.1	15.2
	5.5	550	19.5	5.32	88.6	14.0	16.1
23 ● Dk. Green	3.4	340	19.2	4.57	76.1	12.4	14.3
	4.1	410	19.8	4.77	79.5	12.2	14.0
	4.5	450	19.8	4.97	82.9	12.7	14.6
	4.8	480	20.1	5.32	88.6	13.1	15.2
	5.5	550	20.4	5.66	94.3	13.6	15.7
25 ● Dk. Blue	3.4	340	19.8	4.95	82.5	12.6	14.6
	4.1	410	20.4	5.11	85.2	12.3	14.1
	4.5	450	20.4	5.36	89.3	12.9	14.8
	4.8	480	21.0	5.75	95.8	13.0	15.0
	5.5	550	21.6	6.11	101.8	13.0	15.1
28 ● Black	4.8	480	21.6	6.38	106.4	13.6	15.7
	5.5	550	21.6	6.79	113.2	14.5	16.7
	6.2	620	22.3	7.22	120.4	14.6	16.8
	6.9	690	22.9	7.66	127.6	14.6	16.9

* 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.

G75B NOZZLE PERFORMANCE DATA*

Nozzle	Pressure bar	Pressure kPa	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
8 ● Lt. Brown	2.8	280	14.3	1.75	29.1	8.5	9.8
	3.4	340	14.9	1.89	31.4	8.5	9.8
	4.1	410	15.2	2.09	34.8	9.0	10.4
	4.5	450	15.2	2.16	36.0	9.3	10.7
	4.8	480	15.5	2.25	37.5	9.3	10.7
10 ● Lt. Green	3.4	340	16.2	2.48	41.3	9.5	11.0
	4.1	410	16.5	2.73	45.4	10.1	11.6
	4.5	450	16.5	2.84	47.3	10.5	12.1
	4.8	480	16.8	2.98	49.6	10.6	12.2
	5.5	550	17.1	3.25	54.1	11.1	12.9
13 ● Lt. Blue	3.4	340	16.8	2.54	42.4	9.1	10.5
	4.1	410	17.1	2.79	46.6	9.6	11.1
	4.5	450	17.1	2.91	48.5	10.0	11.5
	4.8	480	17.4	3.02	50.3	10.0	11.6
	5.5	550	17.4	3.25	54.1	10.8	12.4
15 ● Grey	3.4	340	17.4	3.04	50.7	10.1	11.6
	4.1	410	17.7	3.25	54.1	10.4	12.0
	4.5	450	18.0	3.36	56.0	10.4	12.0
	4.8	480	18.0	3.48	57.9	10.7	12.4
	5.5	550	18.3	3.73	62.1	11.2	12.9
18 ● Red	3.4	340	18.3	3.29	54.9	9.8	11.4
	4.1	410	18.6	3.57	59.4	10.3	11.9
	4.5	450	18.6	3.70	61.7	10.7	12.4
	4.8	480	18.9	3.84	64.0	10.7	12.4
	5.5	550	19.2	4.13	68.9	11.2	12.9
20 ● Dk. Brown	4.1	410	18.9	4.04	67.4	11.3	13.1
	4.5	450	18.9	4.13	68.9	11.6	13.4
	4.8	480	19.2	4.36	72.7	11.8	13.7
	5.5	550	19.5	4.66	77.6	12.2	14.1
	6.2	620	19.8	4.95	82.5	12.6	14.6
23 ● Dk. Green	4.1	410	19.5	4.97	82.9	13.1	15.1
	4.5	450	19.8	4.86	81.0	12.4	14.3
	4.8	480	19.8	5.36	89.3	13.7	15.8
	5.5	550	20.1	5.82	96.9	14.4	16.6
	6.2	620	20.4	6.13	102.2	14.7	17.0
25 ● Dk. Blue	4.1	410	19.8	5.34	89.0	13.6	15.7
	4.5	450	19.8	5.63	93.9	14.4	16.6
	4.8	480	20.4	5.82	96.9	13.9	16.1
	5.5	550	21.0	6.20	103.3	14.0	16.2
	6.2	620	21.6	6.59	109.8	14.1	16.2
28 ● Black	4.8	480	20.1	6.11	101.8	15.1	17.4
	5.5	550	20.7	6.56	109.4	15.3	17.6
	6.2	620	21.3	6.95	115.8	15.3	17.6
	6.9	690	21.6	7.34	122.3	15.7	18.1

G70B & G75B NOZZLES



G70B

G75B

GOLF ROTORS

B SERIES

Model: **G35B**
Radius: **5.5 to 15.2 m**
Flow: **0.43 to 2.91 m³/hr; 7.2 to 48.5 l/min**

FEATURES

- Model: G35B: Full/Part Circle (50° - 360°)
- QuickCheck™ arc mechanism
- QuickSet-360 arc mechanism
- Nozzle choices:
  - 8 multi-trajectory 15°–25°
- Nozzle range:
  - #2 to #12
- Water lubricated gear-drive
- Check height up to 3 m in elevation change

OPERATING SPECIFICATIONS

- Radius: 5.5 to 15.2 m
- Flow: 0.43 to 2.91m³/hr; 7.2 to 48.5 l/min
- Pressure range: 2.8 to 4.5 bar; 280 to 450 kPa
- All B Series rotors are pressure rated at 10 bar; 1,000 kPa

G35B
Pop-up height: 8 cm
Overall height: 23 cm
Flange diameter: 12 cm
Female Inlet: 1¼" ACME

GOLF ROTORS

G35B – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Valve Options	3 Nozzle	4 Options*
G35 = Full/Part Circle 50° to 360°	**B** = Block rotor with check valve	**6** = Installed G35 Nozzle* ** Available in SSU model only* *SSU = #6* *Includes nozzle rack*	**S** = SSU* ** Standard Stocking Unit*

Example:
G35 - B - 6 - S = G35 full/part circle block rotor, installed #6 nozzle with nozzle rack, standard stocking unit model

G835 NOZZLE PERFORMANCE DATA*

Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲
2 Yellow	2.8	280	5.5	0.43	7.2	14.3	16.6
	3.4	340	6.1	0.48	7.9	12.8	14.8
	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
3 Yellow	2.8	280	7.0	0.68	11.4	13.9	16.0
	3.4	340	7.6	0.73	21.1	12.5	14.5
	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 Yellow	2.8	280	7.6	0.89	14.8	15.3	17.6
	3.4	340	8.5	0.93	15.5	12.8	14.8
	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
5 Yellow	2.8	280	8.8	1.07	17.8	13.7	15.8
	3.4	340	9.8	1.14	18.9	11.9	13.8
	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 Yellow	2.8	280	9.8	1.36	22.7	14.3	16.5
	3.4	340	10.7	1.43	23.8	12.6	14.5
	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
8 Yellow	2.8	280	11.0	1.77	29.5	14.7	17.0
	3.4	340	11.9	1.82	30.3	12.9	14.8
	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 Yellow	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
	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 Yellow	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
	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

* 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.

G835 NOZZLES

HQ5LRC Quick Coupler

with HSJ-1 SnapLok™ equipped swing joint

Introducing Hunter's new full line of HSJ heavy-duty swing joints with configurations for every need and every project. There is even a version specifically designed for quick coupler applications. The SnapLok outlet on HSJ-1 models come equipped with accommodations for both rebar and pipe stabilisation, as well as heavy-duty brass outlet threads with a unique anti-rotation locking feature.

See the HSJ swing joints on page 47

RT SERIES

Models: **G70RT, G75RT & G80RT**
Radius: **14.3 to 26.8 m**
Flow: **1.75 to 13.15 m³/hr; 29.1 to 219.2 l/min**

FEATURES

- Models:
  - G70RT: Full circle riser with nozzle set
  - G75RT: Full/Part circle riser with nozzle set
  - G80RT: Full circle riser with nozzle set
- Works with all 1" and 1½" inlet Toro® 600 and 700 Series golf rotors
- Converts current sprinklers into closed-case rotors
- The RT upgrade extends the life of existing irrigation systems
- Performance, reliability and long life
- Upgrade takes less than 5 minutes

G70RT / G75RT
Pop-up height: 8 cm

G80RT
Pop-up height: 8 cm

Quick and Easy Upgrade!
The RT retro upgrade takes just minutes and extends the life and reliability of aging irrigation systems.

G70RT/G75RT RETRO RISERS

To Replace TORO®	Use Hunter Model/Nozzle Nozzle	G70RT Full Circle	G75RT Full/Part Circle
630	31	15	15
	32	18	18
	33	20	20
	34	28	–
660	62	15	15
	63	18	18
	64	25	25
	65	28	–
730	31	15	15
	32	18	18
	33	20	20
	34	23	23
	35	28	–
760	62	15	15
	63	18	18
	64	20	23
	65	25	25
	66	28	–

G80RT RETRO RISERS

To Replace TORO®	Use Hunter Model/Nozzle Nozzle	G80RT Full Circle
650	56	23
	57	33
	58	33
	59	38
670	70	43
	71	48
	72	48
680	84	25
	85	33
	86	33
	87	43
	88	48
750	54	25
	55	33
	56	38
	57	43
	58	48
780	84	25
	85	25
	86	33
	87	38
	88	43
	89	48

ACME ADAPTER FITTINGS

1¼" Models

1¼" male ACME x 1" female NPT	P/N 109325
1¼" male ACME x 1" female BSP	P/N 105329
1¼" male ACME x 1¼" female NPT	P/N 474800
1¼" male ACME x 1¼" female BSP	P/N 474900
1¼" male ACME x 1½" female NPT	P/N 104153
1¼" male ACME x 1½" female BSP	P/N 107262

Acme x Acme Models

1½" male ACME x 1" ACME female	P/N 225300
1½" male ACME x 1¼" ACME female	P/N 225400
1¼" male ACME x 1" ACME female	P/N 225500

1½" Models

1½" male ACME x 1" female NPT	P/N 475400
1½" male ACME x 1" female BSP	P/N 475500
1½" male ACME x 1¼" female NPT	P/N 475200
1½" male ACME x 1¼" female BSP	P/N 475300
1½" male ACME x 1½" female NPT	P/N 475000
1½" male ACME x 1½" female BSP	P/N 475100

B2B Tee Assembly

1½" ACME threaded tee and 1½" 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

HOSE-SWIVEL ADAPTERS

Models

- Hose swivel adapter for G90 and G900 Series (fits ¾" & 1" hose) P/N G90HS100
- Hose swivel adapter for G800 Series (fits ¾" & 1" hose) P/N G800HS100

Hose Swivel Adapters

RUBBER COVER KITS

Models

- G990 rubber cover kit (date codes 06/11 & prior only) P/N 473800
- G995 rubber cover kit (also G990 date codes 07/11 & after) P/N 473900

Rubber Cover Kit

CENTRAL CONTROL

PILOT® CENTRAL CONTROL
ADVANCED FEATURES

COMPLETE CONTROL

PILOT-CC SOFTWARE CENTRAL CONTROL

Safely balance sprinkler demand with water and electrical supply for the most efficient irrigation cycles possible.

PILOT-FC FIELD CONTROLLER

The Pilot field controller manages up to 80 stations in 10 station increments. The full-featured controller has everything you need in a stand-alone field controller. For a fully automated, flow-optimised system, network all your controllers together with Pilot-CC central control software.

Communication options include hardwire, UHF radio, and two spread-spectrum bands. Power options include both 120 VAC and 230 VAC.

PILOT-DH DECODER HUB

Pilot includes a two-wire decoder option. Pilot-DH decoder hubs have a 999-station capacity and can run up to 120 stations simultaneously.

The hub has a plastic pedestal enclosure with a full-featured control panel. It can be used as in-field control, a stand-alone decoder controller, or linked to a Pilot-CC central control for fully flow-optimised irrigation management.

Communication options include hardwire, UHF radio, and two spread-spectrum bands. Power options include both 120 and 230 VAC.

EASY TO PROGRAM AND MAINTAIN

Ease-of-Use: The control panel features a large, multi-language display and an array of function buttons providing quick access to the most commonly used features. The display clearly shows what the controller is doing and has a unique feature which shows the user what time the next scheduled watering will occur.

Ease-of-Maintenance: The system was designed with you in mind. Circuit boards are encapsulated in polyurethane to reduce damage from moisture and pests. All hardware is captured, so you won't lose screws in the grass. The clean, modular design of Pilot units allow them to be serviced with a Phillips screwdriver, which we provide with every controller.

PILOT® SOFTWARE

Pilot is easy to use and has all the features you need to reliably and automatically water your course. Runtimes can be adjusted manually or determined automatically using application depth. Irrigation is scheduled through a powerful programming matrix which lets you see every sprinkler on the course while you make your adjustments. Pilot offers two types of water management, flow optimised and FCP or field controller program. When flow-optimised, electrical and hydraulic demand are efficiently managed to ensure your watering window is as short as possible. When you use an FCP you have total control over when, where and how long sprinklers run—perfect for overseeding, seed germination, grow-in and other cultural practices where optimal use of the pump station is a secondary concern. FCPs can be retrieved into the central control software, edited, then sent back to the field unit – so you can manage all your controller schedules from the computer in your office.

PILOT SOFTWARE SPECIFICATIONS

- Operating system: 64-bit Windows® 8
- Maximum field controllers: 999
- Maximum stations: 79,920
- ET-based scheduling: weather station or manually entered
- Hydraulic management: automated and graphed to individual stations
- Mapping: online maps converted from AutoCAD and other applications

* Note: Windows is a registered trademark of The Microsoft® Corporation

Overview - Pilot

MANAGE THE FLOW

Pilot® 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, irrigation can be gradually stepped up in safe increments.

Flow Optimisation

CREATE AND EDIT SCHEDULES OUT ON THE COURSE

With Pilot, critical irrigation is not dependent upon the whims and availability of a computer or communications link where it is subject to a single point of failure. Pilot software creates schedules then sends them to the field where controllers do the actual irrigating. Because Pilot field controllers are packed with intelligence, you can even create and edit schedules out on the course and transfer them back to Pilot for review and editing.

Schedule Creation

MAPPING YOUR COURSE

Although it is not required to have a map, adding one allows you to run water by clicking the station symbols on the map, monitor stations as they are running, and adjust certain settings.

Maps

PILOT® CONTROLLER

Application: **Golf**
Number of Stations: **80**
Type: **Field Controller**

FEATURES

- 5 languages
- Up to 80 station outputs in 10-station increments
- Up to 3 Hunter golf valve-in-head rotors per station output
- Up to 20 simultaneous Hunter golf valve-in-head rotors active per controller
- 32 automatic schedules with 8 start times per schedule
- Exclusive Safe-Toggle™ mechanical on-off-auto station switches
- 1–31 day skip-day scheduling
- One-touch rain shutdown up to 30 days or indefinitely
- One-touch Safe-Pause™ with 30 minute safety timer
- 1–300% runtime seasonal adjustment
- Seasonal start time adjustment is used to quickly change all start times plus or minus 30 minutes

Pilot-FC Plastic Pedestal
Height: 100 cm
Width: 60 cm
Depth: 44 cm
Weight: 32 kg

POWER SUPPLY INPUT

- 120/230 VAC at 60/50 Hz
- 1.2 Amps maximum at 120 VAC
- 0.73 Amps maximum at 230 VAC

POWER SUPPLY OUTPUT

- Station output: 1 Amp at 24 VAC
- 24 VAC Hot Post output: 420 mA at 24 VAC
- Solenoid Capacity: 3 standard 24 VAC Hunter golf valve-in-head rotors per output, 20 maximum simultaneous stations

Pilot-FI Field Interface
One is required with any central control 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

RADIO SYSTEMS

- UHF Radio: 450-470 MHz; other frequeny ranges available for selected markets
- Spread Spectrum Radio: 915 MHz (US) and 2.4 GHz (international)

WIRED SYSTEMS

- GCBL: Shielded two twisted pairs, 0.82 mm^2
- GCBLA: Armored, shielded two twisted pairs, 0.82 mm^2

PILOT-FI – SPECIFICATION BUILDER ORDER 1 + 2 + 3

1 Model	2 Standard Features	3 Options	
Pilot-FI	Plastic pedestal (grey)	**HWR**	Hardwire communications
		UHF	UHF radio communications (US only)
		LF	Licence-free radio communications
		ILF	Licence-free radio communications

Examples:
Pilot-FI-HWR = Field interface with hardwire communications
Pilot-FI-UHF = Field interface with UHF radio communications (US only)
Pilot-FI-ILF = Field interface with international licence-free radio communications

THE PILOT® FIELD CONTROLLER WAS BUILT SPECIFICALLY FOR GOLF COURSE IRRIGATION CONTROL.

Water-Resistant Keypad
Large backlit display with convenient function buttons for the most commonly used features. Built-in system diagnostics make trouble-shooting your system a breeze.

Auto/On/Off Switches and Diagnostic LED Indicators
Standard for all station outputs, 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 included with every controller.

Modular 10-Station Expansion Boards
Colour-coded modular components with captured screws so they won't get lost, making it easy to assemble and troubleshoot.

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 Options	
Pilot-FC30 (30-station)	Plastic pedestal (grey) 120/230 VAC 60/50 Hz dual-voltage transformer	**S**	Stand-alone field controller with no central communications
Pilot-FC40 (40-station)		**HWR**	Hardwire communications
Pilot-FC50 (50-station)		**UHF**	UHF radio communications (US only)
Pilot-FC60 (60-station)		**LF**	Licence-free spread spectrum radio communications (900 MHz for North America and where permitted)
Pilot-FC70 (70-station)		**ILF**	Licence-free spread spectrum radio communications (2.4 GHz for international, where permitted)
Pilot-FC80 (80-station)			

Examples:
Pilot-FC40-S = 40-station, stand-alone field contraoller with no central communications
Pilot-FC70-HWR = 70-station field controller with hardwire communications
Pilot-FC80-ILF = 80-station field controller with international licence-free radio communications

PILOT® DECODERS

Application: **Golf**
Number of Stations: **999**
Type: **Decoder System**

Decoder installations continue to be one of the fastest growing forms of technology in irrigation control. A key advantage over conventional systems is that decoders use less wire for an overall irrigation system. That means lower cost, quicker installation time, and easier system diagnosis and repair if needed. Systems can be easily expanded—with minimal digging and disruption of landscaping—by adding in more decoders rather than running additional wires.

Pilot enables you to take advantage of this cost-efficient approach. Pilot decoders are available with 1, 2, 4 and 6-station outputs, making it possible to run each head on an entire green with a single decoder. In all, decoders let you operate up to 999 stations out to 4.5 km from a single hub.

Pilot decoder systems include built-in surge suppression, colour-coded wire connections, true independent station control, programmable station addresses, and two-way feedback to the controller with confirmation and status indication.

Pilot-SG surge protectors are required when a system is designed and installed with Decoder-In-Head (DIH) rotors.

Pilot Decoder Hub

Water-Resistant Keypad
Backlit display and secondary LED facepack means it can be used day or night

Diagnostic LED Indicators
For all functions on decoder output module

250-Station Output Modules
Enable your decoder hub to grow with your course. Start with 250 - grow to 999

Pilot Decoders
1 & 2 Station Decoders:
Height: 9 cm
Width: 4 cm
Depth: 2.5 cm
Weight: 150 g

4 & 6 Station Decoders:
Height: 9 cm
Width: 4.5 cm
Depth: 4 cm
Weight: 250 g

Distinct yellow design makes it much easier to find decoders in dark valve boxes or buried in the soil.

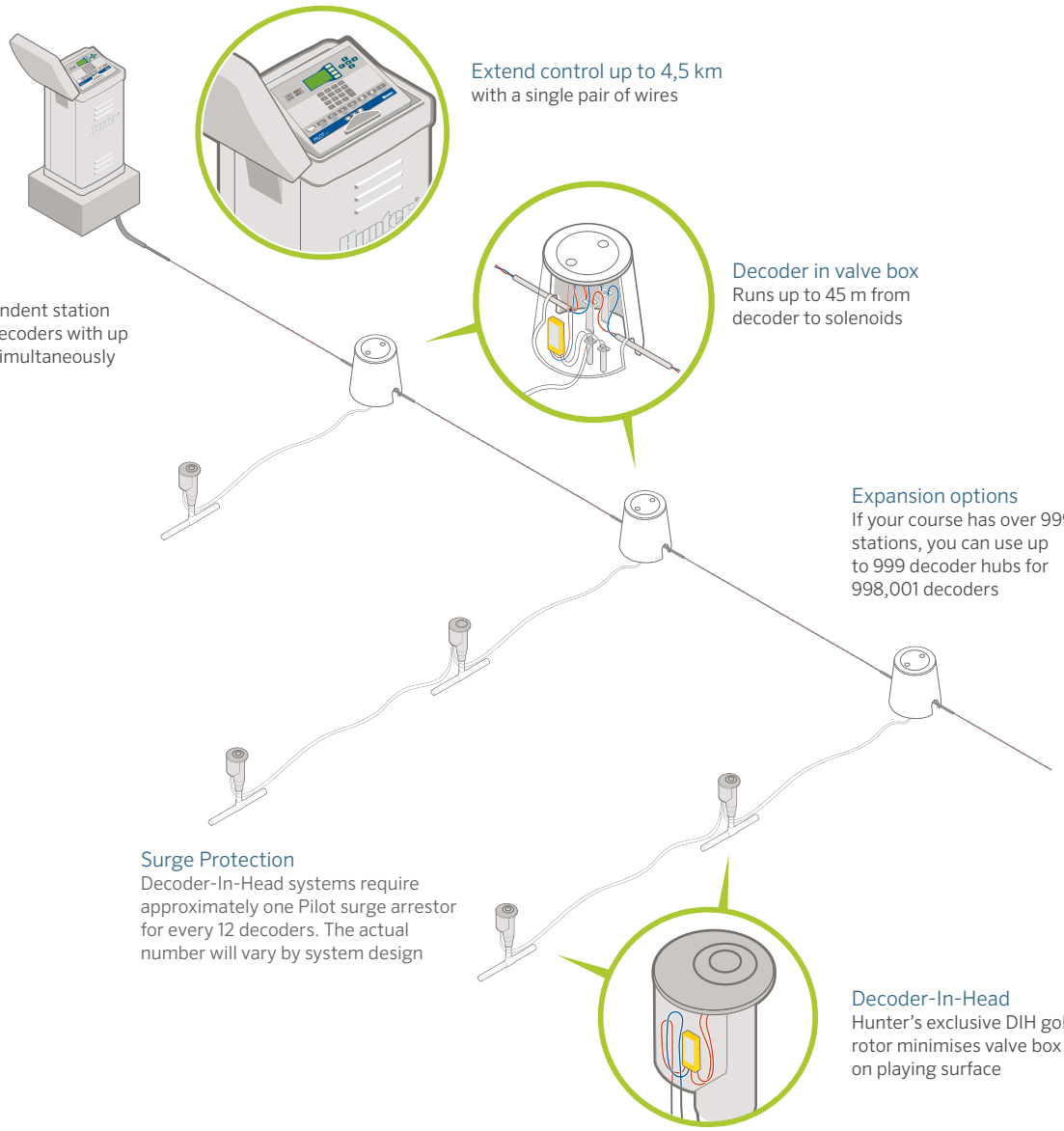
DS-G Surge Ground Arrestor

All DIH rotors include two IBM DBRY-6 splices for connection to the 2-wire path. DIH rotor control systems require grounding with Pilot-SG surge suppressors coupled to appropriate grounding plate or rod. Hunter recommends a minimum of one Pilot-SG for every 12 installed DIH rotors or as per project specification.

PILOT-DH – SPECIFICATION BUILDER ORDER 1 + 2 + 3

1 Model	2 Standard Features	3 Options	
Pilot-DH250 (250-station)	Plastic pedestal (grey)	**S**	Stand-alone decoder hub with no central communications
Pilot-DH500 (500-station)		**HWR**	Hardwire communications
Pilot-DH750 (750-station)		**UHF**	UHF radio communications (US only)
Pilot-DH999 (999-station)		**LF**	Licence-free spread spectrum radio communications (900 MHz for North America and where permitted)
		ILF	Licence-free spread spectrum radio communications (2.4 GHz for international, where permitted)

Examples:
Pilot-DH250-S = 250-station, stand-alone decoder hub with no central communications
Pilot-DH750-ILF = 750-station decoder hub with international licence-free radio communications
Pilot-DH999-HWR = 999-station decoder hub with hardwire communications



Extend control up to 4,5 km
with a single pair of wires

Pilot-DH
Provides independent station control of 999 decoders with up to 120 running simultaneously

Decoder in valve box
Runs up to 45 m from decoder to solenoids

Expansion options
If your course has over 999 stations, you can use up to 999 decoder hubs for 998,001 decoders

Surge Protection
Decoder-In-Head systems require approximately one Pilot surge arrestor for every 12 decoders. The actual number will vary by system design

Decoder-In-Head
Hunter's exclusive DIH golf rotor minimises valve box covers on playing surface

DECODERS – SPECIFICATION BUILDER ORDER 1

1 Model		2 Standard Features
Pilot-100	1-station decoder	Built-in surge protection
Pilot-200	2-station decoder	DBRY-6 Waterproof Connectors included
Pilot-400	4-station decoder	
Pilot-600	6-station decoder	
Pilot-SG	Inline surge protection (for DIH rotor systems)	

Example:
Pilot-100 = 1-station decoder

Wireless Programming!
Communicate with decoders directly through plastic case: wireless electro-magnetic induction saves waterproof connectors

See the ICD-HP on page 195

WEATHER STATION

Application: **Golf**
Range: **Wireless 1 km**
Type: **Weather Station**

FEATURES

- Includes built-in 60-day data logger: With onboard evapotranspiration (ET) calculation (modified Penman-Monteith equation for turf grass)
- Wireless package uses 2.4 GHz licence-free technology
  - 2.4 GHz radio systems can reach up to 3 km
  - In rural areas, try the licence-free, 900 MHz radio for links up to 800 m
- Wired systems use Hunter GCBL, direct-bury cable with a range of 1.25 km (dedicated 9-pin serial computer port required)
- Optional solar panel kit provides wireless power
  - Simple installation and versatile mounting with on-board 800 mAh rechargeable gel cell battery with 18 VDC transformer and 7 m power cable.
- Weatherproof construction: With UV stabilised enclosure, weather-proof external connectors and long-life coated circuit boards
- UL, c-UL and CE certifications

TurfWeather Station
Height: 61 cm
Width: 40.5 cm
Depth: 38 cm
Weight: 6 kg

COMPLETE PACKAGES INCLUDE HUNTER WEATHER SOFTWARE

Model	Description
TWHW	Wired communications to central computer – GCBL cable is required
TW24	2.4 GHz licence-free radio communication to central computer
TW916	916 MHz licence-free radio communication to central computer
TW922A	922 MHz licence-free radio communication to central computer
TWSUN	Optional solar power kit for all TurfWeather models

MAINTENANCE RADIO

Application: **Golf**
Range: **Up to 3.5 km**
Type: **Remote Control**

FEATURES

- Instant control of stations, blocks and programs
- Fewer buttons to push
- Instant audio confirmation of commands
- Hunter's famous StraightTalk™ Technology: Enables wireless remote control at ranges up to 3.5 km whether or not the central computer is turned on
- 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 watts, UHF (450–470 MHz)*

* Note: Licence required in most countries

TRNR Radio
Height: 10.25 cm
Width: 5.25 cm
Depth: 3 cm
Weight: 200 grams

ICD-HP

WIRELESS HANDHELD DECODER PROGRAMMER

Type: **Decoder Programmer**

FEATURES

- Program or re-program decoder stations, whether new or installed
- Program any station numbers in any order, or skip stations for future expansion
- Turn decoder stations on and view solenoid status, current in milliamps, and more
- Built-in voltmeter for decoder path
- Communicates with decoders directly through plastic case: wireless electro-magnetic induction saves waterproof connectors
- Communicates through the top of DIH rotors- no cover removal required

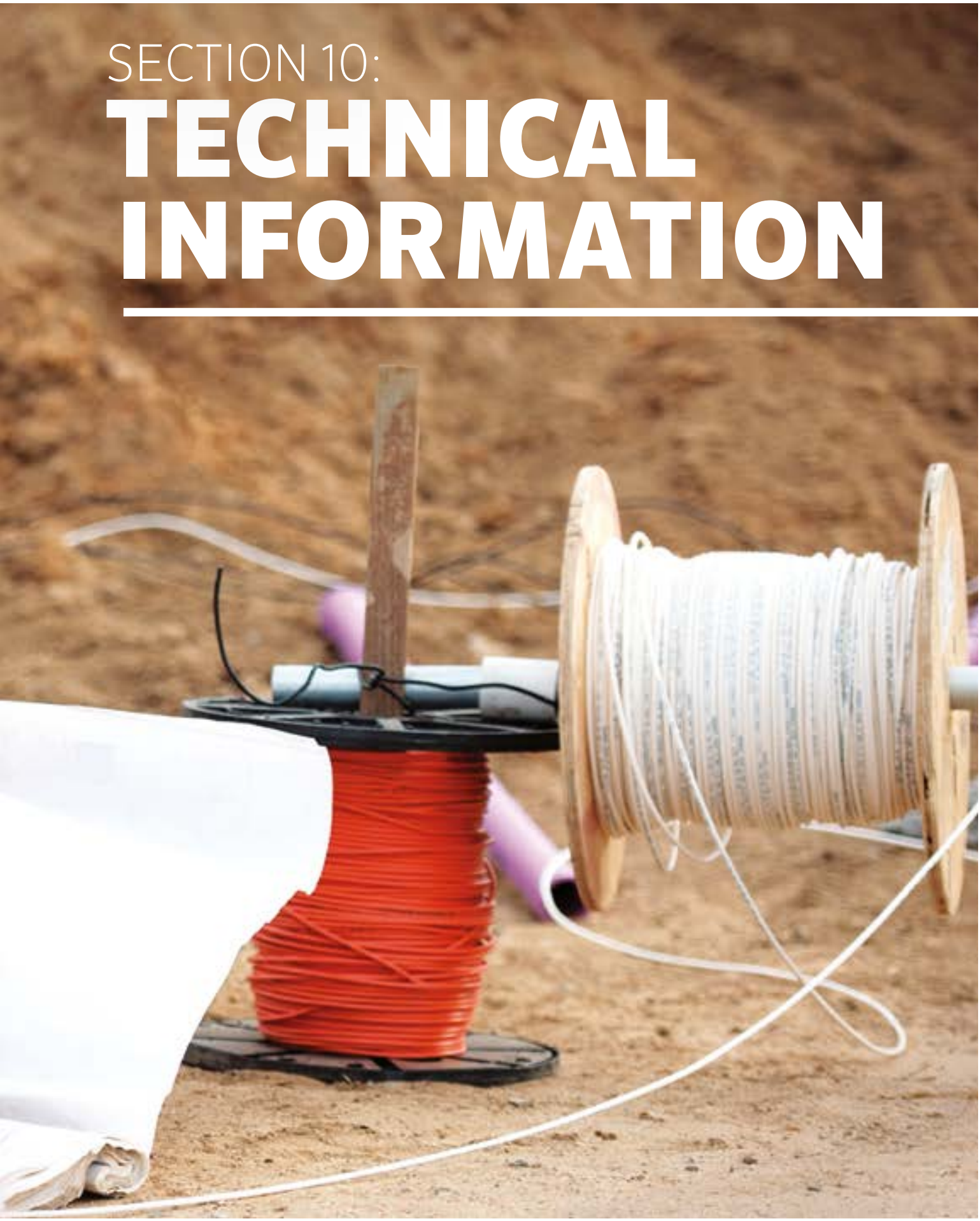
ICD-HP

ICD-HP
Height: 21 cm
Width: 9 cm
Depth: 5 cm

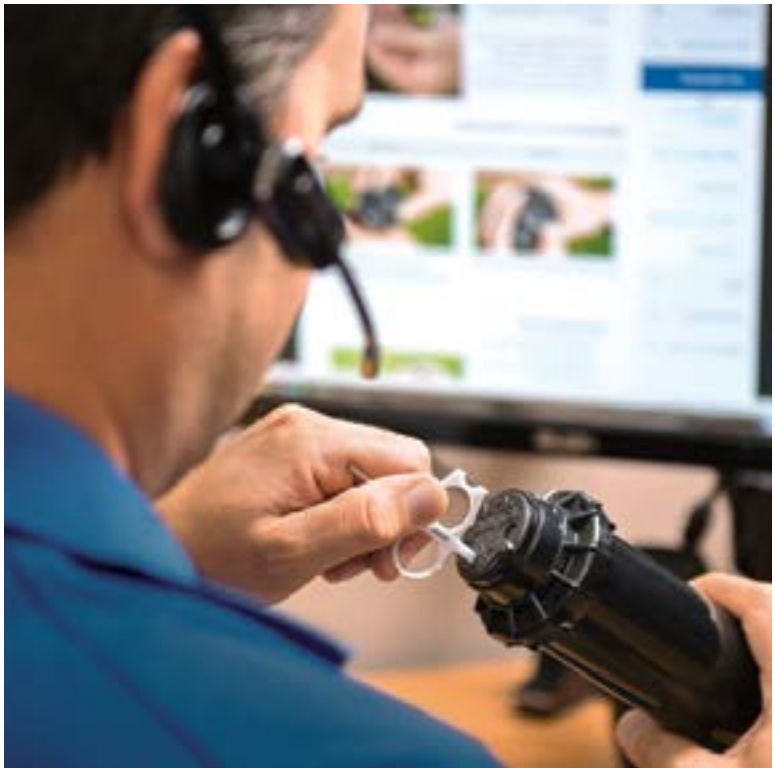
Packaged in an outdoor carrying case, this complete kit includes probes, induction cup, cable, USB power cable for bench use, and 4 AA batteries for field work.

SECTION 10:

TECHNICAL INFORMATION



HUNTER
Technical Services



Our Hunter Technical Service Team has more than 197 years of combined industry expertise.

Anyone can sell you products. At Hunter, we've always believed the difference lies in providing world-class product support to make your job easier. When you need technical help, whether it's to ask a quick question or to get product-specific troubleshooting assistance, you can count on Hunter's Technical Services Team to provide the best support in the industry. Our knowledgeable experts are always available to help you.

In addition, our Field Service Team provides on-site training and troubleshooting assistance with central control, decoder system, and other commercial, residential, municipal, and golf course installations. Their combined experience of 200+ years in the industry is invaluable when you need factory support by phone, remote desktop, or at the job site.

Contact Us

Phone: 1-800-733-2823, Mon–Fri 6 a.m.–4 p.m. PST

Email: huntertechnicalsupport@hunterindustries.com

After Hours: Leave us a voice message and someone from our team will return your call the next business day

Online Product Information

Visit our Support Library for instructional videos, owner's manuals, installation details, articles, and more.

Rotors, Controllers, Sensors, Drip/Micro Irrigation, Valves, Sprays, Nozzles, FX Luminaire, and Water Management Software

www.hunterindustries.com/support

PRODUCT
Specialist Program

This unique training program is designed to equip contractors, distributors, and other professionals with the knowledge to become familiar with Hunter products.

To get started:

1. Access the training website:

- Visit www.training.hunterindustries.com
- Log in or create a new account
- Click on courses, enroll at no cost, watch the training module, and take the quiz

2. Take courses for the level you choose:

- Click on the Specialist Program and choose the level you need
- Click on the courses required for each level and enroll in the courses
- Watch the training module and take the quiz

3. Apply for your certificate:

- Submit the Completion Notification Form for each level
- Obtain your certificate and use your membership card. You may use your certificates to apply for Continuing Education Unit Credits through the Irrigation Association

Choose from three levels of training:

Technician Level: Basic knowledge of the entire Hunter product line

Specialist Level: In-depth knowledge on a particular product

Expert Level: Thorough knowledge on a product category

REPLACEMENT GUIDE

Bringing together a combination of intelligent design, carefully controlled manufacturing, and regular testing to ensure conformity to the strictest standards, Hunter has been able to create truly exceptional nozzles. Essentially, we have made the science of developing superior nozzles—and thus, superior sprinklers—look easy. In the process, we have also made it easy for you to determine which of these high performance sprinklers can be used to replace other brands. Simply consult the following replacement guide to find the appropriate Hunter sprinkler for any irrigation need.

PGJ GEAR DRIVEN ROTARY SPRINKLERS

To Replace RAIN BIRD®		Use Hunter Nozzle ● Red
3500	0.75	0.75
	1	1.0
	1.5	1.5
	2	2.0
	3	3.0
	4	4.0
T-Bird T-22	.65 (Blue)	0.75
	1.0 (Red)	1.0
	1.3 (Black)	1.5
	2.0 (Brown)	2.0
	2.5 (Grey)	2.5
	4.0 (Yellow)	4.0
T-Bird T-30	1.0 (Red)	1.0
	1.3 (Black)	1.5
	2.0 (Brown)	2.0
	2.5 (Grey)	2.5
	4.0 (Yellow)	4.0
	5.0 (Green)	5.0

To Replace TORO®		Use Hunter Nozzle ● Red
300/340	1	0.75
Stream Rotor	2	1.5
	3	3.0

To Replace NELSON®		Use Hunter Nozzle ● Red
5500	#51	0.75
	#52	1.5
	#53	2.0
	#54	2.5

PGP® GEAR DRIVEN ROTARY SPRINKLERS

To Replace RAIN BIRD®		Use Hunter Nozzle ● Red	● Blue
Mini-Paw 15103	07 (Black)	6	2.5
	09 (Green)	7	3.0
Maxi-Paw 2045	06 (Red)	5	2.0
	07 (Black)	6	2.5
	08 (Blue)	8	4.0
	10 (Yellow)	9	5.0
	12 (Beige)	10	8.0
R-50	1.5 (Black)	5	2.0
	2.0 (Brown)	7	3.0
	3.0 (Grey)	8	4.0
	4.0 (Yellow)	9	5.0
	6.0 (Green)	10	8.0
T-Bird T-30	1.3 (Black)	4	1.5
	2.5 (Grey)	6	2.5
	5.0 (Green)	9	5.0
5000	1.5	4	1.5
	2.0	5	2.0
	3.0	7	3.0
	4.0	8	4.0
	6.0	9	5.0
	8.0	10	8.0
5505	2	5	2.0
	3	6	2.5
	4	7	3.0
	5	8	4.0
	6	9	5.0
	8	10	8.0
	10	10	8.0
	12	11	8.0

To Replace K-RAIN®		Use Hunter Nozzle ● Red	● Blue
RPS75	0.50	1	- -
	0.75	2	- -
	1.0	4	1.5
	2.0	6	2.0
	2.5	7	2.5
	3.0	8	3.0
	4.0	9	4.0
	6.0	10	6.0
	8.0	11	8.0

PGP® GEAR DRIVEN ROTARY SPRINKLERS

To Replace TORO®		Use Hunter Nozzle ● Red	● Blue
300/340	308-XX-02	4	1.5
Stream Rotor	308-XX-03	7	3.0
	316-XX-02	7	3.0
	316-XX-03	10	8.0
XP-300 Series	XP-300-090-07	4	1.5
	180-07	7	3.0
	360-07	10	8.0
	XP-300-090-09	5	2.0
	180-09	8	4.0
	360-09	11	- -
	XP-300-090-10	5	2.0
	180-10	9	5.0
	360-10	12	- -
Super 600	1.3	4	1.5
	2.5	7	3.0
	5.0	10	8.0
	6.0	10	8.0
Super 700	1.3	3	1.5
	1.5	4	1.5
	2.0	5	2.0
	3.0	7	3.0
	4.5	8	4.0
	6.0	9	5.0
	7.5	10	8.0
	9.0	11	8.0
Super 800	0.50	1	- -
	0.75	2	- -
	1.0	4	1.5
	2.0	6	2.0
	2.5	7	2.5
	3.0	8	3.0
	4.0	9	4.0
	6.0	10	6.0
	8.0	11	8.0
TR50	1.0	3	- -
	1.5	4	1.5
	2.0	5	2.0
	3.0	6	3.0
	4.5	8	4.0
	6.0	9	6.0
	7.5	10	8.0
	9.0	11	8.0

REPLACEMENT GUIDE

PGP® ULTRA / I-20 GEAR DRIVEN ROTARY SPRINKLERS

To Replace RAIN BIRD®		Use Hunter Nozzle ● Blue
Mini-Paw 15103	07 (Black)	**2.5**
	09 (Green)	**3.0**
Maxi-Paw 2045	06 (Red)	**2.0**
	07 (Black)	**2.5**
	08 (Blue)	**4.0**
	10 (Yellow)	**5.0**
	12 (Beige)	**8.0**
R-50	1.5 (Black)	**2.0**
	2.0 (Brown)	**3.0**
	3.0 (Grey)	**4.0**
	4.0 (Yellow)	**5.0**
	6.0 (Green)	**8.0**
T-Bird T-30	1.3 (Black)	**1.5**
	2.5 (Grey)	**2.5**
	5.0 (Green)	**5.0**
5000	1.5	**1.5**
	2.0	**2.0**
	3.0	**3.0**
	4.0	**4.0**
	6.0	**5.0**
	8.0	**8.0**
5505	2	**2.0**
	3	**2.5**
	4	**3.0**
	5	**4.0**
	6	**5.0**
	8	**8.0**
	10	**8.0**
	12	**8.0**

To Replace K-RAIN®		Use Hunter Nozzle ● Blue
RPS75	0.50	- -
	0.75	- -
	1.0	**1.5**
	2.0	**2.0**
	2.5	**2.5**
	3.0	**3.0**
	4.0	**4.0**
	6.0	**6.0**
	8.0	**8.0**

PGP® ULTRA / I-20 GEAR DRIVEN ROTARY SPRINKLERS

To Replace TORO®		Use Hunter Nozzle ● Blue
300/340	308-XX-02	**1.5**
Stream Rotor	308-XX-03	**3.0**
	316-XX-02	**3.0**
	316-XX-03	**8.0**
XP-300 Series	XP-300-090-07	**1.5**
	180-07	**3.0**
	360-07	**8.0**
	XP-300-090-09	**2.0**
	180-09	**4.0**
	360-09	- -
	XP-300-090-10	**2.0**
	180-10	**5.0**
	360-10	- -
Super 600	1.3	**1.5**
	2.5	**3.0**
	5.0	**8.0**
	6.0	**8.0**
Super 700	1.3	**1.5**
	1.5	**1.5**
	2.0	**2.0**
	3.0	**3.0**
	4.5	**4.0**
	6.0	**5.0**
	7.5	**8.0**
	9.0	**8.0**
Super 800	0.50	- -
	0.75	- -
	1.0	**1.5**
	2.0	**2.0**
	2.5	**2.5**
	3.0	**3.0**
	4.0	**4.0**
	6.0	**6.0**
	8.0	**8.0**
TR50	1.0	- -
	1.5	**1.5**
	2.0	**2.0**
	3.0	**3.0**
	4.5	**4.0**
	6.0	**6.0**
	7.5	**8.0**
	9.0	**8.0**

SPRAY SPRINKLERS

To Replace ANY MFRS NOZZLES		Use Hunter Product Nozzles
Nozzles	8 Radius	**8A**
	10 Radius	**10A**
	12 Radius	**12A**
	15 Radius	**15A**
	17 Radius	**17A**
Rain Bird 1800		**Pro-Spray**
1800 SAM		**Pro-Spray-CV**
1800 SAM PRS		**Pro-Spray-PRS30-CV**
Uni-Spray		**PS Ultra**

REPLACEMENT GUIDE

To Replace RAIN BIRD®		Use Hunter Nozzle
FALCON	4 (Black)	**4 (Yellow)**
	6 (Lt. Blue)	**5 (White)**
	8 (Dk. Green)	**7 (Orange)**
	10 (Grey)	**8 (Lt. Brown)**
	12 (Beige)	**10 (Lt. Green)**
	14 (Lt. Green)	**13 (Lt. Blue)**
	16 (Dk. Brown)	**18 (Red)**
	18 (Dk. Blue)	**20 (Dk. Brown)**
41-51A	18 x 11.5	**20 (Dk. Brown)**
41-51A	13 x 11	**13 (Lt. Blue)**
47A	16	**13 (Lt. Blue)**
37A	14	**8 (Lt. Brown)**
7005	4 (Black)	**4 (Yellow)**
	6 (Lt. Blue)	**5 (White)**
	8 (Dk. Green)	**8 (Lt. Brown)**
	10 (Grey)	**10 (Lt. Green)**
	12 (Beige)	**13 (Lt. Blue)**
	14 (Lt. Green)	**15 (Grey)**
	16 (Dk. Brown)	**18 (Red)**
	18 (Dk. Blue)	**20 (Dk. Brown)**
8005	12 (Beige)	**13 (Lt. Blue)**
	14 (Lt. Green)	**15 (Grey)**
	16 (Dk. Brown)	**18 (Red)**
	18 (Dk. Blue)	**20 (Dk. Brown)**
	20 (Red)	**23 (Dk. Green)**
	22 (Yellow)	**25 (Dk. Blue)**
	24 (Orange)	**28 (Black)**

To Replace TORO®		Use Hunter Nozzle
2001	6 (Yellow)	**7 (Orange)**
	9 (Red)	**8 (Lt. Brown)**
	12 (Brown)	**10 (Lt. Green)**
	18 (Blue)	**18 (Red)**
	24 (Green)	**25 (Dk. Blue)**
640	40	**8 (Lt. Brown)**
	41	**10 (Lt. Green)**
	42	**13 (Lt. Blue)**
	43	**15 (Grey)**
	44	**20 (Dk. Brown)**

To Replace NELSON®		Use Hunter Nozzle
7000 & 7500	1	**7 (Orange)**
	2	**8 (Lt. Brown)**
	3	**10 (Lt. Green)**
	4	**13 (Lt. Blue)**
	5	**15 (Grey)**
	6	**20 (Dk. Brown)**
	7	**23 (Dk. Green)**
	8	**25 (Dk. Blue)**

I-40 GEAR DRIVEN ROTARY SPRINKLERS

To Replace RAIN BIRD®		Use Hunter Nozzle
41-51A	18 x 11.5	**23 (Dk. Green)**
41-51A	13 x 11	**15 (Grey)**
47A-SAM	16	**13 (Lt. Blue)**
37A	14	**10 (Lt. Green)**
65 SERIES	16	**13 (Lt. Blue)**
8005	12 (Beige)	**10 (Lt. Green)**
	14 (Lt. Green)	**15 (Grey)**
	16 (Dk. Brown)	**15 (Grey)**
	18 (Dk. Blue)	**23 (Dk. Green)**
	20 (Red)	**25 (Dk. Blue)**
	22 (Yellow)	**25 (Dk. Blue)**
TALON	14	**13 (Lt. Blue)**
	16	**10 (Lt. Green)**
	18	**23 (Dk. Green)**
	20	**25 (Dk. Blue)**
	22	**25 (Dk. Blue)**

To Replace TORO®		Use Hunter Nozzle
640	40	**8 (Lt. Brown)**
	41	**10 (Lt. Green)**
	42	**13 (Lt. Blue)**
	43	**15 (Grey)**
	44	**23 (Dk. Green)**

To Replace THOMPSON®		Use Hunter Nozzle
186/7	R-Nozzle	**13 (Lt. Blue)**
	S-Nozzle	**15 (Grey)**
	T-Nozzle	**15 (Grey)**
188/9	U-Nozzle	**23 (Dk. Green)**
	V-Nozzle	**25 (Dk. Blue)**

REPLACEMENT GUIDE

HQ - KEYS

To Replace RAIN BIRD®	To Replace TORO®	To Replace BUCKNER	To Replace WEST AG/STORM	Use Hunter
33K, 33DK	075-SLK	QB33K07	4C075, C075	**HK-33**
44K	100-SLK	QB44K10	4C100, C100	**HK-44**
4K-Acme	100-AK	QB44KAT10	4C100A, C100A	**HK-44A**
55K-1		QB5RK10	4C101, C101	**HK-55**

HQ - SWIVELS

To Replace RAIN BIRD®	To Replace TORO®	To Replace BUCKNER	To Replace WEST AG/STORM	Use Hunter
SH-0	075-75MHS	HS075	4HS-075, HS075	**HS-0**
SH-1	075-MHS	HS100	4HS-100, HS-100	**HS-1**
SH-2	100-MHS	HS101	4HS-101, HS-101	**HS-2**
		HS100BS	4HS-100-BS, HS-100-BS	**HS-1-B**
		HS101BS	4HS-101-BS, HS-101-BS	**HS-2-B**

HQ - QUICK COUPLERS

To Replace RAIN BIRD®	To Replace TORO®	To Replace BUCKNER	To Replace WEST AG/STORM	Use Hunter
3RC	075-SLSC	QB3RC07	4V075-RY, QCV075-R	**HQ-3RC**
33DRC		QB33RC07	4V133-4A-RY, QCV133-4A-R	**HQ-33DRC**
33DLRC		QB33LRC07	4V133-4A-RLY, QCV133-4A-RL-2	**HQ-33DLRC**
33DNP		QB33NP07	4V133-4A-RL-NP, QVC133-4A-N-2	**HQ-33DLRC-R**
44RC	100-SLSC,	QB44RC10	4V144-RY, QCV-144-R	**HQ-44RC**
44LRC	100-2SLVC	QB44LRC10	4V144-RLY, QCV-144-RL	**HQ-44LRC**
44NP	100-SLVLC	QB44NO10	4V144-RL-NP, QCV-144-N	**HQ-44LRC-R**
	100-2SLLVC	QB44RCATAR10		**HQ-44RC-AW**
		QB44LRCATAR10		**HQ-44LRC-AW**
4NP-Acme		QB44NPATAR10		**HQ-44LRC-AW-R**
5RC	100-ATLVC	QBRB5RC10	4V101-RY, QCV-101-R	**HQ-5RC**
5LRC		QBRB5LRC10	4V101-RLY, QCV-101-RL	**HQ-5LRC**
5NP		QBRB5NP10	4V101-RL-NP, QCV-101-N	**HQ-5LRC-R**
5RC-BSP		QBRB5RC10BS	4V101-RY-BS, QCV-101-R-BS	**HQ-5RC-BSP**
5LRC-BSP		QBRB5LRC10BS	4V101-RLY-BS, QCV-101-RL-BS	**HQ-5LRC-BSP**
5NP-BSP		QBRB5NP10BS	4V101-RL-NP-BS, QCV-101-N-BS	**HQ-5LRC-BSPR**

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 25mm 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 25mm of water in one hour has a precipitation rate of one meter per hour (25 mm/hr). 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 excessive run times, which lead to high water consumption and increased 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^3/hr; 3.8 l/min

180° Arc = 2 GPM; 0.45 m^3/hr; 7.6 l/min

360° Arc = 4 GPM; 0.91 m^3/hr; 15.1 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.

CALCULATING PRECIPITATION RATES

Depending upon the construction of the irrigation system, the precipitation rate may be calculated by either a Sprinkler Spacing or a Total Area method.

Sprinkler Spacing Method (■)
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:

Any Arc and Any Spacing (■):

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 (m^3/hr) for any Arc x 360,000 / Degrees of Arc x Head Spacing (m) x Row Spacing (m)

P.R. (mm/hr) = Flow Rate (l/min) for any Arc x 21,600 / Degrees of Arc x Head Spacing (m) x Row Spacing (m)

Sprinkler Spacing Method (▲)
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:

Equilateral Triangular Spacing (▲):

P.R. (in/hr) = Flow Rate (GPM) for any Arc x 34,650 / Degrees of Arc x $(\text{Head Spacing})^2$ x 0.866

P.R. (mm/hr) = Flow Rate (m^3/hr) for any Arc x 360,000 / Degrees of Arc x $(\text{Head Spacing})^2$ x 0.866

P.R. (mm/hr) = Flow Rate (l/min) for any Arc x 21,600 / Degrees of Arc x $(\text{Head Spacing})^2$ x 0.866

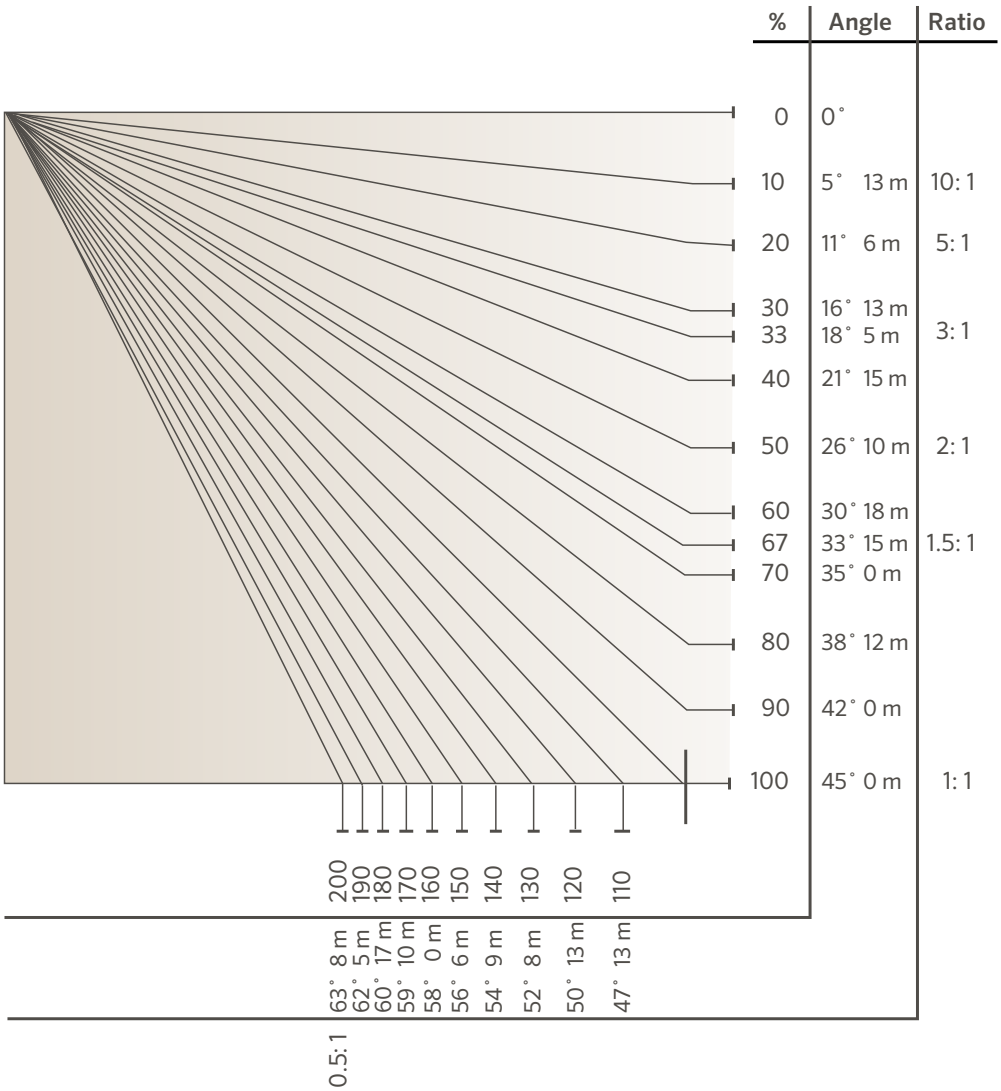
Total Area Method
The precipitation rate for a "system" is the average precipitation rate of all sprinklers in an area, regardless of the spacing, flow rate, or arc for each head. The Total Area Method calculates all the flows of all of the heads in any given area.

P.R. (in/hr) = Flow (GPM) x 96.25 / Total Area (ft.)

P.R. (mm/hr) = Flow (m^3/hr) x 1,000 / Total Area (m^2)

P.R. (mm/hr) = Flow (l/min) x 60 / Total Area (m^2)

SLOPE EQUIVALENTS/IRRIGATION



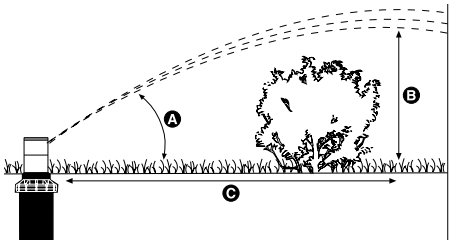
SLOPE IRRIGATION: Maximum precipitation rates for slopes in mm/hr

Soil Texture	0 to 5% Slope		5 to 8% Slope		8 to 12% Slope		12% + Slope	
	Cover	Bare	Cover	Bare	Cover	Bare	Cover	Bare
Coarse sandy soils	51	51	51	38	38	25	25	13
Coarse sandy soils over compact subsoils	44	38	32	25	25	19	19	10
Light sandy loams uniform	44	25	32	20	25	15	19	10
Light sandy loams over compact subsoils	32	19	25	13	19	10	13	8
Uniform silt loams	25	13	20	10	15	8	10	5
Silt loams over compact subsoil	15	8	13	6	10	4	8	3
Heavy clay or clay loam	5	4	4	3	3	2	3	2

Notes:
Maximum precipitation rates for slopes in mm/hr
The maximum precipitation values listed below are those suggested by the United States Department of Agriculture. The values are average and may vary with respect to actual soil condition and condition of ground cover.

HEIGHT OF SPRAY

The trajectory and spray height of the water stream leaving a sprinkler nozzle is important information when designing and installing irrigation systems.



These rotor nozzle trajectory charts are designed to help determine how close a sprinkler can be placed to an object such as a fence or hedge without obstructing the spray pattern. All information shown is at optimum operating pressures.

HUNTER NOZZLE HEIGHT AND TRAJECTORY CHART

Model	Nozzle No.	Pressure		Degrees of Trajectory	Max Height of Spray (m)	Distance from Head to Maximum Height (m)
		bar	kPa			
MP ROTATOR®	800	2.8	280	18	0.4	Varies
	1000	2.8	280	20	0.5	Varies
	2000	2.8	280	26	1.1	Varies
	3000	2.8	280	26	2.0	Varies
	3500	2.8	280	28	2.5	Varies
	Corner	2.8	280	14	0.4	Varies
	Side Strip	2.8	280	16	0.5	Varies
	Left Strip	2.8	280	16	0.5	Varies
PGJ	0.75	2.8	280	10	0.6	1.2
	1.0	2.8	280	10	0.6	2.4
	1.5	2.8	280	10	0.9	3.7
	2.0	2.8	280	15	1.5	4.9
	2.5	2.8	280	12	1.5	6.1
	3.0	2.8	280	15	1.5	6.1
	4.0	2.8	280	15	1.5	6.7
	5.0	2.8	280	15	1.8	7.3
PGP® RED NOZZLES	1.0	3.5	350	26	2.1	6.7
	2.0	3.5	350	26	2.1	6.7
	3.0	3.5	350	26	2.4	7.0
	4.0	3.5	350	26	2.4	7.0
	5.0	3.5	350	27	2.7	7.9
	6.0	3.5	350	27	3.0	8.5
	7.0	3.5	350	26	3.4	9.1
	8.0	3.5	350	26	3.4	9.1
	9.0	3.5	350	27	3.7	9.8
	10.0	4.0	400	25	4.0	9.8
	11.0	4.0	400	25	4.0	11.6
	12.0	4.0	400	25	4.0	12.2
PGP LOW ANGLE GREY NOZZLES	4.0	3.5	350	15	1.5	6.7
	5.0	3.5	350	15	1.2	6.7
	6.0	3.5	350	14	1.2	6.7
	7.0	3.5	350	14	1.2	6.7
	8.0	3.5	350	14	1.5	7.3
	9.0	3.5	350	15	1.5	7.9
	10.0	4.0	400	15	1.8	9.1
PGP BLUE NOZZLES	1.5	3.0	300	25	2.4	7.0
	2.0	3.0	300	25	2.4	7.0
	2.5	3.0	300	25	2.7	7.9
	3.0	3.0	300	25	3.0	8.5
	4.0	3.0	300	25	3.4	9.1
	5.0	3.0	300	25	3.4	9.1
	6.0	3.8	380	25	3.7	9.8
	8.0	3.8	380	25	4.0	9.8
PGP ULTRA/I-20 DARK BLUE NOZZLES	1.0	3.5	350	26	2.4	7.0
	1.5	3.5	350	26	2.4	7.0
	2.0	3.5	350	27	2.7	7.9
	3.0	3.5	350	27	3.0	8.5
	3.5	3.5	350	26	3.4	9.1
	4.0	3.5	350	26	3.4	9.1
	6.0	3.5	350	27	3.7	9.8
	8.0	4.0	400	25	4.0	9.8
PGP ULTRA/I-20 BLUE NOZZLES	1.5	3.0	300	25	2.4	7.0
	2.0	3.0	300	25	2.4	7.0
	2.5	3.0	300	25	2.7	7.9
	3.0	3.0	300	25	3.0	8.5
	4.0	3.0	300	25	3.4	9.1
	5.0	3.0	300	25	3.4	9.1
	6.0	3.8	380	25	3.7	9.8
	8.0	3.8	380	25	4.0	9.8

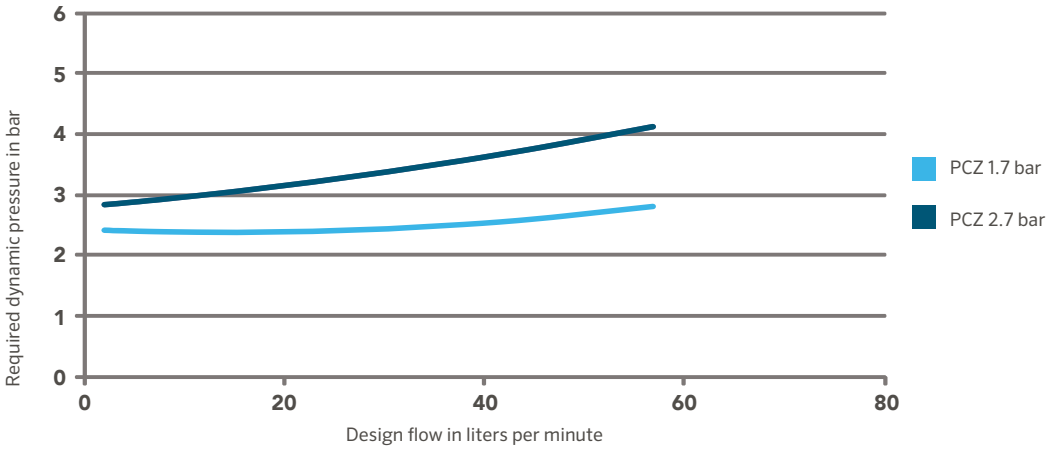
HEIGHT OF SPRAY

HUNTER NOZZLE HEIGHT AND TRAJECTORY CHART

Model	Nozzle No.	Pressure		Degrees of Trajectory	Max Height of Spray (m)	Distance from Head to Maximum Height (m)
		bar	kPa			
PGP® Ultra/I-20 Low Angle Grey Nozzles	2.0 LA	3.5	350	13	1.5	6.7
	2.5 LA	3.5	350	13	1.2	6.7
	3.5 LA	3.5	350	13	1.2	6.7
	4.5 LA	3.5	350	13	1.2	6.7
PGP Ultra/I-20 Short Radius Black Nozzles	0.5	3.5	350	15	1.5	2.4
	1.0	3.5	350	14	1.8	2.7
	2.0	3.5	350	3	0.3	1.8
PGP Ultra/I-20 Short Radius Black Nozzles	0.75	3.5	350	22	2.1	4.0
	1.5	3.5	350	18	2.1	4.0
	3.0	3.5	350	8	0.3	1.8
PGP Ultra/I-20 MPR-25 Red Nozzles	Q - 90	3.0	300	22	0.9	4.6
	T - 120	3.0	300	21	1.2	4.2
	H - 180	3.0	300	24	1.2	4.2
	F - 360	3.0	300	22	1.2	3.0
PGP Ultra/I-20 MPR-30 Lt. Green Nozzles	Q - 90	3.0	300	28	1.5	5.4
	T - 120	3.0	300	14	0.9	5.1
	H - 180	3.0	300	16	1.2	4.8
	F - 360	3.0	300	18	0.6	3.9
PGP Ultra/I-20 MPR-35 Tan Nozzles	Q - 90	3.0	300	28	1.8	5.7
	T - 120	3.0	300	28	1.8	5.4
	H - 180	3.0	300	16	1.2	5.1
	F - 360	3.0	300	14	0.9	3.6
I-25	4	3.5	350	25	2.7	6.7
	5	3.5	350	25	3.4	8.5
	7	3.5	350	25	3.0	8.5
	8	3.5	350	25	3.4	8.5
	10	4	400	25	3.7	9.1
	13	4	400	25	4.0	9.4
	15	4	400	25	3.7	9.4
	18	4	400	25	4.6	10.4
	20	5	500	25	4.6	10.7
	23	5	500	25	4.9	11.6
	25	5	500	25	4.9	11.6
	28	5	500	25	5.2	12.2
I-40	8 (40)	3.5	350	25	3.7	9.8
	10 (41)	4	400	25	4.3	9.8
	13 (42)	4	400	25	4.3	10.4
	15 (43)	4	400	25	4.6	12.8
	23 (44)	5	500	25	5.2	14.0
	25 (45)	5	500	25	5.2	14.6
I-90 ADV	33	5.5	550	22	4.6	12.8
	38	5.5	550	22	4.9	14.6
	43	5.5	550	22	4.9	14.6
	48	5.5	550	22	5.2	16.5
	53	5.5	550	22	5.2	17.1
	63	5.5	550	22	5.5	19.5
I-90 36V	33	5.5	550	22	5.2	14.0
	38	5.5	550	22	5.2	15.2
	43	5.5	550	22	5.2	16.5
	48	5.5	550	22	5.2	17.1
	53	5.5	550	22	5.2	17.7
	63	5.5	550	22	5.5	18.9
I-90 ADV Low Angle	33	5.5	550	15	2.4	11.5
	38	5.5	550	15	2.7	12.1
	43	5.5	550	15	2.7	12.5
	48	5.5	550	15	3.0	13.1
	53	5.5	550	15	3.4	13.7
	63	5.5	550	15	3.7	14.6
I-90 36V Low Angle	33	5.5	550	15	2.4	11.5
	38	5.5	550	15	2.7	12.1
	43	5.5	550	15	2.7	12.5
	48	5.5	550	15	3.0	13.1
	53	5.5	550	15	3.4	13.7
	63	5.5	550	15	3.7	14.6

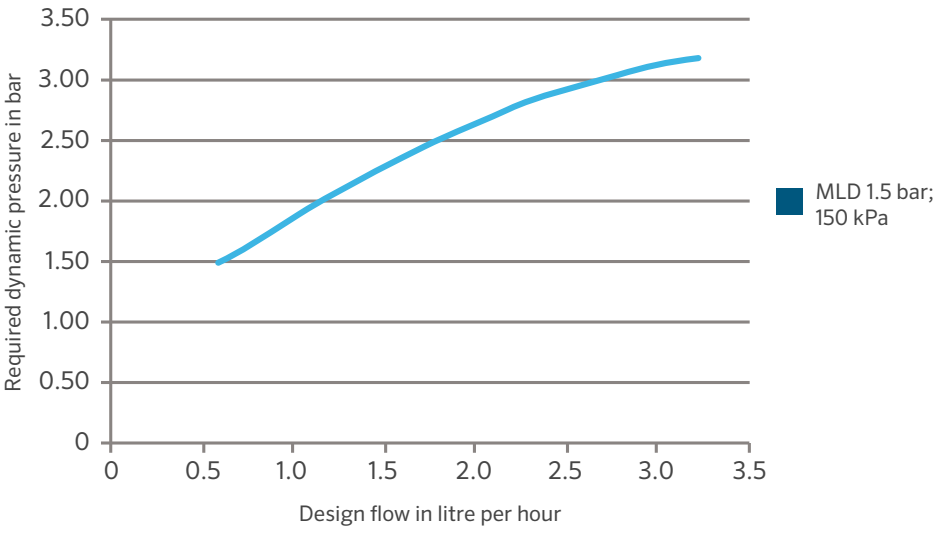
DRIP CONTROL ZONE KIT CHARTS

PCZ101: Inlet pressure required for designed outlet pressure



MLD FLOW CHART

MLD FLOW CHART



CONVERSION FACTORS

CONVERSION FACTORS			
To Convert	**From**	**To**	**Multiply By**
Area	acres	foot^2	43560
	acres	meter^2	4046.8
	meter^2	foot^2	10.764
	foot^2	inch^2	144
	inch^2	centimeter^2	6.452
	hectares	meter^2	10000
	hectares	acres	2.471
Power	kilowatts	horsepower	1.341
Flow	foot^3/minute	meter^3/second	0.0004719
	foot^3/second	meter^3/second	0.02832
	yards^3/minute	meter^3/second	0.01274
	gallon/minute	meter^3/hour	0.22716
	gallon/minute	liter/minute	3.7854
	gallon/minute	liter/second	0.06309
	meter^3/hour	liter/minute	16.645
	meter^3/hour	liter/second	0.2774
	liter/minute	liter/second	60
Length	foot	inch	12
	inch	centimeter	2.54
	foot	meter	0.30481
	kilometer	miles	0.6214
	miles	foot	5280
	miles	meter	1609.34
	millimeter	inch	0.03937
Pressure	PSI	kilopascals	6.89476
	PSI	bar	0.068948
	bar	kilopascals	100
	PSI	feet of head	2.31
Velocity	feet/second	meter/second	0.3048
Volume	feet^3	gallon	7.481
	feet^3	liter	28.32
	meter^3	feet^3	35.31
	meter^3	yard^3	1.3087
	yard^3	feet^3	27
	yard^3	gallon	202
	acres/feet	foot^3	43,560
	gallon	meter^3	0.003785
	gallon	liter	3.785
	imperial gallon	gallon	1.833

ADDITIONAL DATA

WIRE SIZE REFERENCE CHART

Wire Size (mm^2)	25 mm	32 mm	40 mm	50 mm	63 mm	75 mm	90 mm	110 mm	160 mm	Wire Size (mm^2)
0.5	20	35	49	80	110	175	-	-	-	0.5
1	16	30	42	67	97	150	-	-	-	1
1.5	10	18	25	40	56	88	120	150	-	1.5
2.5	7	15	20	33	50	75	102	130	-	2.5
4	6	13	16	27	40	63	85	110	-	4
6	4	6	9	16	25	35	50	65	150	6

Notes:
Approximate number of wires to be installed in conduit or tubing. Maximum number of wires in conduit or sleeving

CLIMATE ETp TABLE

Climate*	mm Daily
Cool Humid	2.5 to 3.8
Cool Dry	3.8 to 5.1
Warm Humid	3.8 to 5.1
Warm Dry	5.1 to 6.3
Hot Humid	5.1 to 7.6
Hot Dry	7.6 to 11.4

Notes:
* Cool = under 21˚C as an average mid-summer high
* Warm = between 21˚ and 32˚ C as mid-summer highs
* Hot = over 32˚ C
* Humid = over 50% as average mid-summer relative humidity (dry=under 50%)

FRICTION LOSS CHARTS

UPVC PIPE CLASS 3 (6 BAR)

C=150 • PRESSURE LOSS (BAR/100 METERS)

Nominal Size		40 mm		50 mm		63 mm		75 mm		90 mm		110 mm		160 mm		200 mm	
Pipe ID		36.4 mm		46.4 mm		59.2 mm		70.6 mm		84.6 mm		103.6 mm		153.2 mm		188.2 mm	
Pipe OD		40 mm		50 mm		63 mm		75 mm		90 mm		110 mm		160 mm		200 mm	
Wall Thick		1.8 mm		1.8 mm		1.9 mm		2.2 mm		2.7 mm		3.2 mm		3.4 mm		5.9 mm	
Flow l/min	Flow m³/hr	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss
3.8	0.25																
7.6	0.5																
11.4	0.75																
15.1	1	0.3	0.03														
26.5	1.5	0.4	0.06	0.2	0.02												
34.1	2	0.5	0.09	0.3	0.03												
41.6	2.5	0.7	0.14	0.4	0.04												
49.2	3	0.8	0.20	0.5	0.06												
56.8	3.5	0.9	0.27	0.6	0.08												
68.1	4	1.1	0.34	0.7	0.10												
83.3	5	1.3	0.52	0.8	0.16												
98.4	6	1.6	0.72	1.0	0.22	0.6	0.07	0.4	0.03								
117.3	7	1.9	0.96	1.1	0.30	0.7	0.09	0.5	0.04								
132.5	8	2.1	1.23	1.3	0.38	0.8	0.12	0.6	0.05								
151.4	9	2.4	1.53	1.5	0.47	0.9	0.14	0.6	0.06								
166.6	10	2.7	1.86	1.6	0.57	1.0	0.17	0.7	0.07								
181.7	11			1.8	0.68	1.1	0.21	0.8	0.09	0.5	0.04						
200.6	12			2.0	0.8	1.2	0.24	0.9	0.10	0.6	0.04						
215.8	13			2.1	0.93	1.3	0.28	0.9	0.12	0.6	0.05						
234.7	14			2.3	1.07	1.4	0.33	1.0	0.14	0.7	0.06						
249.8	15			2.5	1.21	1.5	0.37	1.1	0.16	0.7	0.06	0.5	0.02				
265.0	16					1.6	0.42	1.1	0.18	0.8	0.07	0.5	0.03				
283.9	17					1.7	0.47	1.2	0.20	0.8	0.08	0.6	0.03				
299.0	18					1.8	0.52	1.3	0.22	0.9	0.09	0.6	0.03				
318.0	19					1.9	0.57	1.3	0.24	0.9	0.10	0.6	0.04				
333.1	20					2.0	0.63	1.4	0.27	1.0	0.11	0.7	0.04				
348.3	21					2.1	0.69	1.5	0.29	1.0	0.12	0.7	0.05				
367.2	22					2.2	0.75	1.6	0.32	1.1	0.13	0.7	0.05				
382.3	23					2.3	0.82	1.6	0.35	1.1	0.14	0.8	0.05				
401.3	24							1.7	0.37	1.2	0.16	0.8	0.06				
416.4	25							1.8	0.40	1.2	0.17	0.8	0.06				
431.5	26							1.8	0.43	1.3	0.18	0.9	0.07				
450.5	27							1.9	0.47	1.3	0.19	0.9	0.07				
465.6	28							2.0	0.50	1.4	0.21	0.9	0.08				
484.5	29							2.1	0.53	1.4	0.22	1.0	0.08				
499.7	30							2.1	0.57	1.5	0.23	1.0	0.09				
583.0	35									1.7	0.31	1.2	0.12				
666.2	40									2.0	0.40	1.3	0.15				
749.5	45									2.2	0.50	1.5	0.19				
832.8	50											1.6	0.23				
916.1	55											1.8	0.27				
999.3	60											2.0	0.32				
1082.6	65											2.1	0.37	1.0	0.05		
1165.9	70											2.3	0.42	1.1	0.06		
1249.2	75													1.1	0.07		
1332.5	80													1.2	0.08		
1415.7	85													1.3	0.09		
1499.0	90													1.4	0.10		
1665.6	100													1.5	0.12	1.0	0.04
1832.1	110													1.7	0.14	1.1	0.05
1998.7	120													1.8	0.17	1.2	0.06
2165.3	130													2.0	0.20	1.3	0.07
2331.8	140													2.1	0.23	1.4	0.08
2498.4	150													2.3	0.26	1.5	0.09

Notes: Shaded area represents velocities over 1.5 m/s. Use with caution where water hammer is a concern.

FRICTION LOSS CHARTS

UPVC PIPE CLASS 4 (10 BAR)

C=150 • PRESSURE LOSS (BAR/100 METERS)

Nominal Size		25 mm		32 mm		40 mm		50 mm		63 mm		75 mm		90 mm		110 mm		160 mm		200 mm	
Pipe ID		22 mm		28.4 mm		36.2 mm		45.2 mm		57 mm		67.8 mm		81.4 mm		99.4 mm		144.6 mm		180.8 mm	
Pipe OD		25 mm		32 mm		40 mm		50 mm		63 mm		75 mm		90 mm		110 mm		160 mm		200 mm	
Wall Thick		1.5 mm		1.8 mm		1.9 mm		2.4 mm		3.0 mm		3.6 mm		4.3 mm		5.3 mm		7.7 mm		9.6 mm	
Flow l/min	Flow m³/hr	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss
3.8	0.25	0.2	0.02																		
7.6	0.5	0.4	0.08																		
11.4	0.75	0.5	0.18																		
15.1	1	0.7	0.30																		
26.5	1.5	1.1	0.64	0.7	0.19																
34.1	2	1.5	1.10	0.9	0.32																
41.6	2.5	1.8	1.66	1.1	0.48	0.7	0.15														
49.2	3	2.2	2.33	1.3	0.67	0.8	0.21														
56.8	3.5	2.6	3.10	1.5	0.89	0.9	0.27														
68.1	4			1.8	1.14	1.1	0.35	0.7	0.12												
83.3	5			2.2	1.73	1.3	0.53	0.9	0.18												
98.4	6			2.6	2.42	1.6	0.74	1.0	0.25	0.7	0.08										
117.3	7					1.9	0.99	1.2	0.34	0.8	0.11										
132.5	8					2.2	1.27	1.4	0.43	0.9	0.14										
151.4	9					2.4	1.58	1.6	0.53	1.0	0.17	0.7	0.07								
166.6	10							1.7	0.65	1.1	0.21	0.8	0.09								
181.7	11							1.9	0.77	1.2	0.25	0.8	0.11								
200.6	12							2.1	0.91	1.3	0.29	0.9	0.13								
215.8	13							2.3	1.06	1.4	0.34	1.0	0.15								
234.7	14							2.4	1.21	1.5	0.39	1.1	0.17								
249.8	15							2.6	1.38	1.6	0.44	1.2	0.19								
265.0	16									1.7	0.50	1.2	0.22	0.9	0.09						
283.9	17									1.9	0.56	1.3	0.24	0.9	0.10						
299.0	18									2.0	0.62	1.4	0.27	1.0	0.11						
318.0	19									2.1	0.69	1.5	0.30	1.0	0.12						
333.1	20									2.2	0.76	1.5	0.33	1.1	0.13						
348.3	21									2.3	0.83	1.6	0.36	1.1	0.15						
367.2	22									2.4	0.90	1.7	0.39	1.2	0.16						
382.3	23									2.5	0.98	1.8	0.42	1.2	0.17						
401.3	24											1.8	0.46	1.3	0.19						
416.4	25											1.9	0.49	1.3	0.20						
431.5	26											2.0	0.53	1.4	0.22	0.9	0.08				
450.5	27											2.1	0.57	1.4	0.23	1.0	0.09				
465.6	28											2.2	0.61	1.5	0.25	1.0	0.09				
484.5	29											2.2	0.65	1.5	0.27	1.0	0.10				
499.7	30											2.3	0.69	1.6	0.28	1.1	0.11	0.5	0.02		
583.0	35													1.9	0.38	1.3	0.14	0.6	0.02		
666.2	40													2.1	0.48	1.4	0.18	0.7	0.03		
749.5	45													2.4	0.60	1.6	0.23	0.8	0.04		
832.8	50															1.8	0.28	0.8	0.04		
916.1	55															2.0	0.33	0.9	0.05		
999.3	60															2.1	0.39	1.0	0.06		
1082.6	65															2.3	0.45	1.1	0.07		
1165.9	70															2.5	0.51	1.2	0.08		
1249.2	75															2.7	0.58	1.3	0.09		
1332.5	80															2.9	0.66	1.4	0.11		
1415.7	85															3.0	0.74	1.4	0.12		
1499.0	90															3.2	0.82	1.5	0.13	1.0	0.04
1665.6	100																	1.7	0.16	1.1	0.05
1832.1	110																	1.9	0.19	1.2	0.06
1998.7	120																	2.0	0.22	1.3	0.08
2165.3	130																	2.2	0.26	1.4	0.09
2331.8	140																	2.4	0.30	1.5	0.10
2498.4	150																	2.5	0.34	1.6	0.11

Notes: Shaded area represents velocities over 1.5 m/s. Use with caution where water hammer is a concern.

FRICTION LOSS CHARTS

UPVC PIPE CLASS 5 (16 BAR)

C=150 • PRESSURE LOSS (BAR/100 METERS)

Nominal Size		25 mm		32 mm		40 mm		50 mm		63 mm		75 mm		90 mm		110 mm		160 mm		200 mm	
Pipe ID		21.2 mm		27.2 mm		34 mm		42.6 mm		53.6 mm		63.8 mm		76.6 mm		93.6 mm		136.2 mm		170.2 mm	
Pipe OD		25 mm		32 mm		40 mm		50 mm		63 mm		75 mm		90 mm		110 mm		160 mm		200 mm	
Wall Thick		1.5 mm		1.8 mm		1.9 mm		2.4 mm		3 mm		3.6 mm		4.3 mm		5.3 mm		7.7 mm		14.9 mm	
Flow l/min	Flow m³/hr	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss
3.8	0.25	0.2	0.03																		
7.6	0.5	0.4	0.10																		
11.4	0.75	0.6	0.21	0.4	0.06																
15.1	1	0.8	0.36	0.5	0.11	0.3	0.04														
26.5	1.5	1.2	0.77	0.7	0.23	0.5	0.08	0.3	0.03												
34.1	2	1.6	1.32	1.0	0.39	0.6	0.13	0.4	0.04												
41.6	2.5	2.0	1.99	1.2	0.59	0.8	0.20	0.5	0.07												
49.2	3	2.4	2.79	1.4	0.83	0.9	0.28	0.6	0.09												
56.8	3.5			1.7	1.10	1.1	0.37	0.7	0.12												
68.1	4			1.9	1.41	1.2	0.48	0.8	0.16												
83.3	5			2.4	2.13	1.5	0.72	1.0	0.24												
98.4	6					1.8	1.01	1.2	0.34	0.7	0.11										
117.3	7					2.1	1.34	1.4	0.45	0.9	0.15										
132.5	8					2.4	1.72	1.6	0.57	1.0	0.19										
151.4	9							1.8	0.71	1.1	0.23										
166.6	10							1.9	0.87	1.2	0.28										
181.7	11							2.1	1.03	1.4	0.34	1.0	0.14								
200.6	12							2.3	1.21	1.5	0.40	1.0	0.17								
215.8	13									1.6	0.46	1.1	0.20								
234.7	14									1.7	0.53	1.2	0.23								
249.8	15									1.8	0.60	1.3	0.26								
265.0	16									2.0	0.68	1.4	0.29	1.0	0.12						
283.9	17									2.1	0.76	1.5	0.32	1.0	0.13						
299.0	18									2.2	0.84	1.6	0.36	1.1	0.15						
318.0	19									2.3	0.93	1.7	0.40	1.1	0.16						
333.1	20									2.5	1.02	1.7	0.44	1.2	0.18						
348.3	21											1.8	0.48	1.3	0.20						
367.2	22											1.9	0.52	1.3	0.21						
382.3	23											2.0	0.57	1.4	0.23						
401.3	24											2.1	0.61	1.4	0.25	1.0	0.09				
416.4	25											2.2	0.66	1.5	0.27	1.0	0.10				
431.5	26											2.3	0.71	1.6	0.29	1.0	0.11				
450.5	27											2.3	0.76	1.6	0.31	1.1	0.12				
465.6	28											2.4	0.82	1.7	0.33	1.1	0.13				
484.5	29											2.5	0.87	1.7	0.36	1.2	0.13				
499.7	30													1.8	0.38	1.2	0.14				
583.0	35													2.1	0.51	1.4	0.19				
666.2	40													2.4	0.65	1.6	0.24				
749.5	45													2.7	0.81	1.8	0.30				
832.8	50															2.0	0.37	1.0	0.06		
916.1	55															2.2	0.44	1.0	0.07		
999.3	60															2.4	0.52	1.1	0.08		
1082.6	65															2.6	0.60	1.2	0.10		
1165.9	70															2.8	0.69	1.3	0.11		
1249.2	75															3.0	0.78	1.4	0.13		
1332.5	80															3.2	0.88	1.5	0.14		
1415.7	85																	1.6	0.16		
1499.0	90																	1.7	0.18		
1665.6	100																	1.9	0.21	1.2	0.07
1832.1	110																	2.1	0.26	1.3	0.09
1998.7	120																	2.3	0.30	1.5	0.10
2165.3	130																	2.5	0.35	1.6	0.12
2331.8	140																	2.7	0.40	1.7	0.14
2498.4	150																	2.9	0.45	1.8	0.15

Notes: Shaded area represents velocities over 1.5 m/s. Use with caution where water hammer is a concern.

FRICTION LOSS CHARTS

SCHEDULE 40 IPS PVC PLASTIC PIPE

C=150 • PRESSURE LOSS (BAR/100 METERS)

Nominal Size		1"		1¼"		1½"		2"		2½"		3"		4"		6"		8"	
Pipe OD		1.315"		1.66"		1.900"		2.375"		2.375"		3.500"		4.500"		6.625"		8.625"	
Pipe ID		1.049"		1.380"		1.610"		2.067"		2.469"		3.068"		4.026"		6.065"		7.981"	
Pipe ID mm		26.64		35.05		40.89		52.50		62.71		77.93		102.26		154.05		202.72	
Wall Thick		0.133"		0.140"		0.145"		0.154"		0.203"		0.216"		0.237"		0.280"		0.322"	
Flow l/min	Flow m³/hr	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss
3.8	0.25	0.1	0.01																
7.6	0.5	0.2	0.03																
11.4	0.75	0.4	0.07	0.2	0.02														
15.1	1	0.5	0.12	0.3	0.03	0.2	0.01												
26.5	1.5	0.7	0.25	0.4	0.07	0.3	0.03	0.2	0.01										
34.1	2	1.0	0.43	0.6	0.11	0.4	0.05	0.3	0.02										
41.6	2.5	1.2	0.65	0.7	0.17	0.5	0.08	0.3	0.02										
49.2	3	1.5	0.92	0.9	0.24	0.6	0.11	0.4	0.03										
56.8	3.5	1.7	1.22	1.0	0.32	0.7	0.15	0.4	0.04										
68.1	4	2.0	1.56	1.2	0.41	0.8	0.19	0.5	0.06										
83.3	5	2.5	2.36	1.4	0.62	1.1	0.29	0.6	0.09										
98.4	6			1.7	0.87	1.3	0.41	0.8	0.12	0.5	0.05	0.3	0.02						
117.3	7			2.0	1.16	1.5	0.55	0.9	0.16	0.6	0.07	0.4	0.02						
132.5	8			2.3	1.48	1.7	0.70	1.0	0.21	0.7	0.09	0.5	0.03						
151.4	9			2.6	1.84	1.9	0.87	1.2	0.26	0.8	0.11	0.5	0.04						
166.6	10			2.9	2.24	2.1	1.06	1.3	0.31	0.9	0.13	0.6	0.05						
181.7	11					2.3	1.26	1.4	0.37	1.0	0.16	0.6	0.05						
200.6	12					2.5	1.48	1.5	0.44	1.1	0.18	0.7	0.06						
215.8	13					2.7	1.72	1.7	0.51	1.2	0.21	0.8	0.07						
234.7	14					3.0	1.97	1.8	0.58	1.3	0.25	0.8	0.09						
249.8	15					3.2	2.24	1.9	0.66	1.3	0.28	0.9	0.10						
265.0	16							2.1	0.75	1.4	0.31	0.9	0.11						
283.9	17							2.2	0.84	1.5	0.35	1.0	0.12						
299.0	18							2.3	0.93	1.6	0.39	1.0	0.14						
318.0	19							2.4	1.03	1.7	0.43	1.1	0.15						
333.1	20							2.6	1.13	1.8	0.48	1.2	0.17						
348.3	21									1.9	0.52	1.2	0.18						
367.2	22									2.0	0.57	1.3	0.20						
382.3	23									2.1	0.62	1.3	0.21						
401.3	24									2.2	0.67	1.4	0.23						
416.4	25									2.2	0.72	1.5	0.25						
431.5	26									2.3	0.77	1.5	0.27						
450.5	27									2.4	0.83	1.6	0.29						
465.6	28											1.6	0.31						
484.5	29											1.7	0.33						
499.7	30											1.7	0.35						
583.0	35											2.0	0.47	1.2	0.12				
666.2	40											2.3	0.60	1.4	0.16				
749.5	45											2.6	0.74	1.5	0.20				
832.8	50											2.9	0.90	1.7	0.24				
916.1	55													1.9	0.29				
999.3	60													2.0	0.34				
1082.6	65													2.2	0.39	1.0	0.07		
1165.9	70													2.4	0.45	1.0	0.08		
1249.2	75													2.5	0.51	1.1	0.09		
1332.5	80													2.7	0.57	1.2	0.10		
1415.7	85													2.9	0.64	1.3	0.11		
1499.0	90													3.0	0.71	1.3	0.12	0.8	0.03
1665.6	100															1.5	0.15	0.9	0.03
1832.1	110															1.6	0.18	0.9	0.04
1998.7	120															1.8	0.21	1.0	0.04
2165.3	130															1.9	0.25	1.1	0.05
2331.8	140															2.1	0.28	1.2	0.06
2498.4	150															2.1	0.32	1.3	0.07

Notes: Shaded area represents velocities over 1.5 m/s. Use with caution where water hammer is a concern.

FRICTION LOSS CHARTS

SCHEDULE 80 IPS PVC PLASTIC PIPE

C=150 • PRESSURE LOSS (BAR/100 METERS)

Nominal Size		1"		1¼"		1½"		2"		2½"		3"		4"		6"		8"	
Pipe OD		1.315"		1.660"		1.900"		2.375"		2.875"		3.500"		4.500"		6.625"		8.625"	
Pipe ID		0.957"		1.278"		1.500"		1.939"		2.323"		2.900"		3.826"		5.761"		7.625"	
Pipe ID mm		24.31		32.46		38.10		49.25		59.00		73.66		97.18		146.33		193.68	
Wall Thick		0.179"		0.191"		0.200"		0.218"		0.276"		0.300"		0.337"		0.432"		0.500"	
Flow l/min	Flow m³/hr	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss
3.8	0.25	0.1	0.01																
7.6	0.5	0.3	0.05																
11.4	0.75	0.4	0.11	0.3	0.03														
15.1	1	0.6	0.19	0.3	0.05	0.2	0.02												
26.5	1.5	0.9	0.40	0.5	0.10	0.4	0.04	0.2	0.01										
34.1	2	1.2	0.68	0.7	0.17	0.5	0.08	0.3	0.02										
41.6	2.5	1.5	1.02	0.8	0.25	0.6	0.11	0.4	0.03										
49.2	3	1.8	1.43	1.0	0.35	0.7	0.16	0.4	0.05										
56.8	3.5	2.1	1.90	1.2	0.47	0.9	0.21	0.5	0.06										
68.1	4	2.4	2.44	1.3	0.60	1.0	0.27	0.6	0.08										
83.3	5	3.0	3.69	1.7	0.90	1.2	0.41	0.7	0.12										
98.4	6			2.0	1.26	1.5	0.58	0.9	0.17	0.6	0.07	0.4	0.02						
117.3	7			2.3	1.68	1.7	0.77	1.0	0.22	0.7	0.09	0.5	0.03						
132.5	8			2.7	2.15	1.9	0.99	1.2	0.28	0.8	0.12	0.5	0.04						
151.4	9			3.0	2.68	2.2	1.23	1.3	0.35	0.9	0.15	0.6	0.05						
166.6	10					2.4	1.49	1.5	0.43	1.0	0.18	0.7	0.06						
181.7	11					2.7	1.78	1.6	0.51	1.1	0.21	0.7	0.07						
200.6	12					2.9	2.09	1.7	0.60	1.2	0.25	0.8	0.08						
215.8	13							1.9	0.69	1.3	0.29	0.8	0.10						
234.7	14							2.0	0.80	1.4	0.33	0.9	0.11						
249.8	15							2.2	0.91	1.5	0.38	1.0	0.13						
265.0	16							2.3	1.02	1.6	0.42	1.0	0.14						
283.9	17							2.5	1.14	1.7	0.47	1.1	0.16						
299.0	18							2.6	1.27	1.8	0.53	1.2	0.18						
318.0	19									1.9	0.58	1.2	0.20						
333.1	20									2.0	0.64	1.3	0.22						
348.3	21									2.1	0.70	1.4	0.24						
367.2	22									2.2	0.76	1.4	0.26						
382.3	23									2.3	0.83	1.5	0.28						
401.3	24									2.4	0.90	1.6	0.30						
416.4	25									2.5	0.97	1.6	0.33						
431.5	26											1.7	0.35						
450.5	27											1.8	0.38						
465.6	28											1.8	0.41	1.0	0.11				
484.5	29											1.9	0.43	1.1	0.11				
499.7	30											2.0	0.46	1.1	0.12				
583.0	35											2.3	0.61	1.3	0.16				
666.2	40											2.6	0.78	1.5	0.20				
749.5	45													1.7	0.25				
832.8	50													1.9	0.31				
916.1	55													2.1	0.37				
999.3	60													2.2	0.43				
1082.6	65													2.4	0.50	1.1	0.07		
1165.9	70													2.6	0.57	1.2	0.08		
1249.2	75													2.8	0.65	1.2	0.09		
1332.5	80													3.0	0.73	1.3	0.10		
1415.7	85													3.2	0.82	1.4	0.11		
1499.0	90													3.4	0.91	1.5	0.12		
1665.6	100															1.7	0.15	0.9	0.04
1832.1	110															1.8	0.18	1.0	0.05
1998.7	120															2.0	0.21	1.1	0.05
2165.3	130															2.1	0.25	1.2	0.06
2331.8	140															2.3	0.28	1.3	0.07
2498.4	150															2.5	0.32	1.4	0.08

Notes: Shaded area represents velocities over 1.5 m/s. Use with caution where water hammer is a concern.

FRICTION LOSS CHARTS

HDPE PRESSURE PIPE PE80 SDR 17.6 PN6

C=140 • PRESSURE LOSS (BAR/100 METERS)

Nominal Size		25 mm		32 mm		40 mm		50 mm		63 mm		75 mm		90 mm		110 mm		160 mm		200 mm	
Pipe ID mm		21.40		28.40		35.40		44.20		55.80		66.40		79.80		97.40		141.80		177.20	
Wall Thick		1.8		1.8		2.3		2.9		3.6		4.3		5.1		6.3		9.1		11.4	
Flow l/min	Flow m³/hr	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss
3.8	0.25	0.2	0.03																		
7.6	0.5	0.4	0.11																		
11.4	0.75	0.6	0.23	0.3	0.06																
15.1	1	0.8	0.40	0.4	0.10	0.3	0.03														
26.5	1.5	1.2	0.84	0.7	0.21	0.4	0.07	0.3	0.02												
34.1	2	1.5	1.43	0.9	0.36	0.6	0.12	0.4	0.04												
41.6	2.5	1.9	2.16	1.1	0.54	0.7	0.19	0.5	0.06												
49.2	3	2.3	3.03	1.3	0.76	0.8	0.26	0.5	0.09												
56.8	3.5	2.7	4.03	1.5	1.01	1.0	0.35	0.6	0.12												
68.1	4	3.1	5.16	1.8	1.30	1.1	0.44	0.7	0.15												
83.3	5			2.2	1.96	1.4	0.67	0.9	0.23												
98.4	6			2.6	2.75	1.7	0.94	1.1	0.32	0.7	0.10	0.5	0.04								
117.3	7			3.1	3.66	2.0	1.25	1.3	0.42	0.8	0.14	0.6	0.06								
132.5	8			3.5	4.69	2.3	1.60	1.4	0.54	0.9	0.17	0.6	0.07								
151.4	9					2.5	2.00	1.6	0.68	1.0	0.22	0.7	0.09								
166.6	10					2.8	2.43	1.8	0.82	1.1	0.26	0.8	0.11								
181.7	11							2.0	0.98	1.2	0.32	0.9	0.14								
200.6	12							2.2	1.15	1.4	0.37	1.0	0.16								
215.8	13							2.4	1.34	1.5	0.43	1.0	0.18								
234.7	14							2.5	1.53	1.6	0.49	1.1	0.21								
249.8	15							2.7	1.74	1.7	0.56	1.2	0.24								
265.0	16							2.9	1.96	1.8	0.63	1.3	0.27								
283.9	17							3.1	2.20	1.9	0.71	1.4	0.30								
299.0	18							3.3	2.44	2.0	0.79	1.4	0.34								
318.0	19									2.2	0.87	1.5	0.37								
333.1	20									2.3	0.95	1.6	0.41								
348.3	21									2.4	1.04	1.7	0.45	1.2	0.18						
367.2	22									2.5	1.14	1.8	0.49	1.2	0.20						
382.3	23									2.6	1.24	1.8	0.53	1.3	0.22						
401.3	24									2.7	1.34	1.9	0.57	1.3	0.23						
416.4	25									3.8	1.44	2.0	0.62	1.4	0.25						
431.5	26											2.1	0.67	1.4	0.27	1.0	0.10	0.5	0.02		
450.5	27											2.2	0.71	1.5	0.29	1.0	0.11	0.5	0.02		
465.6	28											2.2	0.76	1.6	0.31	1.0	0.12	0.5	0.02		
484.5	29											2.3	0.81	1.6	0.33	1.1	0.13	0.5	0.02		
499.7	30											2.4	0.87	1.7	0.35	1.1	0.13	0.5	0.02		
583.0	35											2.8	1.15	1.9	0.47	1.3	0.18	0.6	0.03		
666.2	40											3.2	1.48	2.2	0.60	1.5	0.23	0.7	0.04		
749.5	45													2.5	0.75	1.7	0.28	0.8	0.05		
832.8	50													2.8	0.91	1.9	0.35	0.9	0.06		
916.1	55													3.1	1.09	2.1	0.41	1.0	0.07		
999.3	60													3.3	1.28	2.2	0.48	1.1	0.08		
1082.6	65															2.4	0.56	1.1	0.09		
1165.9	70															2.6	0.64	1.2	0.10		
1249.2	75																	1.3	0.12		
1332.5	80																	1.4	0.13		
1415.7	85																	1.5	0.15		
1499.0	90																	1.6	0.16		
1665.6	100																	1.8	0.20	1.1	0.07
1832.1	110																	1.9	0.24	1.2	0.08
1998.7	120																	2.1	0.28	1.4	0.09
2165.3	130																	2.3	0.33	1.5	0.11
2331.8	140																			1.6	0.13
2498.4	150																			1.7	0.14

Notes: Shaded area represents velocities over 1.5 m/s. Use with caution where water hammer is a concern.

FRICTION LOSS CHARTS

HDPE PRESSURE PIPE PE80 SDR 11 PN10

C=140 • PRESSURE LOSS (BAR/100 METERS)

Nominal Size		25 mm		32 mm		40 mm		50 mm		63 mm		75 mm		90 mm		110 mm		160 mm		200 mm	
Pipe ID mm		20.40		26.20		32.60		40.80		51.40		61.40		73.60		90.00		130.80		163.60	
Wall Thick		2.3		2.9		3.7		4.6		5.8		6.8		8.2		10		14.6		18.2	
Flow l/min	Flow m^3/hr	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss	Velocity m/s	bar loss
3.8	0.25	0.2	0.04																		
7.6	0.5	0.4	0.14																		
11.4	0.75	0.6	0.29	0.4	0.09																
15.1	1	0.8	0.50	0.5	0.15																
26.5	1.5	1.3	1.06	0.8	0.31	0.5	0.11														
34.1	2	1.7	1.80	1.0	0.53	0.7	0.18														
41.6	2.5	2.1	2.73	1.3	0.81	0.8	0.28	0.5	0.09												
49.2	3	2.5	3.82	1.5	1.13	1.0	0.39	0.6	0.13												
56.8	3.5	3.0	5.08	1.8	1.50	1.2	0.52	0.7	0.17												
68.1	4			2.1	1.92	1.3	0.66	0.8	0.22	0.5	0.07										
83.3	5			2.6	2.91	1.7	1.00	1.1	0.34	0.7	0.11										
98.4	6			3.1	4.08	2.0	1.41	1.3	0.47	0.8	0.15										
117.3	7					2.3	1.87	1.5	0.63	0.9	0.20										
132.5	8					2.7	2.40	1.7	0.8	1.1	0.26										
151.4	9					3.0	2.98	1.9	1.00	1.2	0.32										
166.6	10							2.1	1.21	1.3	0.39										
181.7	11							2.3	1.45	1.5	0.47	1.0	0.20								
200.6	12							2.5	1.70	1.6	0.55	1.1	0.23								
215.8	13							2.8	1.97	1.7	0.64	1.2	0.27								
234.7	14							3.0	2.27	1.9	0.74	1.3	0.31								
249.8	15									2.0	0.84	1.4	0.35								
265.0	16									2.1	0.94	1.5	0.40								
283.9	17									2.3	1.05	1.6	0.44	1.1	0.18						
299.0	18									2.4	1.17	1.7	0.49	1.2	0.20						
318.0	19									2.5	1.30	1.8	0.54	1.2	0.23						
333.1	20									2.7	1.42	1.9	0.60	1.3	0.25						
348.3	21									2.8	1.56	2.0	0.66	1.4	0.27						
367.2	22									2.9	1.70	2.1	0.71	1.4	0.30						
382.3	23									3.1	1.84	2.2	0.78	1.5	0.32						
401.3	24											2.3	0.84	1.6	0.35						
416.4	25											2.3	0.91	1.6	0.37						
431.5	26											2.4	0.97	1.7	0.40	1.1	0.15				
450.5	27											2.5	1.04	1.8	0.43	1.2	0.16				
465.6	28											2.6	1.12	1.8	0.46	1.2	0.17				
484.5	29											2.7	1.19	1.9	0.49	1.3	0.19				
499.7	30											2.8	1.27	2.0	0.53	1.3	0.20				
583.0	35											3.3	1.69	2.3	0.70	1.5	0.26				
666.2	40													2.6	0.89	1.7	0.34				
749.5	45													2.9	1.11	2.0	0.42				
832.8	50													3.3	1.35	2.2	0.51	1.0	0.08		
916.1	55															2.4	0.61	1.1	0.10		
999.3	60															2.6	0.71	1.2	0.12		
1082.6	65															2.8	0.83	1.3	0.13		
1165.9	70															3.1	0.95	1.4	0.15		
1249.2	75															3.3	1.08	1.6	0.17		
1332.5	80																	1.7	0.20		
1415.7	85																	1.8	0.22	1.1	0.07
1499.0	90																	1.9	0.24	1.2	0.08
1665.6	100																	2.1	0.30	1.3	0.10
1832.1	110																	2.3	0.35	1.5	0.12
1998.7	120																	2.5	0.42	1.6	0.14
2165.3	130																	2.7	0.48	1.7	0.16
2331.8	140																			1.8	0.19
2498.4	150																			2.0	0.21

Notes: Shaded area represents velocities over 1.5 m/s. Use with caution where water hammer is a concern.

FRICTION LOSS CHARTS

TABLE OF APPROXIMATE PRESSURE LOSSES FOR PIPE FITTINGS

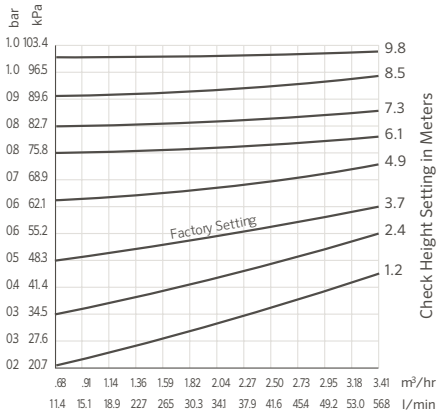
Steel Fitting Type	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	4"	6"	8"
Coupling	0.18	0.24	0.30	0.37	0.46	0.61	0.76	0.91	1.21	1.82	2.40
Run of St. Tee	0.30	0.30	4.60	0.60	0.60	0.76	0.91	1.21	1.52	2.13	3.05
Tee, Side Outlet	0.91	1.38	1.50	2.13	2.74	3.35	4.0	4.90	6.1	9.44	12.1
Tee, Run Reduced ½"	0.45	0.76	0.91	1.21	1.50	1.82	2.13	2.4	3.65	4.90	6.10
Elbow, 90°	0.45	0.76	0.91	1.21	1.50	1.82	2.13	2.4	3.65	4.90	6.10
Elbow, 45°	0.22	0.30	0.40	0.52	0.60	0.76	0.91	1.06	1.5	2.28	3.04
Corporation Stop	2.74	2.74	2.74	2.74	2.74	2.74					
Curb Stop	1.82	1.82	2.13	2.13	2.43	2.43					

Plastic IPS or Copper Fitting Type	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	4"	6"	8"
Coupling	0.46	0.76	0.91	0.91	1.22	1.82	2.13	2.43	3.35	5.50	7.31
Run of St. Tee	0.76	0.91	1.22	1.52	1.83	2.43	2.74	3.35	4.57	6.40	8.53
Tee, Side Outlet	2.13	2.74	3.65	4.57	5.48	7.31	9.14	11.0	13.71	21.33	27.43
Tee, Run Reduced ½"	1.06	1.37	1.82	2.43	2.74	3.35	4.26	5.18	7.31	10.36	13.71
Elbow, 90°	1.06	1.37	1.82	2.43	2.74	3.35	4.26	5.18	7.31	10.36	13.71
Elbow, 34°	0.46	0.60	0.91	1.06	1.22	1.52	2.13	2.44	3.04	4.90	6.10

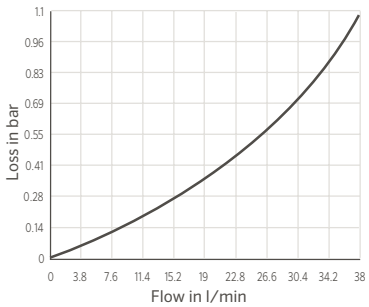
Notes:
It is recommended that the above chart be used only when the manufacturers recommended pressure loss values are not available.

ACCESSORY PRESSURE LOSS CHARTS

HCV PRESSURE LOSS CHART



SWING JOINT FRICTION LOSS



WIRE DATA

STANDARD ANNEALED COPPER AT 20° C

American Wire Gauge	Metric Wire Gauge	Diameter (Mils)	Diameter (mm)	Resistance (Per mft Ohms)	Resistance (Per km Ohms)
1		289.3	7.348	0.9239	0.4065
	7		7		0.448
2		257.6	6.543	0.1563	0.5128
	6		6		0.6098
3		229.4	5.827	0.1971	0.6466
4		204.3	5.189	0.2485	0.8152
	5		5		0.08781
5		181.9	4.62	0.3134	1.028
	4.5		4.5		1.084
6		162	4.115	0.3952	1.297
	4		4		1.372
7		144.3	3.665	0.4981	1.634
	3.5		3.5		1.792
8		128.5	3.264	0.6281	2.061
	3		3		2.439
9		114.4	2.906	0.7925	2.6
10		101.9	2.588	0.9988	3.277
	2.5		2.5		3.512
11		90.7	2.3	1.26	4.14
12		80.8	2.05	1.59	5.21
	2		2		5.49
13		72	1.83	2	6.56
	1.8		1.8		6.78
14		64.1	1.63	2.52	8.28
	1.6		1.6		8.58
15		57.1	1.45	3.18	10.4
	1.4		1.4		11.2
16		50.8	1.29	4.02	13.2
	1.2		1.2		15.2
17		45.3	1.15	5.05	16.6
18		40.3	1.02	6.39	21
	1		1		22
19		35.9	0.912	8.05	26.4
	0.9		0.9		27.1
20		32	0.813	10.1	33.2

WIRE SIZING

REQUIRED INFORMATION

Actual one-way length of wire between the controllers and the power source or the controllers and valves

Allowable voltage loss along the wire circuit

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 300 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).

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

$$R = \frac{4{,}000}{444}$$

$$R = 9.01 \text{ ohms}/1{,}000 \text{ m}$$

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^2 gauge wire has more resistance than 9 ohms per 300 m, choose 2.5 mm^2 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 - RESISTANCE OF COPPER WIRE

Wire Size (mm^2)	Resistance at 20° C (68° F) (ohms per 1000 m)
0.5	38.4
1.0	18.7
1.5	13.6
2.5	7.4
4.0	4.6
6.0	3.1

TABLE 2- VALVE WIRE SIZING

Ground Wire	Control Wire						
	0.5	1	1.5	2.5	4	6	6
0.5	140	190	210	235	250	260	1590
1.0	190	290	335	415	465	495	2440
1.5	208	335	397	515	595	647	3700
2.5	235	415	515	730	900	1030	5400
4.0	250	465	595	900	1175	1405	7690
6.0	260	495	647	1030	1405	1745	10530

Notes:
Maximum one-way distance in meters between controller and valve Heavy-duty solenoid: 24 VAC, 350 mA inrush current, 190 mA holding current, 60 Hz; 370 mA inrush current, 210 mA holding current, 50 Hz

① Native Plant Restoration – San Marcos, CA

② Product Testing for Water Efficiency

③ Employee Garden

④ Hunter Mexico diverts 74.1% of their waste from the landfill

⑤ Electric Golf Cart for Campus Transportation

⑥ Electric Vehicle Charging Stations

⑦ 2014 Solar Panel Installation – San Marcos, CA

A DIFFERENCE – IT'S THE MOST IMPORTANT THING WE MAKE

At Hunter, we are committed to supporting and improving the communities in which we live, work, and play. We protect the planet by designing methods, products, and technologies that enable efficient use of our natural resources and reduce our environmental footprint. That's why we have a team dedicated to social responsibility efforts who regularly track and report our metrics in seven key areas: climate change and energy, charitable giving, water, waste, product responsibility, employees, and the supply chain. We're proud of our efforts and of the Hunter Social Responsibility Report which annually highlights our successes along with areas for improvement. Learn more about our sustainability practices and read the behind-the-scenes stories at: http://corporate.hunterindustries.com/sustainability.

Hunter®

STATEMENT OF WARRANTY Hunter Residential & Commercial Irrigation

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, PLD-LOC Fittings, Rigid Risers
TWO YEARS	**ROTORS**	PGP®-ADJ, PGJ	**CONTROLLERS**	Eco Logic, XC Hybrid, HC Controller, X-Core® and Pro-C® Families, ROAM, NODE, WVP, WVC, PSR
	SPRAYS	PS Ultra Family	**SENSORS**	ET System, Wireless Flow Sensor
	NOZZLES	Spray Nozzles, PCN, PCB, AFB, MSBN	**MICRO**	ACZ, PCZ, RZWS, Point Source Emitters, Tubing, Multi-Port Emitters, IH Risers, MLD, Eco-Indicator
	VALVES	PGV Family, PSR	**ACCESSORIES**	HCV, SJ, FLEXsg, HSBE Family, SpotShot, RZB
THREE YEARS	**CONTROLLERS**	ROAM XL	**MP ROTATOR®**	All
FIVE YEARS	**ROTORS**	PGP Ultra, I-20, I-25, I-40, and I-90 Families	**CENTRAL**	IMMS® Central Control Products
	SPRAYS	Pro-Spray®, Pro-Spray PRS30, and Pro-Spray PRS40 Families	**SENSORS**	Clik Sensors, Solar-Sync®, Flow-Sync®, MWS
	VALVES	HQ, ICV, IBV	**MICRO**	ICZ and PLD Tubing, Eco-Mat®, Eco-Wrap™
	CONTROLLERS	I-Core®/DUAL® and ACC controller families, ICD and Dual Decoder Products, ICR Remotes, ICC2		

Hunter warrants the battery life of the Wireless Rain-Clik and Wireless Solar Sync sensors for 10 years. If a manufacturing 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, improper installation and/or maintenance of the product. This warranty does not extend to failures caused by lighting strikes, electrical power surges, flooding or other acts of God. 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.

STATEMENT OF WARRANTY Hunter Golf and ST System Irrigation

Hunter will unconditionally repair, replace or repurchase, at its sole discretion, any defective Golf or ST Product Components listed below by category, returned freight prepaid, within a period of:

GOLF ROTOR PRODUCTS

A. Three (3) years component* warranty from the date of manufacture
B. Five (5) years component* warranty from the date of manufacture with one-for-one matching purchase of HSJ Swing Joints from authorized Hunter Golf distributor.

HSJ SWING JOINT, ST ROTOR, AND ST ACCESSORY PRODUCTS

C. Five (5) years component* warranty from the date of manufacture

GOLF CONTROLLER PRODUCTS

D. One (1) year component* warranty from the date of manufacture

PILOT GOLF DECODER PRODUCTS

E. Three (3) years component* warranty from the date of manufacture

COMPUTERS, PRINTERS & ACCESSORIES

F. Equipment manufacturer's warranty (no Hunter warranty)

MAINTENANCE RADIO & BATTERY

G. Equipment manufacturer's warranty (no Hunter warranty)

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® | *Built on Innovation®*

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.

* 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.

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

If you have any questions concerning the warranty or its application, please email HunterTechnicalSupport@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, President of Hunter Industries

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