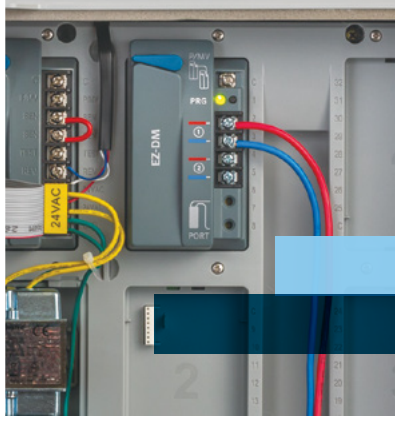
Product Catalogue

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

VOLUME 38

Hunter®



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Hunter®

Advancing Irrigation Management
THROUGH LEADERSHIP AND INNOVATION

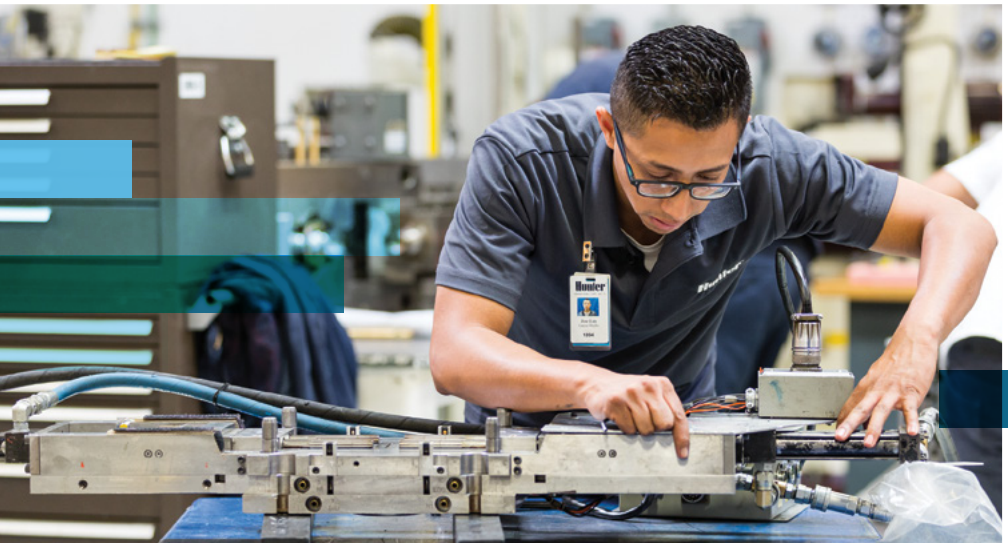
The need for cutting-edge technology and support continues to expand across all segments of the irrigation industry. Labour is increasingly hard to find. Water conservation is a rising concern. Your customers are demanding bold irrigation management solutions that cut costs while ensuring healthy, green landscapes.

These evolving needs call for trusted product solutions and unwavering partnership from manufacturers. **At Hunter Industries, innovation and customer satisfaction are integral parts of who we are.** We build performance, reliability, and efficiency into every product that we manufacture, and we back our solutions with the best training and technical support in the industry.

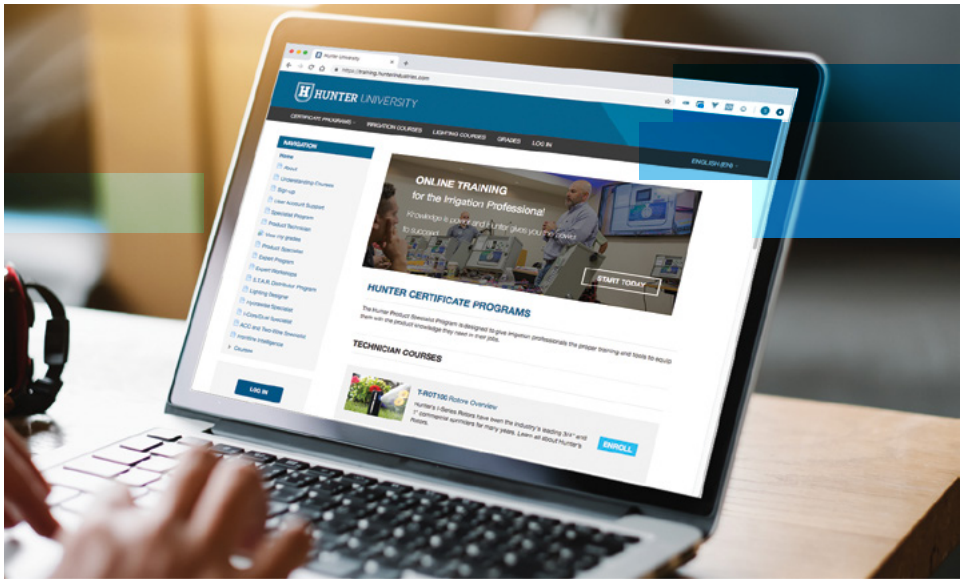
We are committed to advancing the boundaries of innovation wherever we do business. As we have for more than 38 years, we will always push ourselves to do better.

Thank you for choosing Hunter Industries. We're proud to stand with you to help solve your toughest irrigation challenges.


ROAM


Hunter


PRO-C
PC-400i
Hunter


HUNTER UNIVERSITY
ONLINE TRAINING
for the Irrigation Professional
HUNTER CERTIFICATE PROGRAMS
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100%

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FOR GREEN INDUSTRY PROFESSIONALS

From product knowledge to technical support, we offer a full suite of tools, services, and programs to help your business grow:

- Gain valuable product knowledge with comprehensive online irrigation and lighting training certificate programs through **Hunter University**.
- Customise solutions and send bids directly to your customers with the **SiteRec App**.
- Simplify your Hunter ordering and design process with the **My List** feature.
- Show customers their projected savings in real time with the **Water Savings Calculator**.
- Eliminate the guesswork before starting a project with the **Hunter Dripline Calculator**.

We also have technical guides, CAD legends and details, an expansive video library, and an array of other helpful tools and services. **Visit hunterindustries.com/contractors today to learn how we can help you build your business.**

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Hunter®

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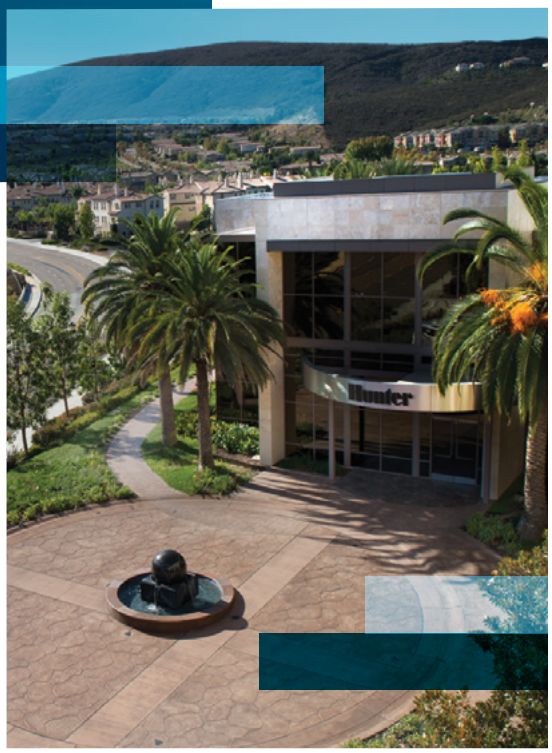


Founded in 1981, Hunter Industries is a family-owned, global manufacturer of best-in-class solutions for residential, commercial, municipal, agricultural, and golf course irrigation systems, as well as the outdoor lighting industry. CEO Greg Hunter and his executive staff provide leadership for our entire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

Hunter®
GOLF IRRIGATION

Hunter has been on the leading edge of golf course irrigation for more than three decades. We take pride in providing golf experts and professionals with the products, tools, and support they need to conceptualise, create, and manage world-class golf courses. **Learn more at hunterindustries.com/golf.**

Senninger®

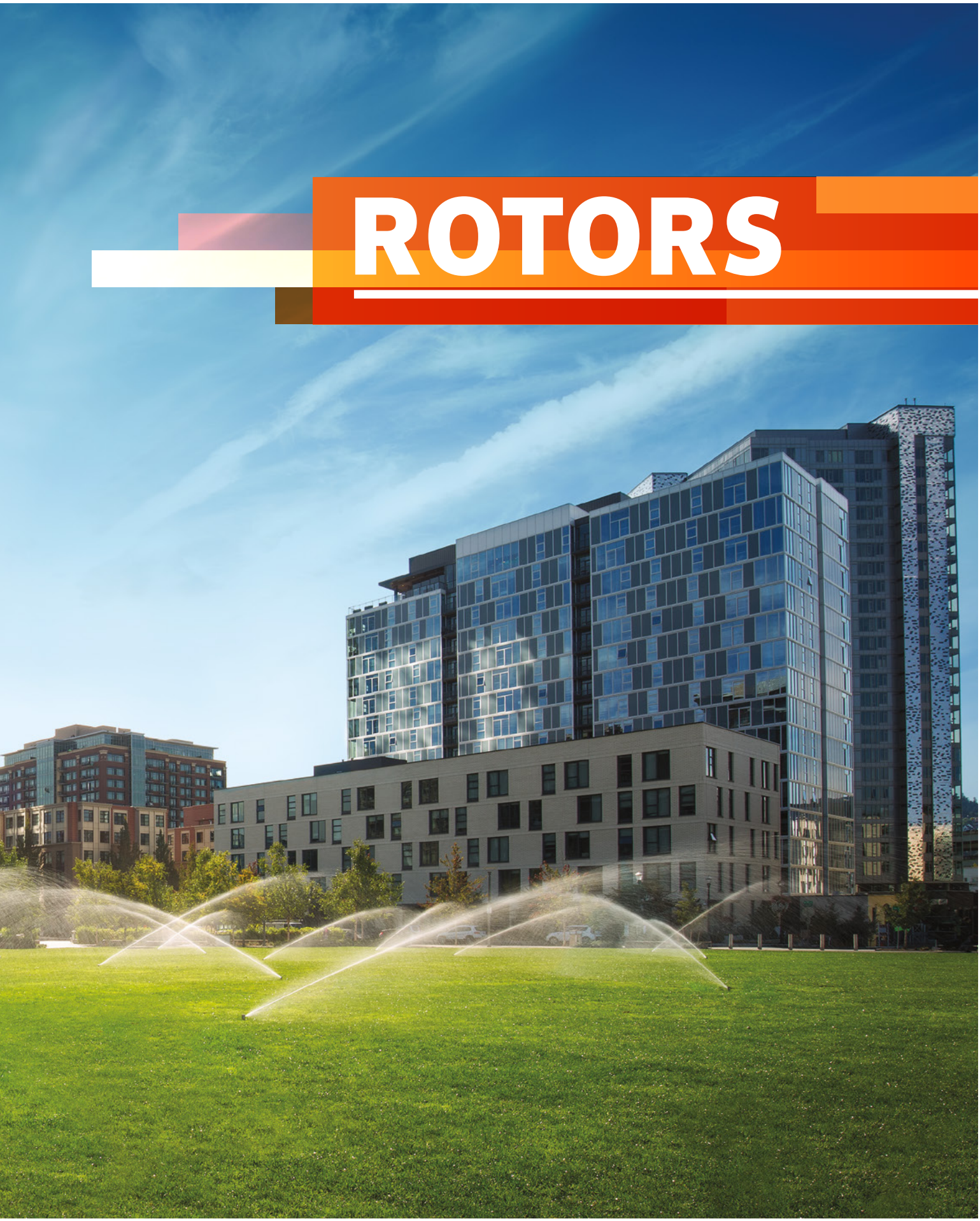
Senninger Irrigation is a principal designer and manufacturer of premier irrigation solutions for agricultural, horticultural, industrial, and wastewater applications. With over 50 years of experience in more than 50 countries worldwide, Senninger is one of the most trusted names in the agricultural irrigation industry. **Learn more at senninger.com.**

FXLuminaire®

FX Luminaire is an industry-leading manufacturer of landscape and architectural lighting solutions. We focus on the advancement of LED technology and digital lighting control with smart home integration and zoning, dimming, and color generation capabilities. **Learn more at fxl.com.**

LUMASCAPE

Lumascape transforms architecture into performance art with precision-engineered lighting solutions. Our global experts combine sophisticated design, advanced technologies, quality materials, and rigorous testing to manufacture comprehensive lighting systems that exceed expectations in a range of commercial and public-sector applications. **Learn more at lumascape.com.**



ROTORS

ROTORS
ADVANCED FEATURES

RELIABLE STRENGTH & DURABILITY

PRESSURE-REGULATED BODY

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

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

STAINLESS STEEL RISER

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

Standard on I-40, I-50, I-80
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 prolongs system life.

PGJ, PGP Ultra, I-20, I-25, I-40, I-50, I-80, 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 midrange and close-in watering.

I-40, I-50, I-80, 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-50, I-80, I-90

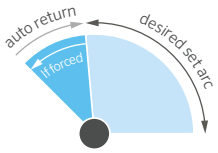
COLOUR-CODED NOZZLES

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

I-25, I-40, I-50, I-80, 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 SETSCREW

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

PGJ, PGP Ultra, I-20

ROTOR COMPARISON CHART

QUICK SPECS		PGJ	SRM	PGP-ADJ	PGP ULTRA	I-20	I-25	I-40 I-50	I-40-ON I-50-ON	I-80	I-90
INLET SIZE		½"	½"	¾"	¾"	¾"	1"	1"	1"	1" - 1½"	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	11.3–29.6	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	2.0–13.5	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	33.7–225.6	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	3.4–6.9	5.5–8.0
	kPa	170–380	170–380	170–450	170–450	170–450	250–700	280–700	280–700	340–690	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	3.4–6.9	5.0–8.0
	kPa	140–700	140–700	140–700	140–700	140–700	280–690	250–700	250–700	340–690	500–800
NOZZLE TRAJECTORY		15°	15°	25°	25°	25°	25°	25°	25°	25°	22.5°
SPECIFIC NOZZLES		---	---	---	Optional	Optional	Pre-Installed	Pre-Installed	Pre-Installed	Pre-Installed	Pre-Installed
NOZZLE OPTIONS		8	6	27	34	34	11	6	6	21	16
WARRANTY		2 Years	1 Year	2 Years	5 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 SETSCREW		●			●	●					
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)	● (1.5 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**

The highly durable PGJ offers all the benefits of a large rotor in a compact, spray-sized package, with water-efficient nozzles and easy arc adjustment.

KEY BENEFITS

- Headed and slotted setscrew allows radius adjustment with a Hunter wrench or flat-blade screwdriver
- Adjustable arc from 40° to 360° to keep water in the appropriate areas
- Standard factory-installed 2.0 nozzle speeds installation
- QuickCheck™ arc mechanism for fast arc adjustment

OPERATING SPECIFICATIONS

- Nozzle choices: 8
- 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 rate: 15 mm/hr approximately
- Nozzle trajectory: 15° approximately
- Warranty period: 2 years

FACTORY-INSTALLED OPTIONS

- Drain check valve (up to 2.1 m of elevation) excluding PGJ-00
- Reclaimed water ID

USER-INSTALLED OPTIONS

- Drain check valve (up to 2.1 m of elevation) excluding PGJ-00 (P/N 462078SP)
- HC-50F-50M Check valve (up to 9.7 m of elevation) PGJ-00

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"

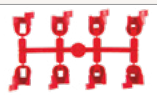
PGJ-12
Overall height: 41 cm
Pop-up height: 30 cm
Exposed diameter: 3 cm
Inlet size: ½"

PGJ RED NOZZLE PERFORMANCE DATA

Nozzle	Pressure bar	Pressure kPa	Radius m	Flow m^3/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
.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

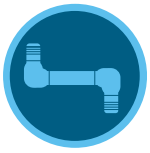
Note:
All precipitation rates calculated for 180° operation. For the precipitation rate for a 360° sprinkler, divide by 2.

PGJ NOZZLES



PGJ

Compatible with:



SJ Swing Joints
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***Hunter Flex**SG*
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SRM

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

The SRM is an economical short-range rotor that offers a convenient and efficient alternative to spray heads.

KEY BENEFITS

- Adjustable arc from 40° to 360° to keep water in the appropriate areas
- Standard factory-installed 2.0 nozzle speeds installation
- QuickCheck™ arc mechanism for fast arc adjustment

OPERATING SPECIFICATIONS

- Nozzle choices: 6
- 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 rate: 11 mm/hr approximately
- Nozzle trajectory: 14° approximately
- Warranty period: 2 years

USER-INSTALLED OPTIONS

- Drain check valve (up to 2.1 m of elevation) (P/N 462078SP)

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

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

SRM NOZZLES

SRM

Compatible with:

SJ Swing Joints
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Hunter Flex SG
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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**

As Hunter's original rotor, the PGP delivers unsurpassed reliability, durability, versatility, and value, keeping it the professional's choice year after year.

KEY BENEFITS

- Three types of nozzles available for various landscapes: standard red, standard blue, grey low-angle
- Adjustable arc from 40° to 360° to keep water in the appropriate areas
- Factory-installed rubber cover for safety
- Through-the-top arc adjustment for easy installation
- QuickCheck™ arc mechanism for fast arc adjustment

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

OPERATING SPECIFICATIONS

- Nozzle choices: 27
- Radius: 4.9 to 14.0 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 rate: 10 mm/hr approximately
- Nozzle trajectory: standard = 25°, low-angle = 13°
- Warranty period: 2 years

FACTORY-INSTALLED OPTIONS

- Red #5–#8 nozzle; Blue #1.5–4.0

USER-INSTALLED OPTIONS

- Drain check valve (up to 1 m of elevation) P/N 142300SP

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)

PGP™ ULTRA

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

The PGP Ultra raises the bar for rotor technology with powerful features developed over three decades of research, customer feedback, and lab testing.

KEY BENEFITS

- Patented automatic arc return feature returns the turret back to the original arc pattern if vandalised; adjustable arc from 50° to 360°
- Non-strippable drive mechanism is protected from damage if turned in the opposite direction of travel
- Part- and full-circle in one model for flexibility across landscapes and reduced inventory
- Headed and slotted setscrew allows radius adjustment with a Hunter wrench or flat-blade screwdriver
- Flat-top nozzles allow fast, easy insertion
- QuickCheck™ arc mechanism for fast arc adjustment

OPERATING SPECIFICATIONS

- Nozzle choices: 34
- 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 rate: 10 mm/hr approximately
- Nozzle trajectory: standard = 25°, low-angle = 13°
- Nozzle racks: 1.5 to 8.0 blue, 2.0 to 4.5 low-angle grey, 0.50 to 3.0 black, 6.0 to 13.0 green, MPR-25, MPR-30, MPR-35
- Warranty period: 5 years

FACTORY-INSTALLED OPTIONS

- Drain check valve (up to 3 m of elevation)
- Reclaimed water ID
- Blue #1.5–4.0 nozzles

USER-INSTALLED OPTIONS

- Drain check valve (up to 1 m of elevation) PGP-04 only (P/N 142300SP)
- HSJ-0 prefabricated ¾" PVC swing joint

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**

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

KEY BENEFITS

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

OPERATING SPECIFICATIONS

- Nozzle choices: 34
- 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 rate: 10 mm/hr approximately
- Nozzle trajectory: standard = 25°, low-angle = 13°
- Nozzle racks: 1.5 to 8.0 blue, 2.0 to 4.5 low-angle grey, 0.50 to 3.0 black, 6.0 to 13.0 green, MPR-25, MPR-30, MPR-35
- Warranty period: 5 years

FACTORY-INSTALLED OPTIONS

- No drain check valve (NCV models)
- Reclaimed water ID
- Blue #1.5–4.0 nozzles

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

USER-INSTALLED OPTIONS

- HSJ-0 prefabricated ¾" PVC swing joint

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"

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

PGP™ ULTRA & I-20 PRB

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

The PGP Ultra and I-20 PRB are built to thrive in applications where high water pressure could otherwise lead to inefficient nozzle operation.

KEY BENEFITS

- Pressure-regulated body (3.1 bar; 310 kPa) reduces high incoming pressure to increase nozzle efficiency
- Patented automatic arc return feature returns the turret back to the original arc pattern if vandalised; adjustable arc from 50° to 360°
- Non-strippable drive mechanism is protected from damage if turned in the opposite direction of travel
- Part- and full-circle in one model for flexibility across landscapes and reduced inventory
- Headed and slotted setscrew allows radius adjustment with a Hunter wrench or flat-blade screwdriver
- FloStop™ closes the flow of water from individual sprinklers, to change the nozzle or perform repairs (I-20 only)
- Flat-top nozzles allow fast, easy insertion
- Drain check valve prevents low-head drainage (up to 3 m of elevation)

OPERATING SPECIFICATIONS

- Nozzle choices: 30
- 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: 1.4 to 7.0 bar; 140 to 700 kPa
- Precipitation rate: 10 mm/hr approximately
- Nozzle trajectory: standard = 25°, low-angle = 13°
- 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

FACTORY-INSTALLED OPTIONS

- Reclaimed water ID
- Blue #1.5–4.0 nozzles

USER-INSTALLED OPTIONS

- HSJ-0 prefabricated ¾" PVC swing joint

PGP-ULTRA & I-20 PRB – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Standard Features	3 Feature Options	4 Nozzle Options
PGP-00-PRB = Riser mount **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 (PGP-04 only) **CV-R** = Drain check valve and reclaimed water ID	**Blue 1.5–8.0** = Factory-installed nozzle number **Grey low-angle** **Black short-radius** **MPR-25, 30, 35 - Q, T, H, F**
I-20-00-PRB = Riser mount **I-20-04-PRB** = 10 cm pop-up **I-20-06-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** = Factory-installed nozzle number **Grey low-angle** **Black short-radius** **MPR-25, 30, 35 - Q, T, H, F**
I-20-04-SS-PRB = 10 cm pop-up **I-20-06-SS-PRB** = 15 cm pop-up	Adjustable arc, stainless steel 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** = Factory-installed nozzle number **Grey low-angle** **Black short-radius** **MPR-25, 30, 35 - Q, T, H, F**

Examples:
PGP-04-PRB = 10 cm pop-up, adjustable arc, plastic riser with no factory installed-nozzle
I-20-04-PRB-3.0-2.5 = 10 cm pop-up, adjustable arc, plastic riser with 3.0 nozzle
I-20-06-SS-PRB-R-MPR-25H = 15 cm pop-up, adjustable arc, stainless steel riser with MPR-25H

PGP-00-PRB
Overall height: 22 cm
Exposed diameter: 4.5 cm
Inlet size: ¾"

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

I-20-00-PRB
Overall height: 22 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	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 ULTRA / I-20 / PRB GREY LOW-ANGLE NOZZLE PERFORMANCE DATA

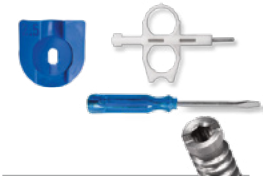
Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲
2.0 LA ● Grey	1.7	170	7.3	0.33	5.6	12	14
	2.0	200	7.6	0.36	6.0	12	14
	2.5	250	7.9	0.40	6.7	13	15
	3.0	300	8.2	0.45	7.4	13	15
	3.5	350	8.5	0.48	8.0	13	15
	4.0	400	8.8	0.52	8.6	13	15
	4.5	450	9.1	0.55	9.1	13	15
2.5 LA ● Grey	1.7	170	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

I-20 04 with PRB Body

PGP ULTRA / I-20 / PRB NOZZLES

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

Flat-top nozzle for easy insertion coupled with a headed slotted adjustment screw for quick radius adjustment with a Hunter wrench or a flat-blade screwdriver.



Pressure Regulation

Continual operating pressure of 3.1 bar; 310 kPa

PR-075

Overall height: 5.7 cm
Inlet/outlet size: ¾"
For use under all models ¾" inlet sprinklers, regulates to 3.1 bar; 310 kPa

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

I-20 with Blue Standard Nozzle

Convenient Nozzle Rack

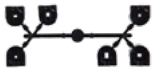
PGP ULTRA / I-20 / PRB BLACK SHORT-RADIUS NOZZLE PERFORMANCE DATA

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)

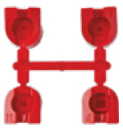


Black Short-Radius
(P/N 466100)

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

PGP-04 Ultra with MPR-30 Nozzle

I-25

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

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

KEY BENEFITS

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

OPERATING SPECIFICATIONS

- Nozzle choices: 11
- 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
- Warranty period: 5 years
- Operating pressure range: 2.5 to 7.0 bar; 250 to 700 kPa
- Precipitation rate: 15 mm/hr approximately
- Nozzle trajectory: standard = 25°

FACTORY-INSTALLED OPTIONS

- Reclaimed water ID
- High-speed rotation

USER-INSTALLED OPTIONS

- HSJ-1 prefabricated 1" (25 mm) PVC swing joint

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		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲
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
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

* Five 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 ▲
04 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
07 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
08 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

Nozzle	Pressure bar	Pressure kPa	Radius m	Flow m^3/hr	Flow l/min	Precip mm/hr ■	Precip mm/hr ▲
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**

The I-40 rotor has a comprehensive list of upgraded features that make it the top choice for demanding, large turf projects.

KEY BENEFITS

- Patented automatic arc return feature returns the turret back to the original arc pattern if vandalised; adjustable arc from 50° to 360°
- Non-strippable drive mechanism is protected from damage if turned in the opposite direction of travel
- Part- and full-circle in one model for flexibility across landscapes and reduced inventory
- Colour-coded nozzles make identification easy
- Available opposing nozzle model for even watering in full-circle applications (I-40-ON model)
- Drain check valve prevents low-head drainage (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

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

OPERATING SPECIFICATIONS

- Nozzle choices: 12
- 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
- Warranty period: 5 years
- 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: standard = 25°

FACTORY-INSTALLED OPTIONS

- Reclaimed water ID
- High-speed rotation

USER-INSTALLED OPTIONS

- HSJ-1 prefabricated 1" (25 mm) PVC swing joint

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

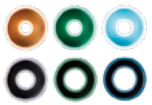
Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m^3/hr	l/min	■	▲
08 (40) Lt. Brown	2.5	250	13.1	1.63	27.2	19	22
	3.0	300	13.4	1.80	30.0	20	23
	3.5	350	13.7	1.94	32.3	21	24
	4.0	400	14.0	2.06	34.4	21	24
	4.5	450	14.0	2.18	36.3	22	26
	5.0	500	14.3	2.29	38.2	22	26
	5.5	550	14.6	2.41	40.2	23	26
10 (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		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m^3/hr	l/min	■	▲
08 (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

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

I-40 NOZZLES



Standard/
High-Speed

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°.

I-40 NOZZLES

Opposing

Front Back

I-40 Turf Cup Kit Option
Available as a field-installed option on all models
P/N TURFCUPKITI40

I-40 Opposing Nozzle 360° Model

I-50

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

The high-torque I-50 rotor is engineered to thrive in difficult water-quality conditions within large turf projects.

KEY BENEFITS

- Extra-strong, non-strippable, planetary gear drive mechanism is reliable and durable in harsh water conditions
- Tool-free, part- and full-circle arc adjustment mechanism makes fast, easy installation and reduces inventory (60° to 360°)
- Colour-coded nozzles make identification easy
- Available opposing nozzle model for even watering in full-circle applications (I-50-ON model)
- Drain check valve prevents low-head drainage (up to 4.5 m of elevation)

OPERATING SPECIFICATIONS

- Nozzle choices: 12
- Radius I-50: 13.1 to 21.3 m
- Radius I-50-ON: 15.2 to 23.2 m
- Flow I-50: 1.63 to 6.84 m³/hr; 27.2 to 114.1 l/min
- Flow I-50-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 rate: 15 mm/hr approximately
- Nozzle trajectory: standard = 25°
- Warranty period: 5 years

FACTORY-INSTALLED OPTIONS

- Reclaimed water ID

USER-INSTALLED OPTIONS

- HSJ-1 prefabricated 1" (25 mm) PVC swing joint

I-50 Reclaimed
Available as a factory-installed option on all models

I-50-06-SS
Overall height: 26 cm
Pop-up height: 15 cm
Exposed diameter: 5 cm
Inlet size: 1" BSP

I-50-06-SS-ON
Overall height: 26 cm
Pop-up height: 15 cm
Exposed diameter: 5 cm
Inlet size: 1" BSP

I-50 Turf Cup Kit Option
Available as a field-installed option on all models
P/N TURFCUPKITI40

I-50 – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Standard Features	3 Feature Options	4 Nozzle Options
I-50-06-SS = 15 cm pop-up	Adjustable arc, stainless steel riser, check valve, and 6 nozzles	**B** = BSP inlet threads **R** = Reclaimed water ID	**#8 to #25** = Factory-installed nozzle number

I-50-ON – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Standard Features	3 Feature Options	4 Nozzle Options
I-50-06-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	**#15 to #28** = Factory-installed nozzle number

Examples:
I-50-06-SS-B = 15 cm pop-up, BSP inlet threads
I-50-06-SS-ON-R-B-23 = 15 cm pop-up, full-circle opposing nozzles, reclaimed water ID, #23 nozzle, BSP inlet threads
I-50-06-SS-15-B = 15 cm Pop-up, #15 nozzle, BSP inlet threads

Below-the-turret arc adjustment

Robust planetary gear drive for extreme conditions

I-50 STANDARD NOZZLE PERFORMANCE DATA

Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲
08 ○ 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 ● 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 ● 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 ● 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 ● 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 ● 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

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

I-50 Opposing Nozzle 360° Model

I-50 DUAL OPPOSING NOZZLE PERFORMANCE DATA

Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/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°.

I-50 STANDARD NOZZLES

Front

I-50 OPPOSING NOZZLES

Front and Back

I-80

Radius: **19.2 to 29.6 m**
Flow: **4.59 to 13.5 m³/hr; 76.5 to 225.6 l/min**

The highly versatile and efficient I-80 rotor is the first commercial sports turf rotor with no-dig Total-Top-Serviceability.

KEY BENEFITS

- Exclusive Total-Top-Service (TTS) design provides convenient no-dig servicing
- PressurePort™ technology and forward-facing triple nozzles (I-80) or opposing triple nozzles (I-80-ON) create exceptional nozzle uniformity in part- and full-circle applications
- Tool-free, part- and full-circle arc adjustment mechanism makes fast, easy installation and reduces inventory (70° to 360°)
- Ratcheting stainless steel riser allows setting of right-side fixed arc alignment to the landscape without rotor disassembly

OPERATING SPECIFICATIONS

- I-80 nozzle choices: 7 standard
- I-80-ON nozzle choices: 7 standard
- Radius I-80: 19.8 to 28.7 m
- Radius I-80-ON: 19.2 to 29.6 m
- Flow I-80: 4.6 to 13.5 m³/hr; 76.5 to 225.6 l/min
- Flow I-80-ON: 4.9 to 13.3 m³/hr; 81.8 to 221.4 l/min
- Recommended pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
- Operating pressure range: 2.7 to 10.3 bar; 275 to 1030 kPa
- Precipitation rates: 10 mm/hr approximately
- Warranty period: 5 years

FACTORY-INSTALLED OPTIONS

- Exclusive ProTech TC™ turf cup option for an aesthetically clean and safe installation:
  - No-dig servicing of riser assembly
  - No-dig arc adjustments
  - Quick-release turf cup assembly
  - Threads in cup lock/retain the turf
- Reclaimed water ID

USER-INSTALLED OPTIONS

- Rubber cover kit #959300SP
- Turf cup kit #959400SP
- HSJ prefabricated PVC swing joints

I-80-04-SS Pop-Up
I-80-04-SS-ON Pop-Up
Overall height: 25 cm
Pop-up height: 9.5 cm
Exposed diameter: 11 cm
Inlet size: 1½"

I-80-04-SS-TC Turf Cup
I-80-04-SS-ON-TC Turf Cup
Overall height: 29 cm
Pop-up height: 9.5 cm
Exposed diameter: 8.9 cm
Inlet size: 1½"

I-80 Turf Cup Kit
P/N 959400SP

I-80 Rubber Cover Kit
P/N 959300SP

I-80 – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Standard Features	3 Featured Options	4 Nozzle Options
I-80-04-SS = 10 cm pop-up	Adjustable arc, stainless steel riser, check valve	**R** = Reclaimed water ID*	**#23 to #53** = Factory-installed nozzle number, no nozzle pack
I-80-04-SS-TC = 10 cm pop-up with turf cup	Adjustable arc, stainless steel riser, check valve, factory-installed turf cup	**B** = BSP inlet threads ** TC reclaimed ID not available*	
I-80-04-SS-ON = 10 cm pop-up	Full-circle, opposing nozzle, stainless steel riser, check valve	**R** = Reclaimed water ID*	**#23 to #53** = Factory-installed nozzle number, no nozzle pack
I-80-04-SS-ON-TC = 10 cm pop-up with turf cup	Full-circle, opposing nozzle, stainless steel riser, check valve, factory-installed turf cup	**B** = BSP inlet threads ** TC reclaimed ID not available*	

Example:
I-80-04-SS-B-25 = 10 cm pop-up, adjustable arc, stainless steel riser, check valve, BSP inlet threads, and factory-installed #25 nozzle
I-80-04-SS-ON-R-B-38 = 10 cm pop-up, stainless steel riser, check valve, opposing nozzle full-circle, reclaimed water ID, BSP inlet threads, and factory-installed #38 nozzle
I-80-04-SS-ON-TC-B-48 = 10 cm pop-up, stainless steel riser, check valve, opposing nozzle full-circle, factory-installed turf cup, BSP inlet threads, and factory-installed #48 nozzle

I-80-ON NOZZLE PERFORMANCE DATA*

Nozzle Set			Pressure		Radius	Flow		Precip mm/hr	
			bar	kPa	m	m³/hr	l/min	■	▲
● Tan 803611	23 Green	● Lt. Blue 315311	3.4	344	19.2	4.91	81.8	13.3	15.4
			4.1	413	19.8	5.22	87.1	13.3	15.4
			4.5	450	20.1	5.45	90.8	13.5	15.6
			4.8	482	20.4	5.66	94.3	13.6	15.7
			5.5	551	20.7	6.04	100.7	14.1	16.2
● Tan 803611	25 Blue	● Lt. Blue 315311	4.5	450	21.6	6.50	108.3	13.9	16.0
			4.8	482	22.3	6.75	112.5	13.6	15.7
			5.5	551	22.6	7.19	119.8	14.1	16.3
			6.2	620	22.9	7.65	127.5	14.6	16.9
			6.9	689	23.5	8.12	135.3	14.7	17.0
● Tan 803611	33 Grey	● Lt. Blue 315311	4.5	450	22.6	7.02	117.0	13.8	15.9
			4.8	482	22.9	7.27	121.1	13.9	16.1
			5.5	551	23.5	7.77	129.5	14.1	16.3
			6.2	620	24.1	8.22	137.0	14.2	16.4
			6.9	689	24.7	8.68	144.6	14.2	16.4
● Tan 803611	38 Red	● Lt. Blue 315311	4.5	450	23.5	7.97	132.9	14.5	16.7
			4.8	482	24.1	8.31	138.5	14.3	16.6
			5.5	551	25.0	8.84	147.3	14.1	16.3
			6.2	620	25.6	9.38	156.3	14.3	16.5
			6.9	689	26.5	9.90	165.0	14.1	16.3
● Tan 803611	43 Dk. Brown	● Lt. Blue 315311	-	-	-	-	-	-	-
			4.8	482	25.3	9.38	156.3	14.7	16.9
			5.5	551	25.9	9.90	165.0	14.8	17.0
			6.2	620	26.5	10.52	175.3	15.0	17.3
			6.9	689	27.1	11.09	184.7	15.1	17.4
● Tan 803611	48 Dk. Green	● Lt. Blue 315311	-	-	-	-	-	-	-
			4.8	482	27.4	10.65	177.5	14.2	16.3
			5.5	551	28.0	11.11	185.1	14.1	16.3
			6.2	620	28.7	11.46	191.0	14.0	16.1
			6.9	689	29.3	12.15	202.5	14.2	16.4
● Tan 803611	53 Dk. Blue	● Lt. Blue 315311	-	-	-	-	-	-	-
			4.8	482	27.7	11.31	188.5	14.7	17.0
			5.5	551	28.3	11.86	197.7	14.8	17.0
			6.2	620	29.0	12.61	210.1	15.0	17.4
			6.9	689	29.6	13.29	221.4	15.2	17.6

I-80 NOZZLES

I-80 NOZZLE PERFORMANCE DATA

Nozzle Set			Pressure		Radius	Flow		Precip mm/hr	
			bar	kPa	m	m³/hr	l/min	■	▲
Orange 803603 ●	23 Green	Lt. Green 315313 ●	3.4	344	19.8	4.59	76.5	11.7	13.5
			4.1	413	20.1	5.02	83.7	12.4	14.3
			4.5	450	20.4	5.43	90.5	13.0	15.0
			4.8	482	20.4	5.50	91.6	13.2	15.2
			5.5	551	21.0	5.88	98.0	13.3	15.4
Orange 803603 ●	25 Blue	Lt. Green 315313 ●	4.5	450	21.6	6.43	107.1	13.7	15.8
			4.8	482	21.9	6.66	110.9	13.8	16.0
			5.5	551	22.3	7.16	119.2	14.5	16.7
			6.2	620	22.6	7.59	126.4	14.9	17.2
			6.9	689	22.9	8.04	134.0	15.4	17.8
Orange 803603 ●	33 Grey	Lt. Green 315313 ●	4.5	450	21.9	6.95	115.8	14.4	16.7
			4.8	482	22.3	7.18	119.6	14.5	16.7
			5.5	551	22.9	7.70	128.3	14.7	17.0
			6.2	620	23.5	8.13	135.5	14.8	17.0
			6.9	689	24.1	8.61	143.5	14.8	17.1
Orange 803603 ●	38 Red	Lt. Green 315313 ●	4.5	450	23.2	7.93	132.1	14.8	17.1
			4.8	482	23.8	8.22	137.0	14.5	16.8
			5.5	551	24.4	8.88	148.0	14.9	17.2
			6.2	620	25.0	9.36	156.0	15.0	17.3
			6.9	689	25.6	9.88	164.7	15.1	17.4
Orange 803603 ●	43 Dk. Brown	Lt. Green 315313 ●	-	-	-	-	-	-	-
			4.8	482	24.7	9.36	156.0	15.4	17.7
			5.5	551	25.3	9.88	164.7	15.4	17.8
			6.2	620	26.2	10.49	174.9	15.3	17.6
			6.9	689	27.1	11.06	184.3	15.0	17.4
Orange 803603 ●	48 Dk. Green	Lt. Green 315313 ●	-	-	-	-	-	-	-
			4.8	482	25.3	10.52	175.3	16.4	19.0
			5.5	551	25.9	10.99	183.2	16.4	18.9
			6.2	620	27.1	11.74	195.7	16.0	18.4
			6.9	689	27.7	12.38	206.3	16.1	18.6
Orange 803603 ●	53 Dk. Blue	Lt. Green 315313 ●	-	-	-	-	-	-	-
			4.8	482	26.5	11.52	191.9	16.4	18.9
			5.5	551	27.1	12.06	201.0	16.4	18.9
			6.2	620	28.0	12.81	213.5	16.3	18.8
			6.9	689	28.7	13.54	225.6	16.5	19.0

● = 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.

I-90

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

The robust I-90 rotor is built for long-distance natural turf applications in large parks, open spaces, and sports fields.

KEY BENEFITS

- PressurePort™ technology, forward-facing triple nozzles (I-90), opposing triple nozzles (I-90-ON) create exceptional nozzle uniformity in part- and full-circle applications
- Part- and full-circle in one model provides flexible installation options and reduces inventory (I-90)
- Drain check valve prevents low-head drainage (up to 2 m of elevation)

OPERATING SPECIFICATIONS

- I-90 nozzle choices: 8
- Radius I-90 ADV: 20.1 to 29.6 m
- Radius I-90 36V: 22.3 to 31.4 m
- Flow I-90 ADV: 6.7 to 19.04 m³/hr; 111.7
- Flow I-90 36V: 6.93 to 18.92 m³/hr; 115.5 to 315.3 l/min
- Recommended pressure range: 5.5 to 8.3 bar; 550 to 830 kPa
- Operating pressure range: 5.5 to 8.3 bar; 550 to 1030 kPa
- Precipitation rate: 19 mm/hr approximately
- Warranty period: 5 years

FACTORY-INSTALLED OPTIONS

- Reclaimed water ID

USER-INSTALLED OPTIONS

- Rubber cover kit #234201
- Turf cup kit #467955
- HSJ prefabricated PVC 1½" (40 mm) swing joints

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

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

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		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m^3/hr	l/min	■	▲
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

I-90-36V NOZZLE PERFORMANCE DATA

Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m^3/hr	l/min	■	▲
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

* 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 NOZZLE

ADV & 36V

I-90

SWING JOINTS

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

KEY BENEFITS

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

Swing Joints
HSJ-0 = Model ¾"
HSJ-1 = Model 1" (25 mm)
HSJ-2 = Model 1¼" (30 mm)
HSJ-3 = Model 1½" (40 mm)

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

1 Model

HSJ-0 = ¾" commercial swing joint

HSJ-1 = 1" (25 mm) heavy-duty swing joint

HSJ-2 = 1¼" (30 mm) heavy-duty swing joint

HSJ-3 = 1½" (40 mm) heavy-duty swing joint

2 Inlet Type (from pipe fitting)

3 = Male NPT

4 = Male Acme*

6 = Male BSP**

7 = Spigot, 10 cm long**

M = Main Acme H-connection ***

P = Main Acme V-connection

* *Not available in HSJ-0 or HSJ-3. Use "M" inlet for HSJ-3.*
** *Not available in HSJ-0.*
*** *Horizontal connection reduces from 40 mm Acme to swing joint size*

3 Outlet Type (to sprinkler inlet)

2 = Male NPT

5 = Male BSP *(not available in HSJ-0)*

6 = Enlarging to 1½" (40 mm) male BSP*

8 = Enlarging to 1½" (40 mm) male Acme*

0 = Male Acme

A = Enlarging/reducing to 30 mm male Acme**

* *Not available in HSJ-0 or HSJ-3*
** *Not available in HSJ-0 and HSJ-2*

4 Outlet Style

2 = Single top-out

4 = Triple top-out

5 Lay Length

8 = 20 cm lay arm*

12 = 30 cm lay arm

18 = 46 cm lay arm**

* *HSJ-0 only*
** *Not available in HSJ-0*

Example:
HSJ-1-3-2-2-12 = HSJ 1" (25 mm) heavy-duty swing joint, 1" (25 mm) NPT inlet, 1" (25 mm) male NPT single top-out outlet, 30 cm lay arm length

SnapLok is a trademark of LASCO Fittings Inc.

SNAPLOK COMBO KITS

These kits are designed for applications that demand sturdy installation due to frequent quick coupler use.

KEY BENEFITS

- Versatile, cross-compatible, and heavy-duty quick coupler
- Highly effective solution for quick-coupler stabilisation
- SnapLok™ design includes:
  - Heavy-duty PVC and brass outlet construction
  - Anti-rotation coupler locking feature
  - Accommodates both rebar and pipe stabilisation
- Solves common quick-coupler stabilisation and unthreading concerns
  - Unique SnapLok outlet with integrated brass thread outlet
- See the HSJ swing joints on **page 47**

Quick Coupler with SnapLok
Equipped HSJ-1 swing joint

SNAPLOK COMBO KITS – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4 + 5

1 Model	2 Inlet Type (from pipe fitting)	3 Outlet Type (to sprinkler inlet)	4 Outlet Style	5 Lay Length
HSJ-1 = 1" (25 mm) heavy-duty swing joint	**6** = Male BSP 	**S** = Male brass NPT SnapLok  **U** = Male brass BSP SnapLok 	**2** = Single top-out 	**12** = 30 cm lay arm  **18** = 46 cm lay arm 

Example:
HSJ-1-6-S-2-12 = HSJ 1" (25 mm) heavy-duty swing joint, 1" (25 mm) BSP inlet, 1" (25 mm) male brass outlet, single top-out, 30 cm lay arm length

HUNTER CHECK VALVES

Eliminate low-head drainage for both rotor and spray shrub systems with the adjustable Hunter Check Valve.

KEY BENEFITS

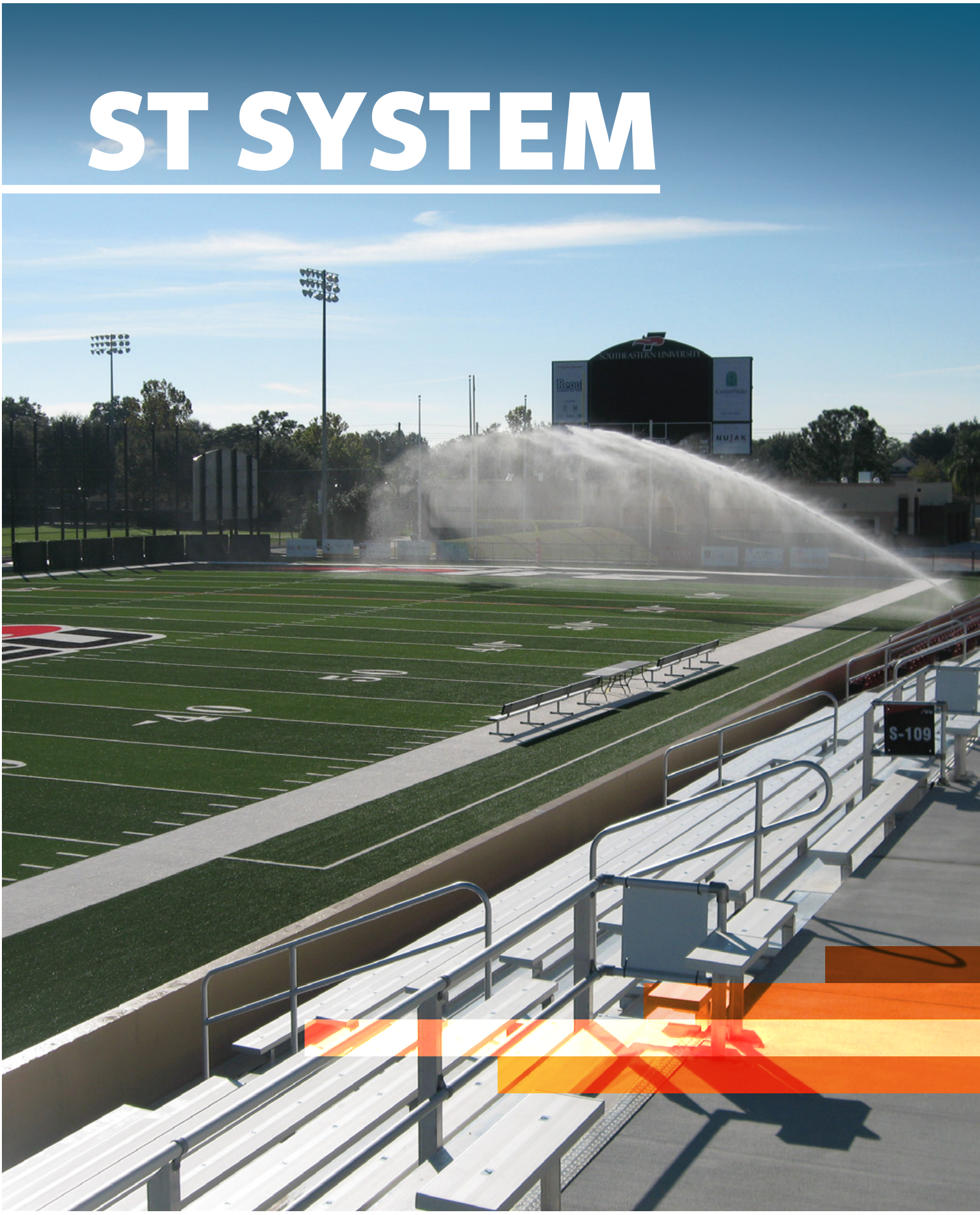
- Adjustment access from top of valve
- Adjusts to compensate for elevational changes up to 11 m
- Variety of inlet and outlet options reduces need for additional fittings
- Meets schedule 80 specifications for durability under high pressure
- Pressure loss charts for HCV products on **page 254**

HUNTER CHECK VALVES

Model	Description
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

HCV
Overall height: 7.5 cm

ST SYSTEM



STK-1 / STK-2

Radius: **31.4 to 36.6 m**
Flow: **16.9 to 20.9 m³/hr; 282.0 to 348 l/min**

Top-quality ST System long-range rotors are dedicated to synthetic turf sports field irrigation.

KEY BENEFITS

- 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°

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
- Warranty period: 5 years component part

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-XX	8 cm pop-up, jar-top cap, adjustable arc, plastic riser, and BSP inlet threads, #73 or #83 pre-installed nozzle
STG-900-XX	8 cm pop-up, top service, adjustable arc, plastic riser, and Acme inlet threads, #73 or #83 pre-installed nozzle

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 the 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" (50 mm) 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" (25 mm) 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

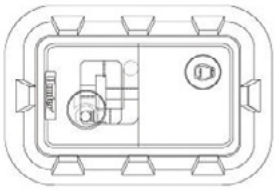
Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲
73 ●	7.0	700	31.4	16.9	282	34.3	39.6
	7.5	750	33.2	17.5	291	31.7	36.6
Orange	8.0	800	35.1	18.1	301	29.4	34.0
83 ●	7.0	700	34.1	19.1	319	32.8	37.9
	7.5	750	35.4	20.0	333	32.0	37.0
Tan	8.0	800	36.6	20.9	348	31.2	36.1

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

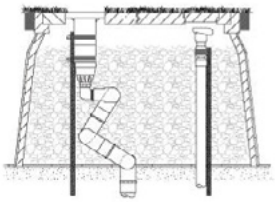
Requires minimum 7.0 bar; 700 kPa dynamic pressure supplied to swing joint inlet.

INSTALLATION DETAILS

STK-1

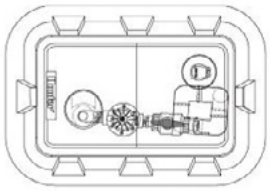


ON-FIELD SIDE

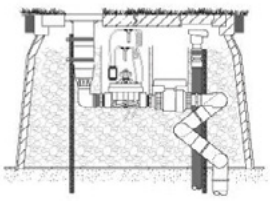


VIEW FROM ON-FIELD SIDE

STK-2



ON-FIELD SIDE



VIEW FROM ON-FIELD SIDE

ST Rotor

ST SWING JOINTS

Multiaxis 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" (40 mm) Acme

* Use P/N 241400 adapter to male BSP threads

Adapter Fitting 239300
Connects 239800 elbow fitting to STG-900 Acme inlet rotor

Adapter fitting 239302
Connects 239800 elbow fitting to ST-90B BSP inlet rotor

ST VALVE SETS

Heavy-duty control valves are 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 50 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. The integrated in-vault design eliminates the need for additional quick-coupler enclosures.

① Quick Coupler

ST-1600 / STK-6V

Radius: **32.5 to 50.3 m**
Flow: **21.8 to 74.2 m³/hr; 364 to 1,237 l/min**

This ST System solution offers cleaning, cooling, and flushing capabilities to prepare synthetic sports fields for play.

KEY BENEFITS

- Nozzle choices: 6
- Standard nozzle: #20
- Nozzle range: #16 to #26
- Nozzle trajectory: 22.5°
- Isolated, grease-lubricated gear drive
- Factory-installed rubber logo cap (ST-1600-B / ST-1600-HSB)
- Movable 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)

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
- Warranty period: 5 years component part

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

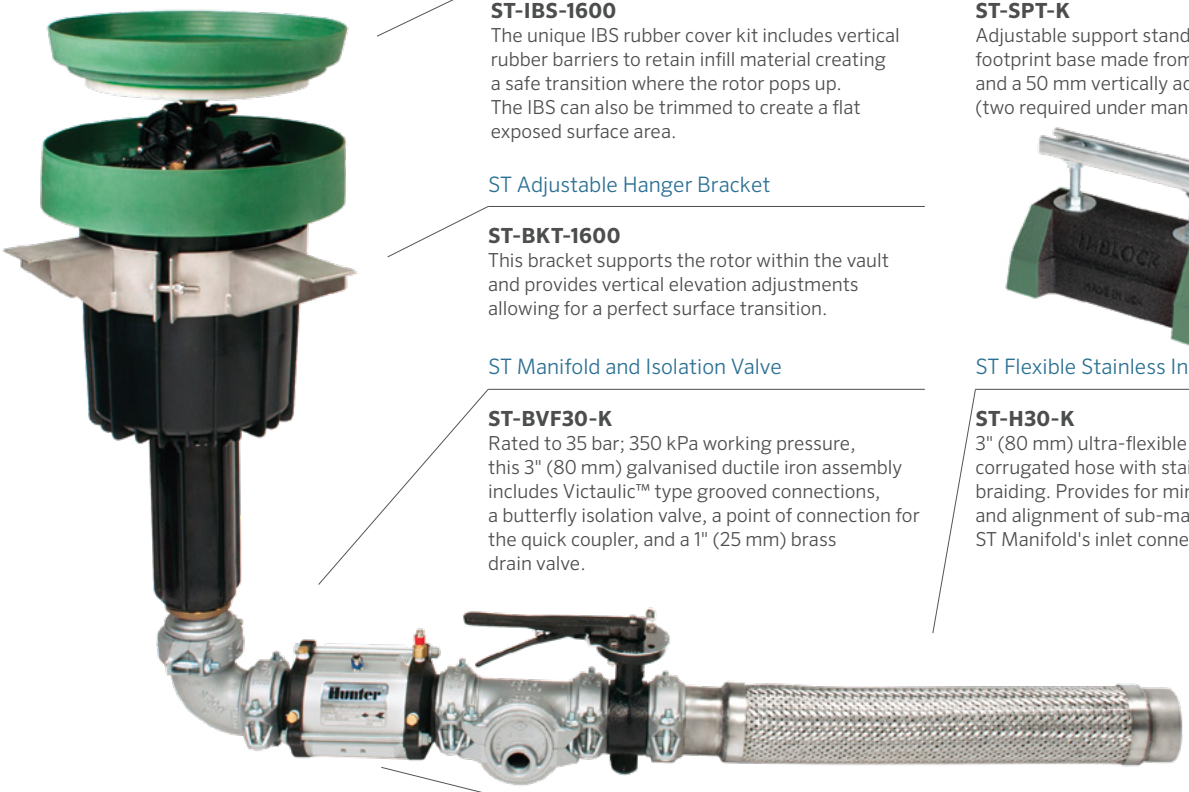
ST-1600-HS-BR (High-Speed)
(Riser-Mounted Model)
Overall height: 22 cm
Diameter: 21 cm
Inlet size: 2" (50 mm) BSP*

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

KIT CONFIGURATIONS

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

ST1600/ST1700 Tool
P/N 517600SP
For gear drive installation and removal



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

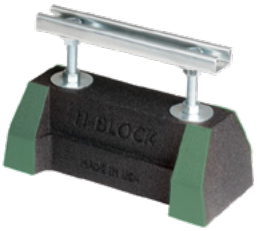
ST-BKT-1600
This bracket supports the rotor within the vault and provides vertical elevation adjustments allowing for a perfect surface transition.

ST Manifold and Isolation Valve

ST-BVF30-K
Rated to 35 bar; 350 kPa working pressure, this 3" (80 mm) galvanised 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 footprint 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.

For Flows Up to 45.0 m³/hr; 757 l/min

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

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)

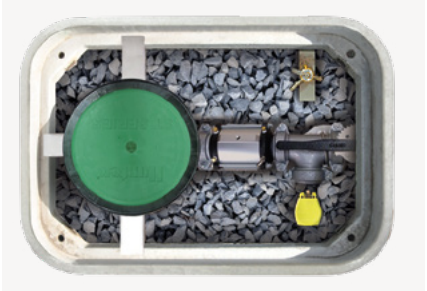
ST-V30-KV: Heavy-duty metal control valve
Valve: 3" (80 mm) grooved Vic type
Opening speed: ST-NDL-K regulates/slows speed
Pressure loss: Ultra-low (0.15 bar; 15 kPa at 65.0 m³/hr; 1,082 l/min)
Manual control: Remote on-off-auto selector and solenoid (not shown)

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

Victaulic is a trademark of Victaulic Company.

ST VAULTS

The heavy-duty tapered fiberglass and polymer-concrete construction includes pre-cast holes for the rotor, quick-coupler valve, and remote manifold assembly.

Quick couplers provide a convenient source of water for washing down spills and water-soluble paint. The 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

ST-1600 SHORT-RADIUS NOZZLE KIT – P/N 959900 PERFORMANCE DATA

Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲
8	3.0	300	20.4	5.29	88.2	25.4	29.3
	4.0	400	21.3	5.29	88.2	23.3	26.8
	5.0	500	21.9	5.79	96.5	24.1	27.8
	6.0	600	22.6	6.20	103.3	24.4	28.1
	7.0	700	23.2	6.63	110.5	24.7	28.5
10	3.0	300	22.6	7.36	122.6	28.9	33.4
	4.0	400	24.7	8.59	143.1	28.2	32.5
	5.0	500	25.6	9.65	160.9	29.5	34.0
	6.0	600	26.2	10.70	178.3	31.1	36.0
	7.0	700	26.8	11.59	193.1	32.2	37.2
12	3.0	300	25.6	10.49	174.9	32.0	37.0
	4.0	400	28.0	12.24	204.0	31.1	36.0
	5.0	500	28.7	13.74	229.0	33.5	38.7
	6.0	600	29.3	14.92	248.7	34.9	40.3
	7.0	700	29.9	16.31	271.8	36.6	42.2
14	3.0	300	27.7	13.79	229.8	35.8	41.4
	4.0	400	31.4	15.74	262.3	31.9	36.9
	5.0	500	32.0	17.76	296.0	34.7	40.0
	6.0	600	32.9	19.42	323.7	35.8	41.4
	7.0	700	33.5	21.01	350.1	37.4	43.2

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

* All radius measurements taken at standard rotation speeds. Slowing rotation to minimum rotation speed will add 3+ metres to radius.

ST-1700V

Radius: **32 to 48 m**
Flow: **21.0 to 58.8 m³/hr; 350 to 980 l/min**

This ST System includes a valve-in-head design for faster installation and maintenance.

KEY BENEFITS

- Nozzle choices: 5
- Standard nozzle: #20
- Nozzle range: #16 to #24
- Nozzle trajectory: 25°
- Total-Top-Service (TTS) design provides convenient no-dig servicing
- Valve-in-head configuration simplifies installation
- Isolated, grease-lubricated gear drive
- Factory-installed rubber logo cap
- Arc adjustment: movable stops for left/right arc adjustment
- Ratcheting nozzle turret

OPERATING SPECIFICATIONS

- Radius: 32 to 48 m
- Flow: 21.0 to 58.8 m³/hr; 350 to 980 l/min
- Operating pressure range: 4.0 to 8.0 bar; 400 to 800 kPa
- Arc setting: 40° to non-reversing 360°
- Speed of rotation: 80 seconds at 6.0 bar; 600 kPa (single 180° sweep)
- Precipitation rate: 45 mm/hr approximately
- Warranty period: 5 years component part

ST-1700V
Overall height: 68 cm
Pop-up height: 13 cm
Top: 33 cm x 39 cm
Inlet size: 2" BSP*

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

ST-1700V NOZZLE PERFORMANCE DATA

Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲
16 ● Black	4.0	400	32.0	21.0	350	41.0	47.3
	5.0	500	35.0	22.7	379	37.1	42.8
	6.0	600	37.0	25.9	432	37.8	43.7
	7.0	700	38.5	28.1	469	38.0	43.9
	8.0	800	40.0	30.4	508	38.1	43.9
18 ● Black	4.0	400	34.0	24.3	405	42.0	48.5
	5.0	500	36.5	26.1	435	39.2	45.3
	6.0	600	38.5	28.8	481	38.9	44.9
	7.0	700	40.0	31.1	519	38.9	44.9
	8.0	800	42.0	33.8	564	38.3	44.3
20 ● Black	4.0	400	35.0	30.4	508	49.7	57.4
	5.0	500	39.0	34.3	572	45.1	52.0
	6.0	600	41.0	37.2	621	44.3	51.1
	7.0	700	43.0	40.9	681	44.2	51.0
	8.0	800	45.0	44.0	733	43.4	50.1
22 ● Black	4.0	400	35.5	34.9	582	55.4	63.9
	5.0	500	39.0	39.5	659	51.9	60.0
	6.0	600	43.0	42.9	715	46.4	53.6
	7.0	700	45.5	46.8	780	45.2	52.2
	8.0	800	47.0	50.4	841	45.7	52.7
24 ● Black	4.0	400	37.0	40.2	671	58.8	67.9
	5.0	500	40.5	45.6	761	55.6	64.2
	6.0	600	44.0	50.4	840	52.1	60.1
	7.0	700	47.0	54.5	908	49.3	57.0
	8.0	800	48.0	58.8	980	51.0	58.9

ST-1700V Valve Tool
P/N 10000100SP
For installation and removal of inlet valve

Snap-Ring Tool
P/N 251000SP

ST1600/ST1700 Tool
P/N 517600SP
For gear drive installation and removal

ST-1200BR

Radius: **20.4 to 35.1 m**
Flow: **6.13 to 29.76 m³/hr; 102.1 to 495.9 l/min**

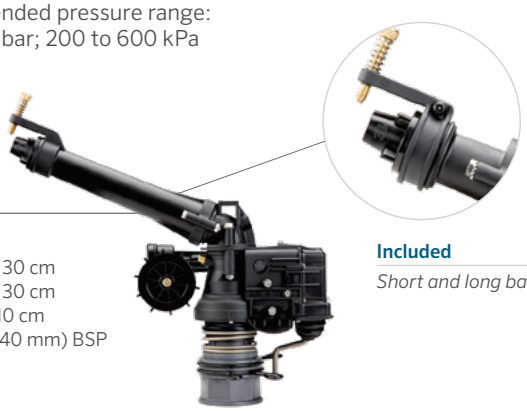
The cost-effective ST-1200BR is the ideal riser-mounted solution for pastures, corrals, arenas, dust control, and wash-down watering.

KEY BENEFITS

- Nozzle choices: 5 (included)
- Standard nozzle: #12
- Nozzle range: #10 to #18
- Nozzle trajectory: 22.5°
- Isolated, grease-lubricated gear drive
- Nozzle barrels: short and long (included)
- Movable stops (left and right) arc adjustment
- Arc setting: 40° to non-reversing 360°
- Ratcheting nozzle turret

OPERATING SPECIFICATIONS

- Radius: 20.4 m to 35.1 m
- Flow: 6.13 to 29.76 m³/hr; 102.1 to 495.9 l/min
- Recommended pressure range: 2.0 to 6.0 bar; 200 to 600 kPa



ST-1200BR
Overall height: 30 cm
Overall length: 30 cm
Overall width: 10 cm
Inlet size: 1½" (40 mm) BSP

Included
Short and long barrels

ST-1200BR NOZZLE PERFORMANCE DATA

Nozzle	Pressure Bar	Pressure kPa	Radius m	Flow m³/hr	Flow l/min	Precip in/hr ■	Precip in/hr ▲
10 ● Black	2.0	200	20.4	6.13	102.2	29.4	34.0
	3.0	300	22.9	7.45	124.2	28.5	32.9
	4.0	400	25.9	8.65	144.2	25.8	29.8
	5.0	500	27.4	9.88	164.7	26.3	30.3
12 ● Black	2.0	200	20.7	7.63	127.2	35.5	41.0
	3.0	300	23.8	9.36	156.0	33.1	38.2
	4.0	400	26.8	10.81	180.2	30.1	34.7
	5.0	500	29.9	12.06	201.0	27.0	31.2
14 ● Black	2.0	200	21.3	10.38	173.0	45.6	52.7
	3.0	300	26.2	12.72	212.0	37.0	42.8
	4.0	400	30.5	14.70	244.9	31.6	36.5
	5.0	500	33.5	16.47	274.4	29.3	33.8
16 ● Black	2.0	200	21.9	13.52	225.2	56.1	64.8
	3.0	300	28.3	16.58	276.3	41.3	47.7
	4.0	400	31.4	19.15	319.1	38.9	44.9
	5.0	500	35.4	18.38	306.2	29.4	33.9
18 ● Black	3.0	300	29.0	21.01	350.1	50.1	57.9
	4.0	400	31.7	24.31	405.0	48.4	55.9
	5.0	500	33.8	27.15	452.4	47.4	54.8
	6.0	600	35.1	29.76	495.9	48.4	55.9

HIGH-FLOW SWING JOINTS

These durable swing joints are easy to position and ensure correct rotor installation height.

KEY BENEFITS

- Heavy-duty, high-flow swing joints with O-ring seals
- HSJ-4 for high-flow I-90 and ST-90 rotors with 50 mm (2") inlets
- HSJ-5 for high-flow ST-1600HSB rotor with 80 mm (3") inlet
- Available in popular inlet and outlet configurations

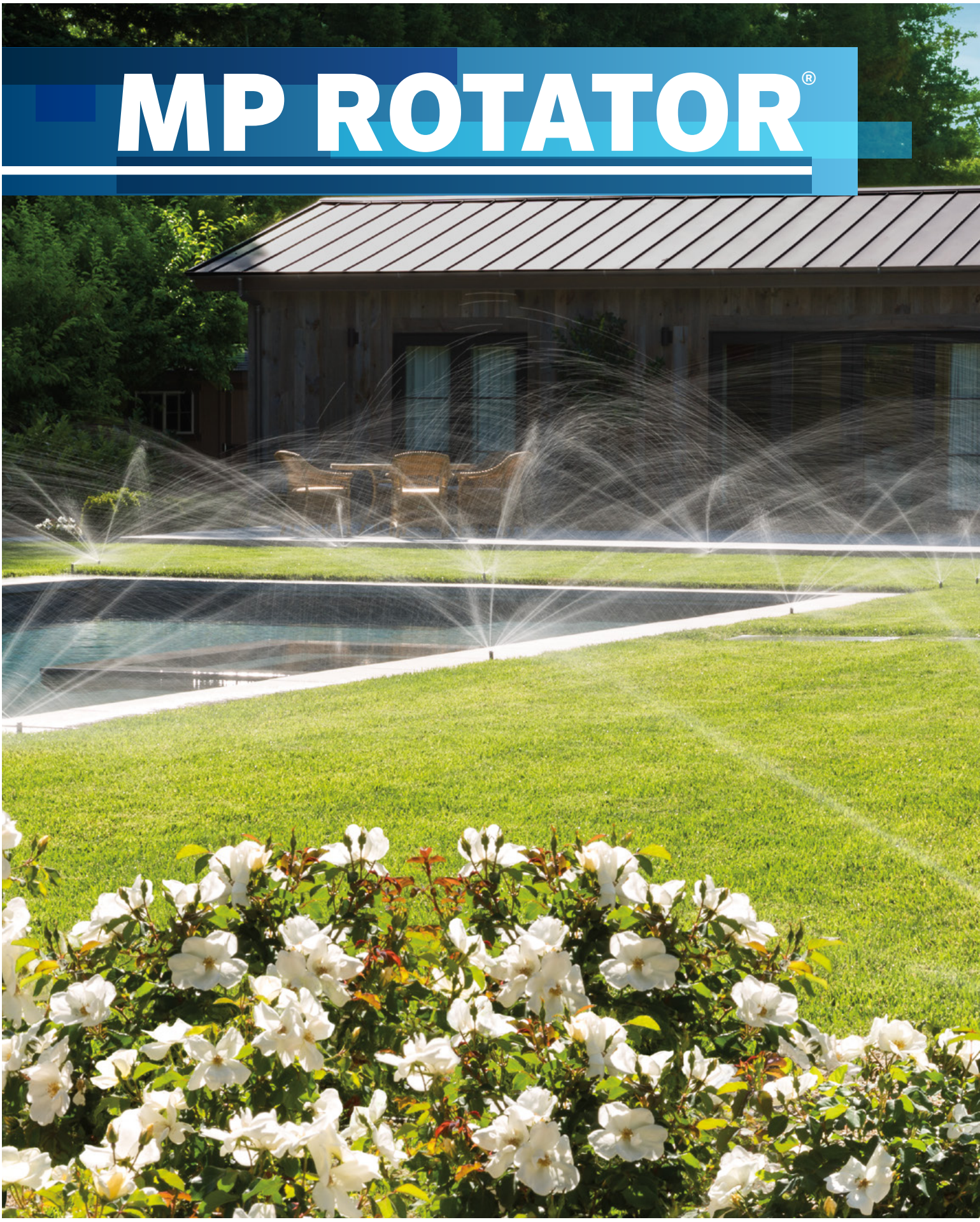
High-Flow Swing Joints
HSJ-4 = Model 50 mm
HSJ-5 = Model 80 mm

HSJ HIGH-FLOW SWING JOINT – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Inlet Type (from pipe fitting)	3 Outlet Type (to sprinkler inlet)	4 Outlet Style	5 Lay Length
HSJ-4 = 50 mm heavy-duty swing joint	**6** = 2" (50 mm) male BSP, horizontal side connection	**D** = 1½" (40 mm) male BSP	**2** = Single top-out	**12** = 12" (30 cm) lay arm
HSJ-5 = 80 mm heavy-duty swing joint	**6** = 3" (80 mm) male BSP, horizontal side connection	**E** = 2" (50 mm) male BSP	**2** = Single top-out	**12** = 12" (30 cm) lay arm

Examples:
HSJ-4-6D-212 = HSJ 50 mm heavy-duty swing joint, 50 mm male BSP horizontal side connection to piping, 40 mm male BSP outlet to sprinkler, single top-out, and 30 cm lay arm
HSJ-5-6E-212 = HSJ 80 mm heavy-duty swing joint, 80 mm male BSP horizontal side connection to piping, 50 mm male BSP outlet to sprinkler, single top-out, and 30 cm lay arm

MP ROTATOR®



ADVANCED FEATURES

AUTOMATIC MATCHED PRECIPITATION

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

DOUBLE-POP FEATURE

MP Rotator nozzles pop up from their protected position only after the riser is fully extended, providing superior defense against dirt and debris.

HIGH DISTRIBUTION UNIFORMITY

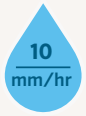
The multiple streams of the MP Rotator target all areas of the landscape evenly, resulting in superior uniformity over traditional spray nozzles and better wind resistance.

LOW PRECIPITATION RATE

Since the majority of soils have a water infiltration rate of less than 25 mm/hr, irrigating at a low precipitation rate is essential to reduce runoff and increase efficiency.

The Standard MP Rotator applies water at 10 mm/hr, while the MP800 has a precipitation rate of 20 mm/hr. Either choice will avoid runoff, save water, and prevent erosion.

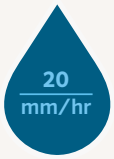
STANDARD
MP Rotator



2.5–10.7 m

- Maximum water efficiency
- Slowest precipitation rate

MP800



1.8–4.9 m

- Small spaces
- Tight water windows

MP STRIPS

1.5 m wide

- Rectangular spaces
- Pair with either option

ECO-ROTATOR

Radius: **2.5 to 9.1 m**

This compact sprinkler comes with a pre-installed MP Rotator® nozzle that provides up to 30% more water savings over traditional spray nozzles.

KEY BENEFITS

- Automatic matched precipitation for simplified irrigation design and flexibility
- High distribution uniformity for a healthy landscape and maximum water efficiency
- Double-pop feature protects the nozzle from external debris
- Large inlet filter screen protects the nozzle from internal debris in the system
- Heavy-duty spring for consistent riser retraction

ADDITIONAL FEATURES

- Wind-resistant, multi-stream technology prevents misting
- Adjustable arc only when MP Rotator is running for vandal resistance
- Colour-coded for easy field identification
- Two-piece ratcheting riser
- Check valve option eliminates low-head drainage

OPERATING SPECIFICATION

- Low precipitation rate of approximately 10 mm/hr — lowest in the industry
- Radius range: 2.5 to 9.1 m
- Operational pressure range: 1.7 to 3.8 bar; 170 to 380 kPa
- Recommended operating pressure: 2.8 bar; 280 kPa
- Warranty period: 2 years

USER-INSTALLED OPTIONS

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

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

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	0.08	1.29	12	13	7.6	0.16	2.69	11	13
	2.0	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**
	3.0	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
	2.0	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**
	3.0	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
	2.0	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**
	3.0	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
360°	1.7	170	-	-	-	-	-	4.9	0.28	4.55	11	13	7.6	0.66	10.92	11	13
	2.0	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**
	3.0	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 = Recommended pressure

Eco-Rotator

MP ROTATOR®

Radius: **2.5 to 10.7 m**

10 mm/hr

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

KEY BENEFITS

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

ADDITIONAL FEATURES

- Wind-resistant, multi-stream technology prevents misting
- Adjustable arc only when running for vandal resistance
- Removable filter screen prevents nozzle from clogging
- Colour-coded for easy identification

OPERATING SPECIFICATIONS

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

OPTIONS

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

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°	
MPLCS-515 = Left corner strip, 1.5 m x 4.6 m	
MPRCS-515 = Right corner strip, 1.5 m x 4.6 m	
MPSS-530 = Side strip, 1.5 m x 9.1 m	
MP-CORNER = 2.5 to 4.5 m radius, adjustable from 45° to 105°	

MP1000: 2.5 to 4.5 m radius

MP1000-90
90° to 210°

MP1000-210
210° to 270°

MP1000-360
360°

MP2000: 4.0 to 6.4 m radius

MP2000-90
90° to 210°

MP2000-210
210° to 270°

MP2000-360
360°

MP3000: 6.7 to 9.1 m radius

MP3000-90
90° to 210°

MP3000-210
210° to 270°

MP3000-360
360°

MP3500: 9.4 to 10.7 m radius

MP3500-90
90° to 210°

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
	2.0	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**
	3.0	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
	2.0	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**
	3.0	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
	2.0	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**
	3.0	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
	2.0	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**
	3.0	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
	2.0	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**
	3.0	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 Pro-Spray PRS40, pressure-regulated spray body at 2.8 bar; 280 kPa.

Works best with Pro-Spray PRS40

For Pro-Spray PRS40 information see **page 67**

Smart Approved WaterMark

Smart WaterMark
Recognised as a responsible water-saving tool

Compatible with:

Pro-Spray PRS40
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

MP3500

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 Pro-Spray PRS40, pressure-regulated spray body at 2.8 bar; 280 kPa.

MP ROTATOR PERFORMANCE DATA

- ○ **MPLCS-515:** Ivory, MP Left Corner Strip
- ● **MPRCS-515:** Copper, MP Right Corner Strip
- ● **MPSS-530:** 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

MP Strips

MPLCS-515
Left Corner Strip
1.5 x 4.6 m

MPRCS-515
Right Corner Strip
1.5 x 4.6 m

MPSS-530
Side Strip
1.5 x 9.1 m

Notes:
To match the precipitation rate of Standard MP Rotator models, use single-row or triangular spacing. To match the MP800, use rectangular spacing.

See **page 239** for precipitation rate calculation.

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

MP-CORNER
Corner
2.5 to 4.5 m

Male Threaded

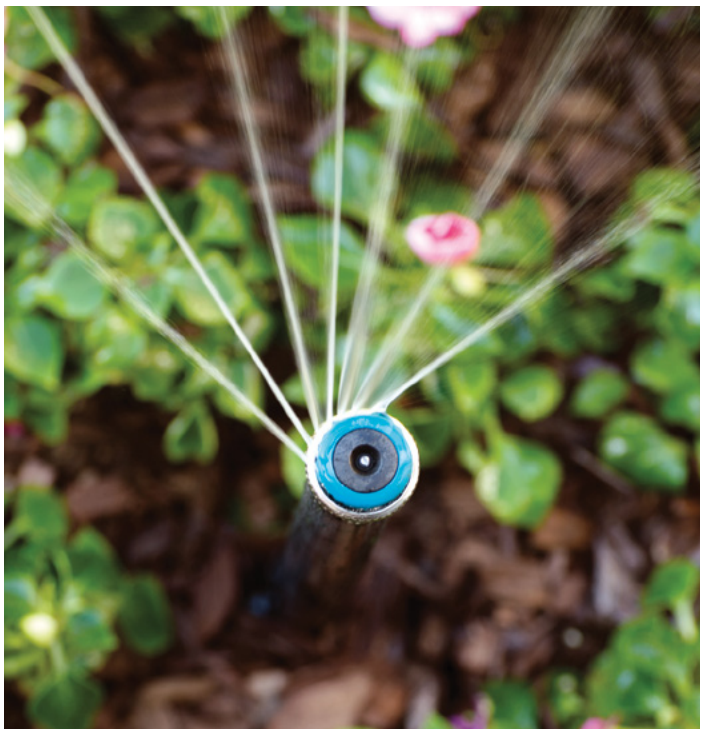
MP-HT
Male Threaded

MP Accessories

MPTOOL
Adjusts all MP Rotator models

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

MP Corner



MP Tool for easy adjustments

MP ROTATOR® 800

Radius: **1.8 to 4.9 m**

20 mm/hr

The MP800 offers a higher precipitation rate perfect for small spaces and spray retrofits.

KEY BENEFITS

- Precipitation rate of approximately 20 mm/hr for spray retrofit applications
- Automatic matched precipitation for simplified irrigation design and flexibility
- Double-pop feature protects the nozzle from external debris
- High distribution uniformity for a healthy landscape with maximum water efficiency

ADDITIONAL FEATURES

- Wind-resistant, multi-stream technology prevents misting
- Adjustable arc only when MP Rotator nozzle is running for vandal resistance
- Removable filter screen prevents nozzle clogging
- Colour-coded for easy identification

OPERATING SPECIFICATIONS

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

OPTIONS

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

MP800SR: 1.8 m to 3.5 m radius

MP800SR-90
90° to 210°

MP800SR-360
360°

MP815: 2.5 m to 4.9 m radius

MP815-90
90° to 210°

MP815-210
210° to 270°

MP815-360
360°

Compatible with:

HY Filter
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PRS30 and PRS40
Page 66 and Page 67

MP800SR-90

MP815-90

MP ROTATOR PERFORMANCE DATA

MP800SR

Radius: 1.8 to 3.5 m
Adjustable Arc and Full-Circle
- 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 Pro-Spray PRS40, pressure-regulated at 2.8 bar; 280 kPa.

MP ROTATOR PERFORMANCE DATA

MP815

Radius: 2.5 to 4.9 m
Adjustable Arc and Full-Circle
- Maroon and Grey: 90° to 210°
- Lt. Blue and Grey: 210° to 270°
- Olive and Grey: 360°

Arc	Pressure bar	Pressure kPa	Radius m	Flow m³/hr	Flow l/min	Precip. mm/hr ■	Precip. mm/hr ▲
90°	2.1	210	4.3	0.10	1.59	21	24
	2.5	250	4.5	0.10	1.74	21	24
	2.8	**280**	**4.6**	**0.11**	**1.85**	**21**	**24**
	3.1	310	4.8	0.12	1.97	21	24
	3.5	350	4.9	0.12	2.08	21	24
	3.8	380	4.9	0.13	2.20	22	25
180°	2.1	210	4.0	0.17	2.84	21	25
	2.5	250	4.3	0.20	3.26	21	24
	2.8	**280**	**4.5**	**0.21**	**3.52**	**21**	**24**
	3.1	310	4.6	0.22	3.63	21	24
	3.5	350	4.8	0.24	4.01	21	24
	3.8	380	4.9	0.25	4.20	21	24
210°	2.1	210	4.0	0.20	3.33	21	25
	2.5	250	4.3	0.22	3.63	20	23
	2.8	**280**	**4.5**	**0.25**	**4.16**	**21**	**24**
	3.1	310	4.6	0.26	4.39	21	25
	3.5	350	4.8	0.28	4.69	21	24
	3.8	380	4.9	0.30	4.92	21	24
270°	2.1	210	4.0	0.26	4.31	22	25
	2.5	250	4.3	0.28	4.69	20	23
	2.8	**280**	**4.5**	**0.32**	**5.30**	**21**	**24**
	3.1	310	4.6	0.33	5.56	21	24
	3.5	350	4.8	0.35	5.83	20	23
	3.8	380	4.9	0.37	6.09	20	23
360°	2.1	210	4.0	0.35	5.75	22	25
	2.5	250	4.3	0.39	6.43	21	24
	2.8	**280**	**4.5**	**0.42**	**7.08**	**21**	**24**
	3.1	310	4.6	0.45	7.57	21	25
	3.5	350	4.8	0.48	8.06	21	24
	3.8	380	4.9	0.51	8.55	21	25

SPRAYS & NOZZLES

SPRAYS
ADVANCED FEATURES

STRENGTH & DURABILITY

CO-MOULDED WIPER SEAL

Moulded with two types of chemical- and chlorine-resistant materials, this multi-function wiper seal reduces flow-by, allowing more heads on one zone, and prevents debris from entering the seal, reducing riser stick-ups.

FLOGUARD™ TECHNOLOGY

In the event of a missing nozzle, FloGuard technology reduces the flow of water from the riser to a 1.9 l/min (3 m tall) indicator stream, eliminating water waste and preventing landscape erosion while providing a visual indicator for repair.

HEAVY-DUTY SPRING

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

CHECK VALVE

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

PRESSURE-REGULATED TO 2.1 & 2.8 BAR

Pressure-regulated Pro-Spray pop-ups optimise the performance of the nozzle, reducing flow rates and preventing misting. The PRS30 (brown) regulates pressures to 2.1 bar; 210 kPa for spray nozzles. The PRS40 (grey) is designed for the efficient MP Rotator nozzle at 2.8 bar; 280 kPa.

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.

PRO-SPRAY **COMPETITOR**

INNOVATIVE SEAL DESIGN

Pedestrian traffic, landscape equipment, temperature changes, and cycling pressures can cause body caps to loosen. The Pro-Spray cap can withstand more than one full 360° turn and remain sealed at any pressure, preventing excess runoff.

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

SPRAY BODY COMPARISON CHART

QUICK SPECS		 PS ULTRA	 PRO-SPRAY®	 PRS30	 PRS40
		Good	Better	Best for Spray Nozzles	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, 8A, 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-MOULDED WIPER SEAL			●	●	●
RECLAIMED CAP			●	●	●
PRESSURE REGULATION				●	●
FLOGUARD™ TECHNOLOGY				●	●
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

The PS Ultra is a compact, slim-line spray sprinkler with the option of pre-installed nozzles for faster installation.

KEY BENEFITS

- Enhanced cap for more durability, easier handling, and extended riser seal life
- Large inlet filter screen for increased debris resistance
- Check valve option eliminates low-head drainage
- Heavy-duty spring for consistent riser retraction

ADDITIONAL FEATURES

- Directional flush plug design for cleaner installation
- Two-piece ratcheting riser
- 5 cm and 10 cm models can retrofit into older style PS models
- Compatible with all female-threaded nozzles

OPERATING SPECIFICATIONS

- Operational pressure range: 1.4 to 4.8 bar; 140 to 480 kPa
- Warranty period: 2 years

FACTORY-INSTALLED OPTIONS

- Flush plug (large filter screen not included)
- Nozzles 2.4 m, 3.0 m, 3.7 m, 4.6 m, 5.2 m, 1.5 x 9.0 m side strip
- Large inlet filter screen included in 10 cm and 15 cm pre-installed nozzle models

USER-INSTALLED OPTIONS

- Check valve installs in filter screen for 10 cm and 15 cm models (up to 2 m of elevation; P/N 462237SP)
- Large inlet filter screen (P/N 162900SP)
- Shutoff nozzle (P/N 916400SP)

PSU-02
Retracted height: 12 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 + 3 (OPTIONAL)

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	**8A** = 2.4 m adjustable nozzle	
PSU-06 = 15 cm pop-up	**10A** = 3.0 m adjustable nozzle	
	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 *(not available for PSU-06)*	

Examples:
PSU-04 - 15A = 10 cm pop-up, with a 4.6 m adjustable nozzle
PSU-02 - 5SS = 5 cm pop-up, with a 1.5 m x 9.0 m side strip
PSU-06 - 10A = 15 cm pop-up, with a 3.0 m adjustable nozzle
PSU-04 - 12A - NFO = 10 cm pop-up, with a 3.7 m adjustable nozzle, nozzle filter only

PS ULTRA STANDARD NOZZLES PERFORMANCE DATA

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

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		8A					10A					12A				
			Radius	Flow		Precip mm/hr		Radius	Flow		Precip mm/hr		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲	m	m³/hr	l/min	■	▲	m	m³/hr	l/min	■	▲
45°	1.0	100	2.0	0.04	0.62	77	89	2.6	0.04	0.68	49	56	3.2	0.04	0.73	34	40
	1.5	150	2.2	0.04	0.72	72	83	2.8	0.05	0.80	49	57	3.4	0.06	0.97	40	46
	2.1	**210**	**2.4**	**0.05**	**0.83**	**67**	**77**	**3.0**	**0.06**	**0.94**	**49**	**56**	**3.7**	**0.07**	**1.23**	**44**	**51**
	2.5	250	2.6	0.05	0.91	63	73	3.2	0.06	1.06	48	56	3.9	0.09	1.44	46	54
	3.0	300	2.9	0.06	1.01	59	68	3.5	0.07	1.18	47	54	4.1	0.10	1.68	48	56
90°	1.0	100	2.0	0.07	1.24	77	89	2.6	0.08	1.35	49	56	3.2	0.09	1.46	34	40
	1.5	150	2.2	0.09	1.44	72	83	2.8	0.10	1.61	49	57	3.4	0.12	1.93	40	46
	2.1	**210**	**2.4**	**0.10**	**1.65**	**67**	**77**	**3.0**	**0.11**	**1.89**	**49**	**56**	**3.7**	**0.15**	**2.46**	**44**	**51**
	2.5	250	2.6	0.11	1.82	63	73	3.2	0.13	2.11	48	56	3.9	0.17	2.88	46	54
	3.0	300	2.9	0.12	2.02	59	68	3.5	0.14	2.37	47	54	4.1	0.20	3.36	48	56
120°	1.0	100	2.0	0.10	1.66	77	89	2.6	0.11	1.80	49	56	3.2	0.12	1.94	34	40
	1.5	150	2.2	0.11	1.92	72	83	2.8	0.13	2.14	49	57	3.4	0.15	2.58	40	46
	2.1	**210**	**2.4**	**0.13**	**2.20**	**67**	**77**	**3.0**	**0.15**	**2.52**	**49**	**56**	**3.7**	**0.20**	**3.28**	**44**	**51**
	2.5	250	2.6	0.15	2.43	63	73	3.2	0.17	2.82	48	56	3.9	0.23	3.84	46	54
	3.0	300	2.9	0.16	2.69	59	68	3.5	0.19	3.16	47	54	4.1	0.27	4.48	48	56
180°	1.0	100	2.0	0.15	2.49	77	89	2.6	0.16	2.71	49	56	3.2	0.17	2.91	34	40
	1.5	150	2.2	0.17	2.87	72	83	2.8	0.19	3.21	49	57	3.4	0.23	3.86	40	46
	2.1	**210**	**2.4**	**0.20**	**3.30**	**67**	**77**	**3.0**	**0.23**	**3.78**	**49**	**56**	**3.7**	**0.30**	**4.92**	**44**	**51**
	2.5	250	2.6	0.22	3.65	63	73	3.2	0.25	4.23	48	56	3.9	0.35	5.76	46	54
	3.0	300	2.9	0.24	4.03	59	68	3.5	0.28	4.73	47	54	4.1	0.40	6.71	48	56
240°	1.0	100	2.0	0.20	3.32	77	89	2.6	0.22	3.61	49	56	3.2	0.23	3.88	34	40
	1.5	150	2.2	0.23	3.83	72	83	2.8	0.26	4.28	49	57	3.4	0.31	5.15	40	46
	2.1	**210**	**2.4**	**0.26**	**4.40**	**67**	**77**	**3.0**	**0.30**	**5.03**	**49**	**56**	**3.7**	**0.39**	**6.56**	**44**	**51**
	2.5	250	2.6	0.29	4.86	63	73	3.2	0.34	5.64	48	56	3.9	0.46	7.68	46	54
	3.0	300	2.9	0.32	5.38	59	68	3.5	0.38	6.31	47	54	4.1	0.54	8.95	48	56
270°	1.0	100	2.0	0.22	3.73	77	89	2.6	0.24	4.06	49	56	3.2	0.26	4.37	34	40
	1.5	150	2.2	0.26	4.31	72	83	2.8	0.29	4.82	49	57	3.4	0.35	5.80	40	46
	2.1	**210**	**2.4**	**0.30**	**4.95**	**67**	**77**	**3.0**	**0.34**	**5.66**	**49**	**56**	**3.7**	**0.44**	**7.38**	**44**	**51**
	2.5	250	2.6	0.33	5.47	63	73	3.2	0.38	6.34	48	56	3.9	0.52	8.65	46	54
	3.0	300	2.9	0.36	6.05	59	68	3.5	0.43	7.10	47	54	4.1	0.60	10.07	48	56
360°	1.0	100	2.0	0.30	4.97	77	89	2.6	0.32	5.41	49	56	3.2	0.35	5.83	34	40
	1.5	150	2.2	0.34	5.75	72	83	2.8	0.39	6.43	49	57	3.4	0.46	7.73	40	46
	2.1	**210**	**2.4**	**0.40**	**6.61**	**67**	**77**	**3.0**	**0.45**	**7.55**	**49**	**56**	**3.7**	**0.59**	**9.84**	**44**	**51**
	2.5	250	2.6	0.44	7.29	63	73	3.2	0.51	8.45	48	56	3.9	0.69	11.53	46	54
	3.0	300	2.9	0.48	8.07	59	68	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		15A Radius	15A Flow		15A Precip mm/hr		17A Radius	17A Flow		17A Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲	m	m³/hr	l/min	■	▲
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		Width x Length	Flow	
	bar	kPa	m	m³/hr	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™

Meet the strongest, most versatile spray body in the industry.

KEY BENEFITS

- Industry's strongest spray body for years of reliable performance
- Co-moulded wiper seal made from chemical- and chlorine-resistant materials
- Innovative seal design prevents cap-to-body leaks
- Heavy-duty spring for consistent riser retraction
- Check valve option eliminates low-head drainage

ADDITIONAL FEATURES

- Directional flush plug design for cleaner installation
- Interchangeable components for easier servicing, retrofits, and upgrades

OPERATING SPECIFICATIONS

- Operational pressure range: 1.0 to 7.0 bar; 100 to 700 kPa
- Warranty period: 5 years

FACTORY-INSTALLED OPTIONS

- Check valve available for 10 cm, 15 cm, and 30 cm models (up to 3 m of elevation)
- Reclaimed water ID cap

USER-INSTALLED OPTIONS

- Drain check valve (up to 3 m of elevation; P/N 437400SP)
- Reclaimed water ID cap (P/N 458520SP)
- Snap-on reclaimed cover (P/N PROS-RC-CAP-SP)
- Shutoff cap (P/N 213600SP)
- Shutoff nozzle (P/N 916400SP)

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)*
PROS-03 = 7.5 cm pop-up	**R** = Factory-installed reclaimed body cap (shrub moulded in purple)
PROS-04 = 10 cm pop-up	
PROS-06 = 15 cm pop-up (no side inlet)	
PROS-12 = 30 cm pop-up (no side inlet)	

PRO-SPRAY (SIDE INLET) MODELS

Model
PROS-06-SI = 15 cm pop-up with side inlet
PROS-12-SI = 30 cm pop-up with side inlet

Examples:
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

To maintain consistent performance and reduce water waste, the PRS30 is pressure-regulated to an optimal pressure of 2.1 bar; 210 kPa.

KEY BENEFITS

- Industry's strongest spray body for years of reliable performance
- Pressure-regulated to 2.1 bar; 210 kPa for optimal nozzle performance
- Brown cap for easy field identification
- Co-moulded wiper seal made from chemical- and chlorine-resistant materials
- Innovative seal design prevents cap-to-body leaks, even with a loose cap
- FloGuard technology option eliminates water waste in the event of a missing nozzle

ADDITIONAL FEATURES

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

OPERATING SPECIFICATIONS

- Operational pressure range: 1.0 to 7.0 bar; 100 to 700 kPa
- Warranty period: 5 years

FACTORY-INSTALLED OPTIONS

- Check valve available for 10 cm, 15 cm, and 30 cm models (up to 4.3 m of elevation)
- Reclaimed water identification
- FloGuard technology available for check valve models

USER-INSTALLED OPTIONS

- Check valve (up to 4.3 m of elevation; P/N 437400SP)
- Reclaimed water ID cap (P/N 458560SP)
- Snap-on reclaimed cover (P/N PROS-RC-CAP-SP)
- Shutoff cap (P/N 213600SP)
- Shutoff nozzle (P/N 916400SP)

PRS30 Reclaimed

PRS30 models include optional factory-installed purple reclaimed caps.

FloGuard Technology

[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"

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"

PRS30 – SPECIFICATION BUILDER: ORDER 1 + 2 + 3

1 Model	2 Feature Options	3 Specialty Options
PROS-00-PRS30 = 2.1 bar regulated shrub adapter	**(blank)** = No option	**(blank)** = No option
PROS-04-PRS30 = 2.1 bar regulated 10 cm pop-up	**CV** = Factory-installed drain check valve *(pop-up models only)*	**R** = Factory-installed reclaimed body cap
PROS-06-PRS30 = 2.1 bar regulated 15 cm pop-up		**F** = FloGuard technology
PROS-12-PRS30 = 2.1 bar regulated 30 cm pop-up		**F-R** = FloGuard technology with reclaimed body cap

PRS30 (SIDE INLET) MODELS

Model
PROS-06-SI-PRS30 = 2.1 bar regulated 15 cm pop-up with side inlet
PROS-12-SI-PRS30 = 2.1 bar regulated 30 cm pop-up with side inlet

Examples:
PROS-06-SI-PRS30 = 15 cm pop-up with side inlet 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-F-R = 30 cm pop-up regulated at 2.1 bar; 210 kPa, drain check valve, and FloGuard technology with reclaimed body cap

Compatible with:

Pro Adjustable Nozzles
Page 70
Pro-Spray Fixed Arc Nozzles
Page 74

PRS40

To optimise MP Rotator performance, the PRS40 is pressure-regulated to 2.8 bar; 280 kPa.

KEY BENEFITS

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

ADDITIONAL FEATURES

- Directional flush plug design for cleaner installation
- Interchangeable components for easier servicing, retrofits, and upgrades
- Heavy-duty spring for consistent riser retraction
- Check valve comes standard (4.3 m of elevation)

OPERATING SPECIFICATIONS

- Operational pressure range: 1.0 to 7.0 bar; 100 to 700 kPa
- Warranty period: 5 years

FACTORY-INSTALLED OPTIONS

- Reclaimed water identification
- FloGuard technology available for pop-up models

USER-INSTALLED OPTIONS

- Reclaimed water ID cap (P/N 458562SP)
- Snap-on reclaimed cover (P/N PROS-RC-CAP-SP)
- Shutoff cap (P/N 213600SP)
- Shutoff nozzle (P/N 916400SP)

PRS40 Reclaimed

PRS40 models include optional factory-installed purple reclaimed caps.

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"

FloGuard Technology

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

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

PRS40 – SPECIFICATION BUILDER: ORDER 1 + 2

1 Model	2 Specialty Options
PROS-00-PRS40 = 2.8 bar regulated shrub adapter	**(blank)** = No option
PROS-04-PRS40-CV = 2.8 bar regulated 10 cm pop-up with drain check valve	**R** = Factory-installed reclaimed body cap
PROS-06-PRS40-CV = 2.8 bar regulated 15 cm pop-up with drain check valve	**F** = FloGuard technology
PROS-12-PRS40-CV = 2.8 bar regulated 30 cm pop-up with drain check valve	**F-R** = FloGuard technology with reclaimed body cap

Examples:
PROS-04-PRS40-CV = 10 cm pop-up regulated at 2.8 bar, drain check valve
PROS-06-PRS40-CV-F = 15 cm pop-up regulated at 2.8 bar, drain check valve, with FloGuard technology
PROS-12-PRS40-CV-R = 30 cm pop-up regulated at 2.8 bar, drain check valve, reclaimed body cap

Compatible with:

MP Rotator
Page 52 and Page 56

SPRAY ACCESSORIES

Spray accessories provide flexibility for installation and maintenance of spray systems.

SJ SWING JOINTS

Features
- Unique swivel ells on both ends for easy installation in any configuration.
- Swing joints are built with air-tight connection points for long-term reliability. Pressure loss charts for SJ products on **page 254**

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

Operating Specifications
- Pressure-rated to 10 bar; 1000 kPa
- Warranty period: 2 years

SJ Swing Joint
15 cm or 30 cm links

HUNTER SPIRAL BARB ELBOWS

Features
- Compatible with Flexsg and other brands for a customised swing joint
- Acetal material for sharp barbs

Models
- HSBE-050: ½" male x spiral barb elbow
- HSBE-075: ¾" male x spiral barb elbow
- HSBE TOOL: Insert tool

Operating Specifications
- Operating pressure: Up to 5.5 bar; 550 kPa
- Warranty period: 2 years

Spiral Barb Elbows
HSBE-TOOL, HSBE-050, HSBE-075

FLEXsg TUBING

Features
- Engineered to resist kinking
- Textured for easy grip
- Linear low-density polyethylene material
- Meets ASTM D2104, D2239, D2737

Models
- FLEXSG: 30 m roll
- FLEXSG-18: 45 cm pre-cut lengths

Operating Specifications
- Operating pressure: up to 5.5 bar; 550 kPa
- Warranty period: 2 years

FLEXsg Tubing
30 m and 45 cm pre-cut lengths
Inside diameter: 1.2 cm

PRO-SPRAY SHUTOFF CAP

Features
- Caps off the Pro-Spray for maintenance or drip conversions
- Maintains a clean look to the landscape

Models
- 213600SP

Pro-Spray Shutoff Cap
P/N 213600SP

SHUTOFF NOZZLE

Features
- Easy shutoff for spray systems
- Allows heads to pop-up for easy visibility
- Use with Pro-Spray and PS Ultra models

Models
- 916400SP

Shutoff Nozzle
P/N 916400SP

NOZZLES

PRO ADJUSTABLE NOZZLES

Choose Pro Adjustable Nozzles for optimal landscape coverage in any setting.

KEY BENEFITS

- Adjustable from 0° to 360° for maximum design flexibility
- Easy-grip top for simple adjustment
- Strong edges for a defined pattern with better wind resistance
- Large water droplets minimise misting with better uniformity

ADDITIONAL FEATURES

- Matched precipitation rate on each nozzle from 8A to 17A
- Even distribution results in better coverage
- Colour-coded for easy field identification

OPERATING SPECIFICATIONS

- Recommended operating pressure: 2.1 bar; 210 kPa
- Pair with Pro-Spray PRS30 pop-up for pressure regulation to 2.1 bar; 210 kPa
- Warranty period: 2 years

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

Pro Adjustable Nozzle

PRO 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	0.04	0.72	213	246	1.5	0.06	1.08	116	134	2.0	0.07	1.24	77	89
	1.5	150	1.0	0.05	0.76	182	210	1.6	0.07	1.21	109	126	2.2	0.09	1.44	72	83
	2.1	**210**	**1.2**	**0.05**	**0.83**	**139**	**160**	**1.8**	**0.08**	**1.35**	**102**	**118**	**2.4**	**0.10**	**1.65**	**67**	**77**
	2.5	250	1.3	0.05	0.91	129	149	1.9	0.09	1.47	97	112	2.6	0.11	1.82	63	73
	3.0	300	1.4	0.06	0.95	116	134	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.

PRO ADJUSTABLE 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°

15A
● Black
4.6 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		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.

PRO 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.

PRO-SPRAY™ FIXED ARC NOZZLES

Fixed Arc Nozzles are designed for high accuracy within a variety of landscape shapes and sizes.

KEY BENEFITS

- Clean edges for a defined pattern with better wind resistance
- Large water droplets minimise misting with better uniformity
- Sturdy construction ensures reliable performance
- Colour-coded for easy field identification

OPERATING SPECIFICATIONS

- Recommended operating pressure: 2.1 bar; 210 kPa
- Pair with Pro-Spray PRS30 pop-up for pressure regulation to 2.1 bar; 210 kPa
- Warranty period: 2 years

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		Radius	Flow		Precip mm/hr		Radius	Flow		Precip mm/hr		Radius	Flow		Precip mm/hr	
		bar	kPa	m	m^3/hr	l/min	■	▲	m	m^3/hr	l/min	■	▲	m	m^3/hr	l/min	■	▲
90°	Q	1.0	100	1.1	0.02	0.30	60	69	1.8	0.04	0.62	46	53	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	51
		2.1	**210**	**1.5**	**0.03**	**0.46**	**49**	**57**	**2.4**	**0.05**	**0.91**	**38**	**44**	**3.0**	**0.09**	**1.57**	**42**	**48**
		2.5	250	1.7	0.03	0.51	42	49	2.7	0.06	0.98	32	37	3.3	0.10	1.71	38	44
		3.0	300	1.8	0.03	0.53	39	45	2.7	0.06	1.10	36	42	3.4	0.11	1.85	38	44
120°	T	1.0	100						1.8	0.05	0.83	46	53	2.4	0.09	1.44	45	52
		1.5	150						2.1	0.07	1.10	45	52	2.7	0.11	1.77	44	50
		2.1	**210**	**Use 4A or 6A Nozzle**					**2.4**	**0.07**	**1.21**	**38**	**44**	**3.0**	**0.13**	**2.09**	**42**	**48**
		2.5	250						2.7	0.08	1.32	33	38	3.3	0.14	2.31	38	44
		3.0	300						2.7	0.09	1.44	36	41	3.4	0.15	2.50	39	45
180°	H	1.0	100	1.1	0.04	0.60	60	69	1.8	0.08	1.33	49	57	2.4	0.13	2.17	45	52
		1.5	150	1.3	0.05	0.76	54	62	2.1	0.10	1.63	44	51	2.7	0.16	2.65	44	50
		2.1	**210**	**1.5**	**0.06**	**0.87**	**49**	**57**	**2.4**	**0.11**	**1.80**	**38**	**43**	**3.0**	**0.19**	**3.14**	**42**	**48**
		2.5	250	1.7	0.06	0.95	42	49	2.7	0.12	1.93	32	37	3.3	0.22	3.60	40	46
		3.0	300	1.8	0.06	1.04	39	44	2.7	0.13	2.10	35	40	3.4	0.23	3.90	40	47
240°	TT	1.0	100															
		1.5	150															
		2.1	**210**	**Use 4A or 6A Nozzle**					**Use 8A Nozzle**					**Use 10A Nozzle**				
		2.5	250															
		3.0	300															
270°	TQ	1.0	100															
		1.5	150															
		2.1	**210**	**Use 4A or 6A Nozzle**					**Use 8A Nozzle**					**Use 10A Nozzle**				
		2.5	250															
		3.0	300															
360°	F	1.0	100	1.1	0.07	1.20	60	69	1.8	0.16	2.67	49	57	2.4	0.26	4.33	45	52
		1.5	150	1.3	0.09	1.52	54	62	2.1	0.20	3.33	45	52	2.7	0.32	5.31	44	50
		2.1	**210**	**1.5**	**0.11**	**1.85**	**49**	**57**	**2.4**	**0.22**	**3.67**	**38**	**44**	**3.0**	**0.38**	**6.28**	**42**	**48**
		2.5	250	1.7	0.12	2.04	42	49	2.7	0.24	4.01	33	38	3.3	0.41	6.85	38	44
		3.0	300	1.8	0.12	2.10	39	45	2.7	0.26	4.35	36	41	3.4	0.42	6.97	36	42

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
		2.1	**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	39	46	5.5	0.30	5.01	40	46
		3.0	300	4.0	0.18	2.95	44	51	5.2	0.26	4.32	38	44	5.8	0.32	5.30	38	44
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					
		2.1	**210**	**3.7**	**0.19**	**3.25**	**43**	**49**	**4.6**	**0.29**	**4.83**	**41**	**47**	**Use 17A Nozzle**				
		2.5	250	4.0	0.22	3.67	41	48	4.9	0.32	5.27	40	46					
		3.0	300	4.0	0.24	3.94	44	51	5.2	0.35	5.75	38	44					
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
		2.1	**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
		3.0	300	4.0	0.35	5.75	43	50	5.2	0.49	8.18	36	42	5.8	0.64	10.06	38	44
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					
		2.1	**210**	**3.7**	**0.39**	**6.49**	**43**	**49**	**4.6**	**0.58**	**9.66**	**41**	**47**	**Use 17A Nozzle**				
		2.5	250	4.0	0.43	7.18	40	47	4.9	0.63	10.54	40	46					
		3.0	300	4.0	0.46	7.68	43	50	5.2	0.65	10.90	36	42					
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					
		2.1	**210**	**3.7**	**0.44**	**7.30**	**43**	**49**	**4.6**	**0.65**	**10.87**	**41**	**47**	**Use 17A Nozzle**				
		2.5	250	4.0	0.48	8.08	40	47	4.9	0.71	11.86	40	46					
		3.0	300	4.0	0.53	8.82	44	51	5.2	0.78	12.95	38	44					
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					
		2.1	**210**	**3.7**	**0.58**	**9.74**	**43**	**49**	**4.6**	**0.87**	**14.49**	**41**	**47**	**Use 17A Nozzle**				
		2.5	250	4.0	0.65	10.78	40	47	4.9	0.95	15.81	40	46					
		3.0	300	4.0	0.70	11.73	44	51	5.2	0.99	16.50	37	42					

Bold = Recommended pressure

SHORT-RADIUS MICRO SPRAY NOZZLES

These highly accurate nozzles are perfect for small spaces and can support a robust micro spray system with Pro-Spray pop-ups.

KEY BENEFITS

- Low flow for controlled irrigation of tight spaces
- Meets micro spray requirement of 114 l/hr max flow at 2.1 bar; 210 kPa
- Built to last for a robust overhead solution for small spaces

OPERATING SPECIFICATIONS

- Recommended operating pressure: 2.1 bar; 210 kPa
- Pair with Pro-Spray PRS30 pop-up for pressure regulation to 2.1 bar; 210 kPa

SHORT-RADIUS NOZZLES PERFORMANCE DATA

Nozzle Lt. Brown

Arc	Pressure bar	Pressure kPa	Position	Radius m	Flow l/min	Flow l/hr	*Precip mm/hr
90°	1.0	100	2Q	0.6	0.34	20	57
	1.5	150		0.6	0.38	23	63
	2.1	**210**		**0.6**	**0.42**	**25**	**70**
	2.5	250		0.6	0.49	29	82
	3.0	300		0.6	0.53	32	88
180°	1.0	100	2H	0.6	0.53	32	44
	1.5	150		0.6	0.57	34	48
	2.1	**210**		**0.6**	**0.76**	**46**	**63**
	2.5	250		0.6	0.77	46	64
	3.0	300		0.6	0.80	48	67

Nozzle Lt. Green

Arc	Pressure bar	Pressure kPa	Position	Radius m	Flow l/min	Flow l/hr	*Precip mm/hr
90°	1.0	100	4Q	1.2	0.68	41	28
	1.5	150		1.2	0.76	46	32
	2.1	**210**		**1.2**	**0.76**	**46**	**32**
	2.5	250		1.2	0.83	50	35
	3.0	300		1.2	0.91	55	38
180°	1.0	100	4H	1.2	1.25	75	26
	1.5	150		1.2	1.29	77	27
	2.1	**210**		**1.2**	**1.51**	**91**	**31**
	2.5	250		1.2	1.52	91	32
	3.0	300		1.2	1.67	100	35

Nozzle Lt. Blue

Arc	Pressure bar	Pressure kPa	Position	Radius m	Flow l/min	Flow l/hr	*Precip mm/hr
90°	1.0	100	6Q	1.8	0.83	50	15
	1.5	150		1.8	0.91	55	17
	2.1	**210**		**1.8**	**1.14**	**68**	**21**
	2.5	250		1.8	1.14	68	21
	3.0	300		1.8	1.14	68	21
180°	1.0	100	6H	1.8	1.52	91	14
	1.5	150		1.8	1.67	100	15
	2.1	**210**		**1.8**	**1.90**	**114**	**18**
	2.5	250		1.8	1.97	118	18
	3.0	300		1.8	2.05	123	19

Bold = Recommended pressure
*Precipitation rate shown without overlap

2Q Nozzle
Radius: 0.6 m

2H Nozzle
Radius: 0.6 m

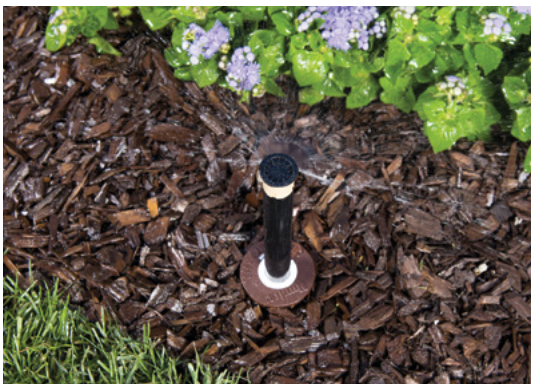
4Q Nozzle
Radius: 1.2 m

4H Nozzle
Radius: 1.2 m

6Q Nozzle
Radius: 1.8 m

6H Nozzle
Radius: 1.8 m

Short-Radius Micro Spray Nozzle



STRIP PATTERN NOZZLES

Irrigate narrow turf and planter areas accurately with fixed arc strip nozzles.

KEY BENEFITS

- Designed for accurate coverage of strip areas
- Available in a variety of models for unique, rectangular spaces
- Built to last in harsh conditions

OPERATING SPECIFICATIONS

- Recommended operating pressure: 2.1 bar; 210 kPa
- Pair with Pro-Spray PRS30 pop-up for pressure regulation to 2.1 bar; 210 kPa
- Warranty period: 2 years

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
	2.1	**210**	**1.5 x 4.5**	**0.15**	**2.5**
	2.5	250	1.5 x 4.5	0.16	2.7
	3.0	300	1.5 x 4.5	0.17	2.8
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
	2.1	**210**	**1.5 x 4.5**	**0.15**	**2.5**
	2.5	250	1.5 x 4.5	0.16	2.7
	3.0	300	1.5 x 4.5	0.17	2.8
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
	2.1	**210**	**1.5 x 9.1**	**0.30**	**5.0**
	2.5	250	1.5 x 9.1	0.33	5.5
	3.0	300	1.5 x 9.1	0.34	5.7
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
	2.1	**210**	**2.7 x 5.5**	**0.39**	**6.5**
	2.5	250	2.7 x 5.5	0.43	7.1
	3.0	300	2.7 x 5.5	0.47	7.9
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
	2.1	**210**	**1.5 x 9.1**	**0.30**	**5.0**
	2.5	250	1.5 x 9.1	0.33	5.5
	3.0	300	1.5 x 9.1	0.34	5.7
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
	2.1	**210**	**1.5 x 4.5**	**0.15**	**2.5**
	2.5	250	1.5 x 4.5	0.16	2.7
	3.0	300	1.5 x 4.5	0.17	2.8

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

RCS-515

STREAM NOZZLES

Prevent runoff for slope, groundcover, and shrub applications with the low precipitation rate of these adjustable arc stream nozzles.

KEY BENEFITS

- Low application rate to avoid runoff
- Ideal for slopes, ground cover, and shrub applications
- Multiple streams provide even coverage
- Adjustable arc from 25° to 360° for design flexibility

OPERATING SPECIFICATIONS

- Recommended operating pressure: 2.1 bar; 210 kPa
- Pair with Pro-Spray PRS30 pop-up for pressure regulation to 2.1 bar; 210 kPa
- Warranty period: 2 years

MODEL S-8A STREAM SPRAY NOZZLE PERFORMANCE DATA

Arc	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲
90°	1.0	100	2.1	0.05	0.9	49	57
	1.5	150	2.2	0.07	1.1	55	63
	2.1	**210**	**2.4**	**0.09**	**1.4**	**58**	**67**
	2.5	250	2.6	0.10	1.6	57	66
	3.0	300	2.7	0.12	2.0	66	76
180°	1.0	100	2.1	0.12	1.9	52	60
	1.5	150	2.2	0.13	2.1	52	60
	2.1	**210**	**2.4**	**0.14**	**2.3**	**48**	**55**
	2.5	250	2.6	0.15	2.4	43	49
	3.0	300	2.7	0.15	2.5	41	48
360°	1.0	100	2.1	0.24	4.0	54	63
	1.5	150	2.2	0.25	4.2	52	60
	2.1	**210**	**2.4**	**0.26**	**4.4**	**46**	**53**
	2.5	250	2.6	0.27	4.5	40	46
	3.0	300	2.7	0.28	4.6	38	44

Bold = Recommended pressure

MODEL S-16A STREAM SPRAY NOZZLE PERFORMANCE DATA

Arc	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲
90°	1.0	100	4.3	0.08	1.4	18	21
	1.5	150	4.6	0.10	1.6	18	21
	2.1	**210**	**5.0**	**0.11**	**1.9**	**18**	**21**
	2.5	250	5.3	0.12	2.1	18	21
	3.0	300	5.5	0.13	2.2	17	20
180°	1.0	100	4.3	0.14	2.3	15	17
	1.5	150	4.6	0.17	2.8	16	18
	2.1	**210**	**5.0**	**0.20**	**3.4**	**16**	**19**
	2.5	250	5.3	0.23	3.8	16	19
	3.0	300	5.5	0.24	4.0	16	18
360°	1.0	100	4.3	0.23	3.9	13	15
	1.5	150	4.6	0.30	5.0	14	16
	2.1	**210**	**5.0**	**0.38**	**6.3**	**15**	**17**
	2.5	250	5.3	0.43	7.2	15	18
	3.0	300	5.5	0.45	7.5	15	17

Bold = Recommended pressure

S-8A
Radius: 2.1 m to 2.6 m

S-16A
Radius: 4.3 m to 5.3 m

S-8A

BUBBLER NOZZLES

Deliver a consistent flow regardless of inlet pressure with pressure-compensating bubbler nozzles.

KEY BENEFITS

- Pressure-compensating for constant water flow at any pressure
- Designed for deep watering of planted areas
- Nozzle threaded for use with Pro-Spray
- Warranty period: 2 years

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.

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.

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

PCN 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

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

BUBBLERS

Ensure consistent flow regardless of pressure with above-ground, pressure-compensating bubblers.

KEY BENEFITS

- Pressure-compensating for constant water flow at any pressure
- Designed for deep watering of planted areas
- ½" threaded inlet for easy installation on a ½" riser
- Warranty period: 2 years

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

VALVES

All Hunter valves are 100% water-tested to ensure reliable operation once installed.

VALVE COMPARISON CHART

QUICK SPECS	1" PGV & JAR-TOP	PGV	ICV	ICV FILTER SENTRY	IBV FILTER SENTRY
SIZE	1" BSP (25 mm)	1½", 2" BSP (40, 50 mm)	1", 1½", 2", 3" BSP (25, 40, 50, 80 mm)	1", 1½", 2", 3" BSP (25, 40, 50, 80 mm)	1", 1½", 2", 3" BSP (25, 40, 50, 80 mm)
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	User-Installed	
RECLAIMED WATER ID TAG			User-Installed	User-Installed	User-Installed
APPLICATIONS					
RESIDENTIAL	●	●	●		
COMMERCIAL		●	●	●	●
POTABLE WATER	●	●	●	●	●
RECLAIMED WATER			●	●	●
SECONDARY WATER				●	●
PRESSURE REGULATION	●	●	●	●	●
HIGH-PRESSURE SYSTEMS			●	●	●
LOW-PRESSURE SYSTEMS	●	●	●	●	●
HIGH-TEMPERATURE LOCATIONS			●	●	●
USE AS MASTER VALVE		●	●	●	●

Advanced Features

ACCU SYNC PRESSURE REGULATION

Available on:

PGV, ICV, IBV

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

FILTER SENTRY

For use with:

ICV, IBV

The Filter Sentry disc 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.

1½" & 2" PGV

These reliable valves provide long-lasting performance for larger systems.

KEY BENEFITS

- External/internal manual bleed allows for quick and easy activation at the valve
- Double-beaded diaphragm seal design ensures leak-free performance
- Captive bonnet screws eliminate the possibility of lost parts during disassembly
- Flow control maximises efficiency and prolongs the life of the system
- Triple-tool bonnet screws are compatible with standard or Phillips screwdrivers as well as a nut driver
- Each valve available with globe or angle configuration for convenient placement
- Encapsulated solenoid with captive plunger used on every Hunter valve provides hassle-free service

USER-INSTALLED OPTIONS

- Accu Sync™ pressure regulation at the valve*
- DC-latching solenoid for battery-powered controllers (P/N 458200)
- Solenoid conduit cover (P/N 464322)
- Reclaimed flow control handle (P/N 607105)

FACTORY-INSTALLED OPTIONS

- LS: Valve without solenoid
- DC: DC-latching solenoid for battery-powered controllers

OPERATING SPECIFICATIONS

- Flow:
  - PGV-151: 5 to 27 m^3/hr; 75 to 450 l/min
  - PGV-201: 5 to 34 m^3/hr; 75 to 570 l/min
- Recommended pressure range: 1.5 to 10 bar; 150 to 1000 kPa
- Temperature rating: 66°C
- Warranty period: 2 years

* Accu Sync product information on **page 94**

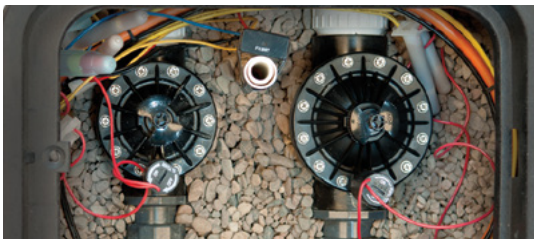
SOLENOID SPECIFICATIONS

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

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 1½" (40 MM) & 2" (50 MM)

Model	Description
PGV-151-B	40 mm globe/angle valve with flow control
PGV-151-B-DC	40 mm globe/angle valve with DC-latching solenoid
PGV-151-B-LS	40 mm globe/angle valve less solenoid
PGV-201-B	50 mm globe/angle valve with flow control
PGV-201-B-DC	50 mm globe/angle valve with DC-latching solenoid
PGV-201-B-LS	50 mm globe/angle valve less solenoid

PGV PRESSURE LOSS IN BAR

Flow m^3/hr	1½" (40 mm) Globe	1½" (40 mm) Angle	2" (50 mm) Globe	2" (50 mm) 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" (40 mm) Globe	1½" (40 mm) Angle	2" (50 mm) Globe	2" (50 mm) 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

1" PGV & PGV JAR-TOP

These versatile and robust valves offer simple serviceability.

KEY BENEFITS

- External/internal manual bleed allows for quick and easy activation at the valve
- Double-beaded diaphragm seal design ensures leak-free performance
- Captive bonnet screws eliminate the possibility of lost parts during disassembly
- Triple-tool bonnet screws are compatible with standard or Phillips screwdrivers as well as a nut driver
- Jar-top models provide easy access without tools
- Encapsulated solenoid with captive plunger used on every Hunter valve provides hassle-free service
- Flow control maximises efficiency and prolongs the life of the system

USER-INSTALLED OPTIONS

- Accu Sync™ pressure regulation at the valve*
- DC-latching solenoid for battery-powered controllers (P/N 458200)
- Solenoid conduit cover (P/N 464322)

FACTORY-INSTALLED OPTIONS

- LS: Valve without solenoid
- DC: DC-latching solenoid for battery-powered controllers
- JT: Jar-top models

OPERATING SPECIFICATIONS

- Flow: 0.05 to 9 m^3/hr; 0.7 to 150 l/min
- Recommended pressure range: 1.5 to 10 bar; 150 to 1000 kPa
- Temperature rating: 66°C
- Warranty period: 2 years

SOLENOID SPECIFICATIONS

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

* Accu Sync product information on **page 94**

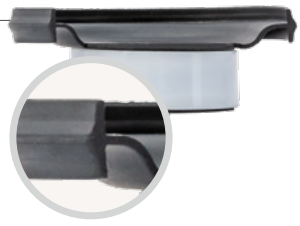
PGV-100G
Inlet diameter: 1" (25 mm)
Height: 13 cm
Length: 11 cm
Width: 6 cm

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

Double-Beaded Diaphragm



1" (25 MM) PGV	
Model	**Description**
PGV-100G-B	1" (25 mm) plastic globe valve, without flow control, female BSP inlet and outlet
PGV-100MMB	1" (25 mm) plastic globe valve, without flow control, male BSP inlet and outlet
PGV-101G-B	1" (25 mm) plastic globe valve, with flow control, female BSP inlet and outlet
PGV-101MMB	1" (25 mm) plastic globe valve, with flow control, male BSP inlet and outlet

PGV JAR-TOP	
Model	**Description**
PGV-100JT-GB	1" (25 mm) plastic globe valve, jar-top bonnet, without flow control, female BSP inlet and outlet
PGV-101JT-GB	1" (25 mm) plastic globe valve, jar-top bonnet, with flow control, female BSP inlet and outlet
PGV-100JT-MMB	1" (25 mm) plastic globe valve, jar-top bonnet, without flow control, male BSP inlet and outlet
PGV-101JT-MMB	1" (25 mm) plastic globe valve, jar-top bonnet, with flow control, male BSP inlet and outlet

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-100G Installed

Captive Bonnet Bolts

ICV

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

KEY BENEFITS

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

USER-INSTALLED OPTIONS

- Accu Sync™ pressure regulation at the valve*
- DC-latching solenoid for battery-powered controllers (P/N 458200)
- Filter Sentry easily added to an installed valve
- Solenoid conduit cover (P/N 464322)

FACTORY-INSTALLED OPTIONS

- LS: Valve without solenoid
- DC: DC-latching solenoid for battery-powered controllers
- FS: Filter Sentry
- FS-R: Reclaimed option with Filter Sentry, purple control knob, and purple chlorine-resistant diaphragm

OPERATING SPECIFICATIONS

- Flow:
  - ICV-101G: 0.03 to 9 m^3/hr; 0.4 to 150 l/min
  - ICV-151G: 0.03 to 34 m^3/hr; 0.4 to 568 l/min
  - ICV-201G: 0.03 to 45 m^3/hr; 0.4 to 757 l/min
  - ICV-301: 0.03 to 68 m^3/hr; 0.4 to 1,135 l/min
- Recommended pressure range: 1.5 to 15.0 bar; 150 to 1500 kPa
- Temperature rating: 66°C
- Warranty period: 5 years

SOLENOID SPECIFICATIONS

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

* Accu Sync product information on **page 94**

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

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

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

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

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

Double-Beaded Diaphragm

Filter Sentry

ICV

Model	Description
ICV-101G	1" (25 mm) globe valve with flow control
ICV-101G-FS	1" (25 mm) globe valve with flow control, Filter Sentry
ICV-101G-DC	1" (25 mm) globe valve with flow control, DC solenoid
ICV-101G-LS	1" (25 mm) globe valve with flow control less solenoid
ICV-101G-FS-DC	1" (25 mm) globe valve with flow control, Filter Sentry, DC solenoid
ICV-101G-FS-LS	1" (25 mm) globe valve with flow control, Filter Sentry less solenoid
ICV-101G-FS-R	Reclaimed 1" (25 mm) globe valve with flow control, Filter Sentry
ICV-151G	1½" (40 mm) globe valve with flow control
ICV-151G-FS	1½" (40 mm) globe valve with flow control, Filter Sentry
ICV-151G-DC	1½" (40 mm) globe valve with flow control, DC solenoid
ICV-151G-FS-DC	1½" (40 mm) globe valve with flow control, Filter Sentry, DC solenoid
ICV-151G-FS-R	Reclaimed 1½" (40 mm) globe valve with flow control, Filter Sentry
ICV-201G	2" (50 mm) globe valve with flow control
ICV-201G-FS	2" (50 mm) globe valve with flow control, Filter Sentry
ICV-201G-DC	2" (50 mm) globe valve with flow control, DC solenoid
ICV-201G-LS	2" (50 mm) globe valve with flow control less solenoid
ICV-201G-FS-DC	2" (50 mm) globe valve with flow control, Filter Sentry, DC solenoid
ICV-201G-FS-LS	2" (50 mm) globe valve with flow control, Filter Sentry less solenoid
ICV-201G-FS-R	Reclaimed 2" (50 mm) globe valve with flow control, Filter Sentry
ICV-301-FS-R	Reclaimed 3" (80 mm) globe/angle valve with flow control, Filter Sentry

Double-Beaded Chlorine-Resistant Diaphragm

Filter Sentry

Captive Bonnet Bolts

ICV PRESSURE LOSS (AT OPTIMAL FLOWS) IN BAR

Flow m^3/hr	1" (25 mm) Globe	1½" (40 mm) Globe	2" (50 mm) Globe	3" (80 mm) Globe	3" (80 mm) 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 (AT OPTIMAL FLOWS) IN kPa

Flow l/min	1" (25 mm) Globe	1½" (40 mm) Globe	2" (50 mm) Globe	3" (80 mm) Globe	3" (80 mm) 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

Built of solid brass, this valve can power through the fiercest irrigation conditions.

KEY BENEFITS

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

USER-INSTALLED OPTIONS

- Accu Sync™ pressure regulation at the valve*
- DC-latching solenoid for battery-powered controllers (P/N 458200)
- Solenoid conduit cover (P/N 464322)

FACTORY-INSTALLED OPTIONS

- DC: DC-latching solenoid for battery-powered controllers

OPERATING SPECIFICATIONS

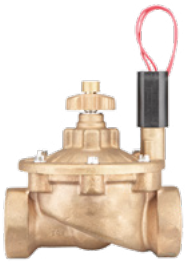
- Flow rate:
  - IBV-101G-FS: 0.03 to 9 m^3/hr; 0.4 to 150 l/min
  - IBV-151G-FS: 0.03 to 34 m^3/hr; 0.4 to 568 l/min
  - IBV-201G-FS: 0.03 to 45 m^3/hr; 0.4 to 757 l/min
  - IBV-301G-FS: 0.03 to 68 m^3/hr; 0.4 to 1,135 l/min
- Recommended pressure range: 1.5 to 15 bar; 150 to 1500 kPa
- Temperature rating: 66°C
- Warranty period: 5 years

SOLENOID SPECIFICATIONS

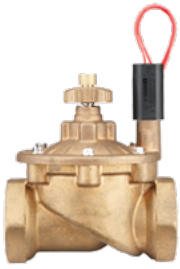
- 24 VAC solenoid
- 350 mA inrush, 190 mA holding, 60 Hz
- 370 mA inrush, 210 mA holding, 50 Hz

* Accu Sync product information on **page 94**

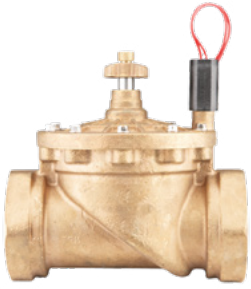
IBV-101G-FS
Inlet diameter: 1" (25 mm)
Height: 14 cm
Length: 12 cm
Width: 8 cm



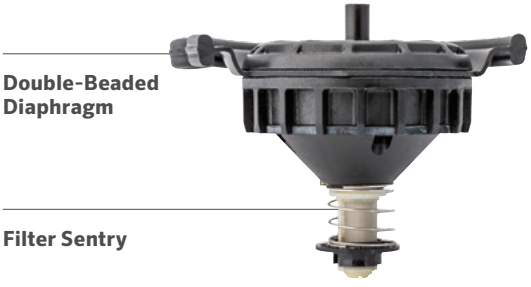
IBV-151G-FS
Inlet diameter: 1½" (40 mm)
Height: 17 cm
Length: 15 cm
Width: 15 cm



IBV-201G-FS
Inlet diameter: 2" (50 mm)
Height: 18 cm
Length: 15 cm
Width: 15 cm



IBV-301G-FS
Inlet diameter: 3" (80 mm)
Height: 23 cm
Length: 22 cm
Width: 18 cm



IBV	
Model	**Description**
IBV-101G-B-FS	1" (25 mm) BSP brass globe valve, with flow control, with factory-installed Filter Sentry diaphragm
IBV-151G-B-FS	1½" (40 mm) BSP brass globe valve, with flow control, with factory-installed Filter Sentry diaphragm
IBV-201G-B-FS	2" (50 mm) BSP brass globe valve, with flow control, with factory-installed Filter Sentry diaphragm
IBV-301G-B-FS	3" (80 mm) BSP brass globe valve, with flow control, with factory-installed Filter Sentry diaphragm
IBV-151G-FS-R	1½" (40 mm) BSP brass globe valve, with flow control, purple ID tag, Filter Sentry, and chlorine-resistant purple diaphragm
IBV-201G-FS-R	2" (50 mm) BSP brass globe valve, with flow control, purple ID tag, Filter Sentry, and chlorine-resistant purple diaphragm

IBV PRESSURE LOSS (AT OPTIMAL FLOWS) IN BAR				
Flow m^3/hr	**1" (25 mm)** Globe	**1½" (40 mm)** Globe	**2" (50 mm)** Globe	**3" (80 mm)** 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 (AT OPTIMAL FLOWS) IN kPa				
Flow l/min	**1" (25 mm)** Globe	**1½" (40 mm)** Globe	**2" (50 mm)** Globe	**3" (80 mm)** 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

The sturdy red brass and stainless steel construction of quick couplers strengthens any project.

FEATURES

- 100% interchangeable with major brands*
- Red brass and stainless steel construction
- Heavy-duty thermoplastic locking and non-locking covers
- Optional winged stabilisation and Acme key connection
- Stainless steel lug on 1" (25 mm) and 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

Quick Couplers

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, 1 slot	**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

HQ-3RC HQ-5RC HK-33

HQ-33DLRC HQ-44LRC HK-44

Non-locking Locking Reclaimed

HQ-44LRC HK-55

Key

Reclaimed Water Option

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

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" (20 mm) BSP outlet	HK44, HK44A, HK55
HS2B = 1" (25 mm) inlet, 1" (25 mm) BSP outlet	HK44, HK44A, HK55

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	1	1-piece	Yellow	No	HK-55	HS-1 or HS-2
HQ-5LRC	1" (25 mm) NPT	1	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 PRESSURE LOSS IN BAR

Flow m³/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

ACCU SYNC™

Gain unparalleled pressure regulation for any Hunter valve.

OPERATING SPECIFICATIONS

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

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 MP Rotator nozzles and large in-line drip systems, pressure-regulated to 2.8 bar; 280 kPa

ADJUSTABLE

AS-ADJ
Height with solenoid: 8 cm

ADAPTER

SOLENOID ADAPTER

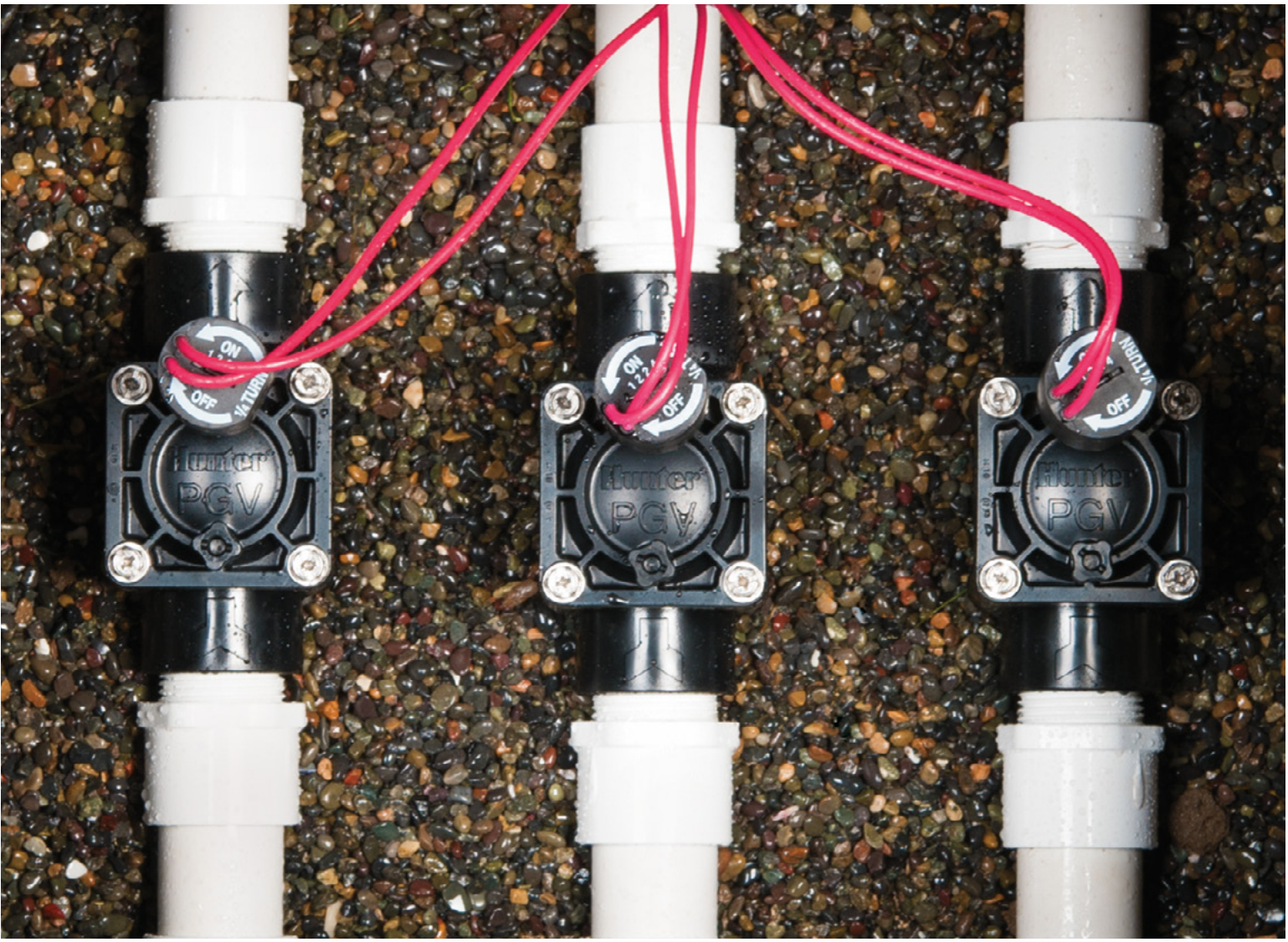
FIXED

AS-30
Height with solenoid: 8 cm

AS-40
Height with solenoid: 8 cm

Installation

Accu Sync shown installed on ICV and PGV valves.



HUNTER VALVES

Built to Thrive Under Pressure

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

ULTIMATE RELIABILITY:

- Fewer parts means greater longevity and simple operation
- AC and DC models for flexibility
- Residential models handle up to 10 bar; 1000 kPa
- Commercial models handle up to 15 bar; 1500 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

CONTROLLERS


HCC Wi-Fi
Hydrawise
Zones
Settings
Status
Hunter

CONTROLLER
SELECTION GUIDE

Platform	*AC-Powered Controllers*

STANDARD

Details on ***page 100***

Button and dial-based controllers are standalone systems that offer water-saving features and convenient remote control operation for faster maintenance.

Eco-Logic
Stations: *4, 6*
page 101

X-Core™
Stations: *2, 4, 6, 8*
page 102

X2™
Stations: *4, 6, 8, 14*
page 103

Pro-C™
Stations: *4–16, 6, 12*
page 104

I-Core™
Stations: *6–42 conventional, 1–48 with two-wire*
page 105

HYDRAWISE®

Details on ***page 108***

Hydrawise is simple to set up, easy to use, and packed with helpful features. Built-in system monitoring and a suite of powerful tools make saving water and managing multi-site municipal properties, community tracks, and commercial projects more convenient than ever before.

HC
Stations: *6, 12*
page 110

WAND for X2
Stations: *4, 6, 8, 14*
page 111

HPC
Stations: *4–16*
page 112

Pro-HC
Stations: *6, 12, 24*
page 113

HCC
Stations: *8–54 conventional, 1–54 with two-wire*
page 114

CENTRALUS™

Details on ***page 118***

Add cloud-based control and monitoring for ICC2 and ACC2 controllers with the mobile-friendly Centralus irrigation management platform.

ICC2
Stations: *8–54 conventional, 1–54 with two-wire*
page 119

ACC2
Stations: *12–54 conventional, 1–225 with two-wire*
page 120

Use this guide to quickly compare Hunter controller power needs, station counts, and software platforms to ensure you choose the best controller for every installation.

Platform — *AC-Powered Controllers, Continued*

IMMS™ ONLINE

Details on ***page 122***

Simplify central control of Hunter ACC controllers and accessories with the web- or server-based IMMS software package.

ACC
Stations: *12–42 conventional, 1–99 with two-wire*
page 124

Platform — *Battery-Powered Controllers*

INDEPENDENT

Details on ***page 126***

Battery-powered controllers allow automatic irrigation for power-restricted valve locations and areas where hardscape blocks the ability to run wire affordably.

NODE
Stations: *1, 2, 4, 6*
page 128

XC Hybrid
Stations: *6, 12*
page 130

BLUETOOTH®

Details on ***page 126***

Bluetooth enabled, battery-powered controllers have all the benefits of independent battery controllers with convenient, on-site wireless control from a smartphone.

BTT
Zones: *1, 2*
page 127

NODE-BT
Stations: *1, 2, 4*
page 129

Look for this icon *to identify controllers with two-wire compatibility. Save wire and easily expand the system as needed after installation.*

STANDARD CONTROLLERS

Standard controllers are self-contained irrigation systems designed for simple installation and programming. They offer locally measured weather monitoring capabilities for automatic schedule adjustments, the option of modular station flexibility, and convenient remote control operation for faster maintenance.

STANDARD CONTROLLER COMPARISON CHART

CONTROLLER MODELS	MAXIMUM STATIONS	SENSOR INPUTS	TWO-WIRE	REMOTE CONTROL	WEB ACCESS
ECO-LOGIC	6	1	None	None	None
X-CORE	8	1	None	ROAM, ROAM XL	None
X2	14	1	None	ROAM, ROAM XL, Smartphone with Wi-Fi	Hydrawise, Wi-Fi
PRO-C	16	1	None	ROAM, ROAM XL	None
I-CORE	42, 48 two-wire	2 (Clik or Flow), 3 (Clik or Flow, in metal)	DUAL, 48 stations	ROAM, ROAM XL	None

ECO-LOGIC

The reliable Eco-Logic controller is the first choice for small residential areas and has the option for water-saving accessories.

KEY BENEFITS

- Number of stations:
  – 4 or 6 (fixed models)
- 2 programs with 4 start times each, and up to 4-hour run times
- QuickCheck™ provides simple diagnostics of faulty field wiring
- Suspend irrigation up to 7 days during the off-season
- Short-circuit protection detects wiring faults and skips the station without system damage
- Seasonal adjustment for quicker schedule adjustments without changing run times

OPERATING SPECIFICATIONS

- Transformer input: 230 VAC
- Transformer output (24 VAC): 0.625 A
- Station output (24 VAC): 0.56 A
- P/MV output (24 VAC): 0.28 A
- Sensor inputs: 1
- Approvals: UL, cUL, FCC, CE, RCM
- Warranty period: 2 years

ECO-LOGIC	
Model	**Description**
ELC-401i-E	4-station indoor controller, 230V wall adapter
ELC-601i-E	6-station indoor controller, 230V wall adapter

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

Compatible with:

Mini-Clik Sensor
Page 145

Soil-Clik Sensor
Page 151

Wind-Clik Sensor
Page 152

ECO-LOGIC

X-CORE™

This simple irrigation controller offers optional on-site smart ET watering adjustments and handheld remote operation.

KEY BENEFITS

- Number of stations:
  - 2, 4, 6, or 8 (fixed models)
- Solar Sync™ accessory saves water based on local weather conditions
- Built-in key lock on outdoor models protects against vandalism
- 3 flexible programs with 4 start times each and up to 4-hour run times
- QuickCheck™ provides simple diagnostics of faulty field wiring
- Hide Programs setting shows 1 program and 1 start time for simplification
- Suspend irrigation up to 99 days during the off-season
- Short-circuit protection detects wiring faults and skips the station without system damage
- Easy Retrieve™ memory backs up the full irrigation schedule
- Delay Between Stations for slow-closing valves or pump recharge
- Cycle and Soak prevents water waste and runoff in areas with elevation changes or tight soils
- Seasonal adjustment for quicker schedule adjustments without changing run times

OPERATING SPECIFICATIONS

- Transformer input: 120 VAC or 230 VAC
- Transformer output (24 VAC): 1 A
- Station output (24 VAC): 0.56 A
- P/MV output (24 VAC): 0.28 A
- Sensor inputs: 1
- Approvals: Plastic IP54 (outdoor), UL, cUL, FCC, CE, RCM
- Warranty period: 2 years

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 Model	2 Transformer	3 Indoor/Outdoor	4 Plug
XC-2 = 2-station *(indoor only)*	**00** = 120 VAC	**(blank)** = Outdoor model	**(blank)** = American plug
XC-4 = 4-station	**01** = 230 VAC	**i** = Indoor model	**E** = European connections
XC-6 = 6-station			**A** = Australian plug
XC-8 = 8-station			

Examples:
XC-801i-E = 8-station controller, 230 VAC European wall adapter, indoor
XC-801-A = 8-station controller, 230 VAC internal transformer, outdoor with Australian plug

Compatible with:

Solar Sync Sensor
Page 146

ROAM Remote
Page 137
ROAM XL Remote
Page 138

Soil-Clik Sensor
Page 151

Smart Approved WaterMark

Smart WaterMark
Recognised as a responsible water-saving tool when used with a Solar Sync sensor

X2™

This online-capable controller features rapid schedule programming and advanced water-saving features.

KEY BENEFITS

- Number of stations:
  - 4, 6, 8, or 14 (fixed models)
- Wi-Fi capable controller automatically managed by Hydrawise® software
- Backlit display provides optimal visibility in any light
- 3 flexible programs with 4 start times each and up to 6-hour run times
- QuickCheck™ provides simple diagnostics of faulty field wiring
- Hide Programs option shows 1 program and 1 start time for simplification
- Suspend irrigation up to 99 days during the off-season
- Short-circuit protection detects wiring faults and skips the station without system damage
- Easy Retrieve™ memory backups the full irrigation schedule
- Delay Between Stations for slow-closing valves or pump recharge
- Cycle and Soak prevents water waste and runoff in areas with elevation changes or tight soils
- Seasonal adjustment for quicker schedule adjustments without changing run times

WI-FI MODULE BENEFITS

- Provides rapid programming, online irrigation management, and controller status alerts
- Standard ABC programming with 6 programs and 6 start times or advanced schedules with 36 start times, and run times up to 24 hours
- Predictive Watering™ provides precise weather adjustments for maximum water savings
- Compatibility with Amazon Alexa™ and Control4® home automation
- See complete WAND Wi-Fi module benefits and specifications on **page 111**

OPERATING SPECIFICATIONS

- Transformer input: 120 VAC or 230 VAC
- Transformer output (24 VAC): 1 A
- Station output (24 VAC): 0.56 A
- P/MV output (24 VAC): 0.28 A
- Sensor inputs: 1
- Approvals (controller): Plastic IP44, UL, cUL, FCC, CE, RCM
- Approvals (module): Wi-Fi b/g/n, Bluetooth 5.0, CE, UL, RCM, FCC
- Warranty period: 2 years

X2 - SPECIFICATION BUILDER: ORDER 1 + 2 + 3

1 Model	2 Transformer	3 Plug
X2-4 = 4-station	**00** = 120 VAC	**(blank)** = American plug
X2-6 = 6-station	**01** = 230 VAC	**E** = European plug
X2-8 = 8-station		**A** = Australian plug
X2-14 = 14-station		

Examples:
X2-1401-E = 14-station controller, 230 VAC internal transformer with European plug
X2-1401-A = 14-station controller, 230 VAC internal transformer with Australian plug

WAND WI-FI MODULE

Model	Description
WAND	Wi-Fi module for Hydrawise water management software

X2
Height: 23 cm
Width: 19 cm
Depth: 10 cm

WAND Wi-Fi Module
Height: 2 cm
Width: 5 cm
Depth: 5 cm

Compatible with:

Hydrawise® Software
Page 108

Rain-Clik Sensor
Page 144

ROAM Remote
Page 137
ROAM XL Remote
Page 138

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Recognised as a responsible water-saving tool when used with the WAND Wi-Fi module

Amazon Alexa is a trademark of Amazon.com Inc. or its affiliates. Control4 is a registered trademark of Control4 Corporation in the United States and/or other countries.

PRO-C™

Simple programming and flexible station expansion make Pro-C the professional's choice for residential and light commercial systems.

KEY BENEFITS

- Number of stations:
  - Modular Pro-C capacity from 4 to 16
  - Fixed PCC with 6- and 12-station options
- 3 independent irrigation programs (4 start times each) allow for customised scheduling
- 6-hour maximum station run time provides flexibility for differing application amounts
- 1 sensor input available for use with Solar Sync™ or any Clik sensors
- 1 P/MV output for pump start relay and master valve activation
- Dedicated Solar Sync dial position provides logic for smart water savings
- Easy Retrieve™ memory allows for manual backup and retrieval of preferred settings and programming
- QuickCheck™ provides simple diagnostics of faulty field wiring

OPERATING SPECIFICATIONS

- Transformer input: 120 VAC or 230 VAC
- Transformer output (24 VAC): 1 A
- Station output (24 VAC): 0.56 A
- P/MV output (24 VAC): 0.28 A
- Approvals: UL, cUL, FCC, CE, RCM
- Warranty period: 2 years

Plastic Indoor
Height: 22.9 cm
Width: 25.4 cm
Depth: 11.4 cm

Plastic Outdoor
Height: 22.9 cm
Width: 25.4 cm
Depth: 11.4 cm

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

1 Model	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
PCM-900	9-station plug-in module (maximum, one per controller)

Compatible with:

Solar Sync Sensor
Page 146

ROAM Remote
Page 137
ROAM XL Remote
Page 138

Soil-Clik Sensor
Page 151

Smart Approved WaterMark

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STANDARD CONTROLLERS

I-CORE™

Flow monitoring and two-wire capabilities make I-Core an ideal fit for standalone midsize commercial and high-end residential projects.

KEY BENEFITS

- Number of stations:
  - Conventional: 6 to 30 (plastic), 6 to 42 (metal and pedestals)
  - With DUAL™ decoder: up to 48
- 4 independent irrigation programs (8 start times each) allow for customised scheduling
- 12-hour maximum station run time provides flexibility for lower-flow zones
- Any 2 programs can operate simultaneously for more efficient watering
- Sensor inputs:
  - 2 (plastic)
  - 3 (metal and pedestal)
- 1 P/MV output for pump start relay and master valve activation
- Flow-monitoring capabilities provide real-time water usage data
- Programmable No Water Window prevents all irrigation for a specified time frame
- High-visibility, backlit display with 6 selectable languages

OPERATING SPECIFICATIONS

- Transformer input: 120/230 VAC
- Transformer output (24 VAC): 1.4 A
- Station output (24 VAC): 0.56 A
- P/MV output (24 VAC): 0.28 A
- Approvals: Plastic Wall Mount IP44, Metal IP56, Plastic Pedestal IP34, NEMA 3R, UL, cUL, FCC, CE, RCM
- Warranty period: 5 years

Plastic Outdoor
Height: 28 cm
Width: 33.7 cm
Depth: 15.9 cm

Metal Wall Mount
(grey or stainless steel)
Height: 31.4 cm
Width: 39.4 cm
Depth: 16.5 cm

Plastic Pedestal
Height: 99 cm
Width: 61 cm
Depth: 43 cm

Metal Pedestal
(grey or stainless steel)
Height: 91.4 cm
Width: 39.4 cm
Depth: 12.7 cm

I-CORE	
Model	**Description**
IC-600-PL	Base 6-station controller, indoor/outdoor, plastic cabinet
IC-600-M	Base 6-station controller, indoor/outdoor, metal cabinet
IC-600-PP	Base 6-station controller, indoor/outdoor, plastic pedestal
IC-600-SS	Base 6-station controller, indoor/outdoor, stainless steel cabinet
ICM-600	6-station plug-in expansion module
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

DUAL	
Model	**Description**
DUAL48M	DUAL decoder output module, up to 48-stations 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)

Compatible with:

Solar Sync Sensor
Page 146

DUAL Decoder
Page 135

Flow-Sync Sensor
Page 148

WFS Sensor
Page 149

Smart WaterMark
Recognised as a responsible water-saving tool when used with a Solar Sync sensor

HYDRAWISE® CONTROLLERS

HYDRAWISE CONTROLLER COMPARISON CHART

CONTROLLER MODELS	MAXIMUM STATIONS	SENSOR INPUTS	TWO-WIRE	REMOTE CONTROL	WEB ACCESS
HC	12	2	None	Smartphone with Wi-Fi	Hydrawise, Wi-Fi
WAND for X2	14	1	None	ROAM, ROAM XL, Smartphone with Wi-Fi	Hydrawise, Wi-Fi
HPC	16	1	None	ROAM, ROAM XL, Smartphone with Wi-Fi	Hydrawise, Wi-Fi
PRO-HC	24	2	None	Smartphone with Wi-Fi	Hydrawise, Wi-Fi
HCC	54	2	EZDS, 54 stations	ROAM, ROAM XL, Smartphone with Wi-Fi	Hydrawise, Wi-Fi

HYDRAWISE® SOFTWARE

The industry-best Hydrawise irrigation control platform allows for professional multi-site management and provides a range of helpful water-saving features for end users.

Save Water

PREDICTIVE WATERING™

Predictive Watering uses past, current, and forecast weather data sourced from the internet to automatically adjust to local, real-time conditions and provide homeowners and end users with tremendous water savings.

SET UP IRRIGATION BY PROGRAM OR ZONE

Configure schedules exactly how you like: by program or zone. If you like to create schedules by program, you can keep your management style.

VIRTUAL SOLAR SYNC™

Virtual Solar Sync uses daily ET measurements from your selected weather stations to supplement the Predictive Watering adjustments on your controller, working to save even more water.

Protect the Landscape

SYSTEM MONITORING

Flow rate and valve monitoring alert you in the event of a problem, so you can quickly prevent landscape degradation before significant damage occurs.

WEATHER MONITORING

Web-based climate monitoring automatically adjusts irrigation systems to local weather conditions, ensuring plants remain healthy — rain or shine.

Save Time and Labour

REMOTE MANAGEMENT

Make changes to a program and know the status of the controller and the irrigation plan without a site visit.

STORE CUSTOMER PLANS AND DESIGNS

Attach irrigation system layouts to your customers' controllers for quick reference in the field. Never forget the location of the pipes or valve box again.

ON-SITE REMOTE

Turn your smartphone into a remote control to make changes and check the irrigation system without visiting the controller.

Build a Stronger Business

BUILD A STRONGER BUSINESS

Add services, grow revenue, increase customer satisfaction, and rest assured that Hydrawise has your back as you expand your business.

BUSINESS BRANDING

Gain instant recognition from your customers by including your business logo and details in your Hydrawise account.

MULTI-SITE MANAGER

Manage customers or multiple sites with our unique business tools.

- Summary of all controllers
- Map view of controllers
- List view of customers/sites
- Search for customers and controllers
- View all controller events and logs
- View all controller alerts
- Global control settings
  - Alerts
  - Watering Schedules
  - Start Times
  - Watering Triggers
- Quick select controllers
- Generate job sheets
- Manage subcontractors or regions

BUSINESS ACCOUNT

Manage staff access with different levels of permission. Remove or add staff easily and quickly. Add and store files, irrigation plans, layouts, or other documents for access by your staff.

MESSAGING

Receive messages from and send messages to customers and staff through the Hydrawise app.

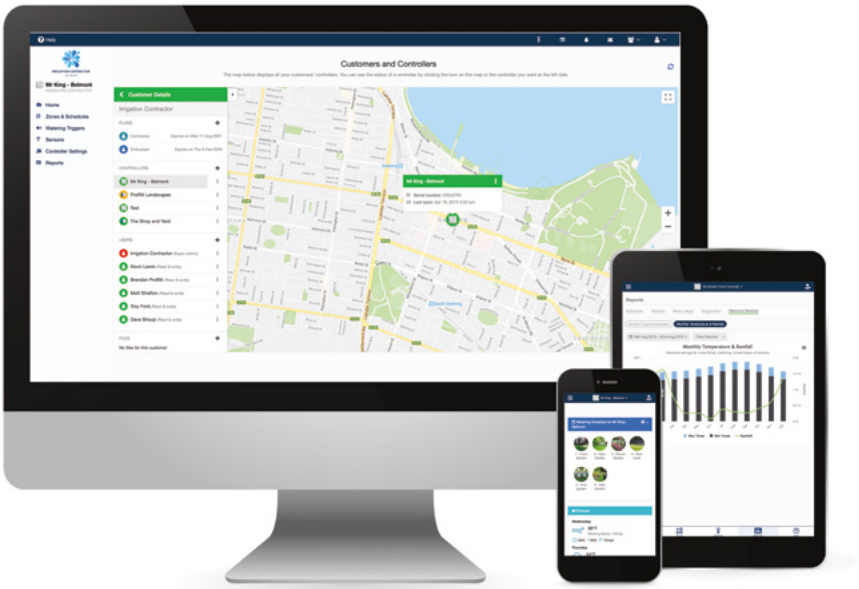
Manage from Anywhere

GLOBAL APP AND WEB ACCESS

Sit back and relax. With Hydrawise, everything you need is in the palm of your hand. Remote access allows you to view, manage, and monitor irrigation controllers from your smartphone, tablet, or computer at your convenience.

SMART-HOME COMPATIBILITY

Hydrawise integrates seamlessly with several industry-leading smart-home solutions.



Access to Hydrawise software is free for all users worldwide. For advanced features, annual software plans are available for purchase. **To learn more, visit hydrawise.com.**

Smart Approved WaterMark

Smart WaterMark
Recognised as a responsible water-saving tool

HC Controller
6- and 12-station count

X2 Controller with WAND Module
4-, 6-, 8-, and 14-station count

HPC Controller
4- to 16-station count

Pro-HC Controller
6-, 12-, and 24-station count

HCC Controller
8- to 54-station count, EZDS two-wire option

HC Flow Meter
Add an optional flow meter to receive flow alerts and monitor water consumption

Not available for X2

HC

Perfect for residential projects, the indoor HC controller provides smart water savings and remote irrigation management capabilities.

KEY BENEFITS

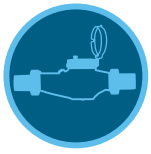
- Number of stations:
  – 6 or 12 (fixed indoor)
- Standard programming option allows for 6 independent irrigation programs and 6 start times per program
- Advanced programming option provides station-based programming with up to 6 total start times available
- 24-hour maximum station run time provides flexibility for low-flow zones
- 2 sensor inputs available for use with any Clik sensors and HC Flow Meter
- Station outputs can also be used to activate a pump start relay or master valve
- Wi-Fi enabled for quick connection to Hydrawise software
- 7 cm full-colour touchscreen display for simple programming at the control panel
- Built-in milliamp sensor for wire fault detection and alerts (12-station model only)

OPERATING SPECIFICATIONS

- Transformer input: 120 VAC or 230 VAC
- Transformer output (24 VAC): 1 A
- Station output (24 VAC): 0.56 A
- P/MV output (24 VAC): 0.28 A
- Approvals: UL, cUL, FCC, CE, RCM
- Warranty period: 2 years

HC
(plastic indoor)
Height: 15.2 cm
Width: 17.8 cm
Depth: 3.3 cm

Compatible with:



HC Flow Meter
Page 147

Rain-Clik Sensor
Page 144

Soil-Clik Sensor
Page 151

Smart Approved WaterMark

Smart WaterMark
Recognised as a responsible water-saving tool

HC	
Model	**Description**
HC-600i	Fixed 6-station, plastic indoor wall mount, 120 VAC transformer
HC-601i-E	Fixed 6-station, plastic indoor wall mount, 230 VAC transformer with European connections
HC-601i-A	Fixed 6-station, plastic indoor wall mount, 230 VAC transformer with Australian connections
HC-1200i	Fixed 12-station, plastic indoor wall mount, 120 VAC transformer
HC-1201i-E	Fixed 12-station, plastic indoor wall mount, 230 VAC transformer with European connections
HC-1201i-A	Fixed 12-station, plastic indoor wall mount, 230 VAC transformer with Australian connections

WAND FOR X2™

This Wi-Fi upgrade option equips X2 controllers with remote management capabilities from anywhere with an internet connection.

KEY BENEFITS

- Simple plug-in Wi-Fi option for any X2 controller model for online irrigation management
- Standard programming option allows for 6 independent irrigation programs and 6 start times per program
- Advanced programming option provides station-based programming with up to 6 total start times and 24-hour maximum run times
- Increase water savings by adding Hydrawise to your X2 controller
- Fast Bluetooth Wi-Fi network setup, or SoftAP or WPS configuration
- See complete X2 controller key benefits and specifications on **page 103**

OPERATING SPECIFICATIONS

- Approvals: Wi-Fi b/g/n, Bluetooth 5.0, UL, cUL, FCC, CE, RCM
- Warranty period: 2 years

WAND Wi-Fi Module
Height: 2 cm
Width: 5 cm
Depth: 5 cm

WAND Module installed in X2 controller

WAND WI-FI MODULE	
Model	**Description**
WAND	Wi-Fi module for Hydrawise water management software

WAND INSTALLATION

Compatible with:

Rain-Clik Sensor
Page 144

ROAM Remote
Page 137
ROAM XL Remote
Page 138

Soil-Clik Sensor
Page 151

Smart Approved WaterMark

Smart WaterMark
Recognised as a responsible water-saving tool

HPC

Combine the modularity of the Pro-C™ with Hydrawise® irrigation management software for a smart and flexible control solution.

KEY BENEFITS

- Number of stations:
  – Modular capacity from 4–16 stations permits simple system expansion
- Standard programming option allows for 6 independent irrigation programs and 6 start times per program
- Advanced programming option provides station-based programming with up to 6 total start times available
- 24-hour maximum station run time provides flexibility for low-flow zones
- 1 sensor input available for use with any Clik sensor or HC Flow Meter
- 1 P/MV output for pump start relay and master valve activation
- Wi-Fi enabled for quick connection to Hydrawise software
- 7 cm full-colour touchscreen display for simple programming at the control panel
- Built-in milliamp sensor for wire fault detection and alerts

OPERATING SPECIFICATIONS

- Transformer input: 120 or 230 VAC
- Transformer output (24 VAC): 1 A
- Station output (24 VAC): 0.56 A
- P/MV output (24 VAC): 0.28 A
- Approvals: Plastic IP44, UL, cUL, FCC, CE, RCM
- Warranty period: 2 years

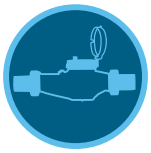
HPC
(plastic indoor/outdoor)
Height: 22.9 cm
Width: 25.4 cm
Depth: 11.4 cm

HPC Face Panel

HPC	
Model	**Description**
HPC-400	4-station base: 120 VAC indoor/outdoor controller
HPC-401-E	4-station base: European 230 VAC indoor/outdoor controller
HPC-401-A	4-station base: Australian 230 VAC indoor/outdoor controller
HPC-FP	Hydrawise retrofit front panel for Pro-C controllers (March 2014 or newer models)

PC-SERIES STATION EXPANSION	
Model	**Description**
PCM-300	3-station plug-in module: Use to increase station count from 4 to 7, 10, or 13
PCM-900	9-station plug-in module: Use to increase station count from 7 to 16

Compatible with:



HC Flow Meter
Page 147

ROAM Remote
Page 137
ROAM XL Remote
Page 138

Rain-Clik Sensor
Page 144

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PRO-HC

Use this rugged, professional-grade Wi-Fi controller for residential and light commercial applications.

KEY BENEFITS

- Number of stations:
  – 6, 12, or 24
- Standard programming option allows for 6 independent irrigation programs and 6 start times per program
- Advanced programming option provides station-based programming with up to 6 total start times available
- 24-hour maximum station run time provides flexibility for low-flow zones
- 2 sensor inputs available for use with any Clik sensor and HC Flow Meter
- 1 P/MV output for pump start relay and master valve activation
- Wi-Fi enabled for quick connection to Hydrawise software
- 7 cm full-colour touchscreen display for simple programming at the control panel
- Built-in milliamp sensor for wire fault detection and alerts

OPERATING SPECIFICATIONS

- Transformer input: 120 VAC or 230 VAC
- Transformer output (24 VAC): 1 A
- Station output (24 VAC): 0.56 A
- P/MV output (24 VAC): 0.28 A
- Approvals: Plastic IP44, UL, cUL, FCC, CE, RCM
- Warranty period: 2 years

Pro-HC
(plastic indoor)
Height: 21 cm
Width: 24 cm
Depth: 8.8 cm

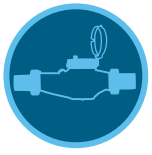
Pro-HC
(plastic outdoor)
Height: 22.8 cm
Width: 25 cm
Depth: 10 cm

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

1 Model	2 Transformer	3 Indoor/Outdoor	4 Options
PHC-6 = 6-station controller **PHC-12** = 12-station controller **PHC-24** = 24-station controller	**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 model has internal transformer with cord)*

Example:
PHC-2400 = 24-station, 120 VAC, outdoor plastic controller

Compatible with:



HC Flow Meter
Page 147

Rain-Clik Sensor
Page 144

Soil-Clik Sensor
Page 151

Smart Approved WaterMark

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Recognised as a responsible water-saving tool

HCC

Bring the power of Hydrawise® to residential, commercial, and public-sector projects with this affordable powerhouse.

KEY BENEFITS

- Number of stations:
  - Conventional: 8 to 38 (plastic), 8 to 54 (metal and pedestals)
  - With two-wire EZDS: up to 54 (all enclosure options)
- Standard programming option allows for 6 independent irrigation programs and 6 start times per program
- Advanced programming option provides station-based programming with up to 6 total start times available
- 24-hour maximum station run time provides flexibility for low-flow zones
- Any 2 programs or stations can operate simultaneously, providing more efficient watering
- 2 sensor inputs available for use with any Clik sensors and HC Flow Meter
- 1 P/MV output for pump start relay and master valve activation
- Wi-Fi enabled for quick connection to Hydrawise software
- 8 cm full-colour touchscreen display for simple programming at the control panel
- Built-in milliamp sensor for wire fault detection and alerts

OPERATING SPECIFICATIONS

- Transformer input: 120/230 VAC
- Transformer output (24 VAC): 1.4 A
- Station output (24 VAC): 0.56 A
- P/MV output (24 VAC): 0.56 A
- Approvals: Plastic Wall Mount IP44, Plastic Pedestal IP34, NEMA 3R, UL, cUL, FCC, CE, RCM
- Warranty period: 5 years

USER-INSTALLED OPTIONS

- Rain-Clik™ for rain sensor shut down see **page 144**

Plastic
Height: 30.5 cm
Width: 35 cm
Depth: 12.7 cm

Metal
(grey or stainless)
Height: 40.6 cm
Width: 33 cm
Depth: 12.7 cm

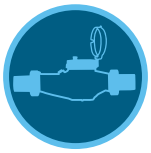
Metal Pedestal
(metal/stainless)
Height: 91.4 cm
Width: 29.2 cm
Depth: 12.7 cm

Plastic Pedestal
Height: 99 cm
Width: 61 cm
Depth: 43 cm

HCC	
Model	**Description**
HCC-800-PL	8-station base model, plastic outdoor, wall mount
HCC-800-M	8-station base model, grey metal outdoor, wall mount
HCC-800-SS	8-station base model, stainless steel, wall mount
HCC-800-PP	8-station base model, plastic pedestal
HCC-FPUP	Retrofit upgrade kit for ICC and ICC2
ICC-PED	Grey pedestal for metal wall mount cabinet
ICC-PED-SS	Stainless steel pedestal for stainless wall mount
ICC-PWB	Optional pedestal wiring board for metal pedestals
WIFI-EXT-KIT	Wi-Fi antenna extension kit

HCC SERIES STATION EXPANSION	
Model	**Description**
ICM-400	4-station plug-in module with enhanced surge protection
ICM-800	8-station plug-in module with enhanced surge protection
ICM-2200	22-station expansion module (maximum one per controller)
EZ-DM	54-station decoder output module (one per controller)
EZ-1	Single-station EZ decoder

Compatible with:



HC Flow Meter
Page 147

ROAM Remote
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ROAM XL Remote
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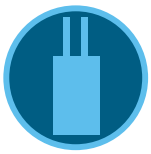

EZ Decoder System
Page 134

Smart Approved WaterMark

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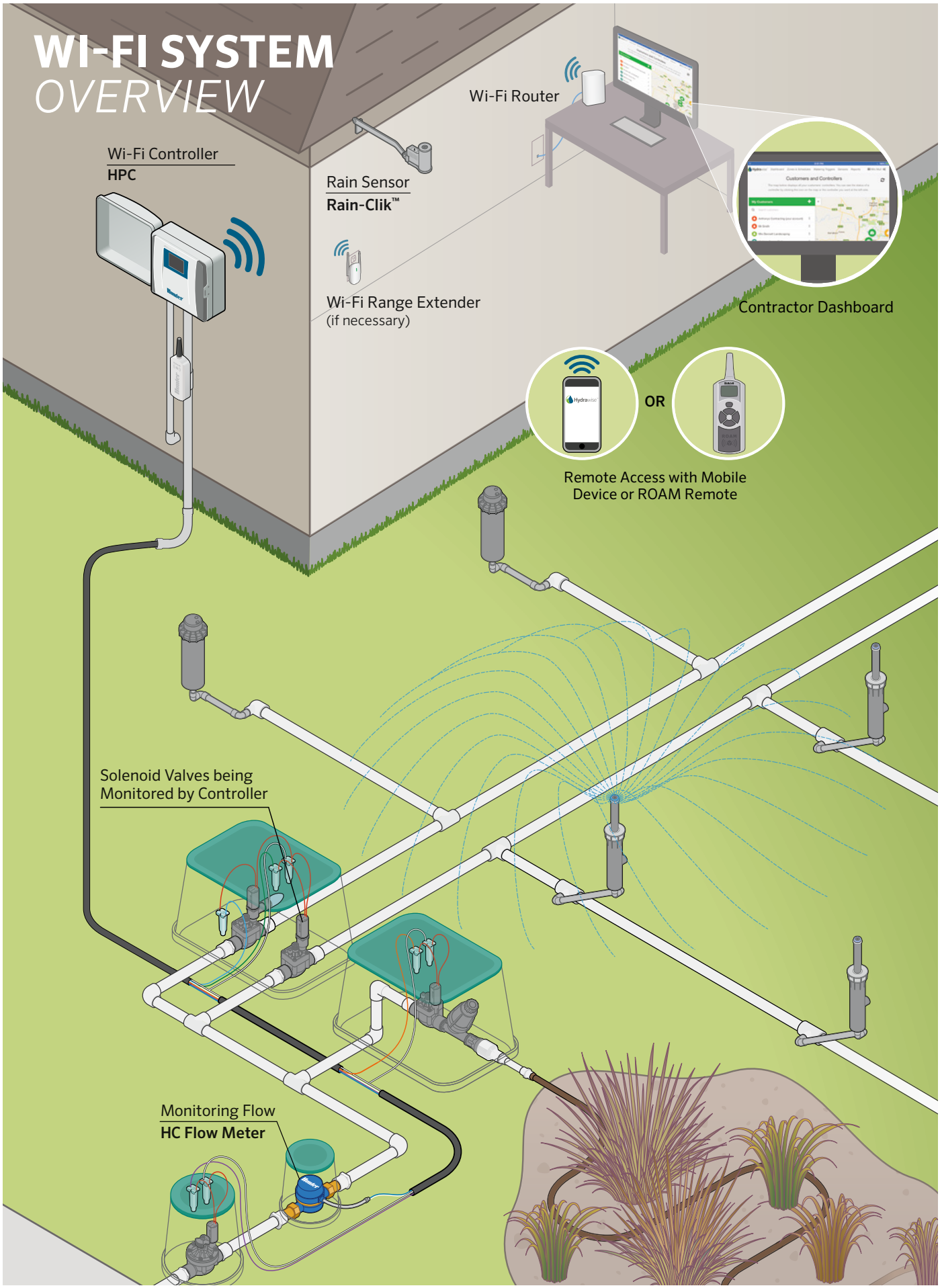
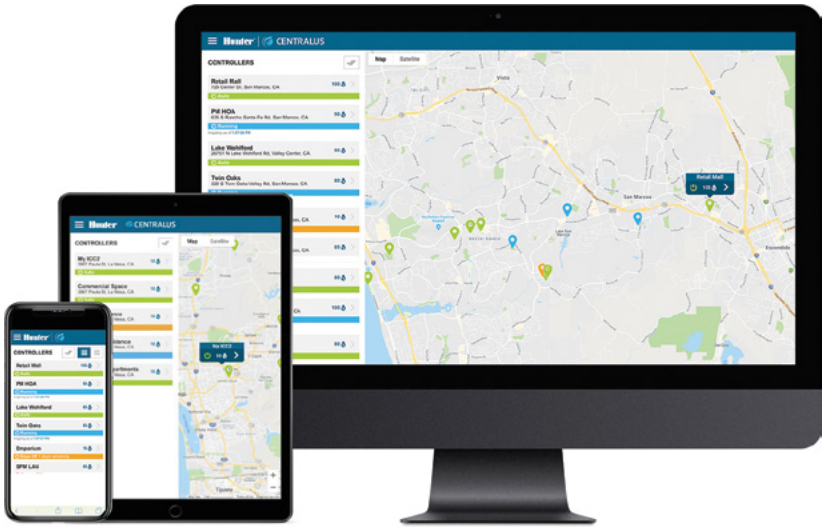

WI-FI SYSTEM
OVERVIEW
Wi-Fi Router
Wi-Fi Controller
HPC
Rain Sensor
Rain-Clik™
Wi-Fi Range Extender
(if necessary)
Contractor Dashboard
OR
Remote Access with Mobile
Device or ROAM Remote
Solenoid Valves being
Monitored by Controller
Monitoring Flow
HC Flow Meter

CENTRALUS™ CONTROLLERS



Centralus Software
Enable ICC2 and ACC2 controllers with next-generation management technology.

Mobile-Friendly

The mobile-friendly Centralus irrigation management platform provides highly secure, comprehensive cloud-based control and monitoring features. The connectivity allows you to view a controller's status, change settings, view forecasts, save water, and receive instant notification of important system alarms.

User-Friendly

The addition of internet access brings dial-based ICC2 and ACC2 controllers seamlessly into the world of next-generation irrigation control. From the intuitive Centralus dashboard, it is now easier than ever before to add alarm monitoring, location information, remote operation, and scheduling to ICC2 and ACC2 controllers.

Easy to Upgrade

To upgrade to Centralus control, add a simple Wi-Fi or LAN communication module to the controller:

- ICC2: Add WIFIKIT or LANKIT
- ACC2: Add A2C-WIFI or A2C-LAN

CENTRALUS CONTROLLER COMPARISON CHART

CONTROLLER MODELS	MAXIMUM STATIONS	SENSOR INPUTS	TWO-WIRE	REMOTE CONTROL	WEB ACCESS
ICC2	54	1	EZDS, 54 stations	ROAM, ROAM XL, Smartphone with Wi-Fi	Centralus*: Wi-Fi, LAN
ACC2	54, 225 two-wire	3 Clik, 6 Flow	ICD, 225 stations	ROAM, ROAM XL, Smartphone with Wi-Fi	Centralus*: Wi-Fi, LAN

**Cellular connections available in 2020.*

CENTRALUS™ SOFTWARE

Add cloud-based control and monitoring for ICC2 and ACC2 controllers with the mobile-friendly Centralus irrigation management platform.

KEY BENEFITS

- Browser-based programming and communication software
- Highly secure cloud access
- Map-based navigation and status
- Instant remote control from mobile device
- Flow monitoring and reporting
- Alarm reporting and detailed irrigation history reports
- Responsive web design configures for your device, allowing the same controls from your smartphone, tablet, or desktop
- Ethernet or Wi-Fi connectivity options
- Built-in Solar Sync™ logic/Solar Sync Delay features for smart water savings
- Professional crewmember administration with multiple levels of access
- Organise maintenance teams and their controllers into management groups

OPERATING SPECIFICATIONS

- Operates in most modern browsers (Internet Explorer® is no longer supported and may not display all screens correctly)
- Secure internet connection for web-hosted application

USER-INSTALLED OPTIONS

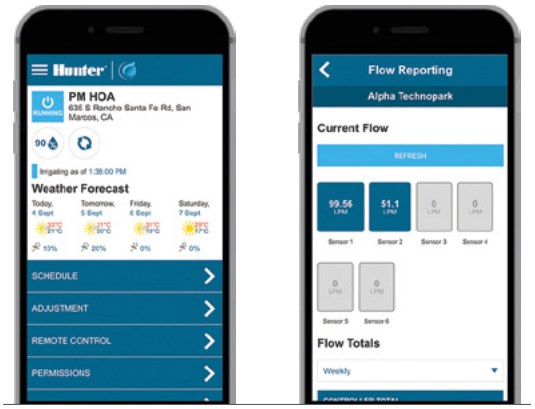
- Solar Sync smart weather sensors, one per controller
- Flow sensors including Flow-Sync, WFS, and other approved equals
- Connected controllers are compatible with ROAM/ROAM XL licence-free remote control (pre-wired controller connection)

COMMUNICATION OPTIONS

- Ethernet with RJ-45 connection, low data requirements
- Wi-Fi 802.11 b/g/n, 2.4 GHz

ACC2 COMMUNICATION MODULE INSTALLATION

A2C-WIFI is installed behind the ACC2 facepack



Manage and monitor controllers from anywhere

COMMUNICATIONS	
Model	**Description**
WIFIKIT	ICC2 Wi-Fi connection
LANKIT	ICC2 LAN (Ethernet) connection
A2C-WIFI	ACC2 Wi-Fi connection
A2C-LAN	ACC2 LAN (Ethernet) connection

COMMUNICATIONS ACCESSORIES	
Model	**Description**
WIFIEXTKIT	Antenna extension, conduit mount (up to 3 m cable), use with A2C-WIFI only

WIFIKIT
Height: 10.8 cm
Width: 6.4 cm (installed)
Depth: 3.5 cm

LANKIT
Height: 10.8 cm
Width: 6.4 cm (installed)
Depth: 3.5 cm

ICC2 WIFIKIT INSTALLATION

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ICC2

This reliable control system can run conventional, two-wire, or hybrid operations with the option to upgrade to Centralus™ cloud-based control.

KEY BENEFITS

- Number of stations:
  - Conventional: 8 to 38 (plastic), 8 to 54 (metal and pedestal)
  - With two-wire EZDS: up to 54 (all enclosure options)
- 4 independent irrigation programs (8 start times each) allow for customised scheduling
- 12-hour maximum station run time provides flexibility for low-flow zones
- Any 2 programs can operate simultaneously, providing more efficient watering
- 1 sensor input available for use with Solar Sync™ or any Clik sensors
- 1 P/MV output for pump start relay and master valve activation
- Backward compatibility to original ICC controllers allows for quick updates to older systems
- Upgradeable to Centralus software for web-based central control options

OPERATING SPECIFICATIONS

- Transformer input: 120/230 VAC
- Transformer output (24 VAC): 1.4 A
- Station output (24 VAC): 0.56 A
- P/MV output (24 VAC): 0.56 A
- Approvals: Wall Mounts IP44, Plastic Pedestal IP34, NEMA 3R, UL, cUL, FCC, CE, RCM
- Warranty period: 5 years

USER-INSTALLED OPTIONS

- WIFIKIT or LANKIT communications for Centralus web-based control
- Compatible with Flow-Clik™ sensor for catastrophic high-flow shutdown

Plastic
Height: 30.5 cm
Width: 35 cm
Depth: 12.7 cm

Metal
(grey or stainless steel)
Height: 40.6 cm
Width: 33 cm
Depth: 12.7 cm

Metal Pedestal
(grey or stainless steel)
Height: 91.4 cm
Width: 29.2 cm
Depth: 12.7 cm

Plastic Pedestal
Height: 99 cm
Width: 61 cm
Depth: 43 cm

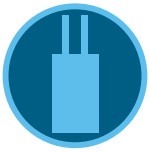
ICC2	
Model	**Description**
I2C-800-PL	8-station base model, plastic outdoor wall mount
I2C-800-M	8-station base model, grey metal outdoor, wall mount
I2C-800-SS	8-station base model, stainless steel, wall mount
I2C-800-PP	8-station base model, plastic pedestal
ICC-FPUP2	ICC2 retrofit kit for original ICC controllers
ICC-PED	Grey pedestal for metal wall mount
ICC-PED-SS	Stainless steel pedestal for stainless wall mount
ICC-PWB	Optional pedestal wiring board for metal pedestals

ICC2 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)
EZ-DM	54-station decoder output module (one per controller)
EZ-1	Single-station EZ decoder

Compatible with:

Solar Sync Sensor
Page 146

ROAM Remote
Page 137
ROAM XL Remote
Page 138



EZ Decoder System
Page 134

Smart Approved WaterMark

Smart WaterMark
Recognised as a responsible water-saving tool when used with a Solar Sync sensor

ACC2

The multi-flow monitoring and management capabilities of ACC2 make it the best choice for complex projects.

KEY BENEFITS

- Number of stations:
  - 12 to 225, for large projects
- Up to 6 flow sensor inputs and 6 P/MV outputs
- 32 automatic programs (10 start times each) for precise plant management
- Block function to group stations and consolidate large systems
- Built-in Solar Sync™ logic for smart water savings
- Real-time flow monitoring detects and diagnoses leaks in up to 6 flow zones
- Flow management optimises watering at safe velocities
- High-visibility, full-colour display with reversible facepack
- Conditional Response "if/then" programming for active responses to sensor inputs
- User management password protection, with two levels of access
- Optional plug-in communications modules for cloud or network control
- Detailed alarm logs in plain language
- Extreme service lightning protection
- Easy Retrieve™ programming backup and restore
- Non-Water Windows to inhibit accidental irrigation

OPERATING SPECIFICATIONS

- Transformer input: 120/230 VAC
- Maximum AC current draw: 120 VAC, 2 A/230 VAC, 1 A
- Transformer output: 24 VAC, ~3 A
- P/MV outputs (24 VAC): Up to 6; 3 included, 0.8 A each
- Sensor inputs: 3 Clik, 1 Solar Sync, and up to 6 Flow sensors (3 included)
- Approvals: Wall Mounts IP44, Plastic Pedestal IP34, NEMA 3R, UL, cUL, FCC, CE, RCM
- Warranty period: 5 years

USER-INSTALLED OPTIONS

- ROAM/ROAM XL remote controls
- WSS-SEN or SOLAR-SYNC-SEN for automatic water savings
- Flow sensors (up to 6) including Flow-Sync, WFS, and other approved equals

Metal Wall Mount
(grey or stainless steel)
Height: 40 cm
Width: 40 cm
Depth: 18 cm

Plastic Wall Mount
Height: 42 cm
Width: 42 cm
Depth: 17 cm

Metal Pedestals
(grey or stainless steel)
Height: 94 cm
Width: 39 cm
Depth: 13 cm

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

Compatible with:

Solar Sync Sensor
Page 146

Flow-Sync Sensor
Page 148
WFS Sensor
Page 149

ROAM Remote
Page 137
ROAM XL Remote
Page 138

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ADDITIONAL SPECIFICATIONS BY MODEL

ACC2 CONVENTIONAL

- Number of stations:
  - 12 to 54, for large projects
- Simultaneous station operation: up to 14 solenoids
- Expands in 6-station increments
- Extreme service lightning protection, standard on all A2M-600 output modules
- Station outputs: 0.8 A each

ACC2 DECODER

- Number of stations:
  - 75, 150, or 225, for large projects
- Simultaneous station operation: up to 30 solenoids
- Operates Hunter's premium ICD decoders over ID wire:
  - Up to 3 km (2 mm^2 wire)
  - Up to 4.5 km (3 mm^2 wire)
- See complete ICD decoder key benefits and specifications on **page 133**
- Up to 3 two-wire paths per output module
- Diagnostics including decoder inventory, wire tracker, solenoid finder, and more

ACC2 CONVENTIONAL MODELS

Model	Description
A2C-1200-M	12-station base unit controller, expands to 54 stations, grey steel wall mount, outdoor
A2C-1200-P	12-station base unit controller, expands to 54 stations, plastic outdoor wall mount
A2C-1200-SS	12-station base unit controller, expands to 54 stations, stainless steel wall mount, outdoor
A2C-1200-PP	12-station base unit controller, expands to 54 stations, plastic pedestal
A2M-600	6-station plug-in module for use with the A2C-1200 series controllers

ACC2 DECODER MODELS

Model	Description
A2C-75D-M	75-station base model, grey metal outdoor, wall mount
A2C-75D-P	75-station base model, plastic outdoor, wall mount
A2C-75D-SS	75-station base model, stainless steel, wall mount
A2C-75D-PP	75-station base model, plastic pedestal
A2C-D75	75-station decoder expansion module

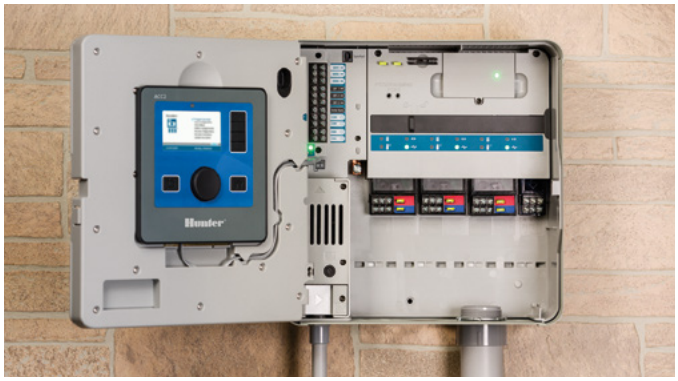
ACC2 ACCESSORIES FOR ALL MODELS

ACC2 ACCESSORIES

Model	Description
A2C-F3	Optional flow meter expansion module (adds 3 inputs)
A2C-LEDKT	External status light shows controller status with door closed
A2C-WIFI	ACC2 Wi-Fi connection
A2C-LAN	ACC2 LAN (Ethernet) connection
ACC-PED	Grey pedestal for wall mount
PED-SS	Stainless steel pedestal for wall mount

A2C-CELL-E cellular connection coming in early 2020

ACC2 – REVERSIBLE FACEPACK

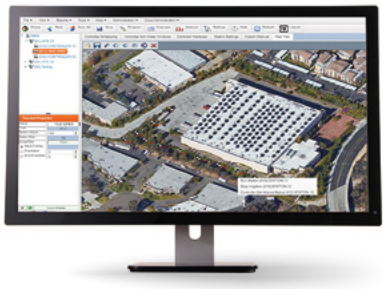


IMMS™ ONLINE

Simplify central control of legacy Hunter ACC controllers and accessories with the web- or server-based IMMS software package.

KEY BENEFITS

- Browser-based programming and communication software
- Cloud access or user-hosted enterprise versions available
- Graphical user interface with customisable, map-based navigation
- Flow monitoring and reporting
- Alarm reporting and detailed irrigation history reports
- Automatic SMS text notification of alarms to your mobile device
- Mobile view allows instant status updates and fast command functions
- Cell, Ethernet, UHF radio, and hardwire cable connectivity options
- APIs available for custom integration into management systems
- Built-in Solar Sync™ logic for smart water savings
- User administration with multiple levels of access



Add a visual dimension to central control with background map graphics

Monitor and command IMMS-equipped controllers from your smartphone

OPERATING SPECIFICATIONS

- Operates in most modern browsers (Internet Explorer® is no longer supported and may not display all screens correctly)
- Secure internet connection for web-hosted application

USER-INSTALLED OPTIONS

- Solar Sync smart weather sensors, one per controller
- Flow sensor including Flow-Sync, WFS, and other approved equals

COMMUNICATION OPTIONS

- Cellular (LTE or 3G, where applicable)
- Ethernet with RJ-45 connection
- Shared connections via UHF radio or hardwire cable
  - Hardwire, 20 mA via GCBL cable

Compatible with:

ACC Controller
Page 124

ROAM Remote
Page 137
ROAM XL Remote
Page 138

Solar Sync Sensor
Page 146

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COMMUNICATION MODEL CHART

Model		Description
ACC-COM-GPRS-E*		Multi-controller cell connection
ACC-COM-LAN		Ethernet connection
ACC-COM-HWR		Radio and hardwire connection, use with:
	RAD3	UHF radio (requires antenna)
	ACC-HWIM	Hardwire cable terminal and driver (requires cable)

Note:
*Requires monthly cell service plan

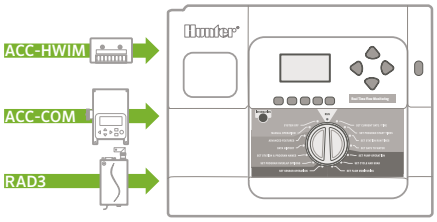
COMMUNICATION ACCESSORIES MODEL CHART

Model	Description
GCBL-XXX HARDWIRE CABLE	Add -100, -300, -500 for length in feet (30, 90, 150 m)
IMMS-ANT2	Antenna for plastic pedestal lid
IMMS-ANT3	Antenna for wall or pole mount
IMMS-ANTYAGI3	High-efficiency directional antenna (pole mount)
RA-5M	High-gain omnidirectional base antenna (roof or pole mount)
APPBRKT2	Comm module bracket for plastic pedestals

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
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)
APPBRKT2	Communication bracket for newer plastic pedestals (April 2017)	Holds comm modules and accessories in new-style plastic pedestal

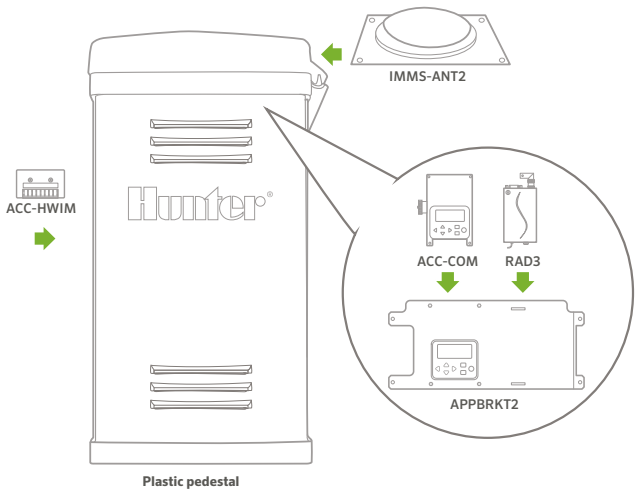
Model	Description	Options	Purpose
IMMS-CCC	Hardwire central interface	None = 120 VAC (North America) E = 230 VAC (Europe/international power) A = 230 VAC (Australia)	Hardwired central interface for connection to site via direct wire (GCBL cable)
GCBL*	100 = 30 m 300 = 90 m 500 = 150 m		Cable for all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

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

RADIO ANTENNA OPTIONS (SPECIFY SEPARATELY)

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

Smart WaterMark
Recognised as a responsible water-saving tool when used with a Solar Sync sensor



ACC plastic pedestal communication components

ACC

Powerful features and simple programming are hallmarks of this proven, flow-monitoring commercial controller.

KEY BENEFITS

- Number of stations:
  - 12 to 99, for large projects
- 6 automatic programs (10 start times each)
- SSGs (Simultaneous Station Groups) to consolidate large systems
- Built-in Solar Sync™ logic for smart water savings
- Real-time flow monitoring detects and diagnoses leaks with optional flow sensor
- Detailed alarm logs in plain language
- Programmable Rain Delay after sensor shutdown
- Easy Retrieve™ programming backup and restore
- Non-Water Windows to inhibit accidental irrigation
- Cycle and Soak, Delay Between Stations

OPERATING SPECIFICATIONS

- Transformer input: 120/230 VAC
- Maximum AC current draw: 120 VAC, 2A/230 VAC, 1 A
- Transformer output: 24 VAC, 4 A
- Station outputs: 0.56 A
- 2 P/MV outputs (24 VAC): 0.325 A each
- Simultaneous program operation: Up to 6 automatic programs
- Sensor inputs: 4 Clik, 1 Solar Sync, and 1 Flow sensor
- Approvals: Wall Mounts IP44, Plastic Pedestal IP34, NEMA 3R, UL, cUL, FCC, CE, RCM
- Warranty period: 5 years

USER-INSTALLED OPTIONS

- Solar Sync smart weather sensor
- Flow sensor including Flow-Sync, WFS, and other approved equals
- ROAM/ROAM XL licence-free remote control (pre-wired controller connection)
- Communication modules for IMMS™ central software on **page 122**

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: 99 cm
Width: 61 cm
Depth: 43 cm

Compatible with:

Solar Sync Sensor
Page 146

ROAM Remote
Page 137
ROAM XL Remote
Page 138

Flow-Sync Sensor
Page 148
WFS Sensor
Page 149

Smart WaterMark
Recognised as a responsible water-saving tool when used with a Solar Sync sensor

IMMS ONLINE

ADDITIONAL SPECIFICATIONS BY MODEL

ACC-1200 CONVENTIONAL

- Number of stations:
  - 12 to 42
- Modular expansion in 6-station increments
- Extreme service lightning protection, standard on all output modules

ACC-99D DECODER

- Number of stations:
  - 99 decoder stations
- Operates Hunter's premium ICD decoders over ID wire:
  - Up to 3 km (2 mm^2 wire)
  - Up to 4.5 km (3 mm^2 wire)
- Up to 6 two-wire paths for maximum flexibility
- 1-, 2-, 4-, and 6-station decoders plus ICD-SEN sensor input decoders
- See complete ICD decoder key benefits and specifications on **page 133**

ACC-1200 CONVENTIONAL MODELS

Model	Description
A2C-1200-M	12-station base unit controller, expands to 54 stations, grey steel wall mount, outdoor
A2C-1200-SS	12-station base unit controller, expands to 54 stations, stainless steel wall mount, outdoor
A2C-1200-PP	12-station base unit controller, expands to 54 stations, plastic pedestal
A2M-600	6-station plug-in module for use with the A2C-1200 series controllers

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 steel wall mount
ACC-99D-PP	2-wire decoder controller with 99-station capacity, plastic pedestal
ADM-99	Decoder output module

ACC ACCESSORIES FOR ALL MODELS

ACC ACCESSORIES

Model	Description
ACC-PED	Grey pedestal for wall mount
PED-SS	Stainless steel pedestal for wall mount

ACC – CONTROL FOR COMMERCIAL PROJECTS

BATTERY-POWERED CONTROLLERS

BATTERY-OPERATED CONTROLLER COMPARISON CHART

CONTROLLER MODELS	MAXIMUM STATIONS	SENSOR INPUTS	REMOTE CONTROL	SOLAR
BTT	2	None	BTT Bluetooth App	None
NODE	6	1	None	SPNODE
NODE-BT	4	2	NODE-BT Bluetooth App	None
XC HYBRID	12	1	None	SPXCH, XCH-600-SSP, XCH-1200-SSP

BTT

Take advantage of smartphone-controlled, above-ground irrigation for easier access to the hose tap.

KEY BENEFITS

- Number of zones:
  – 1 or 2
- Battery-operated tap timer with Bluetooth® control
- 1 smartphone manages an unlimited number of controllers
- 1-second to 24-hour run time with 4 start times
- Cycling mode repeats continuously within user-defined water windows, perfect for drip systems or germinating seeds
- Suspend irrigation up to 99 days during the off-season, perfect for seasonal markets
- Manual push-button operation for quick operation without a smartphone
- Automatic water shutoff after 1 hour prevents water waste
- Blinking LED low-battery alert indicates battery replacement
- Secure passcode protection prevents unauthorised schedule changes
- Alkaline batteries included for quicker installation
- Includes quick coupler adapter

OPERATING SPECIFICATIONS

- Two 1.5V AA alkaline batteries (included)
- BTT-101 flow rate: 19 to 64 l/min (1,130 to 3,860 l/hr)
- BTT-201 flow rate: 15 to 57 l/min (908 to 3,840 l/hr)
- Recommended pressure: 0.5 to 8 bar (50 to 800 kPa)
- Approvals: Plastic IPX6, Bluetooth 4.2 BLE, UL, cUL, FCC, CE, RCM
- Warranty period: 2 years

APP SPECIFICATIONS

- iOS® 9.0 or above
- Android™ 4.4 or above
- Maximum communication distance: 10 m

BTT-101
Inlet diameter: ¾" and 1"
Outlet diameter: ¾"
Height: 16.8 cm
Width: 12 cm
Depth: 6 cm

BTT-201
Inlet diameter: ¾" and 1"
Outlet diameter: ¾"
Height: 15.7 cm
Width: 13.5 cm
Depth: 7.6 cm

BTT-LOC
(optional)
Inlet diameter: ¾"
Outlet diameter: 16-18 mm dripline
Height: 7 cm
Width: 3 cm

Pressure Regulator
(optional)
Inlet diameter: ¾"
Outlet diameter: ¾"
Height: 7 cm
Width: 4 cm

BTT	
Model	**Description**
BTT-101	1-zone Bluetooth Tap Timer, 1" BSP and ¾" hose thread, quick coupler adapter
BTT-201	2-zone Bluetooth Tap Timer, 1" BSP and ¾" hose thread, quick coupler adapter
BTT-LOC	BTT adapter for 16-18 mm dripline

PRESSURE REGULATOR	
Model	**Description**
PRLG203FH3MH	1.4 bar (140 kPa) pressure regulator, ¾" hose thread
PRLG253FH3MH	1.7 bar (170 kPa) pressure regulator, ¾" hose thread
PRLG303FH3MH	2 bar (200 kPa) pressure regulator, ¾" hose thread
PRLG403FH3MH	2.8 bar (280 kPa) pressure regulator, ¾" hose thread

BTT

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NODE

This battery-powered, waterproof controller offers automatic irrigation control for temporary irrigation and sites without electricity.

KEY BENEFITS

- Number of stations:
  – 1, 2, 4, or 6
- Battery-operated controller for automatic irrigation without AC power
- Battery-life indicator for battery replacement
- Waterproof enclosure seal protects against water ingress
- 3 flexible programs with 4 start times each and up to 6-hour run times
- Suspend irrigation up to 99 days during the off-season
- Easy Retrieve™ memory backs up the full irrigation schedule if ever changed
- Delay Between Stations for slow-closing valves or pump recharge
- Seasonal adjustment for quicker schedule adjustments without changing run times
- Solar panel provides maintenance-free operation
- Mounts to Hunter solenoids, pipes, flat surfaces, or inside the valve box

OPERATING SPECIFICATIONS

- One or two 9V alkaline batteries or 1800 mAh solar panel with charging cell
- Operates DC-latching solenoids (P/N 458200)
- 30 m maximum wire runs, 1 mm² wire only
- Station output: 9–11 VDC
- P/MV output: 9–11 VDC
- Sensor inputs: 1
- Approvals: IP68, UL, cUL, FCC, CE, RCM
- Warranty period: 2 years

NODE	
Model	**Description**
NODE-100	Single-station controller and DC-latching solenoid
NODE-100-LS	Single-station controller
NODE-200	2-station controller
NODE-400	4-station controller
NODE-600	6-station controller
NODE-100-VALVE	Single-station controller with PGV-101G valve and DC-latching solenoid (NPT threads)
NODE-100-VALVE-B	Single-station controller with PGV-101G-B valve and DC-latching solenoid (BSP threads)
458200	DC-latching solenoid

NODE
Diameter: 8.9 cm
Height: 6.4 cm

SPXCH
Solar panel kit (optional)
Height: 8 cm
Width: 8 cm
Depth: 2 cm

NODE

Compatible with:

Mini-Clik Sensor
Page 145

Freeze-Clik Sensor
Page 152

NODE-BT

Manage gardens, greenhouses, traffic medians, and temporary irrigation sites from a smartphone without opening the valve box.

KEY BENEFITS

- Number of stations:
  – 1, 2, or 4
- Bluetooth® battery-operated controller for automatic irrigation without AC power
- 1 smartphone manages an unlimited number of controllers
- Waterproof enclosure seal protects against water ingress
- Active station LEDs and battery-life LED indicator for easy battery replacement
- 3 programs with 8 start times each and 1 second to 12-hour run times
- Suspend irrigation up to 99 days during the off-season
- Manual push-button operation for quick operation without a smartphone
- Delay Between Stations for slow-closing valves or pump recharge
- Add soil moisture sensor for compliance with LEED projects and agricultural applications
- Cycle and Soak prevents water waste and runoff in areas with elevation changes or tight soils
- Monthly and global seasonal adjustment for quicker schedule adjustments without changing run times
- Secure passcode protection prevents unauthorised schedule changes
- Mounts to Hunter solenoids, pipes, flat surfaces, or inside the valve box

OPERATING SPECIFICATIONS

- One or two 9V alkaline batteries
- Operates DC-latching solenoids (P/N 458200)
- 30 m maximum wire runs, 1 mm² wire only
- Station output: 9–11 VDC
- P/MV output: 9–11 VDC
- Sensor inputs: 2
- Approvals: IP68, Bluetooth 5.0 BLE, UL, cUL, FCC, CE, RCM
- Warranty period: 2 years

APP SPECIFICATIONS

- iOS® 9.0 or above
- Android™ 5.0 or above
- Maximum communication distance: 15 m

NODE-BT	
Model	**Description**
NODE-BT-100	Single-station Bluetooth battery controller and DC-latching solenoid
NODE-BT-100-LS	Single-station Bluetooth battery controller
NODE-BT-200	2-station Bluetooth battery controller
NODE-BT-400	4-station Bluetooth battery controller
NODE-BT-100-VALVE	Single-station Bluetooth battery controller with PGV-101G valve and DC-latching solenoid (NPT threads)
NODE-BT-100-VALVE-B	Single-station Bluetooth battery controller with PGV-101G-B valve and DC-latching solenoid (BSP threads)
458200	DC-latching solenoid
SC-PROBE	Soil probe for moisture sensing

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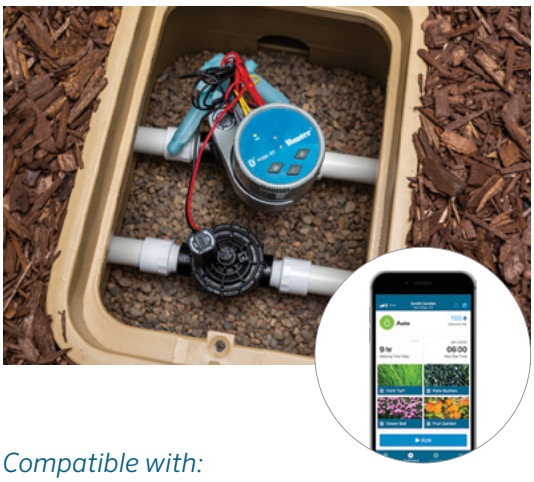
NODE-BT
Diameter: 8.9 cm
Height: 8.3 cm

SC-PROBE Soil Moisture Sensor Probe
Diameter: 2.5 cm
Height: 8.3 cm
Controller to probe: 30 m maximum
1 mm² direct-burial wire

NODE-BT



Compatible with:

Mini-Clik Sensor
Page 145

Freeze-Clik Sensor
Page 152

XC HYBRID

Effectively manage landscapes where electricity is unavailable with this economical battery- or solar-powered controller.

KEY BENEFITS

- Number of stations:
  – 6 or 12
- 3 power options: ambient-light-compatible solar panel, battery, or AC power
- Battery-life indicator for battery replacement
- Stainless steel enclosure protects against vandalism
- 3 programs with 4 start times each and up to 4-hour run times
- Suspend irrigation up to 99 days during the off-season
- Easy Retrieve™ memory backs up the full irrigation schedule
- Delay Between Stations for slow-closing valves or pump recharge
- Seasonal adjustment for quicker schedule adjustments without changing run times
- Solar panel provides maintenance-free operation
- Mounts to flat surfaces or steel posts

OPERATING SPECIFICATIONS

- Plastic model operates six 1.5V AA alkaline batteries
- Stainless steel model operated by six 1.5V C alkaline batteries
- Stainless steel solar model operates 1800 mAh solar panel with charging cell
- All models operate optional 24 VAC plug-in wall adapter (120 VAC P/N 526500, 230 VAC EU P/N 545700, 230 VAC AU P/N 545500)
- Operates DC-latching solenoids (P/N 458200)
- Station output: 9-11 VDC
- P/MV output: 9-11 VDC
- Sensor inputs: 1
- Approvals: Plastic IP54, Stainless Steel IP24, UL, cUL, FCC, CE, RCM
- Warranty period: 2 years

Plastic
Height: 22 cm
Width: 18 cm
Depth: 10 cm

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

Stainless Steel Solar
Height: 27 cm
Width: 19 cm
Depth: 11 cm

SPXCH
Solar panel kit (optional)
Height: 8 cm
Width: 8 cm
Depth: 2 cm

XCHSPB
Mounting bracket and hardware only (optional)

XCHSPOLE
Pole-mounting kit (optional)
Height: 1.2 m

Compatible with:

Mini-Clik Sensor
Page 145

Freeze-Clik Sensor
Page 152

XC HYBRID

Model	Description
XCH-600	6-station battery controller
XCH-600-SS	6-station battery controller, stainless steel
XCH-600-SSP	6-station controller, stainless steel, with mounted solar panel
XCH-1200	12-station battery controller
XCH-1200-SS	12-station battery controller, stainless steel
XCH-1200-SSP	12-station controller, stainless steel, with mounted solar panel
458200	DC-latching solenoid

MAXIMUM WIRE RUNS

Wire Size	Max. Distance (m)
1.0 mm^2	168
1.2 mm^2	265
1.6 mm^2	420
2.0 mm^2	670

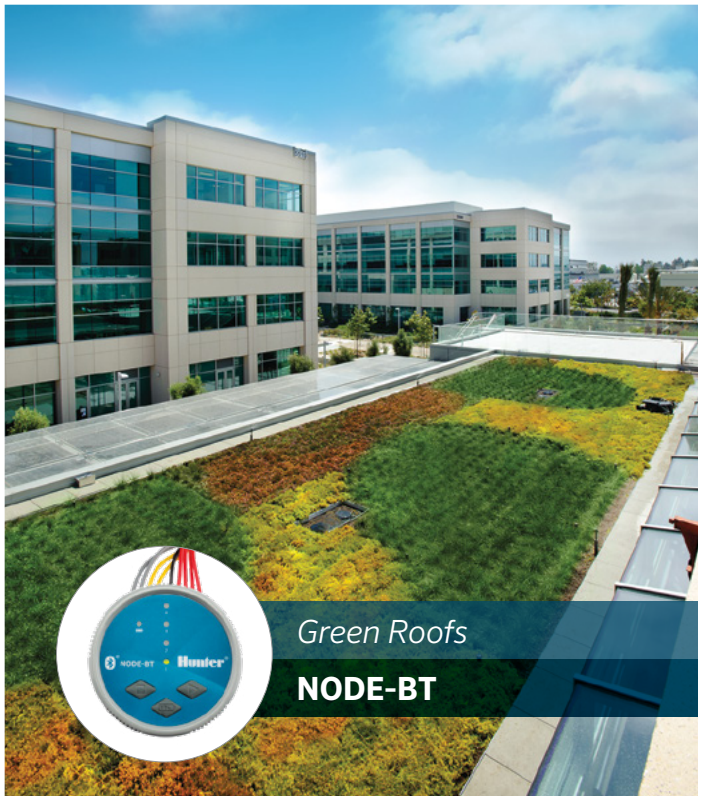
SUSTAINABLE SOLAR AND BATTERY-OPERATED CONTROLLERS PROVIDE EFFICIENT AUTOMATIC IRRIGATION SOLUTIONS FOR TRAFFIC MEDIANS, GREEN ROOFS, AND SITES WITHOUT POWER.

Traffic Medians

XC HYBRID

Nurseries

BTT



Green Roofs

NODE-BT

CONTROLLER DECODERS AND ACCESSORIES

DBRY-6

Use this approved waterproof connector for all ICD, DUAL™, and Pilot™ wiring connections.

KEY BENEFITS

- Compatible with EZ decoder connections, but not a requirement
- UL Listed for 600V direct burial
- Improved red-and-yellow wire nut, eliminating the need for two different sizes
- A snap-lock feature 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
P/N DBRY100, P/N DBRY2X25

DBRY-6 MODULES	
Model	**Description**
DBRY100	Bulk 100 connectors (100 tubes loose in box, plus inner box with 100 wire nuts)
DBRY2X25	25 x 2-packs (2 tubes and 2 wire nuts in a plastic bag, x 25 units)

ICD

Hunter's premium two-wire decoders for long-distance, high-station-count ACC and ACC2 applications include two-way communications and integrated surge protection.

KEY BENEFITS

- ICD decoders are compatible with Hunter ACC-99D and ACC2 Decoder controllers
- 1-, 2-, 4-, and 6-station versions provide maximum flexibility
- Sensor decoders allow flow and Clik sensor monitoring via the two-wire paths
- Field-programmable decoders accept station numbers directly, and do not require entering serial numbers into the control panel
  - Decoders can be programmed before installation at the controller interface
  - Wireless programming with ICD-HP allows for decoder programming or re-programming after installation to the two-wire path
- Integrated surge protection eliminates the need for extra surge protection devices
- Colour-coded wiring connections simplify installation
- Industrial-grade DBRY-6 waterproof connectors included for two-wire path splices

OPERATING SPECIFICATIONS

- Maximum recommended distance, decoder to solenoid: 45 m
- Maximum distance to decoder via two-wire path:
  - 2 mm^2 wire path: 3 km
  - 3.3 mm^2 wire path: 4.5 km
- Approvals: UL, cUL, FCC, CE, RCM
- Decoder rating: IP68 submersible
- Warranty period: 5 years

USER-INSTALLED OPTIONS

- ICD-HP wireless handheld programmer, see **page 136**

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

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

ID WIRE MODEL GUIDE

2 mm^2 Decoder Cable		3.3 mm^2 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

EZ DECODER SYSTEM

Bring two-wire technology to more projects than ever before with the revolutionary, low-cost, hassle-free EZ Decoder System for HCC and ICC2 controllers.

KEY BENEFITS

- Number of stations:
  – Up to 54, plus a master valve
- 2 two-wire paths to the field for flexible system design and installation
- No special wire or connectors required
- No special grounding or surge arrestors required in-line, saves time and money during installation
- Programmable decoders with no need to input individual serial numbers
- P/MV can activate via the two-wire path for pump stations or distant master valves
- Permits hybrid operations of conventional and decoder stations (maximum 54 stations) for added flexibility
- EZ-1 decoders have built-in status LED for positive diagnostics

OPERATING SPECIFICATIONS

- Electrical output on two-wire path: 24 VAC, 50/60 Hz
- Wire paths possible up to 1 km (see wiring chart below)
- Each EZ-1 decoder has the capability to activate two standard 24 VAC solenoids
- Can operate any two decoders simultaneously for more efficient watering
- Approvals: UL, cUL, FCC, CE, RCM, Industry Canada
- EZ-1 decoders are IP68 rated, submersible
- Warranty period: 3 years

USER-INSTALLED OPTIONS

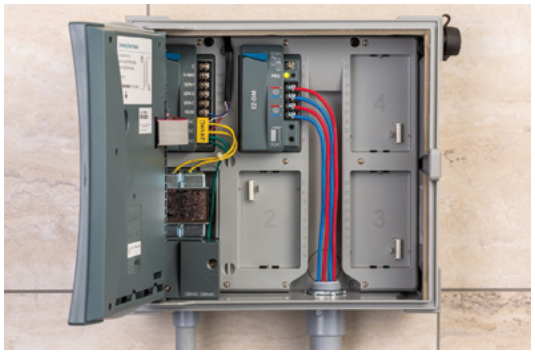
- Centralus™ with ICC2
- Hydrawise® with HCC
- ICV or PGV valves
- Pump start relays (PSR)

Decoder Output Module
Height: 115 mm
Width: 64 mm
Depth: 42 mm

Single-Station Decoder
Height: 73 mm
Width: 42 mm
Depth: 16 mm

EZ-1 single-station decoder with status LED

EZDM Installation



WIRING TABLE		
International Wire Gauge (mm^2)	Distance, single solenoid (m)	Distance, 2 solenoids per output
0.5 mm^2	167	83
0.8 mm^2	267	133
1 mm^2	333	167
1.5 mm^2	500	250
2.5 mm^2	833	417
4 mm^2	1,333	667

Note
Distances in the Wiring Table are calculated based on 50 Hz with a wire temperature of 50°C and a 10% safety factor.

DECODER MODELS	
Model	Description
EZ-DM	Decoder output module for HCC and ICC2 controllers
EZ-1	Single-station decoder with status LED

Compatible with:

HCC Controller
Page 114

ICC2 Controller
Page 119

ROAM Remote
Page 137
ROAM XL Remote
Page 138

DUAL™

Save materials and labour by adding this optional plug-in module to upgrade conventional I-Core™ systems to two-wire control.

KEY BENEFITS

- 3 separate two-wire paths provide flexibility in system design and installation
- 1- and 2-station decoders available for use with a variety of valve manifolds
- Field-programmable decoders do not require serial numbers
  - Decoders can be programmed before installation at the DUAL48M interface
  - Wireless programming with ICD-HP allows for decoder programming or re-programming after installation to the two-wire path
- DUAL-S external surge protection module provides additional protection
- DUAL48M output module displays decoder programming, operation, and diagnostic information for assistance with maintenance and troubleshooting
- DUAL48M may be installed with conventional modules for hybrid operations
- Solenoid finder feature aids in locating decoders and valves in the field

OPERATING SPECIFICATIONS

- Maximum recommended distance, decoder to solenoid: 30 m
- Maximum distance to decoder:
  - 2 mm^2 wire path: 1.5 km
  - 3.3 mm^2 wire path: 2.3 km
- Approvals: UL, cUL, FCC, CE, RCM
- Decoder rating: IP68 submersible
- Warranty period: 5 years

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

DUAL Decoders
Height: 9.5 cm
Width: 4 cm
Depth: 2 cm

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

DUAL		
Base Model	**Plus**	**Description**
IC-600-PL	DUAL48M	48-station controller, indoor/outdoor, plastic cabinet
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, up to 48-stations 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			
2.5 mm^2 Decoder Cable		**4 mm^2 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

ICD-HP

Gain wireless, handheld programming and diagnostic capabilities for Hunter ICD and DUAL™ decoders.

KEY BENEFITS

- 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 electromagnetic 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

* **Note:** ICD-HP is not compatible with EZ-1 Decoders

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

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 fieldwork.

ICD-HP

ROAM

Enable convenient controller management from a distance with this handheld wireless remote.

KEY BENEFITS

- Compatibility with Hunter X-Core™, X2™, Pro-C™, HPC, ICC2, HCC, I-Core™, ACC, and ACC2 controllers provides remote operation for projects of any size
- Manually start individual stations or programs for quick maintenance checks and troubleshooting
- 128 programmable addresses available prevents cross-communication between multiple remotes within close proximity of each other
- Programmable run times from 1 to 90 minutes, which will not overwrite regular automatic programming
- Manual operation up to 240 stations provides flexibility for larger projects

OPERATING SPECIFICATIONS

- Range: 300 m from transmitter to receiver
- Transmitter power source: 4 x AAA batteries included
- Receiver power source: 24 VAC, 0.010 A
- System operating frequency: 433 MHz
- SmartPort™ installation: Maximum 15 m from controller
- FCC and CE approved for use in the United States and internationally
- Warranty period: 2 years

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

Add professional, licence-free remote control to projects of any size with this long-range remote.

KEY BENEFITS

- Compatibility with Hunter X-Core™, X2™, Pro-C™, HPC, ICC2, HCC, I-Core™, ACC, and ACC2 controllers provides remote operation for a wide variety of landscapes
- Manually start individual stations or programs for quick maintenance checks and troubleshooting
- 128 programmable addresses available prevents cross-communication between multiple remotes within close proximity of each other
- Programmable run times from 1 to 90 minutes, which will not overwrite regular automatic programming
- Manual operation up to 240 stations provides flexibility for larger projects
- Rugged and water-resistant transmitter includes a large LCD display with simple push-button operation and a battery-life indicator

OPERATING SPECIFICATIONS

- Range: 3 km (line of sight) from transmitter to receiver
- Transmitter power source: 4 x AAA batteries included
- Receiver power source: 24 VAC, 0.010 A
- System operating frequency: 27 MHz
- SmartPort™ installation: maximum 15 m from controller
- FCC approved (not available in EU and some other countries, check local regulations)
- Warranty period: 3 years

ROAM XL
(without antenna)
Height: 16 cm
Width: 8 cm
Depth: 3 cm

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)

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

PSR

This reliable and economical pump start relay family is perfect for systems that require pump activation.

KEY BENEFITS

- Pump start relay family for a variety of voltage and power requirements
- 24 VAC flying leads make connection to the controller quick and easy
- Suitable for conventional wiring or two-wire decoder activation

OPERATING SPECIFICATIONS

- Recommended installation: minimum 4.5 m from irrigation controller; see chart on **page 255** for maximum distances
- Approvals: IP44, UL, CE, NEMA 3R rated
- 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
** 3-phase power at 230 VAC is not commonly available in some international markets. Check local electrical codes for compatibility.

PSRB

For distant pump starts that require more power, choose the PSRB.

KEY BENEFITS

- Provides a solution for pump start relay installations that have insufficient power to activate the pump
- Includes solid state relay and local 24 VAC transformer for simple PSR activation

OPERATING SPECIFICATIONS

- Primary AC power input: 120/230 VAC,
- Secondary AC power output: 24 VAC, 1.6 A
- Relay rating: Double-pole, double-throw solid state (10 A)
- Approvals: IP54, UL, CE, NEMA 3R rated
- Warranty period: 2 years

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

PUMP START RELAY BOOSTER

Model	Description
PSRB	Use to boost controller output power for pump start relays

SENSORS

SENSOR AND CONTROLLER COMPATIBILITY CHART

AC CONTROLLER MODELS	SENSOR INPUTS	RAIN	SMART WEATHER ADJUST	FLOW	HIGH-FLOW SHUTOFF
ECO-LOGIC page 101	1	Mini-Clik, Rain-Clik	None	None	Flow-Clik
X-CORE page 102	1	Mini-Clik, Rain-Clik	Solar Sync	None	Flow-Clik
X2 page 103	1	Mini-Clik, Rain-Clik	Hydrawise Online	None	Flow-Clik
PRO-C page 104	1	Mini-Clik, Rain-Clik	Solar Sync	None	Flow-Clik
I-CORE page 105	2 (Plastic), 3 (Metal and Pedestals)	Mini-Clik, Rain-Clik	Solar Sync	Flow-Sync, WFS, Other (K-Factor)	Built-in Real-Time Flow Monitoring
HC page 110	2	Mini-Clik, Rain-Clik	Hydrawise Online	HC Flow Meter	Flow-Clik
HPC page 112	1	Mini-Clik, Rain-Clik	Hydrawise Online	HC Flow Meter	Flow-Clik
PRO-HC page 113	2	Mini-Clik, Rain-Clik	Hydrawise Online	HC Flow Meter	Flow-Clik
HCC page 114	2	Mini-Clik, Rain-Clik	Hydrawise Online	HC Flow Meter	Flow-Clik
ICC2 page 119	1	Mini-Clik, Rain-Clik	Centralus Online, Solar Sync	None	Flow-Clik
ACC page 124	4 Clik, 1 Flow	Mini-Clik, Rain-Clik	Solar Sync	Flow-Sync, WFS, Other (K-Factor)	Built-in Real-Time Flow Monitoring
ACC2 page 120	1 Solar Sync, 3 Clik, 6 Flow	Mini-Clik, Rain-Clik	Centralus Online, Solar Sync	Flow-Sync, WFS, HC Flow Meter, Other (K-Factor or Scaled Pulse)	Built-in Real-Time Flow Monitoring
BATTERY CONTROLLER MODELS					
NODE page 128	1	Mini-Clik, Rain-Clik	None	None	None
NODE-BT page 129	2	Mini-Clik, Rain-Clik	None	None	None
XC HYBRID page 130	1	Mini-Clik, Rain-Clik	None	None	None

SOIL MOISTURE	FREEZE	WIND
Soil-Clik	Freeze-Clik, WRF-Clik	Wind-Clik, MWS
Soil-Clik	Freeze-Clik, WRF-Clik	Wind-Clik, MWS
Soil-Clik	Freeze-Clik, WRF-Clik, Online Forecast Option	Wind-Clik, MWS, Online Forecast Option
Soil-Clik	Freeze-Clik, WRF-Clik	Wind-Clik, MWS
Soil-Clik	Freeze-Clik, WRF-Clik	Wind-Clik, MWS
Soil-Clik	Freeze-Clik, WRF-Clik, Online Forecast Option	Wind-Clik, MWS, Online Forecast Option
Soil-Clik	Freeze-Clik, WRF-Clik, Online Forecast Option	Wind-Clik, MWS, Online Forecast Option
Soil-Clik	Freeze-Clik, WRF-Clik, Online Forecast Option	Wind-Clik, MWS, Online Forecast Option
Soil-Clik	Freeze-Clik, WRF-Clik, Online Forecast Option	Wind-Clik, MWS, Online Forecast Option
Soil-Clik	Freeze-Clik, WRF-Clik, Online Forecast Option	Wind-Clik, MWS
Soil-Clik	Freeze-Clik, WRF-Clik	Wind-Clik, MWS
Soil-Clik	Freeze-Clik, WRF-Clik, Online Forecast Option	Wind-Clik, MWS
None	Freeze-Clik	None
SC-Probe	Freeze-Clik	None
None	Freeze-Clik	None

Rain-Clik™

Mini-Clik™

Solar Sync™

HC Flow Meter

Flow-Sync™

WFS

Flow-Clik™

Soil-Clik™

Freeze-Clik™

Wind-Clik™

MWS

RAIN-CLIK™

Sensor: **Rain, Freeze**

To prevent water waste, built-in Quick Response™ technology instantly shuts down irrigation as soon as it starts raining.

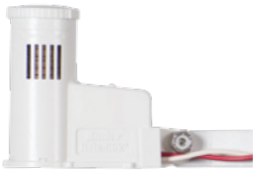
KEY BENEFITS

- Instant Quick Response rain shutoff and freeze shutoff at 3°C
- Maintenance-free design with integrated battery for wireless models
- Adjustable vent ring allows for shorter or longer reset period
- Rugged polycarbonate housing and metal extension arm
- Includes gutter bracket and wall mount with wireless models
- Compatible with most normally open or normally closed irrigation controllers

OPERATING SPECIFICATIONS

- Quick Response:
  - Time to turn off irrigation system: approximately 2 to 5 minutes for Quick Response
  - Time to reset Quick Response: approximately 4 hours under dry, sunny conditions
  - Time to reset when fully wet: approximately 3 days under dry, sunny conditions
- All models switch rating (24 VAC): 3 A
- Wired models include 7 m of 0.5 mm^2 sheathed, two-conductor, UL-approved wire
- Wireless model operating frequency: 433 MHz
- Wireless model range is 243 m line of sight from sensor to receiver
- Multiple wireless receivers can be operated from a single wireless sensor
- Approvals: UL, cUL, FCC, CE, RCM
- Warranty period: 5 years

RAIN-CLIK	
Model	**Description**
RAIN-CLIK	Wired Rain-Clik sensor
RFC	Wired Rain/Freeze-Clik sensor
WR-CLIK	Wireless Rain-Clik sensor and receiver
WRF-CLIK	Wireless Rain/Freeze-Clik sensor and receiver
SGM	Optional gutter mount (included with WR-CLIK and WRF-CLIK)
WS-GUARD	Vandal-resistant wireless sensor guard for flat surfaces or pole mounting (order sensor separately)
WR-GUARD	Vandal-resistant wireless receiver guard for pedestal mounting (order receiver separately)



RAIN-CLIK/RFC
(with mounting arm)
Height: 6 cm
Length: 18 cm

SGM
Height: 1.2 cm
Length: 7.6 cm

WR-CLIK/WRF-CLIK
(with mounting arm)
Height: 7.6 cm
Length: 20 cm

Wireless Receiver
(with mounting hardware)
Height: 8.3 cm
Length: 10 cm

Wireless Sensor Guard
(with mounting hardware)
Height: 7 cm
Length: 9.5 cm
Depth: 3.2 cm

Wireless Receiver Guard
(with mounting hardware)
Height: 12.7
Length: 9.5 cm
Depth: 3.2 cm

Smart Approved WaterMark

Smart WaterMark
Recognised as a responsible water-saving tool

MINI-CLIK™

Sensor: **Rain**

This sensor halts scheduled irrigation when it detects a preset level of rain has fallen to stop water waste.

KEY BENEFITS

- Shuts off sprinkler system automatically when it rains
- Adjustable from 3 mm to 19 mm of rainfall
- Debris tolerant for reliable operation
- Mountable to gutters using (P/N SGM)
- Stainless steel guard with Mini-Clik sensor for commercial applications (P/N SG-MC)
- Compatible with most irrigation controllers

OPERATING SPECIFICATIONS

- Switch rating (24 VAC): 5 A
- Includes 7 m of 0.5 mm^2 sheathed, two-conductor, UL-approved wire
- Approvals: UL, cUL, FCC, CE, RCM
- Warranty period: 5 years

MINI-CLIK
Height: 5 cm
Length: 15 cm

SG-MC
Stainless steel sensor guard enclosure for Mini-Clik (includes Mini-Clik)
Height: 13.9 cm
Length: 7.6 cm
Width: 10.1 cm

SGM
Optional gutter mount
Height: 1.2 cm
Length: 7.6 cm

MINI-CLIK	
Model	**Description**
MINI-CLIK	Wired rain sensor
MINI-CLIK-NO	Wired rain sensor with normally open switch
SG-MC	Stainless steel sensor guard with Mini-Clik sensor
SGM	Optional gutter mount

MINI-CLIK INSTALLATION

SOLAR SYNC™

Sensor: **ET, Rain, Freeze**

This sensor automatically adjusts controller run times daily based on local climate conditions to reduce water usage and improve plant health.

KEY BENEFITS

- Automatically adjusts irrigation duration based on weather conditions using on-site solar radiation and air temperature
- Quick Response™ instant rain shutoff and freeze shutoff at 3°C
- Maintenance-free design with integrated battery for wireless models
- Adjustable vent ring allows for shorter or longer reset period
- Rugged polycarbonate housing and metal extension arm
- Includes gutter bracket and wall mount with wireless models
- Use with Hunter standard controllers, Centralus™ with ICC2 or ACC2, and IMMS™ online central control installations

OPERATING SPECIFICATIONS

- Solar Sync:
  - Adjusts run times daily 3 minutes before midnight using the last 3 days of ET (evapotranspiration) data
- Quick Response:
  - Time to turn off irrigation system: approximately 2 to 5 minutes for Quick Response
  - Time to reset Quick Response: approximately 4 hours under dry, sunny conditions
  - Time to reset when fully wet: approximately 3 days under dry, sunny conditions
- All models switch rating (24 VAC): 3 A
- Wired models include 7 m of 0.5 mm^2 sheathed, two-conductor, UL-approved wire
- Wireless model operating frequency: 433 MHz
- Wireless model range is 243 m line of sight from sensor to receiver
- Multiple wireless receivers can be operated from a single wireless sensor
- Approvals: UL, cUL, FCC, CE, RCM
- Warranty period: 5 years

SOLAR SYNC	
Model	**Description**
SOLAR-SYNC-SEN	Solar Sync sensor, wire, and gutter mount
WSS-SEN	Wireless Solar Sync sensor, receiver, and gutter mount
WS-GUARD	Vandal-resistant wireless sensor guard for flat surfaces or pole mounting (order sensor separately)
WR-GUARD	Vandal-resistant wireless receiver guard for pedestal mounting (order receiver separately)

Wired Solar Sync Sensor
(with mounting arm)
Height: 8 cm
Width: 22 cm
Depth: 2 cm

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

Wireless Solar Sync Receiver
(with wall-mounting kit)
Height: 14 cm
Width: 4 cm
Depth: 4 cm

Wireless Sensor Guard
Height: 7 cm
Width: 9.5 cm
Depth: 3.2 cm

Wireless Receiver Guard
Height: 12.7 cm
Width: 9.5 cm
Depth: 3.2 cm

Smart Approved WaterMark

Smart WaterMark
Recognised as a responsible water-saving tool

HC FLOW METER

Sensor: **Flow**

Detect, monitor, and report critical flow zone data and total system flows with this robust and simple-to-install flow sensor.

KEY BENEFITS

- Compatible with HC, HPC, Pro-HC, and HCC
- Provides station-level flow totals
- Sends automatic alerts in the event of high-flow, low-flow, or unscheduled flow conditions
- Flow reports within Hydrawise software can display total system water use and individual station water use for accurate water budgeting and tracking
- Robust brass construction with union fittings for easy installation and removal for winterisation
- Analogue dial on the face of the meter displays daily flow totals and a leak detector

OPERATING SPECIFICATIONS

- Scaled pulse output is pre-calibrated from the factory based on the size of the meter
- Meter must be hardwired to the controller via shielded, minimum 0.75 mm^2 wire, up to 300 m from the controller
- Temperature range (water): up to 38°C
- Accuracy: ± 2% of reading at recommended flow
- Warranty period: 2 years

HC-075-FLOW-B
(20 mm MBSP coupling)
Height: 8 cm
Length: 23.2 cm
Depth: 8 cm
Weight: 0.9 kg

HC-100-FLOW-B
(25 mm MBSP coupling)
Height: 9.3 cm
Length: 26.2 cm
Depth: 8 cm
Weight: 1.4 kg

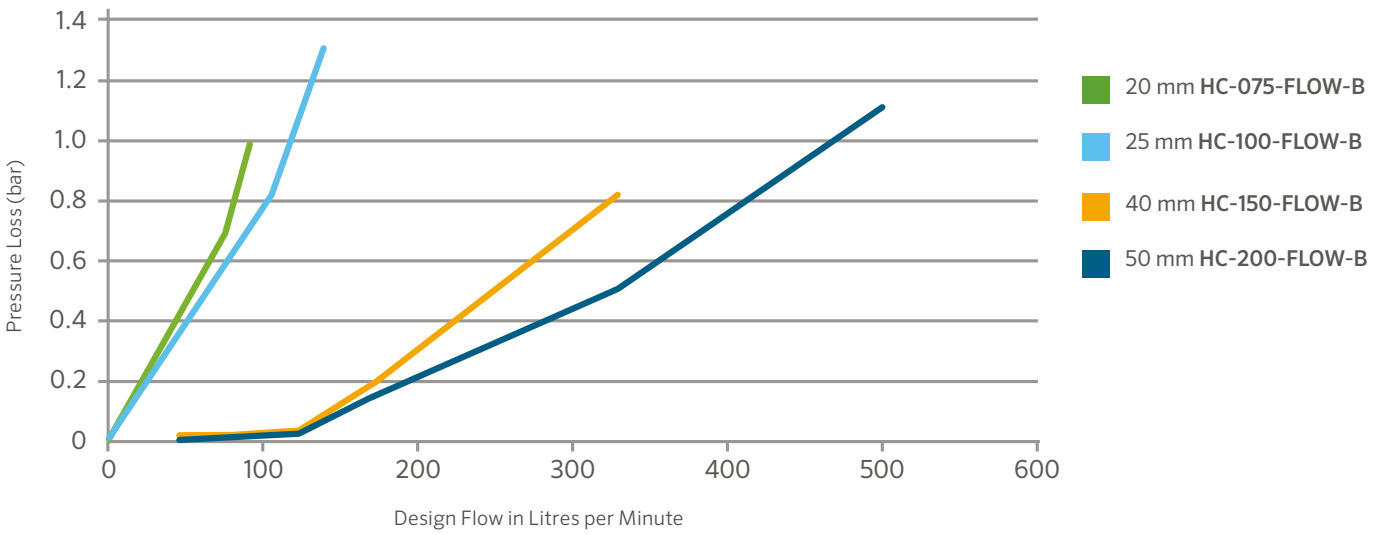
HC-150-FLOW-B
(40 mm MBSP coupling)
Height: 16.2 cm
Length: 43.1 cm
Depth: 12.5 cm
Weight: 6.6 kg

HC-200-FLOW-B
(50 mm MBSP coupling)
Height: 16.2 cm
Length: 44.7 cm
Depth: 12.5 cm
Weight: 7.4 kg

HC FLOW METER SPECIFICATIONS

	HC-075-FLOW-B (20 mm)	HC-100-FLOW-B (25 mm)	HC-150-FLOW-B (40 mm)	HC-200-FLOW-B (50 mm)
Minimum flow (l/min)	0.83	1.16	3.33	7.5
Maximum recommended flow (l/min)	60	110	250	400
Maximum flow rate (l/min)	80	130	330	500
Dial reading (m^3)	1 pulse per 1 litre	1 pulse per 10 litres	1 pulse per 10 litres	1 pulse per 10 litres

HC FLOW METER Pressure Loss Chart



FLOW-SYNC™

Sensor: **Flow**

This cost-effective flow sensor is designed for use with commercial controllers.

KEY BENEFITS

- Simple-insertion flow sensor for metering and reacting to real-time flow conditions
- Provides station-level flow monitoring for reaction to high- or low-flow conditions, helping to protect against flood damage and erosion
- Compatible with Hunter I-Core™, ACC, and ACC2 controllers, as well as ICD-SEN sensor decoders, for flexible installation in a variety of projects
- Easy connection up to 300 m from controller or sensor decoder
- Sensor is pre-calibrated for K-factor and Offset based on pipe size, allowing for quick setup and programming within the controller

OPERATING SPECIFICATIONS

- Recommended pressure range: 1.5 to 15.0 bar; 150 to 1500 kPa
- Pressure loss: < 0.009 bar; 0.9 kPa
- Sensor wiring: 2 x direct burial, 0.75 mm² or greater, colour-coded or marked for polarity, up to 300 m from controller
- Warranty period: 5 years

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

SENSORS

FLOW-SYNC

Model	Description
HFS	Hunter Flow-Sync sensor, use with I-Core, ACC, and ACC2 controllers, sensor requires FCT fitting 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

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	m³/hr	l/min	m³/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 velocity not to exceed 1.5 m/sec. Suggested maximum velocity is based upon Class 200 IPS plastic pipe.

WFS

Sensor: **Flow**

Use this sensor to retrofit flow to existing systems that cross under asphalt, concrete, or other hardscapes.

KEY BENEFITS

- Wireless flow sensor saves time, materials, and labour
- Simple-insertion flow sensor for monitoring and reacting to real-time flow conditions
- Provides station-level flow monitoring for reaction to high- or low-flow conditions, helping to protect against waste and damage from leaks
- Compatible with Hunter I-Core™, ACC, and ACC2 controllers for flexible installation in a variety of projects
- Sensor is pre-calibrated for K-factor and Offset based on pipe size, allowing for quick setup and programming within the controller
- Multi-colour LED on the receiver indicates proper communication to the transmitter, as well as remaining battery life

WFS

OPERATING SPECIFICATIONS

- Recommended pressure range: 0 to 15.0 bar; 0 to 1500 kPa
- Pressure loss: < 0.009 bar; 0.9 kPa
- Maximum distance sensor to receiver: 152 m
- Operating frequency: 868 MHz
- FCC and CE approved
- Warranty period: 5 years

USER-INSTALLED OPTIONS

- FCT tee fittings for pipe installation

WIRELESS FLOW SENSOR

Model	Description
WFS-INT	Wireless Flow Sensor Kit – International 868 MHz
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-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 (grey) receptacle tee
FCT-200	2" (50 mm) Schedule 40 sensor (white) receptacle tee
FCT-208	2" (50 mm) Schedule 80 sensor (grey) receptacle tee
FCT-300	3" (80 mm) Schedule 40 sensor (white) receptacle tee
FCT-308	3" (80 mm) Schedule 80 sensor (grey) 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	m³/hr	l/min	m³/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 velocity not to exceed 1.5 m/sec. Suggested maximum velocity is based upon Class 200 IPS plastic pipe.

FLOW-CLIK™

Sensor: **Flow**

Add high-flow shutoff capabilities to any irrigation controller with this simple, adjustable device.

KEY BENEFITS

- Automatically shuts down entire system if an overflow condition occurs, helping to protect against flood damage and erosion
- Single-button calibration to set highest flow rate
- User-adjustable timing and delay for sensor response
- Compatible with all Hunter AC-powered controllers for a variety of applications
- Multi-colour LED indicates system status and if flow is within limits

OPERATING SPECIFICATIONS

- Recommended pressure range: 1.5 to 15.0 bar; 150 to 1500 kPa
- Current draw (24 VAC): 0.025 A
- Switching current: 2 A maximum
- Sensor wiring: 2 x direct burial, 0.75 mm^2 or greater, colour-coded or marked for polarity, up to 300 m from the interface module
- Programmable start up delay: 0 to 300 seconds (allows for system hydraulics to stabilise and prevents false flow readings)
- Programmable interrupt period: 5 to 60 minutes (or option to reset manually)
- Warranty period: 5 years

USER-INSTALLED OPTIONS

- FCT fittings for 25 mm to 100 mm pipe diameters

Flow-Clik sensor and module shown with required FCT fitting for pipe installation (sold separately)

SENSORS

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

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 velocity not to exceed 1.5 m/sec. Suggested maximum velocity is based upon Class 200 IPS plastic pipe.

SOIL-CLIK™

Sensor: **Soil Moisture**

This sensor prevents water waste by measuring soil moisture and shutting off irrigation when a pre-set level is reached.

KEY BENEFITS

- View current soil moisture level and status at a glance
- One-touch override allows soil moisture bypass for special conditions
- Low-voltage outdoor enclosure powered by host controller
- Connect to Hunter sensor inputs, or use to interrupt common wires in virtually any 24 VAC irrigation system
- Use with Solar Sync™ sensor for maximum water savings

OPERATING SPECIFICATIONS

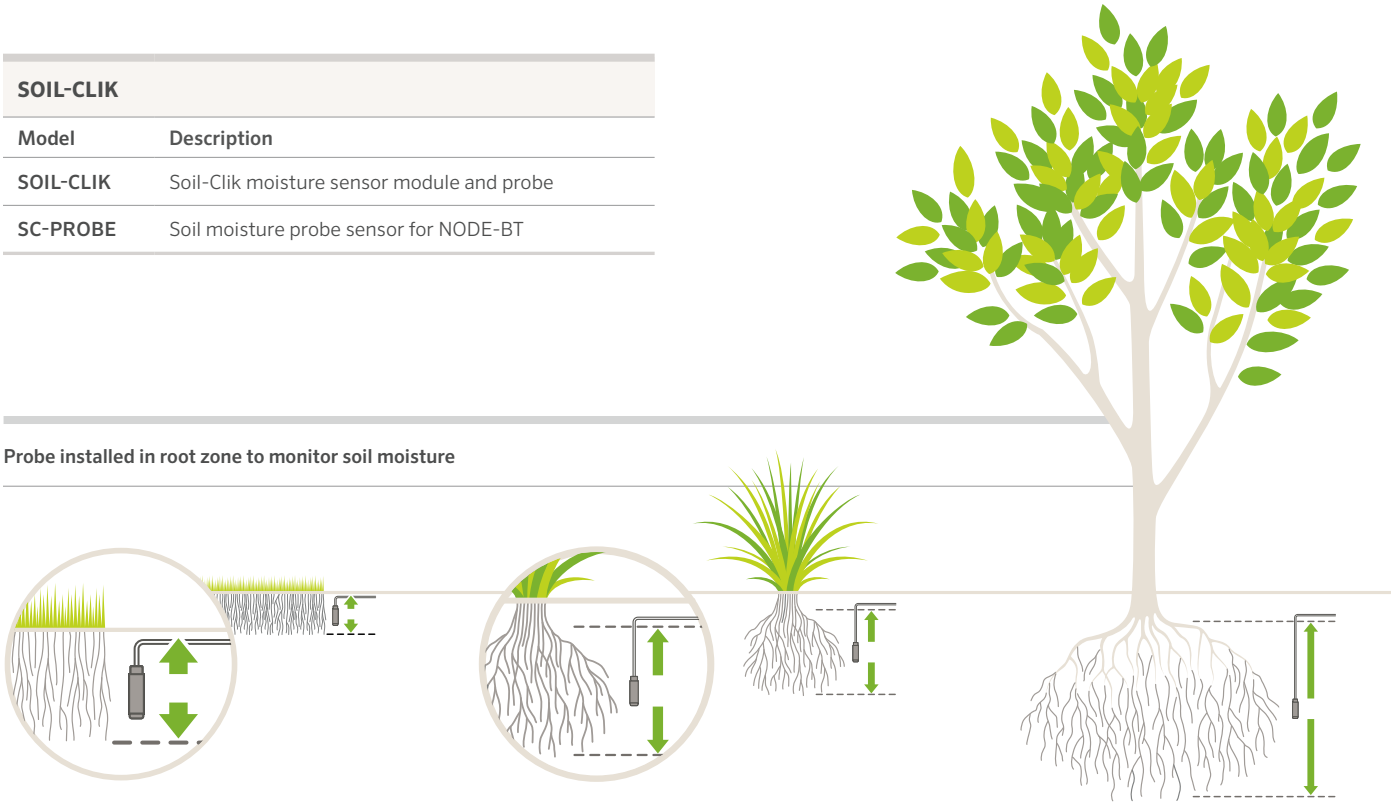
- Switch rating (24 VAC): 5 A
- Input power (24 VAC): 100 mA
- Normally closed dry-contact closure
- 2 m maximum distance from Soil-Clik module to controller
- 300 m maximum distance from Soil-Clik module to sensor probe for AC installations
- 30 m maximum distance for NODE-BT installations
- Approvals: UL, cUL, FCC, CE, RCM
- Warranty period: 5 years

Soil-Clik Module
Height: 11.4 cm
Width: 8.9 cm
Depth: 3.2 cm
Power: 24 VAC, 100 mA maximum
Wire leads: 80 cm

Soil-Clik Probe
Diameter: 2 cm
Height: 8.3 cm
Wire to probe: 300 m maximum
1 mm² direct-burial wire
Wire leads: 80 cm

SOIL-CLIK	
Model	**Description**
SOIL-CLIK	Soil-Clik moisture sensor module and probe
SC-PROBE	Soil moisture probe sensor for NODE-BT

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.

FREEZE-CLIK™

Sensor: **Freeze**

Use this sensor to stop sprinklers from running during a freeze event and protect landscapes, walkways, and roadways from icy conditions.

KEY BENEFITS

- Automatically shuts off irrigation system when temperatures fall below 3°C
- Installs easily on automatic irrigation systems with no adjustments needed
- Use with other sensors to enhance overall efficiency of irrigation systems

Note: Not intended for agricultural applications

SPECIFICATIONS

- Switch rating (24 VAC): 5 A
- Includes 7 m of 0.5 mm² sheathed, two-conductor, UL-approved wire
- Approvals: UL, cUL, FCC, CE, RCM
- Warranty period: 5 years

FREEZE-CLIK
Height: 5 cm
Length: 11 cm

FREEZE-CLIK	
Model	**Description**
FREEZE-CLIK	Wired freeze sensor

WIND-CLIK™

Sensor: **Wind**

This sensor keeps water coverage efficient and pedestrian paths and roadways safe by shutting down irrigation when wind speeds increase.

KEY BENEFITS

- Shuts off irrigation when winds are high
- Works well with fountains to eliminate overspray in windy conditions
- Installs easily on automatic irrigation systems with quick adjustments
- Compatible with most normally open or normally closed irrigation controllers

SPECIFICATIONS

- Switch rating (24 VAC): 5 A maximum
- Wind vane diameter: 13 cm
- Reset speed: 13 to 38 kph
- Includes 7 m of 0.5 mm² sheathed, two-conductor, UL-approved wire
- Mounts: Slip fits over 5 cm PVC pipe or attaches to 1 cm conduit with adapter (included)
- Approvals: UL, cUL, FCC, CE, RCM
- Warranty period: 5 years

WIND-CLIK
Height: 10 cm
Wind vane diameter: 13 cm

WIND-CLIK	
Model	**Description**
WIND-CLIK	Wired wind sensor

MWS

Sensor: **Wind, Rain, Freeze**

This all-in-one wind, rain, and freeze sensor prevents water waste when any sensor triggers a stop to the system.

KEY BENEFITS

- Compact sensor with built-in wind, rain, and freeze sensors
- Installs easily on automatic irrigation systems with limited adjustment
- Set wind actuation speed shutdown from 13 to 38 kph
- Set system shutdown from 3 mm to 19 mm of rainfall
- Automatically shuts off system when temperatures fall below 3°C
- Mounts: Slip fits over 5 cm PVC pipe or attaches to 1 cm conduit with adapter (included)

OPERATING SPECIFICATIONS

- Switch rating (24 VAC): 5 A maximum
- Wind vane diameter: 13 cm
- Reset speed: 13 to 38 kph
- Includes 7 m of 0.5 mm^2 sheathed, two-conductor, UL-approved wire
- Approvals: UL, cUL, FCC, CE, RCM
- Warranty period: 5 years

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

MWS
Height: 20 cm
Wind vane diameter: 13 cm

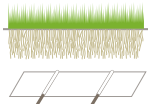
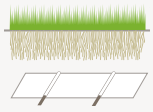
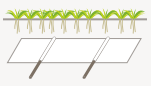
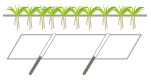
MWS-FR
Height: 20 cm
Wind vane diameter: 13 cm

MICRO

MICRO IRRIGATION SOLUTIONS

From ultra-durable Hunter Dripline to our innovative 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.

COMMON MICRO APPLICATIONS GUIDE

APPLICATION	STANDARD DESIGN	ADVANCED DESIGN
TREES 	MLD, Emitters, Micro Sprays	HDL, PLD, Eco-Wrap, IH Risers, RZWS
MIXED PLANTINGS 	MLD, Micro Sprays, HDL, PLD, Single-Port Emitters	HDL-COP, Multi-Port Emitters, Eco-Wrap
SLOPED AREAS 	MLD, Micro Sprays, HDL-PC, HDL-R, Emitters, RZB	HDL-CV, Eco-Mat, Eco-Wrap, HDL-COP, IH Risers, RZWS
TURF 	HDL-COP	Eco-Wrap, Eco-Mat
SUBSURFACE 	HDL-COP	Eco-Wrap, Eco-Mat
SPARSE PLANTING 	Emitters, RZB	IH Risers
DENSE PLANTING 	Micro Sprays, HDL, PLD	HDL-COP, Eco-Wrap, Eco-Mat
GREEN ROOFS 	Eco-Mat	Eco-Mat
POTTED PLANTS 	Single-Port Emitters, Micro Sprays	MLD
RECLAIMED 	MLD, Micro Sprays, Emitters	HDL-R, IH Risers, RZWS

SOFT PIPE SYSTEMS

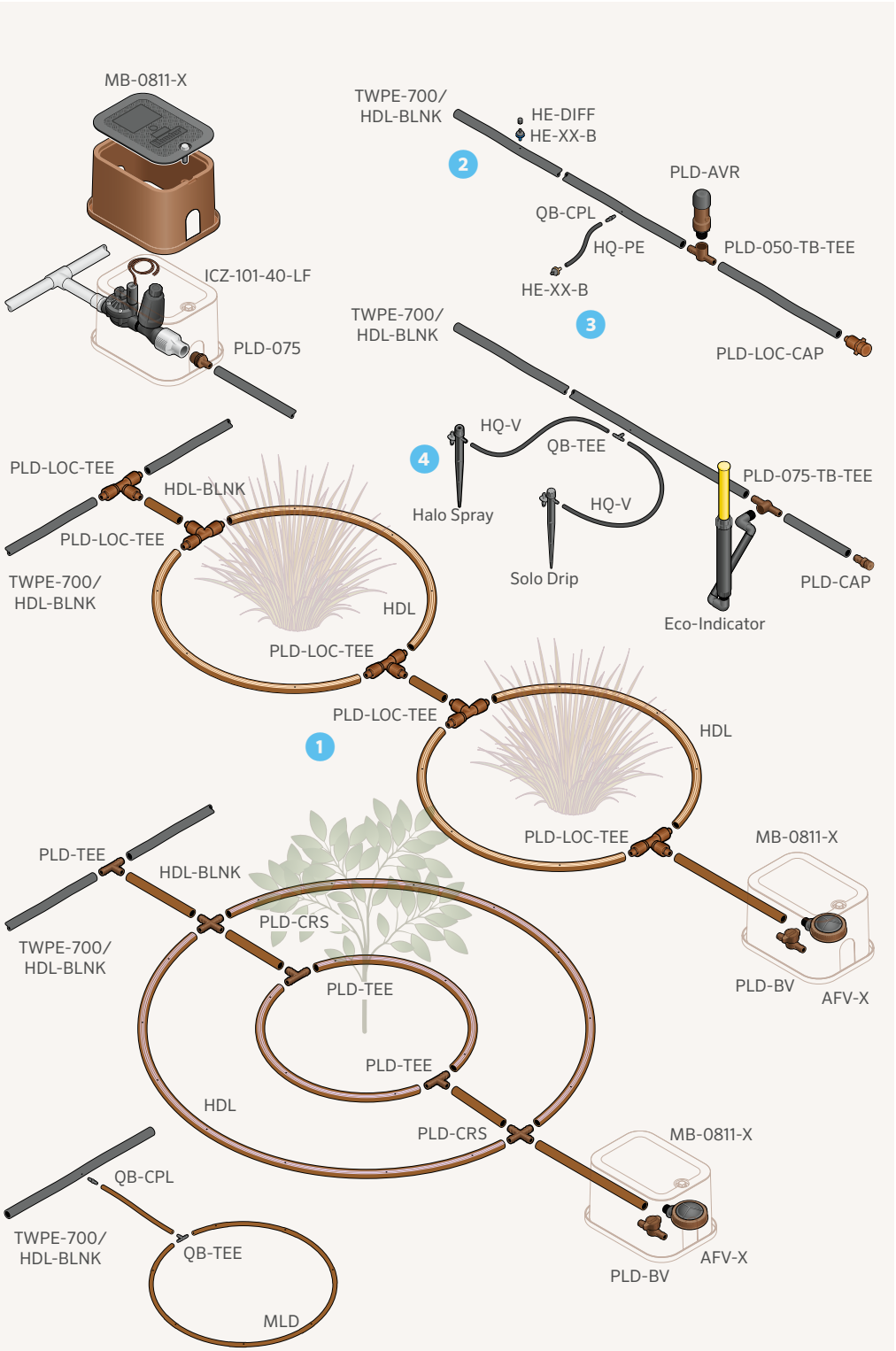
Using soft pipe to distribute irrigation water is acceptable in both commercial and residential applications. Polyethylene tubing is used in place of PVC and may be 1", ¾", or ½". Hunter offers a full suite of products that are compatible with soft pipe systems.

1 Tree and Shrub Rings:
- Convenient and efficient way to irrigate sparse plantings
- Use HDL or MLD to form the irrigation ring
- Connect with LOC fittings for faster installation

2 6 mm PE Tubing:
- Use HDL-BLNK to distribute water
- Use 6 mm PE polyethylene (HQPE) or vinyl (HQV) to connect to emitters and micro sprays

3 Point-Source Emitters:
- Barbed emitters insert directly into PE tubing or at the end of 6 mm vinyl/PE
- Colour-coded flows (2, 4, 8, 15, 23 l/hr)

4 Micro Spray Stakes:
- Use when higher flows are needed (0–114 l/hr)
- Throw water from 0–3.6 m



HARD PIPE SYSTEMS

From multi-port emitters to micro sprays, Hunter offers a wide variety of products and accessories that are designed to complement hard pipe systems.

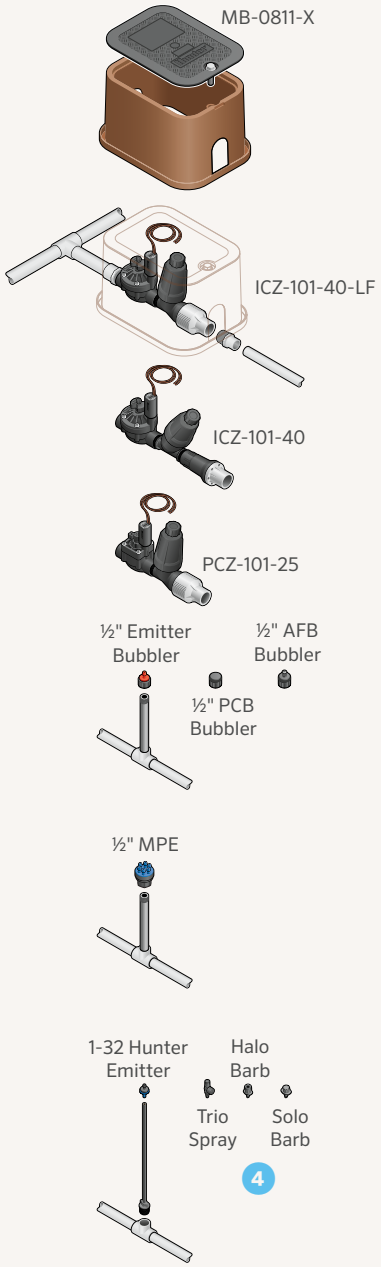
1 IH Risers:
- Ultra-durable point-to-point emitters
- Built-in check valve screen makes them great for slopes
- Wide variety of flows

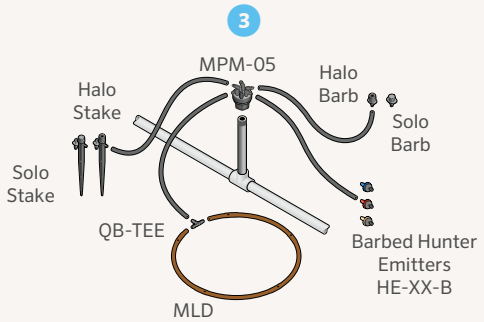
2 Point-Source Emitters:
- Colour-coded flows (2, 4, 8, 23 lph)
- HEB (½" threaded emitter bubblers install directly onto ½" risers)
- HE-T (10-32 threaded emitters install onto rigid risers)

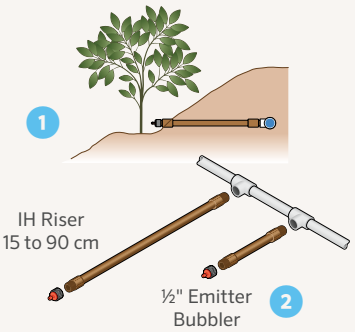
3 Multi-Port Emitters:
- Colour-coded flows (0-119 lph)
- Swivel barbs for directional flow
- Install directly onto ½" risers

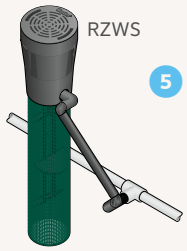
4 Micro Sprays:
- Ideal for higher flows (0-114 l/hr)
- Diameter of throw (0-3.4 m)
- Install directly onto rigid risers or on ¼" tubing

5 Root Zone Watering System:
- For deep root irrigating
- Allows oxygen to penetrate the soil
- Encourages healthier root growth









MICRO

PCZ - DRIP CONTROL ZONE KITS

Make installations quick and easy with this robust, pre-assembled kit with stainless steel filtration and pressure regulation.

KEY BENEFITS

- Factory-assembled for quick and easy installation
- Valves 100% water-tested to ensure dependable operation
- Senninger regulator provides precise regulation to protect system from high pressure
- 150 mesh (100 microns) stainless steel screen for years of reliable filtration

USER-INSTALLED OPTIONS

- Reclaimed water ID handle for PCZ-101 (P/N 269205)

OPERATING SPECIFICATIONS

- 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
- Warranty period: 2 years

PCZ-101
Height: 18 cm
Width: 7 cm
Length: 26 cm
1" BSP (25 mm) inlet x ¾" outlet

PCZ-101 Installed

DRIP CONTROL ZONE KITS

Model	Description
PCZ-101-25-B	1" PGV flow control valve with HFR; 1.7 bar; 170 kPa regulator, ¾" outlet
PCZ-101-40-B	1" PGV flow control valve with HFR; 2.8 bar; 280 kPa regulator, ¾" outlet

PCZ CONTROL ZONE KITS: PRESSURE REQUIREMENTS BASED ON FLOW

System Flow	PCZ-101-25-B (1.7 bar; 170 kPa outlet)	PCZ-101-40-B (2.8 bar; 280 kPa outlet)
l/min	Inlet pressure required to achieve desired outlet pressure (in bar; kPa)	
2	34	41
4	34	42
19	34	45
38	37	52
57	41	59

*Minimum inlet pressure required to achieve 1.7 bar; 170 kPa on the outlet side
**Minimum inlet pressure required to achieve 2.8 bar; 280 kPa on the outlet side

FILTERS & FILTER REGULATORS

Choose rugged filters and filter regulators with stainless steel screens for maximum performance.

KEY BENEFITS

- HFR-075 (Hunter Filter Regulator)
  - Compact, all-in-one filter and regulator minimise required valve box space
  - Senninger regulator provides precise regulation to protect system from high pressure
  - 150 mesh (100 microns) stainless steel screen for years of reliable filtration
  - Wide flow range covers most drip applications
- HY-075 (Hunter Y-Filter)
  - 150 mesh (100 microns) stainless steel screen for years of reliable filtration
  - Wide flow range covers most drip applications

OPERATING SPECIFICATIONS

- 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
- HY-075
  - Flow: up to 75 l/min
  - Operating pressure: up to 8.0 bar; 800 kPa
  - Operating temperature: up to 66°C
- Warranty period: 2 years

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

HUNTER FILTERS	
Model	**Description**
HFR-075-25	Filter regulator, ¾" inlet/outlet, 1.7 bar; 170 kPa
HFR-075-40	Filter regulator, ¾" inlet/outlet, 2.8 bar; 280 kPa
HY-075	¾" filter with ¾" inlet/outlet

PCZ-101 installed in a Multi-Purpose Box

SENNINGER™ PRESSURE REGULATORS

Choose the most consistent and reliable pressure regulators in the industry.

KEY BENEFITS

- Maintain consistent preset outlet pressure to prevent damage to system components
- 100% water-tested to ensure accuracy and dependable operation
- Install above or below ground for convenience of design
- Tamper-proof construction provides reliability and long life

OPERATING SPECIFICATIONS

- PRL (¾"):
  - Flow range: 114 to 1817 l/hr
  - Maximum inlet pressure*: 6.9 to 8.3 bar; 690 to 830 kPa
- PRLV (¾"):
  - Flow range: 114 to 4088 l/hr
  - Maximum inlet pressure: 8.6 bar; 860 kPa
- PRLG:
  - Flow range: 113 to 1590 l/hr
  - Maximum inlet pressure: 8.3 bar; 830 kPa
- Warranty period: 2 years

*Maximum recommended inlet pressure should not exceed 5.5 bar; 550 kPa above nominal model pressure

PRL (¾") USE FOR STANDARD LOW-FLOW IRRIGATION APPLICATIONS

Model	Outlet Pressure	Inlet	Outlet
PRL203F3F	1.38 bar; 138 kPa	¾" FNPT	¾" FNPT
PRL253F3F	1.72 bar; 172 kPa	¾" FNPT	¾" FNPT
PRL303F3F	2.07 bar; 207 kPa	¾" FNPT	¾" FNPT
PRL353F3F	2.41 bar; 241 kPa	¾" FNPT	¾" FNPT
PRL403F3F	2.76 bar; 276 kPa	¾" FNPT	¾" FNPT

PRLV (¾") LIMITS STATIC PRESSURE TO 0.7 TO 1.0 BAR (70 TO 100 KPA) ABOVE PRESSURE RATING WHEN INSTALLED PRIOR TO VALVE

Model	Outlet Pressure	Inlet	Outlet
PRLV20MF3F3FV	1.38 bar; 138 kPa	¾" FNPT	¾" FNPT
PRLV30MF3F3FV	2.07 bar; 207 kPa	¾" FNPT	¾" FNPT
PRLV40MF3F3FV	2.76 bar; 276 kPa	¾" FNPT	¾" FNPT

PRLG

Model	Outlet Pressure	Inlet	Outlet
PRLG203FH3MH	1.38 bar; 138 kPa	¾" FHT	¾" MHT
PRLG253FH3MH	1.72 bar; 172 kPa	¾" FHT	¾" MHT
PRLG303FH3MH	2.07 bar; 207 kPa	¾" FHT	¾" MHT
PRLG403FH3MH	2.76 bar; 276 kPa	¾" FHT	¾" MHT

PRL - Pressure-Regulating Low-Flow
Width: 4.8 cm
Length: 11.4 cm
¾" FNPT inlet x ¾" FNPT outlet

PRLV - Pressure-Regulating Limit Valve Wide-Range Flow
Width: 6.4 cm
Length: 14.7 cm
¾" FNPT inlet x ¾" FNPT outlet

PRLG - Pressure-Regulating Low-Flow
Width: 4.8 cm
Length: 11.4 cm
¾" FNPT inlet x ¾" FNPT outlet

The pressure regulator will maintain the predetermined operating pressure provided that the inlet pressure is at least 0.35 bar; 35 kPa above the expected outlet pressure, but not exceeding the maximum operating pressure.

Choose the most consistent and reliable pressure regulators in the industry.

KEY BENEFITS

- Each regulator maintains a constant preset outlet pressure based on its flow/inlet pressure
- 100% water-tested for accuracy at Senninger's facilities
- Very low hysteresis and friction loss helps maintain accurate regulation
- Can be installed above or below ground
- Patented tamper-proof design
- No external metal parts for excellent corrosion resistance

OPERATING SPECIFICATIONS

- PRLG (¾"):
  - Flow range: 454–4542 l/hr
  - Maximum inlet pressure*: 6.9 to 9.0 bar; 690 to 900 kPa
- PRU:
  - Flow range: 4542 to 22713 l/hr
  - Maximum inlet pressure*: 9.0 bar; 900 kPa
- Warranty period: 2 years on materials, workmanship, and performance

*Maximum recommended inlet pressure should not exceed 5.5 bar; 550 kPa above nominal model pressure

PRLG - Pressure Regulator
Landscape Grade
Width: 41 mm
Length: 79 mm
¾" FHT inlet x ¾" MHT outlet

PRU - Pressure Regulator Ultra
Width: 114 mm
Length: 228 mm
2" FPT inlet x 2" FPT outlet

PRLG (¾" HOSE THREAD)			
Model	**Pressure**	**Inlet**	**Outlet**
PRLG203FH3MH	1.38 bar; 138 kPa	¾" FHT	¾" MHT
PRLG253FH3MH	1.72 bar; 172 kPa	¾" FHT	¾" MHT
PRLG303FH3MH	2.07 bar; 207 kPa	¾" FHT	¾" MHT
PRLG403FH3MH	2.76 bar; 276 kPa	¾" FHT	¾" MHT

PRU-40			
Model	**Pressure**	**Inlet**	**Outlet**
PRU-40	2.76 bar; 276 kPa	2" FPT	2" FPT

The pressure regulator will maintain the predetermined operating pressure provided that the inlet pressure is at least 0.35 bar; 35 kPa above the expected outlet pressure, but not exceeding the maximum operating pressure.

DRIPLINE SYSTEMS

Ultra-durable Hunter dripline solutions are easy to install and provide maximum longevity in the field. HDL and PLD work efficiently and effectively to use as little water as possible and keep plants thriving.

1. The dripline grid is a common installation practice either at grade or subsurface. Establishing consistent laterals in dense plantings provides a quick and simple approach to irrigating a planted area.

2. Arranging the dripline through a series of plants is an accepted and reliable method of irrigation. Ensure the dripline has emission points near or around each plant.

3. **Multi-Purpose Box:**
   - 25 cm x 18 cm opening
   - Five colour options for lids

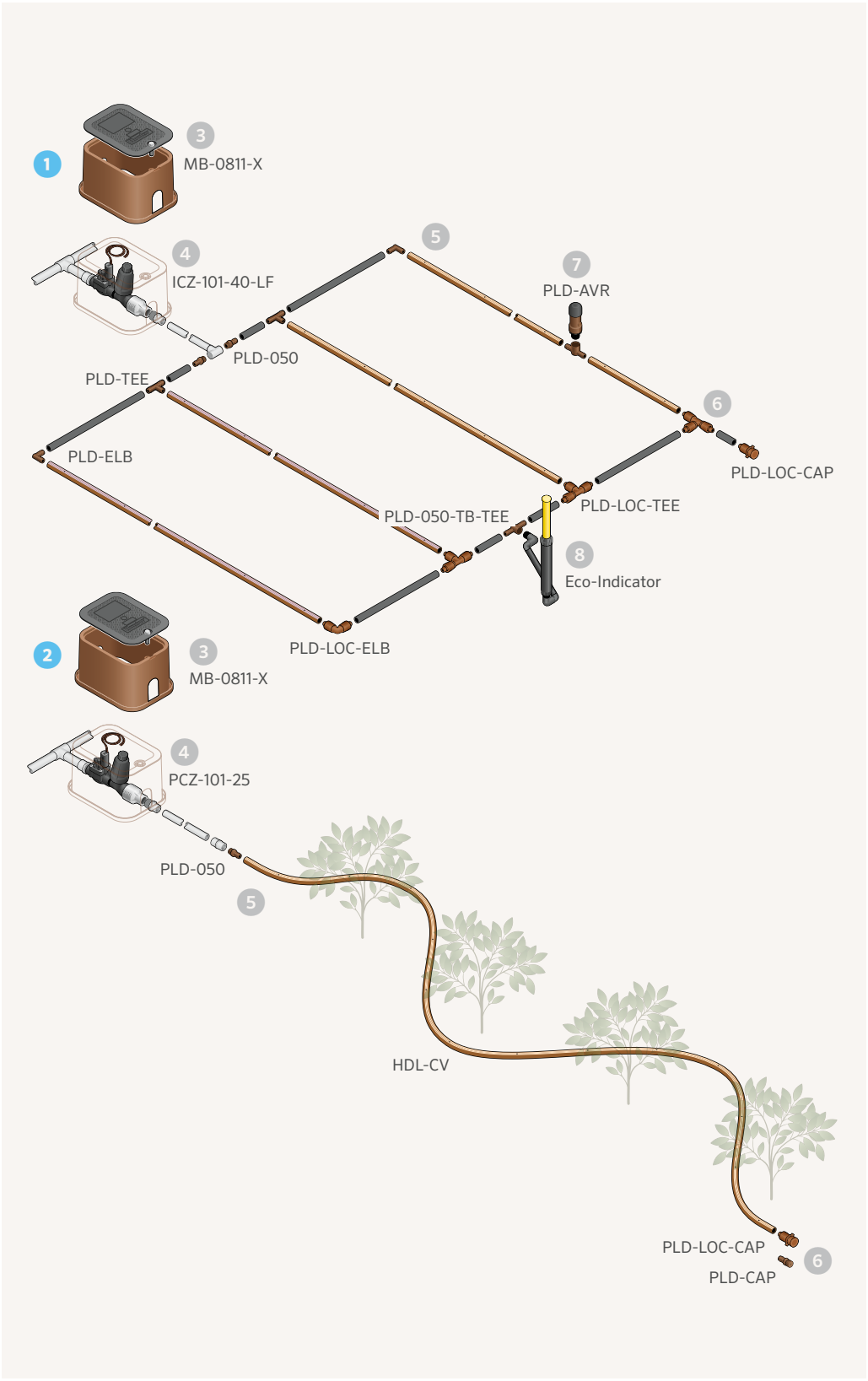
4. **Control Zone Kit:**
   - Factory-assembled for quick and easy installation
   - Low-, medium-, and high-flow kits

5. **PLD/HDL:**
   - All versions are pressure-compensating
   - Check valve options available

6. **Fittings:**
   - Double-barb holds fittings tight
   - LOC fittings can be reused

7. **Air/Vacuum Relief Valve:**
   - Helps prevent water hammer and tubing collapse
   - Use at high point(s) in zone

8. **Eco-Indicator:**
   - Pops up at 0.85 bar; 85 kPa and shows system is running
   - Reveals when system pressure drops too low



HDL-CV

Increase drip system efficiency with pressure compensation, flow indication stripes, and a 1.8 m check height.

KEY BENEFITS

- Pressure-compensating emitters for consistent flow and uniform coverage
- Non-draining check valve(CV-ND) prevents low-point pooling and allows all emitters to open/close at the same time for greater system efficiency
- Check height of 1.8 m minimises system drainage and runoff
- Anti-siphon feature prevents debris from entering emitter at system shutdown
- Colour-coded stripes provide easy identification of flow
- UV resistance facilitates product longevity
- Stretch-wrapped coils stay intact and make installation quick and easy
- Superior grit tolerance provided by proprietary emitter design with multiple inlet filters, a wide turbulent labyrinth, and a full-size outlet pool

PRODUCT SPECIFICATIONS

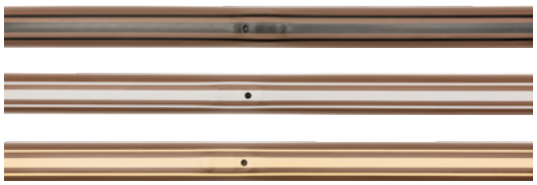
- Available flow rates: 1.5, 2.1, 3.4 l/hr
- Available emitter spacing: 30 cm, 45 cm, 60 cm
- Tubing dimensions: 16.76 mm x 14.22 mm (outside/inside diameter)
- Available without emitter (HDL-BLNK)

OPERATING SPECIFICATIONS

- Operating range: 1 to 4.2 bar; 100 to 420 kPa
- Minimum filtration: 120 mesh (125 microns)
- Warranty period: 5 years (plus 2 additional years for environmental stress cracking)

HDL-CV

Coil with Stretch Wrap



HDL-CV – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Spacing	3 Length	4 Options
HDL-04 = 1.5 l/hr flow	**12"** = 30 cm	**100** = 30 m*	**CV** = Pressure-compensating with check valve
HDL-06 = 2.1 l/hr flow	**18"** = 45 cm	**250** = 75 m	
HDL-09 = 3.4 l/hr flow	**24"** = 60 cm	**500** = 150 m	
		1K = 300 m	

Example:
HDL-06-12-250-CV = 2.1 l/hr, 30 cm emitter spacing, 75 m coil with check valve
Note: 30 m coils available in the following HDL models only:
HDL-06-12-100-CV, HDL-09-12-100-CV

HDL-BLNK – SPECIFICATION BUILDER: ORDER 1 + 2 + 3

1 Model	2 Length	3 Options
HDL-BLNK = No emitters	**100** = 30 m	**(blank)** = Brown
	250 = 75 m	**R** = Purple stripes
	500 = 150 m	
	1K = 300 m	

Examples:
HDL-BLNK-250 = No emitters, 150 m coil with purple stripes
HDL-BLNK-500-R = No emitters, 75 m coil

HUNTER DRIPLINE COLOUR CODE

STRIPE COLOUR	TUBING COLOUR
● 3.4 l/hr - Black	● HDL-PC - Light brown tubing, pressure-compensating
● 2.1 l/hr - Grey	● HDL-R - Light brown with purple stripe, pressure-compensating, reclaimed
● 1.5 l/hr - Tan	

MAXIMUM RUN LENGTHS

HDL-CV – 1.5 l/hr

Pressure (bar; kPa)	Emitter Spacing (cm) 30	45	60
1.0; 100	62	88	112
2.0; 200	116	163	207
3.0; 300	142	200	255
4.0; 400	161	228	289

HDL-CV – 2.1 l/hr

Pressure (bar; kPa)	Emitter Spacing (cm) 30	45	60
1.0; 100	52	73	93
2.0; 200	96	134	171
3.0; 300	117	166	210
4.0; 400	134	189	239

HDL-CV – 3.4 l/hr

Pressure (bar; kPa)	Emitter Spacing (cm) 30	45	60
1.0; 100	36	50	64
2.0; 200	66	94	119
3.0; 300	81	115	146
4.0; 400	92	131	165

HDL-PC & HDL-R

Maximise drip system longevity with robust material construction and pressure compensation for standard and reclaimed applications.

KEY BENEFITS

- Pressure-compensating emitters for consistent flow and uniform coverage
- Check height of 1.8 m minimises system drainage and runoff
- Colour-coded stripes provide easy identification of flow
- UV resistance facilitates product longevity
- Stretch-wrapped coils stay intact and make installation quick and easy
- Superior grit tolerance provided by proprietary emitter design with multiple inlet filters, a wide turbulent labyrinth, and a full-size outlet pool
- Reclaimed product (HDL-R) identified by purple stripes assists in visual identification when using non-potable water

PRODUCT SPECIFICATIONS

- Available flow rates: 2.1, 3.4 l/hr
- Available emitter spacing: 30 cm, 45 cm, 60 cm
- Tubing dimensions: 16.76 mm x 14.22 mm (outside/inside diameter)
- Available without emitter (HDL-BLNK)

OPERATING SPECIFICATIONS

- Operating range: 1 to 4.2 bar; 100 to 420 kPa
- Minimum filtration: 120 mesh (125 microns)
- Warranty period: 5 years (plus 2 additional years for environmental stress cracking)

HDL-PC

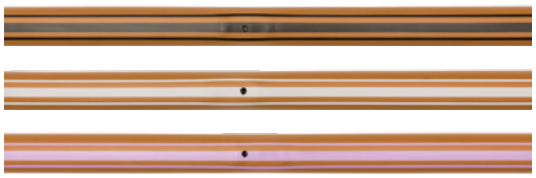
HDL-R (Reclaimed)

Optional colour for reclaimed water sources, available for 17 mm only.

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

1 Model	2 Spacing	3 Length	4 Options
HDL-06 = 2.1 l/hr flow	**12** = 30 cm	**250** = 75 m	**PC** = Pressure-compensating
HDL-09 = 3.4 l/hr flow	**18** = 45 cm	**500** = 150 m	**R** = Reclaimed (available in 2.1 and 3.4 l/hr models only)
	24 = 60 cm	**1K** = 300 m	

Example:
HDL-09-12-1K-PC = 3.4 l/hr, 30 cm emitter spacing, 300 m coil with PC emitter
Note: Two HDL-PC products are available in 30 m coils: HDL-06-12-100-PC and HDL-09-12-100-PC



HUNTER DRIPLINE COLOUR CODE

STRIPE COLOUR
- 3.4 l/hr - Black
- 2.1 l/hr GPH - Grey
- Reclaimed - Purple

TUBING COLOUR
- HDL-CV - Dark brown tubing, pressure-compensating with check valve

MAXIMUM RUN LENGTHS

HDL-PC/HDL-R – 1.5 l/hr

Pressure (bar; kPa)	Emitter Spacing (cm) 30	45	60
1.0; 100	87	123	156
2.0; 200	125	177	224
3.0; 300	149	210	266
4.0; 400	167	235	299

HDL-PC/HDL-R – 2.1 l/hr

Pressure (bar; kPa)	Emitter Spacing (cm) 30	45	60
1.0; 100	72	101	129
2.0; 200	103	147	186
3.0; 300	123	174	220
4.0; 400	137	194	247

HDL-PC/HDL-R – 3.4 l/hr

Pressure (bar; kPa)	Emitter Spacing (cm) 30	45	60
1.0; 100	50	71	89
2.0; 200	72	101	128
3.0; 300	85	120	153
4.0; 400	96	134	171

HDL-COP

Minimise the risk of root intrusion by adding copper to industry-leading Hunter Dripline.

KEY BENEFITS

- Copper oxide in the emitter provides root intrusion resistance
- Copper will not leach into soil possibly creating an unhealthy plant environment
- Slow-draining check valve (CV) emitters prevent low-point pooling and add to system efficiency
- Pressure-compensating emitters provide consistent flow over the entire lateral length
- Anti-siphon feature prevents debris from entering emitter
- Colour-coded stripes provide easy identification of flow
- UV resistance facilitates product longevity
- Stretch-wrapped coils stay intact and make installation quick and easy
- Multiple inlet filters in the emitter and a wide turbulent labyrinth provide superior grit tolerance
- Full-sized emitter outlet pool and raised wall inhibit debris and roots from entering the emitter

HDL-CV

Coil with Stretch Wrap

PRODUCT SPECIFICATIONS

- Available flow rates: 2.1, 3.4 l/hr
- Available emitter spacing: 30 cm
- Tubing dimensions: 16.76 mm x 14.22 mm (outside/inside diameter)

OPERATING SPECIFICATIONS

- Operating range: 1.0 to 4.2 bar; 100 to 420 kPa
- Minimum filtration: 120 mesh (125 microns)
- Warranty period: 5 years (plus 2 additional years for environmental stress cracking)

AVAILABLE MODELS

- HDL-09-12-250-COP
- HDL-09-12-1K-COP
- HDL-06-12-250-COP
- HDL-06-12-1K-COP

MAXIMUM RUN LENGTHS

HDL-CV – 2.1 l/hr

Pressure (bar)	Emitter Spacing (cm) 30
1.0	52
2.0	96
3.0	117
4.0	134

HDL-CV – 3.4 l/hr

Pressure (bar)	Emitter Spacing (cm) 30
1.0	36
2.0	66
3.0	81
4.0	92

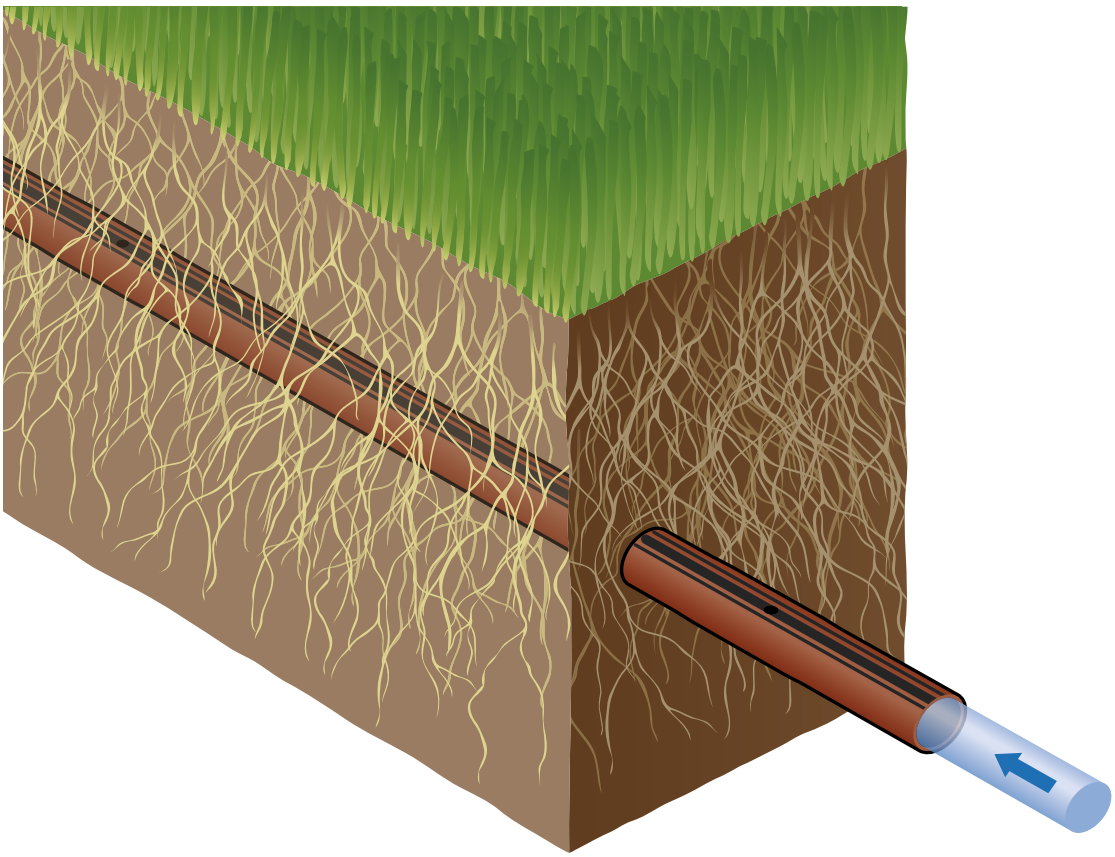
HDL-COP

HOW IT WORKS

Hunter Dripline is known for having an industry-leading emitter with a high level of grit tolerance, accurate flows, and very high burst ratings. This robust emitter is now provided with the added protection of copper, which has been scientifically proven to inhibit root growth. HDL-COP is designed with copper particles infused directly into the emitter. These benefits are long-lasting and provide an effective, nontoxic, and noncorrosive method for aiding in the prevention of root intrusion.

HOW TO IRRIGATE SUBSURFACE

Effective subsurface irrigation requires a different technique than overhead irrigation. Shorter cycles and more frequent watering will assist in maintaining proper soil moisture, oxygenation of the soil, and the prevention of root intrusion. For more information, visit *hunterindustries.com/sites/default/files/subsurfaceguidelineshdl.pdf*



PLD

High-quality, pressure-compensating emitters make PLD a great choice for most landscapes.

KEY BENEFITS

- Pressure-compensating emitters
- Flow rates of 2.2, 3.8 l/hr
- Emitter spacing at 30 cm and 50 cm
- Use with PLD-LOC or barbed PLD fittings
- Strong UV resistance
- Check valves keep the line charged up to 1.5 m and prevent low-point drainage
- Anti-siphon prevents debris from entering emitters when used subsurface

PLD-CV

OPERATING SPECIFICATIONS

- Pressure-compensating, non-draining emitters
- Operating pressure range: 1.0 to 3.5 bar; 100 to 350 kPa
- Minimum filtration: 120 mesh; 125 microns
- Warranty period: 5 years (plus 2 additional years for environmental stress cracking)

PLD Installed

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 DRIPLINE MAX LENGTH – 2.2 l/hr

Pressure (bar; kPa)	Emitter Spacing (m) 0.30	0.50
1.0; 100	47	73
2.0; 200	84	131
3.0; 300	104	162

16 MM DRIPLINE MAX LENGTH – 3.8 l/hr

Pressure (bar; kPa)	Emitter Spacing (m) 0.30	0.50
1.0; 100	35	54
2.0; 200	59	91
3.0; 300	72	112

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.

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 = 100 m**	**CV** = Pressure-compensating, check valve
PLD-38 = 3.8 l/hr flow	**50 cm**	**200 = 200 m**	
		400 = 400 m	

Examples:

PLD-22-30-100-CV = 2.2 l/hr dripline with 30 cm spacing in a 100 m roll

PLD-22-50-200-CV = 2.2 l/hr dripline with 50 cm spacing in a 200 m roll

PLD-38-50-400-CV = 3.8 l/hr dripline with 50 cm spacing in a 400 m roll

PLD 16 MM FITTINGS

Ensure a superior hold with robust acetal construction.

KEY BENEFITS

- Acetal material provides a secure connection
- Dual barb removes the need for clamps

PRODUCT SPECIFICATIONS

- Use with PLD or other 16 mm dripline

OPERATING SPECIFICATIONS

- Pressure range: up to 7 bar; 700 kPa
- Warranty period: 1 year

PLD-CPL-16
16 mm barb x barb

PLD-050-16
½" (12 mm) 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

PLD INSERT BARBS- 16 MM

Model	Description
PLD-CPL-16	16 mm barb x barb
PLD-050-16	½" MPT x 16 mm barb
PLD-ELB-16	12 mm barb x barb elbow
PLD-TEE-16	16 mm barb x barb tee
PLD-BV-16	16 mm barb x barb ball valve

LOC FITTINGS

LOC fittings are compatible with any nominal ½" tubing and dripline for quicker installs and easier repairs.

KEY BENEFITS

- Glass-filled polypropylene for added durability
- Thread lock connection method provides a secure connection while still allowing flexibility for service and system changes

PRODUCT SPECIFICATIONS

- Use with PLD, HDL, or other 16–18 mm dripline
- Install with PLD-IAC/PLD-IAE grommet and a 17.5 mm spade drill bit

OPERATING SPECIFICATIONS

- Operating pressure range: up to 10 bar; 1,000 kPa
- Warranty period: 2 years

PLD-LOC 075
¾" male pipe thread x LOC

PLD-LOC 050
½" male pipe thread x LOC

PLD-LOC CAP
End cap x LOC

PLD-LOC ELB
Locking elbow

PLD-LOC CPL
Locking coupler

PLD-LOC FHS
¾" female hose swivel x LOC

PLD-LOC TEE
Locking tee

17 MM BARB FITTINGS

Acetal construction holds vinyl and PE tubing for an ideal low-cost choice when installing dripline.

KEY BENEFITS

- Acetal material provides a secure connection
- Dual barb removes the need for clamps

PRODUCT SPECIFICATIONS

- Use with HDL or other 17 mm dripline
- Install with PLD-IAC/PLD-IAE grommet and a 17.5 mm spade drill bit

OPERATING SPECIFICATIONS

- Operating pressure range: up to 7 bar; 700 kPa
- Warranty period: 1 year

PLD-050
½" MPT x 17 mm barb

PLD-ELB
17 mm barb elbow

PLD-075
¾" MPT x 17 mm barb

PLD-CPL
17 mm barb coupling

PLD-CAP
17 mm barb x ½" MPT with cap

PLD-075-TB-TEE
17 mm barb tee x ¾" thread

PLD-BV
17 mm barb shut-off valve

PLD-TEE
17 mm barb tee

PLD-075-TB-ELB
¾" FPT x 17 mm barb elbow

PLD-050-TB-TEE
½" FPT x 17 mm barb tee

PLD-IAC
(with *grommet*)
Insert adapter x 17 mm coupling

PLD-IAE
(with *grommet*)
Insert adapter x 17 mm elbow

PLD-CRS
17mm barb cross

SUBSURFACE SYSTEMS

Subsurface drip irrigation systems can be extremely effective at saving water and encouraging root growth. Hunter is the only manufacturer to offer three tiers of top-quality subsurface irrigation solutions: HDL-COP dripline, Eco-Wrap fleece-wrapped dripline, and Eco-Mat specialised fleece mat.

1. **Eco-Mat** offers 30% greater efficiency than any other bare subsurface dripline product. It installs under the soil like a blanket of water, ready for the roots to absorb what they need.

2. **Eco-Wrap** provides resistance to root intrusion while enhancing the capillary action and efficiency of the system. Eco-Wrap combines the quality of HDL with the wicking properties of polyethylene fleece.

3. **Entry Manifold:**
   - PVC (for stability) or polyethylene
   - Assemble with either 17 mm or LOC fittings

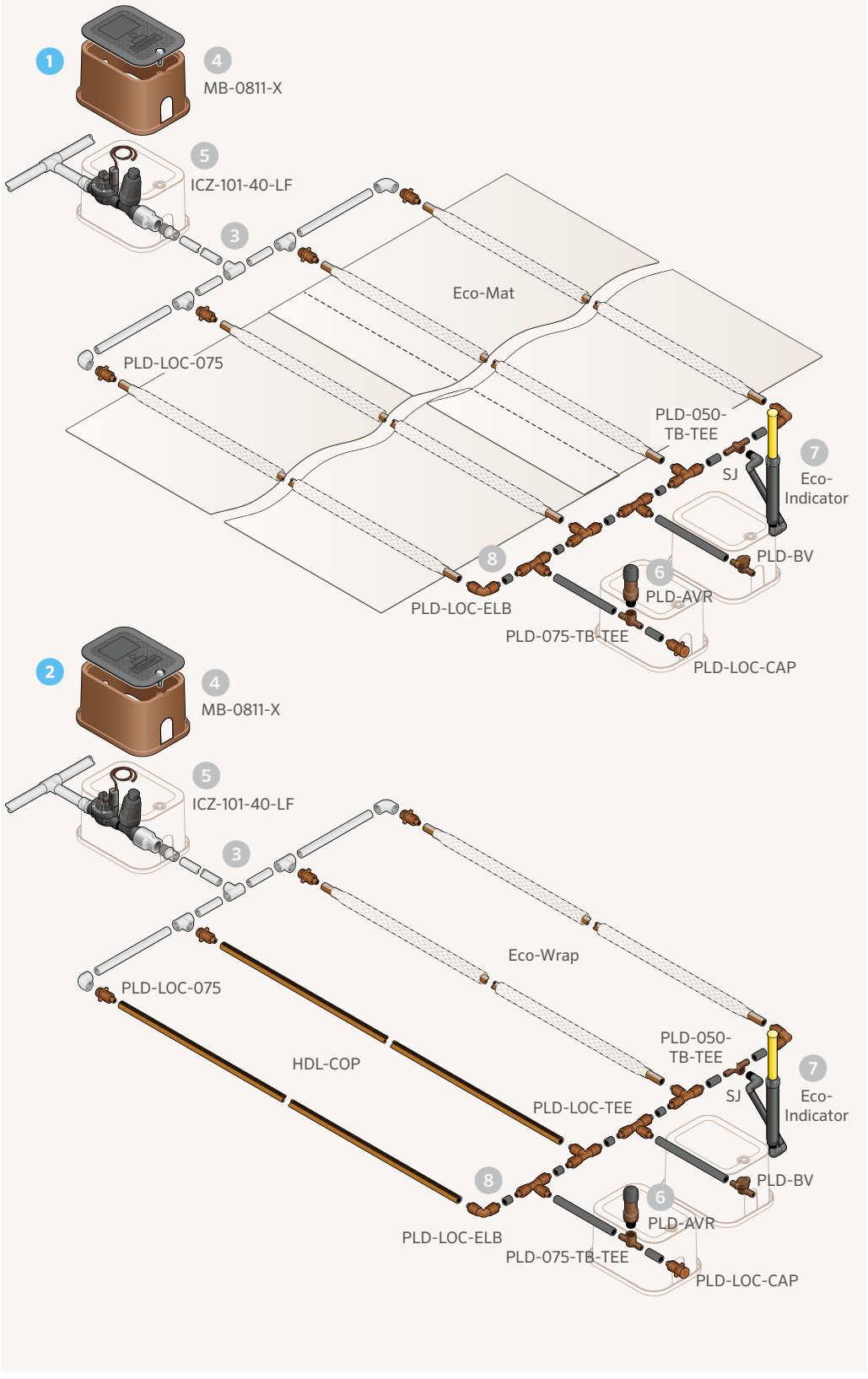
4. **Multi-Purpose Box:**
   - 25 cm x 18 cm opening
   - Five colour options for lids

5. **Control Zone Kit:**
   - Factory-assembled for quick and easy installation
   - Low-, medium-, and high-flow kits

6. **Air/Vacuum Relief Valve:**
   - Helps prevent water hammer and tubing collapse
   - Use at high point(s) in zone

7. **Eco-Indicator:**
   - Pops up at 0.85 bar; 85 kPa and shows system is running
   - Reveals when system pressure drops too low

8. **Fittings:**
   - Double-barb holds fittings tight
   - LOC fittings can be reused



ECO-MAT™

Irrigate plants below the root zone for maximum efficiency with a combination of fleece-wrapped dripline and fleece blanket.

KEY BENEFITS

- Anti-siphon feature and fleece wrap protect against debris and root intrusion
- Saves 20–40% more water than standard products due to superior capillary movement of water to the entire root zone, promoting healthier root growth
- Non-draining, pressure-compensating emitters open/close simultaneously, maximising efficiency
- Check height of 1.5 m minimises system drainage and runoff

PRODUCT SPECIFICATIONS

- Flow rate: 2.2 l/hr; 0.13 m³/hr
- Emitter spacing: 30 cm
- Lateral row spacing: 35 cm
- Product width: 0.80 m
- Roll length: 16 mm = 100 m; 17 mm = 90 m
- Tubing dimensions: 0.660" x 0.560" (outside/inside diameter)
- Accepts 16/17 mm barb (depending on Eco-Mat selection) or LOC fittings
- Water-holding capacity: 1.89 l/m³
- Approximate coverage per roll: 100 m roll = 77 m²; 90 m roll = 70 m²
- Example calculation based on area 12 m x 24 m:

$$\text{Roll Qty.} = \frac{\text{Irrigated landscape area}}{\text{Area of roll coverage}} = \frac{288\ \text{m}^2}{77\ \text{m}^2} = 4$$

OPERATING SPECIFICATIONS

- Operating range: 1.0 to 3.5 bar; 100 to 350 kPa
- Minimum filtration: 120 mesh; 125 microns
- Air relief recommended for sloping conditions greater than 1.5 m
- Recommended installation depth: turf (10–15 cm); other (10–30 cm)
- May use in conjunction with Eco-Wrap
- Warranty period: 5 years (plus 2 additional years for environmental stress cracking)

Eco-Mat Installed

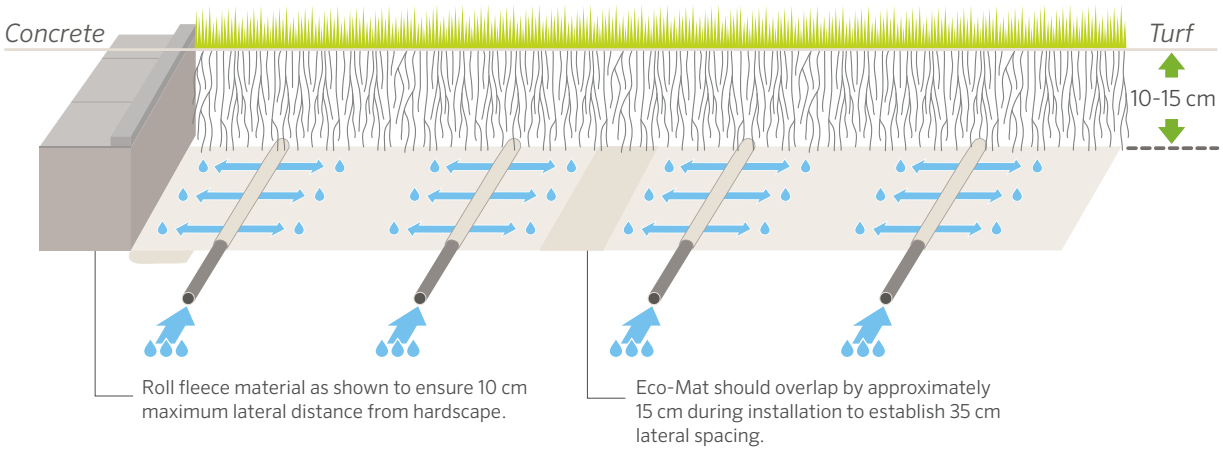
ECO-MAT

Model	Description
ECO-MAT-16	PLD (16 mm) fleece drip mat, 100 m roll
ECO-MAT-16-DL	PLD (16 mm) double-layer fleece drip mat, 75 m roll
ECO-MAT-17	HDL (17 mm) fleece drip mat, 90 m roll

Compatible with:

Soil-Clik
Page 151

Eco-Indicator
Page 173



ECO-WRAP™

Irrigate more efficiently than blank dripline with fleece-wrapped dripline.

KEY BENEFITS

- Perfect for narrow areas that are difficult to irrigate with standard methods
- Anti-siphon feature and fleece wrap protect against debris and root intrusion
- Saves 20–40% more water than standard products due to superior capillary movement of water to the entire root zone, promoting healthier root growth
- Non-draining, pressure-compensating emitters open/close simultaneously, maximising efficiency
- Check height of 1.5 m minimises system drainage and runoff

PRODUCT SPECIFICATIONS

- Flow rate: 2.1 l/hr
- Emitter spacing: 30 cm
- Tubing dimensions: 0.660" x 0.560" (outside/inside diameter)
- Roll length: 16 mm = 100 m; 17 mm = 90 m
- Accepts 16 mm barb or LOC fittings

OPERATING SPECIFICATIONS

- Operating range: 1.0 to 3.5 bar; 100 to 350 kPa
- Minimum filtration: 120 mesh; 125 microns
- Air relief recommended for sloping conditions greater than 1.5 m
- Recommended installation depth: turf (10–16 cm); other (10–30 cm)
- Compatible with Eco-Mat
- Warranty period: 5 years (plus 2 additional years for environmental stress cracking)

MAXIMUM RUN LENGTH FOR ECO-MAT AND ECO-WRAP

Pressure (bar; kPa)	Length (m)
1.0; 100	52
1.5; 150	75
2.0; 200	95
2.5; 250	106
3.5; 350	126
4.0; 400	130

Eco-Wrap

ECO-WRAP

Model	Description
ECO-WRAP-16	PLD (16 mm) fleece drip wrap, 100 m roll
ECO-WRAP-17	HDL (17 mm) fleece drip wrap, 90 m roll

Eco-Wrap Installed

Compatible with:

Soil-Clik
Page 151

Eco-Indicator
Page 173

SUPPLY TUBING

UV-resistant polyethylene makes this 0.700" x 0.600" solution a useful addition to drip systems.

KEY BENEFITS

- Thick wall and UV resistance provide durability and longevity
- Kink resistance for added flexibility and quicker installation

PRODUCT SPECIFICATIONS

- 17.8 mm x 15.2 mm (outside x inside diameter)

OPERATING SPECIFICATIONS

- 0 to 4.1 bar; 0 to 410 kPa
- Warranty period: 2 years

SUPPLY TUBING (THICK-WALLED POLYETHYLENE)

Model	Description
TWPE-700-100	½" PE tubing - 30 m
TWPE-700-250	½" PE tubing - 75 m
TWPE-700-500	½" PE tubing - 150 m
TWPE-700-1K	½" PE tubing - 300 m

Example:
TWPE-700-250 = 17 mm polyethylene tubing in a 76 m roll

17 mm PE Tubing

ECO-INDICATOR

Confirm system operation and adequate pressure with this handy visual tool.

KEY BENEFITS

- Visible yellow stem indicates when system is in operation
- Stem pops up when pressure exceeds 0.85 bar; 85 kPa and assists in confirming low pressures if not raised

OPERATING SPECIFICATIONS

- Operating pressure: up to 5.5 bar; 550 kPa
- Indication of system operation: above 0.85 bar; 85 kPa
- Warranty period: 2 years

Eco-Indicator Installed

ECO-ID

Pair with Eco-Mat™ and Eco-Wrap™ subsurface systems.

MLD

Use this 6 mm dripline solution for tight spaces and raised planters.

KEY BENEFITS

- Superior flexibility makes MLD an excellent choice for small spaces and raised containers
- Properly irrigates without being intrusive to the landscape

PRODUCT SPECIFICATIONS

- Colours: brown or black polyethylene
- Emitter spacing: 15 cm or 30 cm
- Coil sizes: 30 m or 75 m
- 6.4 mm x 4.5 mm (outside/inside diameters)
- Use with 6 mm barb fittings

OPERATING SPECIFICATIONS

- Pressure range: 0.7 to 2.8 bar; 70 to 280 kPa
- Minimum filtration: 150 mesh; 120 microns
- Maximum run lengths: 15 cm = 4.6 m; 30 cm = 9.2 m
- Warranty period: 2 years

MLD

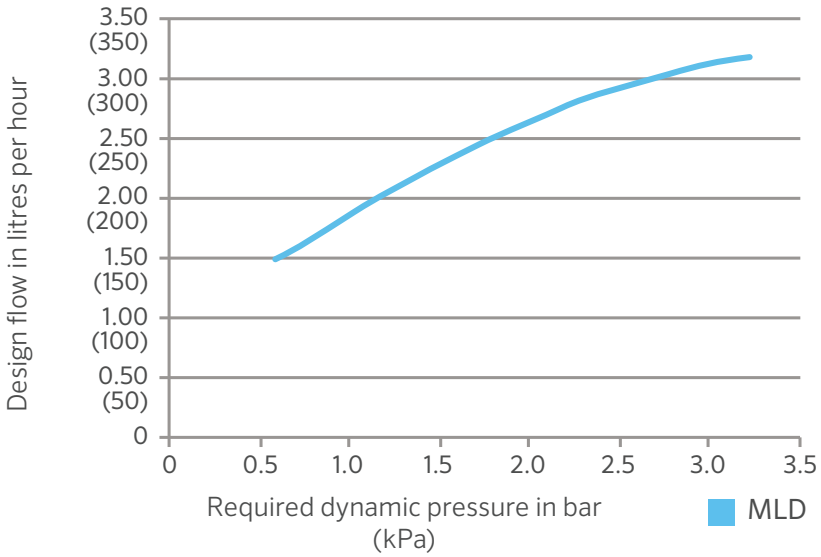
MLD Installed

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** = 75 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, brown

MLD FLOW CHART



DISTRIBUTION TUBING

Add stability and flexibility when using point-source emitters or micro sprays.

KEY BENEFITS

- High-quality vinyl or polyethylene securely connects to acetal (6 mm) fittings
- Vinyl is more flexible, but it softens in high heat and should be used in cooler climates
- Polyethylene performs well in warmer climates

PRODUCT SPECIFICATIONS

- Material: polyethylene or vinyl
- Coil sizes: 30 m, 75 m, and 300 m

OPERATING SPECIFICATIONS

- Operating pressure range: up to 4.1 bar; 410 kPa
- Warranty period: 2 years

6 mm Tubing

6 MM TUBING – SPECIFICATION BUILDER: ORDER 1 + 2 + 3

1 Model	2 Tubing Diameter	3 Length
HQPE = Polyethylene tubing	**250** = 6 mm barb	**100** = 30 m
HQV = Vinyl tubing		**250** = 75 m
		1K = 300 m

Example:
HQPE-250-1K = 6 mm polyethylene tubing in a 300 m roll

6 MM FITTINGS

Ensure a superior hold with robust acetal construction.

KEY BENEFITS

- Acetal material provides a secure connection
- Goof plug lays flat to help prevent leaking

PRODUCT SPECIFICATIONS

- Fits Hunter MLD and distribution tubings

OPERATING SPECIFICATIONS

- Pressure range: up to 4 bar; 400 kPa
- Warranty period: 2 years

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

6 mm Barb Fittings

Use with MLD or any vinyl or polyethylene 6 mm tubing, UV-stabilised materials, and durable single barb connection.

IH RISERS

Simplify point-to-point irrigation with vandal-resistant, heavy-duty IH Risers.

KEY BENEFITS

- Heavy-duty, military-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 labour by up to 50%
- At-grade or below-grade installation
- Available in multiple lengths for easy assembly
- Pre-assembled with ½" MPT adapter and specified emitter with check valve
- Available as components for custom assemblies
- Check valve holds back 3.6 m of head

IH RISERS

OPERATING SPECIFICATIONS

- Maximum flow: 26.5 l/min
- Maximum pressure: 4.1 bar; 410 kPa
- Warranty period: 2 years

IH RISER COMPONENTS SOLD SEPARATELY

Model	Description
SCREEN-CV	Filter screen with 2.7 m check valve
IH-FIT-3850	⅜" x ½" MPT IH fitting
IH-FIT-3850-R	⅜" x ½" MPT IH fitting (reclaimed)
IH-250	75 m length of irrigation hose
IPS-050-250	75 m length of ½" IPS

SCREEN-CV
Filter screen with 3.6 m check valve

IH-FIT-3850
⅜" x ½" MPT IH fitting

IH-FIT-3850-R
⅜" x ½" MPT IH fitting (reclaimed)

IH Risers with Emitters – SPECIFICATION BUILDER: ORDER 1 + 2 + 3

1 Riser Length	2 Flow with Check Valve Screen	3 Fitting Options
IH-06 = 15 cm riser	**05-CV** = 2 l/hr	**(blank)** = Brown
IH-12 = 30 cm riser	**10-CV** = 4 l/hr	R = Reclaimed (purple fitting)
IH-18 = 45 cm riser	**20-CV** = 8 l/hr	
IH-24 = 60 cm riser	**40-CV** = 15 l/hr	
IH-36 = 90 cm riser	**60-CV** = 23 l/hr	

Example:
IH-12-10-CV = 30 cm irrigation hose riser with 4 l/hr emitter with brown fittings

IPS-050-250

IH-250

Flexible PVC for creating headers or custom risers

POINT-SOURCE EMITTERS

Ensure accurate irrigation for mixed and sparse plantings with a wide range of flow rates.

KEY BENEFITS

- Pressure-compensating for consistent and reliable flow
- Colour-coded by flow for easy identification in the field
- Earth-tone colours blend in well with the surrounding environment
- 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

OPERATING SPECIFICATIONS

- Recommended pressure range: 1.4 to 3.5 bar; 140 to 350 kPa
- Minimum filtration: 150 mesh; 100 microns
- Warranty period: 2 years

½" FEMALE THREAD (BROWN BASE)

	Model	Inlet Type	Flow (l/hr)
Blue	HEB-05-BR	½" female thread	2.0
Red	HEB-20-BR	½" female thread	8.0
Tan	HEB-40-BR	½" female thread	15.0
Orange	HEB-60-BR	½" female thread	23.0

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

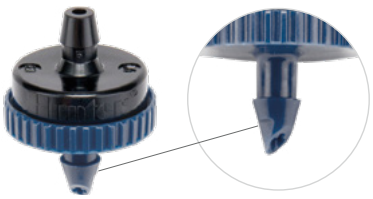
Pocket Punch
P/N POCKETPUNCH
(Punches, inserts, and removes emitters)

Hunter Emitter Multi-Tool
P/N HEMT
(Punches pilot holes and pellets, inserts and removes emitters, cuts tubing)

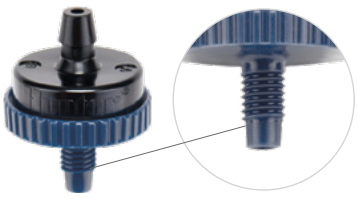
DIFFUSER CAP
(HE-DIFF)
Gently diffuses water on higher flow emitters to prevent erosion.

½" FEMALE THREAD
(brown base)

Inlet Options



① Self-piercing barb



② 10-32 thread

③ ½" female thread

MULTI-PORT EMITTERS

Use these emitters to irrigate groups of plants effectively from one source.

KEY BENEFITS

- Six pressure-compensating emitter ports provide consistent and reliable flow
- Colour-coded by flow for easy identification
- Earth-tone colours blend in with surrounding landscape
- Swivel elbows assist in placing water directly to plant
- MPM (Multi-Port Manifold) provides unrestricted flow for each outlet

PRODUCT SPECIFICATIONS

- Available in ½" FNPT
- Available flows: 2, 4, 8 l/hr
- PVC cap plugs port when not being used

OPERATING SPECIFICATIONS

- Pressure range: 1.4 to 3.5 bar; 140 to 350 kPa
- Minimum filtration: 150 mesh; 100 microns
- Warranty period: 2 years

MULTI-PORT EMITTER MODEL CHART

	Model	Flow (l/hr)
Blue	MPE-05	2.0
Black	MPE-10	4.0
Red	MPE-20	8.0
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)
Plug unused 6 mm barbed emitter outlets. Use with Hunter Multi-Port Emitters.

RIGID RISERS

These risers maintain their stiffness even when used with micro sprays, making them a perfect choice for high-throw applications.

KEY BENEFITS

- Provide a rigid connection for emitters and micro sprays
- Increase the height of sprays for flower beds

PRODUCT SPECIFICATIONS

- Inlet configurations: blank, 6 mm barb, ½" FNPT

OPERATING SPECIFICATIONS

- Pressure range: 1.4 to 4.1 bar; 140 to 410 kPa
- Warranty period: 1 year

30 cm Rigid Riser
(also available in 45 cm)

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

MICRO SPRAYS

Apply water accurately for small-area coverage.

SOLO-DRIP

- Eight streams of water for thorough coverage
- Adjustable cap for flow and radius adjustment

SOLO-DRIP PERFORMANCE DATA

Pressure (bar; kPa)	Flow (l/hr)	Throw Diameter (m)
1.0; 100	0–40	0–0.5
1.5; 150	0–50	0–0.6
2.0; 200	0–60	0–0.8

Note: Adjustable to maximum (approx. 20 clicks)

HALO-SPRAY

- Adjustable umbrella of water
- Adjustable cap for flow and radius adjustment

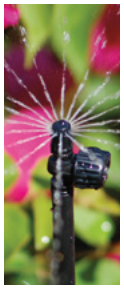
HALO-SPRAY PERFORMANCE DATA

Pressure (bar; kPa)	Flow (l/hr)	Throw Diameter (m)
1.0; 100	0–52	0–1.7
1.5; 150	0–65	0–2.8
2.0; 200	0–74	0–3.4

Note: Adjustable to maximum (approx. 14 clicks)

TRIO-SPRAY

- Full-, half-, and quarter-circle configurations
- Adjustable cap for flow and radius adjustment



TRIO-SPRAY PERFORMANCE DATA

Pressure (bar; kPa)	Flow (l/hr)	Spray Pattern (m) Diameter in Throw 360° x 18 Hole	Radius of Throw 180°	Radius of Throw 90°
0.5; 50	0–54	0–5.0	0–2.0	0–1.5
1.0; 100	0–77	0–5.8	0–2.5	0–2.1
1.5; 150	0–94	0–6.4	0–2.9	0–2.6
2.0; 200	0–105	0–7.0	0–3.2	0–3.0
2.5; 250	0–119	0–7.5	0–3.5	0–3.3

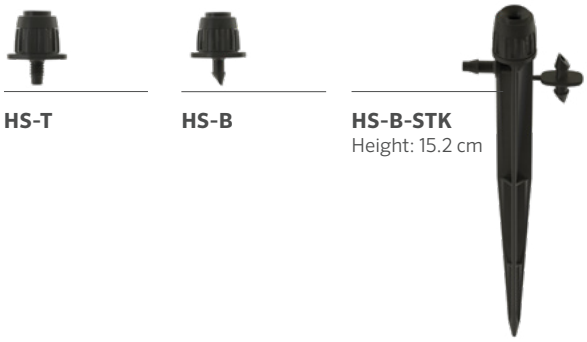
PRODUCT SPECIFICATIONS

- Inlet configurations: 6 mm barb, 10-32 thread, 6 mm barb stake

OPERATING SPECIFICATIONS

- Pressure range: 0.5 to 2.5 bar; 50 to 250 kPa
- Minimum filtration: 100 mesh; 150 microns
- Warranty period: 1 year

SD-T | **SD-B** | **SD-B-STK** Height: 15.2 cm



HS-T | **HS-B** | **HS-B-STK** Height: 15.2 cm

TS-T-F | **TS-T-H** | **TS-T-Q**

B = Barbed, F = Full, H = Half, Q = Quarter, STK = Stake, T = Threaded

For a more robust overhead micro spray system, pair Short-Radius Micro Spray Nozzles with Pro-Spray sprinklers:

Short-Radius Micro Spray Nozzles
Page 77

MULTI-PURPOSE BOX

This sturdy box is just right size to provide protection and easy access to essential irrigation components.

KEY BENEFITS

- Small footprint in a sturdy, durable box
- Five colour offerings blend in with any environment
- Overlapping lid prevents debris from entering box
- Knock-out bolt hole
- UV-protected, non-slip lid
- Warranty period: 2 years

PRODUCT SPECIFICATIONS

- Fits small control zone kits and other assorted components
- Durable HDPE construction
- ⅜" bolt included with every box

MULTI-PURPOSE BOX

Model	Description
MB-0811	Multi-purpose box with standard brown lid
MB-0811-G	Multi-purpose box with green lid
MB-0811-T	Multi-purpose box with tan lid
MB-0811-R	Multi-purpose box with purple lid
MB-0811-B	Multi-purpose box with black lid
MB-BOX	Multi-purpose box (box only)
MB-LID	Multi-purpose box (lid only), brown
MB-LID-G	Multi-purpose box (lid only), green
MB-LID-T	Multi-purpose box (lid only), tan
MB-LID-R	Multi-purpose box (lid only), purple
MB-LID-B	Multi-purpose box (lid only), black

Multi-Purpose Box
Top
Width: 19.0 cm
Length: 26.7 cm

Bottom
Width: 21.6 cm
Length: 29.2 cm

Height: 20 cm

MB-LID-B

MB-LID-G

MB-LID

MB-LID-R

MB-LID-T

Multi-Purpose Box Installed

AIR/VACUUM RELIEF VALVE

Prevent water hammer and system collapse by discharging air during startup and allowing air to enter during shutdown.

KEY BENEFITS

- Releases air pockets without premature closure
- Leak-free closure after release
- Helps prevent system collapse through vacuum relief

PRODUCT SPECIFICATIONS

- UV-protected and corrosion-resistant material

OPERATING SPECIFICATIONS

- Pressure range: up to 5.5 bar; 550 kPa
- Warranty period: 2 years

AVR-075
Height: 13 cm
Width: 5 cm
Inlet: ¾" MPT

PLD-AVR
½" Air/vacuum relief valve

Air/Vacuum Relief Valve Installed

AUTOMATIC FLUSH VALVE

Keep laterals clean by automatically flushing water, air, and debris at each system startup.

KEY BENEFITS

- Flushes debris automatically at every system startup
- Reversible diaphragm to coordinate with low or high flow
- Lateral placement provides better grit tolerance

PRODUCT SPECIFICATIONS

- Removable top for diaphragm maintenance

OPERATING SPECIFICATIONS

- Pressure range: up to 4.1 bar; 410 kPa
- Low-flow diaphragm side: 7.6 to 18.9 l/m
- High-flow diaphragm side: 18.9 to 45.4 l/m
- Warranty period: 1 year

AFV-B
Automatic flush valve with 17 mm barb connection

AFV-T
Automatic flush valve with ½" MPT connection

Automatic Flush Valve Installed

RZWS

Deliver water across all levels of the root zone for high-efficiency subsurface irrigation of trees and shrubs.

KEY BENEFITS

- Patented StrataRoot™ baffles divert water to all levels of the root zone while adding strength to the unit
- Durable locking cap for vandal resistance
- Pressure-compensating bubbler for accurate water flow
- Built-in Hunter Swing Joint for direct installation to ½" PVC fitting
- Pre-assembled for fast installation

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
- Warranty period: 2 years

FACTORY-INSTALLED OPTIONS

- Hunter check valve (HCV)
- Locking reclaimed water purple cap

USER-INSTALLED OPTIONS

- Fabric sleeve to 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 (P/N 913300SP)
- Locking reclaimed purple cap for 45 and 90 cm models (P/N 913301SP)
- Reclaimed water purple cap for 25 cm model (P/N RZWS10-RCC)

RZWS-10
Diameter: 5.1 cm
Length: 25 cm

RZWS-18
Tube diameter: 7.6 cm
Cap diameter: 12 cm
Length: 45 cm

RZWS-36
Tube diameter: 7.6 cm
Cap diameter: 12 cm
Length: 90 cm

Reclaimed models available (Add -R to model number)

RZWS patented StrataRoot baffles

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

ADDITIONAL OPTION (SPECIFY SEPARATELY)

RZWS-SLEEVE = Field-installed sleeve made from filter fabric

RZWS-E

Cultivate stronger, deeper roots by delivering water and oxygen directly to the root zone of trees and shrubs.

KEY BENEFITS

- Top serviceable cap design
- Pressure-compensating bubbler for accurate water flow
- Built-in Hunter Swing Joint for direct installation to ½" PVC fitting
- Pre-assembled for fast installation

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
- Warranty period: 2 years

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

RZWS-E-18
Diameter: 7.6 cm
Length: 45 cm

RZWS-E-36
Diameter: 7.6 cm
Length: 90 cm

RZB

This accessory for small trees and shrubs assists in delivering water to roots.

KEY BENEFITS

- 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
- Warranty period: 1 year

RZB
Diameter: 5 cm
Length: 23 cm

RECLAIMED

Hunter's Full Line of
RECLAIMED WATER PRODUCTS

ROTORS

PGJ

PGJ-00-R
PGJ-04-R
PGJ-06-R
PGJ-12-R

PGP ULTRA

PGP-00-CV-R
PGP-00-CV-R-PRB
PGP-04-CV-R
PGP-04-CV-R-PRB
PGP-12-CV-R

I-20

I-20-00-R
I-20-00-R-PRB
I-20-04-R
I-20-04-SS-R
I-20-04-R-PRB
I-20-04-SS-R-PRB
I-20-06-R
I-20-06-SS-R
I-20-06-R-PRB
I-20-06-SS-R-PRB
I-20-12-R

I-25

I-25-04-B-R
I-25-04-SS-B-R
I-25-06-B-R
I-25-06-SS-B-R

I-40

I-40-04-SS-B-R
I-40-04-SS-ON-B-R
I-40-06-SS-B-R
I-40-06-SS-ON-B-R

I-50

I-50-06-SS-B-R
I-50-06-SS-ON-B-R

Rotors Key

00 - Shrub
04 - 10 cm pop-up
06 - 15 cm pop-up

12 - 30 cm pop-up
CV - Check valve
SS - Stainless steel

ON - Opposing nozzles
PRB - Pressure-regulated body

ARV - Adjustable arc
3RV - Full-circle
RB - Reclaimed BSP

ROTORS

I-80

I-80-04-SS-RB
I-80-04-SS-ON-RB

I-90

I-90-ARV-B
I-90-3RV-B

SPRAYS

PRO-SPRAY

PROS-00-R
PROS-04-CV-R
PROS-06-CV-R
PROS-12-CV-R
PROS-RC-CAP (snap-on)
458520 = ID cap (threaded)

PRO-SPRAY PRS30

PROS-00-PRS30-R
PROS-04-PRS30-CV-R
PROS-06-PRS30-CV-R
PROS-12-PRS30-CV-R
458560 = ID cap

PRO-SPRAY PRS40

PROS-00-PRS40-R
PROS-04-PRS40-CV-R
PROS-06-PRS40-CV-R
PROS-12-PRS40-CV-R
458562 = ID cap

Sprays Key

00 - Shrub
04 - 10 cm pop-up
06 - 15 cm pop-up

12 - 30 cm pop-up
CV - Check valve

BUBBLERS

BUBBLERS

PCB-25-R
PCB-50-R
PCB-10-R
PCB-20-R

Bubblers Key

25 - 0.9 l/min
50 - 1.9 l/min
10 - 3.8 l/min
20 - 7.6 l/min

VALVES

ICV

ICV-101G-FS-R
ICV-151G-B-FS-R
ICV-201G-B-FS-R
ICV-301-FS-R
561205 = ICV-101-201 series ID handle
515005 = ICV-301 series ID handle

IBV

IBV-101G-FS-R
IBV-151G-FS-R
IBV-201G-FS-R
IBV-301G-FS-R

QUICK COUPLER

HQ-33DLRC-R
HQ-44LRC-R
HQ-44LRC-AW-R
HQ-5LRC-R
HQ-5LRC-BSP-R

Valves Key

B - BSP threads
FS - Filter Sentry™
LRC - Locking rubber cover
RC - Rubber cover
AW - Acme key with anti-rotation wheels

*** Note:** IBV purple tags are user-installed options.

Quick Coupler Key

LRC - Locking rubber cover
RC - Rubber cover
AW - Acme key with anti-rotation wheels

MICRO

IH RISERS

IH-RISER-XX-R
IH-XX-YY-CV-R
IH-FIT-3850-R

RZWS

RZWS-10-R
RZWS-10-25-R
RZWS-10-50-R
RZWS-10-25-CV-R
RZWS-10-50-CV-R
RZWS-18-R
RZWS-18-25-R
RZWS-18-50-R
RZWS-18-25-CV-R
RZWS-18-50-CV-R
RZWS-36-R
RZWS-36-25-R
RZWS-36-50-R
RZWS-36-25-CV-R
RZWS-36-50-CV-R
913301SP (purple cap for 45 cm and 90 cm)
RZWS10-RCC (purple cap for 25 cm)

HDL

HDL-06-12-250-R
HDL-06-12-500-R
HDL-06-12-1K-R
HDL-06-18-250-R
HDL-06-18-500-R
HDL-06-18-1K-R
HDL-06-24-250-R
HDL-06-24-1K-R
HDL-09-12-250-R
HDL-09-12-500-R
HDL-09-12-1K-R
HDL-09-18-250-R
HDL-09-18-500-R
HDL-09-18-1K-R
HDL-09-24-250-R
HDL-09-24-250-R
HDL-09-24-1K-R
HDL-BLNK-250-R
HDL-BLNK-500-R
HDL-BLNK-1K-R

MULTI-PURPOSE BOX

MB-0811-R
MB-LID-R (lid only)

Micro Key

IH Risers
12 - 30 cm
18 - 45 cm
24 - 61 cm
XX - Riser length (15, 30,45, 61, 91) cm
YY - Emitter flow (2, 4, 8, 15, 23) l/hr
CV - Check valve (standard)

RZWS
10 - 25 cm
18 - 45 cm
36 - 90 cm
25 - 0.9 l/min
50 - 1.9 l/min
CV - Check valve

HDL
BLNK - No emitter
HDL-04 - 1.5 l/hr
HDL-06 - 2.1 l/hr
HDL-09 - 3.4 l/hr
12 - 12 cm
18 - 18 cm
24 - 24 cm
250 - 75 m
500 - 150 m
1K - 300 m

TOOLS

SPOTSHOT HOSE-END NOZZLE

MODELS

- ¾" hose thread inlet – P/N 160700
- 1" (25 mm) hose thread inlet – P/N 160705

KEY BENEFITS

- 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 160700SP
1" (25 mm) P/N 160705

Pitot Gauge
P/N 280100SP
Used to check operating pressure of rotor sprinklers

MP Gauge Assembly
P/N MPGAUGE
Used to check operating pressure on spray body sprinklers

Hand Pump
P/N 217500SP
Used to remove water from flooded areas during service and installation

Nozzle Insertion Collar
P/N 123200SP

Hunter Wrench
P/N 172000SP

"T" Handle Tool
P/N 319100SP

Nozzle Removal/ Installation Tool
P/N 803700
I-80, G85B, G885 Short and Mid-Range Nozzles

I-80 Turf Cup Tool
P/N 991300SP
Arc Adjustment, Riser Hold-up, Turf Cup Remove/Install

I-80 Body Plug
P/N 996500SP

Snap Ring Tool
P/N 984400SP
I-80 Installation/Removal

PILOT™ NETWORK

Pilot CCS

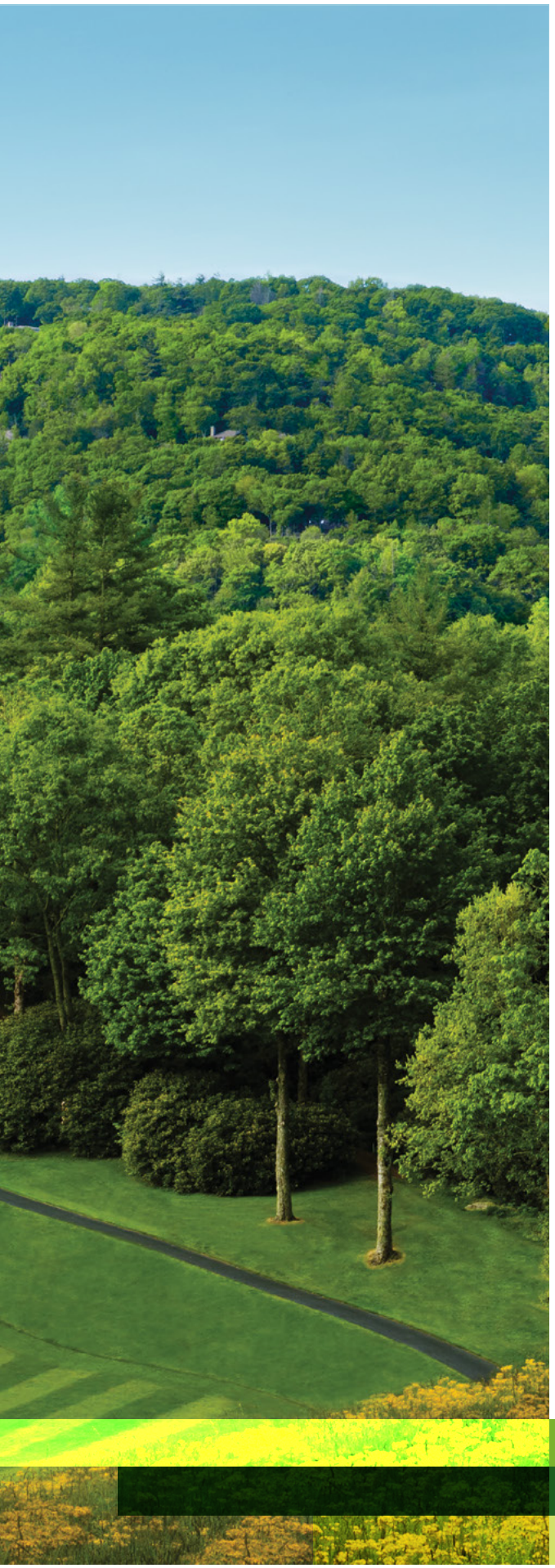
Powerful software designed with advanced tools to make irrigation simple and seamless

Pilot IHS

Reliable field controllers with modern engineering and next-generation technology

TTS Rotors

Integrated two-way modules with no-dig Total-Top-Serviceability



MAKE LIFE EASIER

WITH A NEW APPROACH TO GOLF IRRIGATION

Pilot CCS

Command Center Software

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

Pilot IHS

Integrated Hub System

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

TTS Rotors

with Integrated Two-Way Modules

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

ICD-HP

Communicate Directly with TWMs

Program and troubleshoot two-way modules with no digging or wires required. The handy device communicates directly through the plastic without barcodes, saving you time in the field.

PILOT™ COMMAND CENTER SOFTWARE

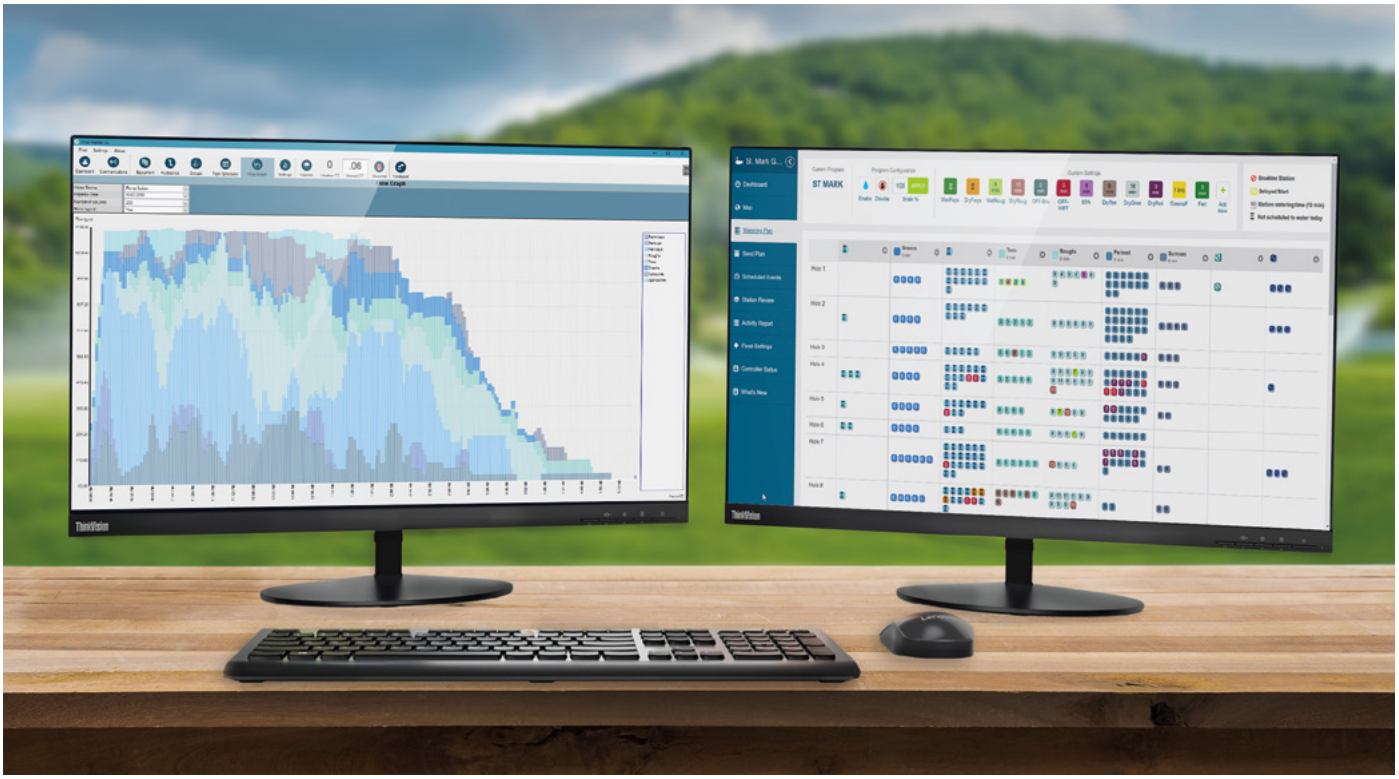
Enjoy simple yet powerful irrigation management and control with revolutionary Pilot CCS.

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

PILOT SPECIFICATIONS

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

Pilot Command Center software



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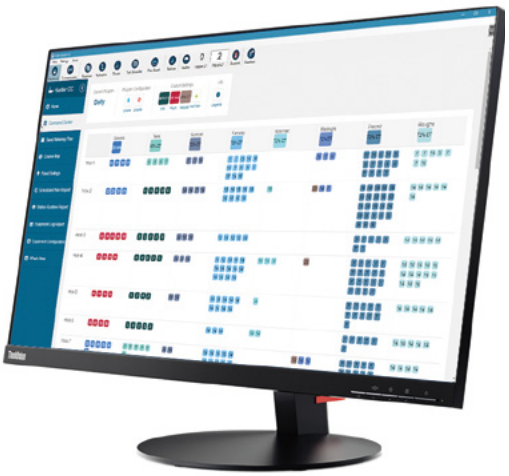
COMMAND CENTER

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



Command Center

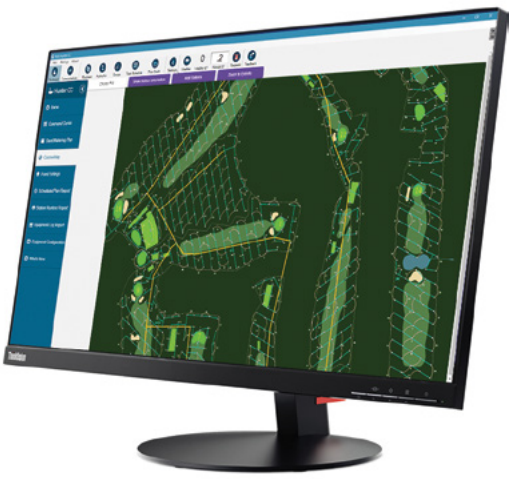
SPEND LESS TIME RUNNING YOUR PUMP

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

Flow Optimisation

MAPPING YOUR COURSE

Although having a map is not required, adding one allows you to run water by simply clicking the station symbols on the map. With this helpful feature, you can also monitor stations as they are running.



Maps

PILOT™ FIELD CONTROLLER SYSTEMS

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

KEY BENEFITS

- Five languages
- Up to 80 station outputs in 10-station increments
- Up to three Hunter golf valve-in-head rotors per station output
- Up to 20 simultaneous Hunter golf valve-in-head rotors active per controller
- 32 automatic schedules with eight 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% run time 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

Two voltage settings:

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

Current requirement:

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

For additional information, see electrical data on **page 245**

Pilot-FI Field Interface
One is required with any Pilot network system. It is used to link the central computer to the field equipment. For indoor locations only.

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

OUTPUT VOLTAGE

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

RADIO SYSTEMS

- UHF radio: 450–490 MHz; other UHF frequencies available for selected markets
- Spread-spectrum radio: 915 MHz

WIRED SYSTEMS

- GCBL: Shielded two twisted pairs, 0.82 mm^2
- GCBLA: Armoured, shielded two twisted pairs, 0.82 mm^2

PILOT-FI – SPECIFICATION BUILDER: ORDER 1 + 2 + 3

1 Model	2 Standard Features	3 Communication Options	
Pilot-FI	Plastic pedestal (grey)	**HWR**	Hardwire communications
		UHF	UHF radio communications (licence required)
		UHFA	UHF radio (licence required, Australia only)
		LF	915 MHz spread-spectrum radio communications (no licence needed)

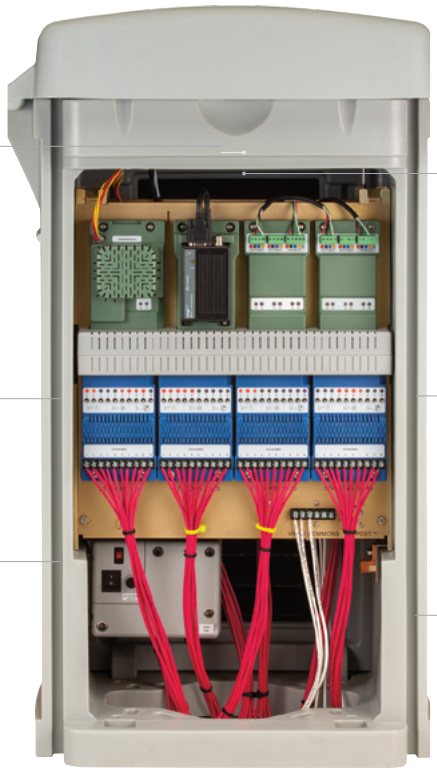
Examples:
Pilot-FI-HWR = Field interface with hardwire communications
Pilot-FI-UHF = Field interface with UHF radio communications

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

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

Safe-Toggle Station Switches and Diagnostic LED Indicators
Standard for all station outputs, these features provide quick troubleshooting and watering tools.

Conveniently Located Dual-Voltage (120/230 VAC) Junction Box
Features heavy-duty surge protection and even includes a spare fuse.



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

Modular 10-Station Expansion Boards
Colour-coded modular components have captured screws. This means no more lost screws, which simplifies assembly and troubleshooting.

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

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

1 Model	2 Standard Features	3 Communication Options	
Pilot-FC20 (20-station)		**S**	Standalone field controller with no central communications
Pilot-FC30 (30-station)		**HWR**	Wired communications
Pilot-FC40 (40-station)		**UHF**	UHF radio (licence required)
		UHFA	UHF radio (licence required, Australia only)
Pilot-FC50 (50-station)	Plastic pedestal (grey)	**LF**	915 MHz spread-spectrum radio (no licence needed)
Pilot-FC60 (60-station)	120/230 VAC, 60/50 Hz dual-voltage transformer		
Pilot-FC70 (70-station)			
Pilot-FC80 (80-station)			

Examples:
Pilot-FC40-S = 40-station, standalone field controller with no central communications
Pilot-FC70-HWR = 70-station field controller with wired communications

PILOT™ INTEGRATED HUB SYSTEMS

Save money without sacrificing in-field sprinkler control with Pilot integrated hub systems.

Integrated hub systems are one of the fastest growing forms of technology in irrigation control. A key advantage over field controller systems is that integrated hub systems use significantly less wire. This means lower costs, faster installation, and easier system diagnosis and repair if needed. Systems can be easily expanded — with minimal digging and disruption of landscaping — by adding more two-way modules (TWMs) instead of running additional wires.

Pilot embraces this cost-efficient approach. Pilot two-way modules are available with 1-, 2-, 4-, and 6-station outputs, making it possible to run each head on an entire green with a single device. In all, TWMs let you operate about 1,000 stations up to approximately 2½ km from a single hub.

Pilot two-way modules include built-in surge suppression, colour-coded wire connections, true independent station control, programmable station addresses, and two-way feedback to the hub with confirmation and status indication. Pilot-SG surge suppressors are required when the system is designed and installed with golf rotors containing integrated TWMs.

TWM Hub

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

Diagnostic LED Indicators
For all functions on 250-station output modules

250-Station Output Modules
Enable your integrated hub system to expand with your course; start with 250 and grow to 999

Pilot TWMs
1- and 2-station:
Height: 9 cm
Width: 4 cm
Depth: 2.5 cm
Weight: 150 g

4- and 6-station:
Height: 9 cm
Width: 4.5 cm
Depth: 4 cm
Weight: 250 g

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

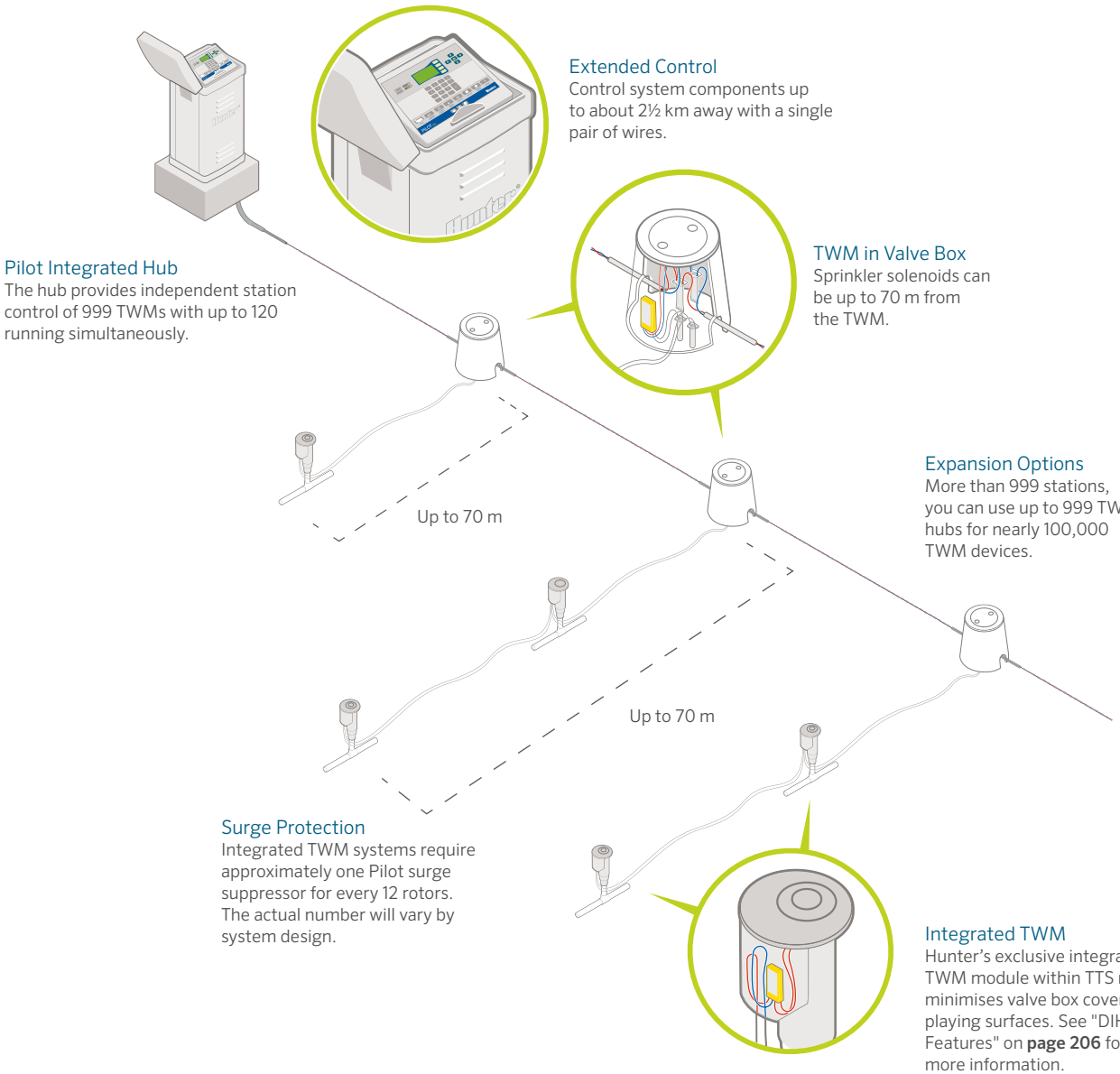
PILOT-SG Surge Suppressor

All integrated TWM rotors include two 3M DBRY-6 splices for connection to the two-wire path. Integrated TWM systems require grounding with Pilot-SG surge suppressors coupled to an appropriate grounding plate or rod. Hunter recommends a minimum of one Pilot-SG for every 12 installed rotors or as per project specification.

PILOT-DH – SPECIFICATION BUILDER: ORDER 1 + 2 + 3

1 Model	2 Standard Features	3 Communication Options	
Pilot-DH250 (250-station)	Plastic pedestal (grey)	**S**	Standalone TWM hub with no central communications
Pilot-DH500 (500-station)		**HWR**	Wired communications
Pilot-DH750 (750-station)		**UHF**	UHF radio (licence required)
		UHFA	UHF radio (licence required, Australia only)
Pilot-DH999 (999-station)		**LF**	915 MHz spread-spectrum radio (no licence required)

Examples:
Pilot-DH250-S = 250-station, standalone TWM hub with no central communications
Pilot-DH999-HWR = 999-station TWM hub with wired communications



TWM – SPECIFICATION BUILDER: ORDER 1

1 Model		2 Standard Features
Pilot-100	1-station TWM	Built-in surge suppressor
Pilot-200	2-station TWM	DBRY-6 waterproof connectors included
Pilot-400	4-station TWM	
Pilot-600	6-station TWM	
Pilot-SG	Inline surge suppression (for integrated TWM rotor systems)	

Example:
Pilot-100 = 1-station TWM

Wireless Programming

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

See the ICD-HP on **page 199**

WEATHER STATION

Achieve and maintain the highest-quality playing surface with consistent, local weather data.

KEY BENEFITS

- 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 nine-pin serial computer port required)
- Optional solar panel kit provides wireless power
  - Simple installation and versatile mounting with onboard 800 mAh rechargeable gel cell battery with 18 VDC transformer and 7 m power cable
- Weatherproof construction: With UV-stabilised enclosure, weatherproof external connectors, and long-life coated circuit boards
- UL, cUL, 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 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

TurfWeather is a trademark of Campbell Scientific Inc.

MAINTENANCE RADIO

Save time and money with seamlessly integrated remote radio control.

KEY BENEFITS

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

* Licence required

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

ICD-HP

Gain wireless, handheld programming and diagnostic capabilities for Hunter ICD and DUAL™ decoders.

KEY BENEFITS

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

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

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

ICD-HP

ROTOR SOLUTIONS
FOR EVERY GOLF COURSE

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

Over the last three decades, Hunter Industries has built a longstanding reputation for innovation in the golf industry. Introductions such as the first Windows-based central control system, the first Total-Top-Service (TTS) rotors, the first Decoder-in-Head (DIH) rotors with integrated two-way modules, and the powerful and water-efficient G85 gear drives are among these revolutionary innovations.

Now, we are proud to advance our legacy of firsts with our all-new TTS-800 Series rotors — the most innovative and technologically advanced rotors in the industry. TTS-800 Series rotors provide maximum uniformity and longevity in the field. The high-torque gear drives are the strongest in the industry, so the potential challenges of reclaimed water use or poor water quality are mitigated. The fast-access flange compartment is the largest in the industry and can accommodate full-sized DBRY-6 splice connectors. And with no-dig Total-Top-Serviceability, the TTS-800 provides solenoid and pressure regulator servicing without mainline depressurisation, making routine maintenance a breeze.

So, whether your irrigation requirements fall into our budget-conscious B Series category, the advanced G-800 Series rotors, or our top-of-the-line TTS-800 Series rotors, Hunter Industries offers total solutions that will exceed your expectations and ensure beautiful, playable courses for years to come.

GOLF ROTORS

UNIFORMITY **YOU CAN COUNT ON**

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

Healthy, playable turf starts with a well-designed irrigation system and top-level golf rotors — like Hunter's ultra-reliable TTS-880 and TTS-885, with their superior distribution uniformity. Couple this with the best support team in the business, and Hunter's golf solutions are second to none.

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

Choose Hunter Golf products for best-in-class performance and enhanced playability.

BEST-IN-CLASS GEAR DRIVES

POWER, PERFORMANCE, AND VERSATILITY

TTS-880

TTS-884

TTS-885

HIGHLY POWERFUL GEAR DRIVES

MEET THE G-80 FULL-CIRCLE DIRECT-DRIVE DYNAMO

In 2013, Hunter introduced the revolutionary G-85 gear drive, the most powerful in the golf industry. Since then, the G-85's reputation for power, performance, and versatility have earned the respect of professionals industry-wide. While the G-85 has an adjustable arc drive with triple forward-facing nozzles, it can also be adjusted to non-reversing, full-circle rotation. In addition, the G-85 can be configured at the factory as a G-84 in an opposing-nozzle, full-circle configuration.

Now, Hunter completes the trilogy with the direct-drive G-80 full-circle dynamo — with power to spare. The dedicated full-circle G-80 melds the tried-and-proven 2006 to 2018 G-80 gearbox with the G-85's outstanding platform to create the best full-circle gear drive in the golf industry.

DUAL-TRAJECTORY FLEXIBILITY

Standard Nozzles

Low-Angle Nozzles

The G-80 and the G-84/G-85 gear drives share the same primary nozzle sets. Each gear drive has dedicated short and mid-range nozzles that when combined with the primary nozzles create the uniformity you can count on. Choose from a wide assortment of efficient wind-fighting 22.5° standard trajectory nozzles, or 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.

TTS-800 VIH GOLF ROTORS
ADVANCED FEATURES

Total-Top-Service (TTS)

Access Everything Through the Top

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

Large and Flexible Yardage Marker Capabilities

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

Largest Flange Compartment in the Industry

Spacious cavity with enough room for full-sized 3M DBRY-6 splice connectors

Unitized Inlet Valve Design Includes Serviceable Components

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

Easy Access and Servicing of Solenoid and Pressure Regulators

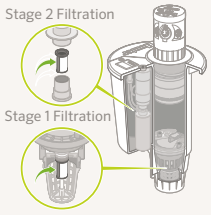
Colour-coded components are removed and replaced without mainline depressurisation

Exclusive Inlet Valve Includes Self-Cleaning Capabilities

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

Single-Point Fast-Access to Flange Compartment

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



Two-Stage Serviceable Filtration in Valve Circuitry

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

Heavy-Duty Flanged and Ribbed Body Design

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

Three Cable Entry Ports at Base of Flange Compartment

Makes splice and cable connections fast, easy, and organised

Low-Bounce Rubber Cover Kit

Impact-absorbing design reduces ball ricochet around the greens

No-Bounce Turf Cup Kit

Recessed turf cup design is aesthetically clean and eliminates ball ricochet

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

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

Largest Flange DIH Compartment in the Industry

Spacious cavity with enough room for two-way modules and full-sized 3M DBRY-6 splice connectors

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

Improves playability and eliminates unsightly enclosures around the course

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

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

TTS-800 DIH GOLF ROTORS
ADVANCED FEATURES

Individual Two-Way Module and Solenoid Components Within Flange Compartment

Isolated/separated configuration minimises yearly maintenance costs

Two-Station DIH Rotor Option

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

State-of-the-Art Surge Suppression

Earth grounding is easily added with the Pilot-SG surge protector

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

Makes splice and cable connections fast, easy, and clean

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

With no connectors, maintains ongoing electrical continuity

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

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

TTS-880

These rotors have Total-Top-Serviceability, powerful G-800 Series gear drives, and the largest flange compartment in the industry to accommodate all two-way module components.

KEY BENEFITS

- 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
- Optional high-rotation-speed stator
- All TTS-800 VIH advanced features on **page 204**
- All TTS-800 DIH advanced features on **page 206**

OPERATING SPECIFICATIONS

- Radius: 14.9 to 29.6 m
- Flow: 3.23 to 13.29 m³/hr; 53.8 to 221.4 l/min
- Pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
- All TTS rotors are pressure-rated at 10 bar; 1,000 kPa

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) 50 Hz; 190 mA (350 mA inrush) 60 Hz solenoid with captive plunger and internal downstream bleed

* All DIH rotors include two 3M DBRY-6 splices for connection to the two-wire path. See **page 196** for critical recommendations on grounding DIH rotors.

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

TTS-880 – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4 + 5

1 Model	2 Valve Options	3 Nozzle	4 Regulation*	5 Options
GT-880 = Full-circle	**C** = Check-O-Matic*	**15 to 53** = Installed G-880 nozzle*	**P5** = 50 PSI; 3.4 bar; 340 kPa (nozzles 15 to 18)	**S** = SSU*
	D = Decoder valve-in-head		**P6** = 65 PSI; 4.5 bar; 450 kPa (nozzles 18 to 25)	
	DD = Two-station decoder valve-in-head		**P8** = 80 PSI; 5.5 bar; 550 kPa (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:
GT-880-E-48-P8-S = GT-880 full-circle electric valve-in-head, installed #48 nozzle, 80 PSI; 5.5 bar; 550 kPa regulation, standard stocking unit model

TTS-880 NOZZLE PERFORMANCE DATA*

Nozzle Set			Pressure		Radius	Flow		Precip mm/hr	
			bar	kPa	m	m³/hr	l/min	■	▲
● Tan		● Grey	3.4	344	14.9	3.23	53.8	14.5	16.7
			4.1	413	15.5	3.57	59.4	14.8	17.0
	15		4.5	450	15.9	3.73	62.1	14.8	17.1
			4.8	482	16.2	3.86	64.4	14.8	17.1
803611	White	315317	5.5	551	16.8	4.13	68.9	14.7	17.0
● Tan		● Grey	3.4	344	17.1	3.91	65.1	13.4	15.5
			4.1	413	17.7	4.28	71.3	13.7	15.8
	18		4.5	450	18.0	4.48	74.6	13.8	16.0
			4.8	482	18.3	4.54	75.7	13.6	15.7
803611	Orange	315317	5.5	551	18.6	4.82	80.3	13.9	16.1
● Tan		● Grey	3.4	344	17.4	4.18	69.7	13.8	16.0
			4.1	413	18.0	4.61	76.8	14.3	16.5
	20		4.5	450	18.6	4.86	81.0	14.1	16.2
			4.8	482	19.2	4.91	81.8	13.3	15.4
803611	Brown	315317	5.5	551	19.5	5.16	85.9	13.5	15.6
● Tan		● Lt. Blue	3.4	344	19.2	4.91	81.8	13.3	15.4
			4.1	413	19.8	5.22	87.1	13.3	15.4
	23		4.5	450	20.1	5.45	90.8	13.5	15.6
			4.8	482	20.4	5.66	94.3	13.6	15.7
803611	Green	315311	5.5	551	20.7	6.04	100.7	14.1	16.2
● Tan		● Lt. Blue	4.5	450	21.6	6.50	108.3	13.9	16.0
			4.8	482	22.3	6.75	112.5	13.6	15.7
	25		5.5	551	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	689	23.5	8.12	135.3	14.7	17.0
● Tan		● Lt. Blue	4.5	450	22.6	7.02	117.0	13.8	15.9
			4.8	482	22.9	7.27	121.1	13.9	16.1
	33		5.5	551	23.5	7.77	129.5	14.1	16.3
			6.2	620	24.1	8.22	137.0	14.2	16.4
803611	Grey	315311	6.9	689	24.7	8.68	144.6	14.2	16.4
● Tan		● Lt. Blue	4.5	450	23.5	7.97	132.9	14.5	16.7
			4.8	482	24.1	8.31	138.5	14.3	16.6
	38		5.5	551	25.0	8.84	147.3	14.1	16.3
			6.2	620	25.6	9.38	156.3	14.3	16.5
803611	Red	315311	6.9	689	26.5	9.90	165.0	14.1	16.3
● Tan		● Blue	-	-	-	-	-	-	-
			4.8	482	25.3	9.38	156.3	14.7	16.9
	43		5.5	551	25.9	9.90	165.0	14.8	17.0
			6.2	620	26.5	10.52	175.3	15.0	17.3
803611	Dk. Brown	315300	6.9	689	27.1	11.09	184.7	15.1	17.4
● Dk. Brown		● Dk. Blue	-	-	-	-	-	-	-
			4.8	482	27.4	10.65	177.5	14.2	16.3
	48		5.5	551	28.0	11.11	185.1	14.1	16.3
			6.2	620	28.7	11.46	191.0	14.0	16.1
803610	Dk. Green	833500	6.9	689	29.3	12.15	202.5	14.2	16.4
● Dk. Brown		● Dk. Blue	-	-	-	-	-	-	-
			4.8	482	27.7	11.31	188.5	14.7	17.0
	53		5.5	551	28.3	11.86	197.7	14.8	17.0
			6.2	620	29.0	12.61	210.1	15.0	17.4
803610	Dk. Blue	833500	6.9	689	29.6	13.29	221.4	15.2	17.6

* 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.

TTS-880 STANDARD NOZZLES

TTS-880 LOW-ANGLE NOZZLES**

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

Easy-Access Servicing

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

Spacious Flange Compartment

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

TTS-884

These rotors have Total-Top-Serviceability, powerful G-800 Series gear drives, and the largest flange compartment in the industry to accommodate all two-way module components.

KEY BENEFITS

- 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
- Optional high-rotation-speed stator
- All TTS-800 VIH advanced features on **page 204**
- All TTS-800 DIH advanced features on **page 206**

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

OPERATING SPECIFICATIONS

- Radius: 14.9 to 29.6 m
- Flow: 3.23 to 13.29 m^3/hr; 53.8 to 221.4 l/min
- Pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
- All TTS rotors are pressure-rated at 10 bar; 1,000 kPa

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) 50 Hz; 190 mA (350 mA inrush) 60 Hz solenoid with captive plunger and internal downstream bleed

* All DIH rotors include two 3M DBRY-6 splices for connection to the two-wire path. See **page 196** for critical recommendations on grounding DIH rotors.

TTS-884 – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4 + 5

1 Model	2 Valve Options	3 Nozzle	4 Regulation*	5 Options
GT-884 = Full-circle (convertible to forward-facing adjustable arc rotor)	**C** = Check-O-Matic*	**15 to 53** = Installed G-880 nozzle*	**P5** = 50 PSI; 3.4 bar; 340 kPa (nozzles 15 to 18)	**S** = SSU*
	D = Decoder valve-in-head		**P6** = 65 PSI; 4.5 bar; 450 kPa (nozzles 18 to 25)	
	DD = Two-station decoder valve-in-head		**P8** = 80 PSI; 5.5 bar; 550 kPa (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:
GT-884-E-48-P8-S = GT-884 full-circle electric valve-in-head, installed #48 nozzle, 80 PSI; 5.5 bar; 550 kPa regulation, standard stocking unit model

TTS-884 NOZZLE PERFORMANCE DATA*

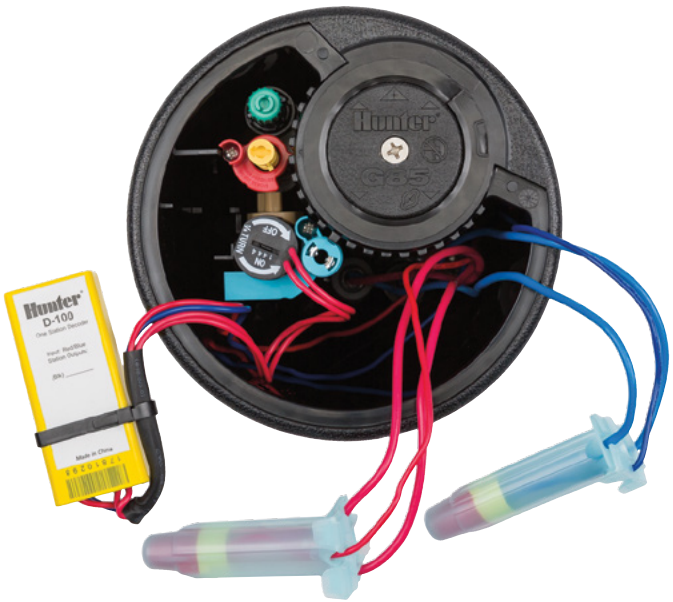
Nozzle Set			Pressure		Radius	Flow		Precip mm/hr	
			bar	kPa	m	m³/hr	l/min	■	▲
● Tan		● Grey	3.4	344	14.9	3.23	53.8	14.5	16.7
			4.1	413	15.5	3.57	59.4	14.8	17.0
	15		4.5	450	15.9	3.73	62.1	14.8	17.1
			4.8	482	16.2	3.86	64.4	14.8	17.1
803611	White	315317	5.5	551	16.8	4.13	68.9	14.7	17.0
● Tan		● Grey	3.4	344	17.1	3.91	65.1	13.4	15.5
			4.1	413	17.7	4.28	71.3	13.7	15.8
	18		4.5	450	18.0	4.48	74.6	13.8	16.0
			4.8	482	18.3	4.54	75.7	13.6	15.7
803611	Orange	315317	5.5	551	18.6	4.82	80.3	13.9	16.1
● Tan		● Grey	3.4	344	17.4	4.18	69.7	13.8	16.0
			4.1	413	18.0	4.61	76.8	14.3	16.5
	20		4.5	450	18.6	4.86	81.0	14.1	16.2
			4.8	482	19.2	4.91	81.8	13.3	15.4
803611	Brown	315317	5.5	551	19.5	5.16	85.9	13.5	15.6
● Tan		● Lt. Blue	3.4	344	19.2	4.91	81.8	13.3	15.4
			4.1	413	19.8	5.22	87.1	13.3	15.4
	23		4.5	450	20.1	5.45	90.8	13.5	15.6
			4.8	482	20.4	5.66	94.3	13.6	15.7
803611	Green	315311	5.5	551	20.7	6.04	100.7	14.1	16.2
● Tan		● Lt. Blue	4.5	450	21.6	6.50	108.3	13.9	16.0
			4.8	482	22.3	6.75	112.5	13.6	15.7
	25		5.5	551	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	689	23.5	8.12	135.3	14.7	17.0
● Tan		● Lt. Blue	4.5	450	22.6	7.02	117.0	13.8	15.9
			4.8	482	22.9	7.27	121.1	13.9	16.1
	33		5.5	551	23.5	7.77	129.5	14.1	16.3
			6.2	620	24.1	8.22	137.0	14.2	16.4
803611	Grey	315311	6.9	689	24.7	8.68	144.6	14.2	16.4
● Tan		● Lt. Blue	4.5	450	23.5	7.97	132.9	14.5	16.7
			4.8	482	24.1	8.31	138.5	14.3	16.6
	38		5.5	551	25.0	8.84	147.3	14.1	16.3
			6.2	620	25.6	9.38	156.3	14.3	16.5
803611	Red	315311	6.9	689	26.5	9.90	165.0	14.1	16.3
● Tan		● Blue	-	-	-	-	-	-	-
			4.8	482	25.3	9.38	156.3	14.7	16.9
	43		5.5	551	25.9	9.90	165.0	14.8	17.0
			6.2	620	26.5	10.52	175.3	15.0	17.3
803611	Dk. Brown	315300	6.9	689	27.1	11.09	184.7	15.1	17.4
● Dk. Brown		● Dk. Blue	-	-	-	-	-	-	-
			4.8	482	27.4	10.65	177.5	14.2	16.3
	48		5.5	551	28.0	11.11	185.1	14.1	16.3
			6.2	620	28.7	11.46	191.0	14.0	16.1
803610	Dk. Green	833500	6.9	689	29.3	12.15	202.5	14.2	16.4
● Dk. Brown		● Dk. Blue	-	-	-	-	-	-	-
			4.8	482	27.7	11.31	188.5	14.7	17.0
	53		5.5	551	28.3	11.86	197.7	14.8	17.0
			6.2	620	29.0	12.61	210.1	15.0	17.4
803610	Dk. Blue	833500	6.9	689	29.6	13.29	221.4	15.2	17.6

* 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.

TTS-884 STANDARD NOZZLES

TTS-884 LOW-ANGLE NOZZLES**

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



Room to Spare

Adding a two-way module does not reduce flange compartment space. The exclusive configuration provides extra room for full-sized DBRY-6 splice connectors and multiple cables.

TTS-885

These rotors have Total-Top-Serviceability, powerful G-800 Series gear drives, and the largest flange compartment in the industry to accommodate all two-way module components.

KEY BENEFITS

- 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
- Optional high-rotation-speed stator
- All TTS-800 VIH advanced features on **page 204**
- All TTS-800 DIH advanced features on **page 206**

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

OPERATING SPECIFICATIONS

- Radius: 11.3 to 28.7 m
- Flow: 2.02 to 13.54 m^3/hr; 33.7 to 225.6 l/min
- Pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
- All TTS rotors are pressure-rated at 10 bar; 1,000 kPa

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) 50 Hz; 190 mA (350 mA inrush) 60 Hz solenoid with captive plunger and internal downstream bleed

* All DIH rotors include two 3M DBRY-6 splices for connection to the two-wire path. See **page 196** for critical recommendations on grounding DIH rotors.

TTS-885 – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4 + 5

1 Model	2 Valve Options	3 Nozzle	4 Regulation*	5 Options
GT-885 = Full/part-circle, 60°-360° arc range	**C** = Check-O-Matic*	**10 to 53** = Installed G-885 nozzle*	**P5** = 50 PSI; 3.4 bar; 340 kPa (nozzles 15 to 18)	**S** = SSU*
	D = Decoder valve-in-head		**P6** = 65 PSI; 4.5 bar; 450 kPa (nozzles 18 to 25)	
	DD = Two-station decoder valve-in-head		**P8** = 80 PSI; 5.5 bar; 550 kPa (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:
GT-885-E-48-P8-S = GT-885 full/part-circle electric valve-in-head, installed #48 nozzle, 80 PSI; 5.5 bar; 550 kPa regulation, standard stocking unit model

TTS-885 NOZZLE PERFORMANCE DATA*

Nozzle Set			Pressure		Radius	Flow		Precip mm/hr	
			bar	kPa	m	m³/hr	l/min	■	▲
Orange	Dk. Green		3.4	344	11.3	2.02	33.7	15.9	18.4
			4.1	413	11.9	2.23	37.1	15.8	18.2
803603	10	315312	4.5	450	12.5	2.32	38.6	14.8	17.1
●	Lt. Green	●	-	-	-	-	-	-	-
Orange	White		3.4	344	14.3	2.59	43.2	12.6	14.6
			4.1	413	14.6	2.79	46.6	13.1	15.1
803603	13	315314	4.5	450	14.9	2.93	48.8	13.1	15.2
●	Lt. Blue	●	-	-	-	-	-	-	-
Orange	White		3.4	344	15.9	2.93	48.8	11.7	13.5
			4.1	413	15.9	3.29	54.9	13.1	15.1
			4.5	450	16.2	3.38	56.4	13.0	15.0
803603	15	315314	4.8	482	16.2	3.52	58.7	13.5	15.6
●	White	●	5.5	551	16.5	3.75	62.5	13.8	16.0
Orange	Lt. Green		3.4	344	17.4	3.77	62.8	12.5	14.4
			4.1	413	17.7	4.04	67.4	12.9	14.9
			4.5	450	18.0	4.23	70.4	13.1	15.1
803603	18	315313	4.8	482	18.3	4.41	73.4	13.2	15.2
●	Orange	●	5.5	551	18.6	4.66	77.6	13.5	15.6
Orange	Lt. Green		3.4	344	18.0	4.07	67.8	12.6	14.5
			4.1	413	18.6	4.43	73.8	12.8	14.8
			4.5	450	18.9	4.50	75.0	12.6	14.5
803603	20	315313	4.8	482	19.2	4.68	78.0	12.7	14.7
●	Tan	●	5.5	551	19.5	5.02	83.7	13.2	15.2
Orange	Lt. Green		3.4	344	19.8	4.59	76.5	11.7	13.5
			4.1	413	20.1	5.02	83.7	12.4	14.3
			4.5	450	20.4	5.43	90.5	13.0	15.0
803603	23	315313	4.8	482	20.4	5.50	91.6	13.2	15.2
●	Green	●	5.5	551	21.0	5.88	98.0	13.3	15.4
Red	Green		4.5	450	21.6	6.43	107.1	13.7	15.8
			4.8	482	21.9	6.66	110.9	13.8	16.0
			5.5	551	22.3	7.16	119.2	14.5	16.7
803602	25	315310	6.2	620	22.6	7.59	126.4	14.9	17.2
●	Blue	●	6.9	689	22.9	8.04	134.0	15.4	17.8
Red	Green		4.5	450	21.9	6.95	115.8	14.4	16.7
			4.8	482	22.3	7.18	119.6	14.5	16.7
			5.5	551	22.9	7.70	128.3	14.7	17.0
803602	33	315310	6.2	620	23.5	8.13	135.5	14.8	17.0
●	Grey	●	6.9	689	24.1	8.61	143.5	14.8	17.1
Red	Green		4.5	450	23.2	7.93	132.1	14.8	17.1
			4.8	482	23.8	8.22	137.0	14.5	16.8
			5.5	551	24.4	8.88	148.0	14.9	17.2
803602	38	315310	6.2	620	25.0	9.36	156.0	15.0	17.3
●	Red	●	6.9	689	25.6	9.88	164.7	15.1	17.4
Red	Green		-	-	-	-	-	-	-
			4.8	482	24.7	9.36	156.0	15.4	17.7
			5.5	551	25.3	9.88	164.7	15.4	17.8
803602	43	315310	6.2	620	26.2	10.49	174.9	15.3	17.6
●	Dk. Brown	●	6.9	689	27.1	11.06	184.3	15.0	17.4
Dk. Red	Dk. Green		-	-	-	-	-	-	-
			4.8	482	25.3	10.52	175.3	16.4	19.0
			5.5	551	25.9	10.99	183.2	16.4	18.9
803601	48	315312	6.2	620	27.1	11.74	195.7	16.0	18.4
●	Dk. Green	●	6.9	689	27.7	12.38	206.3	16.1	18.6
Dk. Red	Dk. Green		-	-	-	-	-	-	-
			4.8	482	26.5	11.52	191.9	16.4	18.9
			5.5	551	27.1	12.06	201.0	16.4	18.9
803601	53	315312	6.2	620	28.0	12.81	213.5	16.3	18.8
●	Dk. Blue	●	6.9	689	28.7	13.54	225.6	16.5	19.0

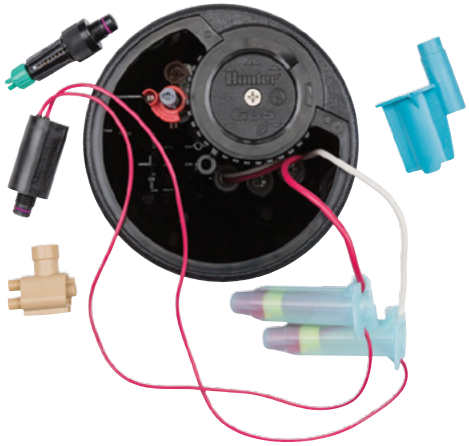
● = Nozzle plug P/N 315300 installed in the back side of the nozzle housing.

* 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.

TTS-885 STANDARD NOZZLES

TTS-885 LOW-ANGLE NOZZLES**

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



Reduced Downtime

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

Total-Top-Service Solution

From the originators of TTS technology, Hunter's no-dig TTS-800 rotors provide total-top-servicing of every serviceable component.

TTS-835

These rotors have Total-Top-Serviceability, powerful G-800 Series gear drives, and the largest flange compartment in the industry to accommodate all two-way module components.

KEY BENEFITS

- 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-800 VIH advanced features on **page 204**
- All TTS-800 DIH advanced features on **page 206**

OPERATING SPECIFICATIONS

- Radius: 5.5 to 15.2 m
- Flow: 0.43 to 2.91 m^3/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) 50 Hz; 190 mA (350 mA inrush) 60 Hz solenoid with captive plunger and internal downstream bleed

* All DIH rotors include two 3M DBRY-6 splices for connection to the two-wire path. See **page 196** for critical recommendations on grounding DIH rotors.

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

GOLF ROTORS

TTS-835 – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4 + 5

1 Model	2 Valve Options	3 Nozzle	4 Regulation*	5 Options
GT-835 = 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 G-835 nozzle* (includes 8-nozzle rack) **SSU = #6*	**P5** = 50 PSI; 3.4 bar; 340 kPa (nozzles 15 to 18) **P6** = 65 PSI; 4.5 bar; 450 kPa (nozzles 18 to 25) **SSU = P5*	**S** = SSU* **Standard stocking unit*

Example:
GT-835-6-P5-S = GT-835 full/part-circle electric valve-in-head, installed #6 nozzle, 50 PSI; 3.4 bar; 340 kPa (nozzles 15 to 18) regulation, standard stocking unit model

TTS-835 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

TTS-835 NOZZLES

Optional Yardage Marker Colours

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

Low-Bounce Rubber Cover Kit - PN 987200SP

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

No-Bounce Turf Cup Kit - PN 987100SP

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

G-880

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

KEY BENEFITS

- 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
- Optional high-rotation-speed stator

OPERATING SPECIFICATIONS

- Radius: 14.9 to 29.6 m
- Flow: 3.23 to 13.29 m³/hr; 53.8 to 221.4 l/min
- Pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
- All TTS rotors are pressure-rated at 10 bar; 1,000 kPa

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) 50 Hz; 190 mA (350 mA inrush) 60 Hz solenoid with captive plunger and internal downstream bleed

* All DIH rotors include two 3M DBRY-6 splices for connection to the two-wire path. See **page 196** for critical recommendations on grounding DIH rotors.

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

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

G-880 – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4 + 5

1 Model	2 Valve Options	3 Nozzle	4 Regulation*	5 Options
G-880 = Full-circle	**C** = Check-O-Matic*	**15 to 53** = Installed G-880 nozzle*	**P5** = 50 PSI; 3.4 bar; 340 kPa (nozzles 15 to 18)	**S** = SSU*
	D = Decoder valve-in-head		**P6** = 65 PSI; 4.5 bar; 450 kPa (nozzles 18 to 25)	
	DD = Two-station decoder valve-in-head		**P8** = 80 PSI; 5.5 bar; 550 kPa (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:
G-880-E-48-P8-S = G-880 full-circle electric valve-in-head, installed #48 nozzle, 80 PSI; 5.5 bar; 550 kPa regulation, standard stocking unit model

G-880 NOZZLE PERFORMANCE DATA*

Nozzle Set			Pressure		Radius	Flow		Precip mm/hr	
			bar	kPa	m	m³/hr	l/min	■	▲
● Tan		● Grey	3.4	344	14.9	3.23	53.8	14.5	16.7
			4.1	413	15.5	3.57	59.4	14.8	17.0
	15		4.5	450	15.9	3.73	62.1	14.8	17.1
			4.8	482	16.2	3.86	64.4	14.8	17.1
803611	White	315317	5.5	551	16.8	4.13	68.9	14.7	17.0
● Tan		● Grey	3.4	344	17.1	3.91	65.1	13.4	15.5
			4.1	413	17.7	4.28	71.3	13.7	15.8
	18		4.5	450	18.0	4.48	74.6	13.8	16.0
			4.8	482	18.3	4.54	75.7	13.6	15.7
803611	Orange	315317	5.5	551	18.6	4.82	80.3	13.9	16.1
● Tan		● Grey	3.4	344	17.4	4.18	69.7	13.8	16.0
			4.1	413	18.0	4.61	76.8	14.3	16.5
	20		4.5	450	18.6	4.86	81.0	14.1	16.2
			4.8	482	19.2	4.91	81.8	13.3	15.4
803611	Brown	315317	5.5	551	19.5	5.16	85.9	13.5	15.6
● Tan		● Lt. Blue	3.4	344	19.2	4.91	81.8	13.3	15.4
			4.1	413	19.8	5.22	87.1	13.3	15.4
	23		4.5	450	20.1	5.45	90.8	13.5	15.6
			4.8	482	20.4	5.66	94.3	13.6	15.7
803611	Green	315311	5.5	551	20.7	6.04	100.7	14.1	16.2
● Tan		● Lt. Blue	4.5	450	21.6	6.50	108.3	13.9	16.0
			4.8	482	22.3	6.75	112.5	13.6	15.7
	25		5.5	551	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	689	23.5	8.12	135.3	14.7	17.0
● Tan		● Lt. Blue	4.5	450	22.6	7.02	117.0	13.8	15.9
			4.8	482	22.9	7.27	121.1	13.9	16.1
	33		5.5	551	23.5	7.77	129.5	14.1	16.3
			6.2	620	24.1	8.22	137.0	14.2	16.4
803611	Grey	315311	6.9	689	24.7	8.68	144.6	14.2	16.4
● Tan		● Lt. Blue	4.5	450	23.5	7.97	132.9	14.5	16.7
			4.8	482	24.1	8.31	138.5	14.3	16.6
	38		5.5	551	25.0	8.84	147.3	14.1	16.3
			6.2	620	25.6	9.38	156.3	14.3	16.5
803611	Red	315311	6.9	689	26.5	9.90	165.0	14.1	16.3
● Tan		● Blue	-	-	-	-	-	-	-
			4.8	482	25.3	9.38	156.3	14.7	16.9
	43		5.5	551	25.9	9.90	165.0	14.8	17.0
			6.2	620	26.5	10.52	175.3	15.0	17.3
803611	Dk. Brown	315300	6.9	689	27.1	11.09	184.7	15.1	17.4
● Dk. Brown		● Dk. Blue	-	-	-	-	-	-	-
			4.8	482	27.4	10.65	177.5	14.2	16.3
	48		5.5	551	28.0	11.11	185.1	14.1	16.3
			6.2	620	28.7	11.46	191.0	14.0	16.1
803610	Dk. Green	833500	6.9	689	29.3	12.15	202.5	14.2	16.4
● Dk. Brown		● Dk. Blue	-	-	-	-	-	-	-
			4.8	482	27.7	11.31	188.5	14.7	17.0
	53		5.5	551	28.3	11.86	197.7	14.8	17.0
			6.2	620	29.0	12.61	210.1	15.0	17.4
803610	Dk. Blue	833500	6.9	689	29.6	13.29	221.4	15.2	17.6

* 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.

G-880 STANDARD NOZZLES

G-880 LOW-ANGLE NOZZLES**

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

TTS Means Convenience and Versatility

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

G-884

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

KEY BENEFITS

- 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
- Optional high-rotation-speed stator

OPERATING SPECIFICATIONS

- Radius: 14.9 to 29.6 m
- Flow: 3.23 to 13.29 m^3/hr; 53.8 to 221.4 l/min
- Pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
- All TTS rotors are pressure-rated at 10 bar; 1,000 kPa

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) 50 Hz; 190 mA (350 mA inrush) 60 Hz solenoid with captive plunger and internal downstream bleed

* All DIH rotors include two 3M DBRY-6 splices for connection to the two-wire path. See **page 196** for critical recommendations on grounding DIH rotors.

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

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

G-884 – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4 + 5

1 Model	2 Valve Options	3 Nozzle	4 Regulation*	5 Options
G-884 = Full-circle (convertible to forward-facing adjustable arc rotor)	**C** = Check-O-Matic*	**15 to 53** = Installed G-880 nozzle*	**P5** = 50 PSI; 3.4 bar; 340 kPa (nozzles 15 to 18)	**S** = SSU*
	D = Decoder valve-in-head		**P6** = 65 PSI; 4.5 bar; 450 kPa (nozzles 18 to 25)	
	DD = Two-station decoder valve-in-head		**P8** = 80 PSI; 5.5 bar; 550 kPa (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:
G-884-E-48-P8-S = G-884 full-circle electric valve-in-head, installed #48 nozzle, 80 PSI; 5.5 bar; 550 kPa regulation, standard stocking unit model

G-884 NOZZLE PERFORMANCE DATA*

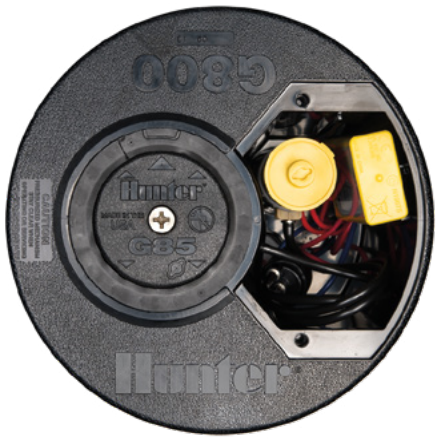
Nozzle Set			Pressure		Radius	Flow		Precip mm/hr	
			bar	kPa	m	m³/hr	l/min	■	▲
● Tan		● Grey	3.4	344	14.9	3.23	53.8	14.5	16.7
			4.1	413	15.5	3.57	59.4	14.8	17.0
	15		4.5	450	15.9	3.73	62.1	14.8	17.1
			4.8	482	16.2	3.86	64.4	14.8	17.1
803611	White	315317	5.5	551	16.8	4.13	68.9	14.7	17.0
● Tan		● Grey	3.4	344	17.1	3.91	65.1	13.4	15.5
			4.1	413	17.7	4.28	71.3	13.7	15.8
	18		4.5	450	18.0	4.48	74.6	13.8	16.0
			4.8	482	18.3	4.54	75.7	13.6	15.7
803611	Orange	315317	5.5	551	18.6	4.82	80.3	13.9	16.1
● Tan		● Grey	3.4	344	17.4	4.18	69.7	13.8	16.0
			4.1	413	18.0	4.61	76.8	14.3	16.5
	20		4.5	450	18.6	4.86	81.0	14.1	16.2
			4.8	482	19.2	4.91	81.8	13.3	15.4
803611	Brown	315317	5.5	551	19.5	5.16	85.9	13.5	15.6
● Tan		● Lt. Blue	3.4	344	19.2	4.91	81.8	13.3	15.4
			4.1	413	19.8	5.22	87.1	13.3	15.4
	23		4.5	450	20.1	5.45	90.8	13.5	15.6
			4.8	482	20.4	5.66	94.3	13.6	15.7
803611	Green	315311	5.5	551	20.7	6.04	100.7	14.1	16.2
● Tan		● Lt. Blue	4.5	450	21.6	6.50	108.3	13.9	16.0
			4.8	482	22.3	6.75	112.5	13.6	15.7
	25		5.5	551	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	689	23.5	8.12	135.3	14.7	17.0
● Tan		● Lt. Blue	4.5	450	22.6	7.02	117.0	13.8	15.9
			4.8	482	22.9	7.27	121.1	13.9	16.1
	33		5.5	551	23.5	7.77	129.5	14.1	16.3
			6.2	620	24.1	8.22	137.0	14.2	16.4
803611	Grey	315311	6.9	689	24.7	8.68	144.6	14.2	16.4
● Tan		● Lt. Blue	4.5	450	23.5	7.97	132.9	14.5	16.7
			4.8	482	24.1	8.31	138.5	14.3	16.6
	38		5.5	551	25.0	8.84	147.3	14.1	16.3
			6.2	620	25.6	9.38	156.3	14.3	16.5
803611	Red	315311	6.9	689	26.5	9.90	165.0	14.1	16.3
● Tan		● Blue	-	-	-	-	-	-	-
			4.8	482	25.3	9.38	156.3	14.7	16.9
	43		5.5	551	25.9	9.90	165.0	14.8	17.0
			6.2	620	26.5	10.52	175.3	15.0	17.3
803611	Dk. Brown	315300	6.9	689	27.1	11.09	184.7	15.1	17.4
● Dk. Brown		● Dk. Blue	-	-	-	-	-	-	-
			4.8	482	27.4	10.65	177.5	14.2	16.3
	48		5.5	551	28.0	11.11	185.1	14.1	16.3
			6.2	620	28.7	11.46	191.0	14.0	16.1
803610	Dk. Green	833500	6.9	689	29.3	12.15	202.5	14.2	16.4
● Dk. Brown		● Dk. Blue	-	-	-	-	-	-	-
			4.8	482	27.7	11.31	188.5	14.7	17.0
	53		5.5	551	28.3	11.86	197.7	14.8	17.0
			6.2	620	29.0	12.61	210.1	15.0	17.4
803610	Dk. Blue	833500	6.9	689	29.6	13.29	221.4	15.2	17.6

* 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.

G-884 STANDARD NOZZLES

G-884 LOW-ANGLE NOZZLES**

** Low-angle nozzles reduce radius by 15%



G-885 Decoder-in-Head TTS Rotor

TTS Flange Compartment

All TTS rotors include ample room for solenoid splice connections and a two-way module when needed.

G-885

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

KEY BENEFITS

- 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
- Optional high-rotation-speed stator

OPERATING SPECIFICATIONS

- Radius: 11.3 to 28.7 m
- Flow: 2.02 to 13.54 m^3/hr; 33.7 to 225.6 l/min
- Pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
- All TTS rotors are pressure-rated at 10 bar; 1,000 kPa

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) 50 Hz; 190 mA (350 mA inrush) 60 Hz solenoid with captive plunger and internal downstream bleed

* All DIH rotors include two 3M DBRY-6 splices for connection to the two-wire path. See **page 196** for critical recommendations on grounding DIH rotors.

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

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

G-885 – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4 + 5

1 Model	2 Valve Options	3 Nozzle	4 Regulation*	5 Options
G-885 = Full/part-circle 60°-360° arc range	**C** = Check-O-Matic*	**10 to 53** = Installed G-885 nozzle*	**P5** = 50 PSI; 3.4 bar; 340 kPa (nozzles 15 to 18)	**S** = SSU*
	D = Decoder valve-in-head		**P6** = 65 PSI; 4.5 bar; 450 kPa (nozzles 18 to 25)	
	DD = Two-station decoder valve-in-head		**P8** = 80 PSI; 5.5 bar; 550 kPa (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:
G-885-E-48-P8-S = G-885 full/part-circle electric valve-in-head, installed #48 nozzle, 80 PSI; 5.5 bar; 550 kPa regulation, standard stocking unit model

G-885 NOZZLE PERFORMANCE DATA*

Nozzle Set			Pressure		Radius	Flow		Precip mm/hr	
			bar	kPa	m	m³/hr	l/min	■	▲
Orange	10	Dk. Green	3.4	344	11.3	2.02	33.7	15.9	18.4
			4.1	413	11.9	2.23	37.1	15.8	18.2
803603		315312	4.5	450	12.5	2.32	38.6	14.8	17.1
			-	-	-	-	-	-	-
●	Lt. Green	●	-	-	-	-	-	-	-
Orange	13	White	3.4	344	14.3	2.59	43.2	12.6	14.6
			4.1	413	14.6	2.79	46.6	13.1	15.1
803603		315314	4.5	450	14.9	2.93	48.8	13.1	15.2
			-	-	-	-	-	-	-
●	Lt. Blue	●	-	-	-	-	-	-	-
Orange	15	White	3.4	344	15.9	2.93	48.8	11.7	13.5
			4.1	413	15.9	3.29	54.9	13.1	15.1
803603		315314	4.5	450	16.2	3.38	56.4	13.0	15.0
			4.8	482	16.2	3.52	58.7	13.5	15.6
●	White	●	5.5	551	16.5	3.75	62.5	13.8	16.0
Orange	18	Lt. Green	3.4	344	17.4	3.77	62.8	12.5	14.4
			4.1	413	17.7	4.04	67.4	12.9	14.9
803603		315313	4.5	450	18.0	4.23	70.4	13.1	15.1
			4.8	482	18.3	4.41	73.4	13.2	15.2
●	Orange	●	5.5	551	18.6	4.66	77.6	13.5	15.6
Orange	20	Lt. Green	3.4	344	18.0	4.07	67.8	12.6	14.5
			4.1	413	18.6	4.43	73.8	12.8	14.8
803603		315313	4.5	450	18.9	4.50	75.0	12.6	14.5
			4.8	482	19.2	4.68	78.0	12.7	14.7
●	Tan	●	5.5	551	19.5	5.02	83.7	13.2	15.2
Orange	23	Lt. Green	3.4	344	19.8	4.59	76.5	11.7	13.5
			4.1	413	20.1	5.02	83.7	12.4	14.3
803603		315313	4.5	450	20.4	5.43	90.5	13.0	15.0
			4.8	482	20.4	5.50	91.6	13.2	15.2
●	Green	●	5.5	551	21.0	5.88	98.0	13.3	15.4
Red	25	Green	4.5	450	21.6	6.43	107.1	13.7	15.8
			4.8	482	21.9	6.66	110.9	13.8	16.0
803602		315310	5.5	551	22.3	7.16	119.2	14.5	16.7
			6.2	620	22.6	7.59	126.4	14.9	17.2
●	Blue	●	6.9	689	22.9	8.04	134.0	15.4	17.8
Red	33	Green	4.5	450	21.9	6.95	115.8	14.4	16.7
			4.8	482	22.3	7.18	119.6	14.5	16.7
803602		315310	5.5	551	22.9	7.70	128.3	14.7	17.0
			6.2	620	23.5	8.13	135.5	14.8	17.0
●	Grey	●	6.9	689	24.1	8.61	143.5	14.8	17.1
Red	38	Green	4.5	450	23.2	7.93	132.1	14.8	17.1
			4.8	482	23.8	8.22	137.0	14.5	16.8
803602		315310	5.5	551	24.4	8.88	148.0	14.9	17.2
			6.2	620	25.0	9.36	156.0	15.0	17.3
●	Red	●	6.9	689	25.6	9.88	164.7	15.1	17.4
Red	43	Green	-	-	-	-	-	-	-
			4.8	482	24.7	9.36	156.0	15.4	17.7
803602		315310	5.5	551	25.3	9.88	164.7	15.4	17.8
			6.2	620	26.2	10.49	174.9	15.3	17.6
●	Dk. Brown	●	6.9	689	27.1	11.06	184.3	15.0	17.4
Dk. Red	48	Dk. Green	-	-	-	-	-	-	-
			4.8	482	25.3	10.52	175.3	16.4	19.0
803601		315312	5.5	551	25.9	10.99	183.2	16.4	18.9
			6.2	620	27.1	11.74	195.7	16.0	18.4
●	Dk. Green	●	6.9	689	27.7	12.38	206.3	16.1	18.6
Dk. Red	53	Dk. Green	-	-	-	-	-	-	-
			4.8	482	26.5	11.52	191.9	16.4	18.9
803601		315312	5.5	551	27.1	12.06	201.0	16.4	18.9
			6.2	620	28.0	12.81	213.5	16.3	18.8
●	Dk. Blue	●	6.9	689	28.7	13.54	225.6	16.5	19.0

● = 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.

G-885 STANDARD NOZZLES

G-885 LOW-ANGLE NOZZLES**

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

Contour Back-Nozzle Capabilities

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

CONTOUR BACK-NOZZLE PERFORMANCE DATA

			4.5 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

TTS-800/G-885 CONTOUR BACK-NOZZLES

QuickSet-360 with Ratcheting Riser

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

G-835

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

KEY BENEFITS

- 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

OPERATING SPECIFICATIONS

- Radius: 5.5 to 15.2 m
- Flow: 0.43 to 2.91 m^3/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) 50 Hz; 190 mA (350 mA inrush) 60 Hz solenoid with captive plunger and internal downstream bleed

* All DIH rotors include two 3M DBRY-6 splices for connection to the two-wire path. See **page 196** for critical recommendations on grounding DIH rotors.

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

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

G-835 – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4 + 5

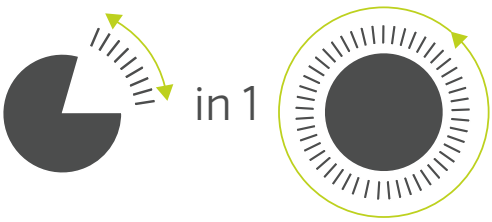
1 Model	2 Valve Options	3 Nozzle	4 Regulation*	5 Options
G-835 = Full/part-circle, 50° to 360°	**C** = Check-O-Matic * **D** = Decoder valve-in-head **E** = Electric valve-in-head **Converts to N.O. hydraulic valve-in-head*	**6** = Installed G-835 nozzle* (includes 8-nozzle rack) **SSU = #6*	**P5** = 50 PSI; 3.4 bar; 340 kPa (nozzles 15 to 18) **P6** = 65 PSI; 4.5 bar; 450 kPa (nozzles 18 to 25) **SSU = P5*	**S** = SSU* **Standard stocking unit*

Example:
G-835E-6-P5-S = G-835 full/part-circle electric valve-in-head, installed #6 nozzle, 50 PSI; 3.4 bar; 340 kPa regulation, standard stocking unit model

G-835 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

G-835 NOZZLES



QuickSet-360

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

G-80

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

KEY BENEFITS

- Full-circle opposing nozzles
- Dual-trajectory, colour-coded nozzles:
  - 10 standard trajectory (22.5°)
  - 9 low-angle trajectory (15°)
- Nozzle range: #15 to #53
- Exclusive PressurePort™ nozzle technology
- Ratcheting stainless steel riser
- Water-lubricated gear drives
- Check height up to 3 m in elevation change
- Optional high-rotation-speed stator

OPERATING SPECIFICATIONS

- G-80B
  - Radius: 14.9 to 29.6 m
  - Flow: 3.23 to 13.29 m³/hr; 53.8 to 221.4 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

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

G-80B – 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	**15 to 53** = Installed G80 nozzle* **SSU = #18, #25, or #48*	**S** = SSU* **Standard stocking unit*

Example:
G80-B-25-S = G-80 full-circle block rotor, installed #25 nozzle, standard stocking unit model

G-80B NOZZLE PERFORMANCE DATA

Nozzle Set			Pressure		Radius	Flow		Precip mm/hr	
			bar	kPa	m	m³/hr	l/min	■	▲
● Tan		● Grey	3.4	344	14.9	3.23	53.8	14.5	16.7
			4.1	413	15.5	3.57	59.4	14.8	17.0
	15		4.5	450	15.9	3.73	62.1	14.8	17.1
			4.8	482	16.2	3.86	64.4	14.8	17.1
803611	White	315317	5.5	551	16.8	4.13	68.9	14.7	17.0
● Tan		● Grey	3.4	344	17.1	3.91	65.1	13.4	15.5
			4.1	413	17.7	4.28	71.3	13.7	15.8
	18		4.5	450	18.0	4.48	74.6	13.8	16.0
			4.8	482	18.3	4.54	75.7	13.6	15.7
803611	Orange	315317	5.5	551	18.6	4.82	80.3	13.9	16.1
● Tan		● Grey	3.4	344	17.4	4.18	69.7	13.8	16.0
			4.1	413	18.0	4.61	76.8	14.3	16.5
	20		4.5	450	18.6	4.86	81.0	14.1	16.2
			4.8	482	19.2	4.91	81.8	13.3	15.4
803611	Brown	315317	5.5	551	19.5	5.16	85.9	13.5	15.6
● Tan		● Lt. Blue	3.4	344	19.2	4.91	81.8	13.3	15.4
			4.1	413	19.8	5.22	87.1	13.3	15.4
	23		4.5	450	20.1	5.45	90.8	13.5	15.6
			4.8	482	20.4	5.66	94.3	13.6	15.7
803611	Green	315311	5.5	551	20.7	6.04	100.7	14.1	16.2
● Tan		● Lt. Blue	4.5	450	21.6	6.50	108.3	13.9	16.0
			4.8	482	22.3	6.75	112.5	13.6	15.7
	25		5.5	551	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	689	23.5	8.12	135.3	14.7	17.0
● Tan		● Lt. Blue	4.5	450	22.6	7.02	117.0	13.8	15.9
			4.8	482	22.9	7.27	121.1	13.9	16.1
	33		5.5	551	23.5	7.77	129.5	14.1	16.3
			6.2	620	24.1	8.22	137.0	14.2	16.4
803611	Grey	315311	6.9	689	24.7	8.68	144.6	14.2	16.4
● Tan		● Lt. Blue	4.5	450	23.5	7.97	132.9	14.5	16.7
			4.8	482	24.1	8.31	138.5	14.3	16.6
	38		5.5	551	25.0	8.84	147.3	14.1	16.3
			6.2	620	25.6	9.38	156.3	14.3	16.5
803611	Red	315311	6.9	689	26.5	9.90	165.0	14.1	16.3
● Tan		● Blue	-	-	-	-	-	-	-
			4.8	482	25.3	9.38	156.3	14.7	16.9
	43		5.5	551	25.9	9.90	165.0	14.8	17.0
			6.2	620	26.5	10.52	175.3	15.0	17.3
803611	Dk. Brown	315300	6.9	689	27.1	11.09	184.7	15.1	17.4
● Dk. Brown		● Dk. Blue	-	-	-	-	-	-	-
			4.8	482	27.4	10.65	177.5	14.2	16.3
	48		5.5	551	28.0	11.11	185.1	14.1	16.3
			6.2	620	28.7	11.46	191.0	14.0	16.1
803610	Dk. Green	833500	6.9	689	29.3	12.15	202.5	14.2	16.4
● Dk. Brown		● Dk. Blue	-	-	-	-	-	-	-
			4.8	482	27.7	11.31	188.5	14.7	17.0
	53		5.5	551	28.3	11.86	197.7	14.8	17.0
			6.2	620	29.0	12.61	210.1	15.0	17.4
803610	Dk. Blue	833500	6.9	689	29.6	13.29	221.4	15.2	17.6

G-80B NOZZLES

LOW-ANGLE NOZZLES**

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

G-84 & G-85

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

KEY BENEFITS

- G-84B: Full-circle opposing nozzles
- G-85B: True full-circle/adjustable part-circle (60° to 360°)
- QuickCheck™ arc mechanism (G-85B)
- QuickSet-360 arc mechanism (G-85B)
- Dual-trajectory, colour-coded nozzles:
  - G-84B: 10 standard trajectory (22.5°)
  - G-85B: 12 standard trajectory (22.5°)
  - G-84B and G-85B: 9 low-angle trajectory (15°)
- Nozzle range:
  - G-84B: #15 to #53
  - G-85B: #10 to #53
- Exclusive PressurePort™ nozzle technology
- Contour back-nozzle capabilities (G-85B)
- Ratcheting stainless steel riser
- Water-lubricated gear drives
- Check height up to 3 m in elevation change
- Optional high-rotation-speed stator

OPERATING SPECIFICATIONS

- G-84B
  - Radius: 14.9 to 29.6 m
  - Flow: 3.23 to 13.29 m³/hr; 53.8 to 221.4 l/min
  - Pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
- G-85B
  - Radius: 11.3 to 28.7 m
  - Flow: 2.02 to 13.54 m³/hr; 33.7 to 225.6 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

G-84B
Pop-up height: 9.5 cm
Overall height: 24.5 cm
Flange diameter: 13.7 cm
Female inlet: 1¼" (30 mm) Acme

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

G-84B & G-85B – 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, or #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, or #48*	**S** = SSU* **Standard stocking unit*

Example:
G84-B-25-S = G-84 full-circle block rotor, installed #25 nozzle, standard stocking unit model

G-84B 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	344	14.9	3.23	53.8	14.5	16.7
			4.1	413	15.5	3.57	59.4	14.8	17.0
			4.5	450	15.9	3.73	62.1	14.8	17.1
			4.8	482	16.2	3.86	64.4	14.8	17.1
	White		5.5	551	16.8	4.13	68.9	14.7	17.0
● Tan 803611	18	● Grey 315317	3.4	344	17.1	3.91	65.1	13.4	15.5
			4.1	413	17.7	4.28	71.3	13.7	15.8
			4.5	450	18.0	4.48	74.6	13.8	16.0
			4.8	482	18.3	4.54	75.7	13.6	15.7
	Orange		5.5	551	18.6	4.82	80.3	13.9	16.1
● Tan 803611	20	● Grey 315317	3.4	344	17.4	4.18	69.7	13.8	16.0
			4.1	413	18.0	4.61	76.8	14.3	16.5
			4.5	450	18.6	4.86	81.0	14.1	16.2
			4.8	482	19.2	4.91	81.8	13.3	15.4
	Brown		5.5	551	19.5	5.16	85.9	13.5	15.6
● Tan 803611	23	● Lt. Blue 315311	3.4	344	19.2	4.91	81.8	13.3	15.4
			4.1	413	19.8	5.22	87.1	13.3	15.4
			4.5	450	20.1	5.45	90.8	13.5	15.6
			4.8	482	20.4	5.66	94.3	13.6	15.7
	Green		5.5	551	20.7	6.04	100.7	14.1	16.2
● Tan 803611	25	● Lt. Blue 315311	4.5	450	21.6	6.50	108.3	13.9	16.0
			4.8	482	22.3	6.75	112.5	13.6	15.7
			5.5	551	22.6	7.19	119.8	14.1	16.3
			6.2	620	22.9	7.65	127.5	14.6	16.9
	Blue		6.9	689	23.5	8.12	135.3	14.7	17.0
● Tan 803611	33	● Lt. Blue 315311	4.5	450	22.6	7.02	117.0	13.8	15.9
			4.8	482	22.9	7.27	121.1	13.9	16.1
			5.5	551	23.5	7.77	129.5	14.1	16.3
			6.2	620	24.1	8.22	137.0	14.2	16.4
	Grey		6.9	689	24.7	8.68	144.6	14.2	16.4
● Tan 803611	38	● Lt. Blue 315311	4.5	450	23.5	7.97	132.9	14.5	16.7
			4.8	482	24.1	8.31	138.5	14.3	16.6
			5.5	551	25.0	8.84	147.3	14.1	16.3
			6.2	620	25.6	9.38	156.3	14.3	16.5
	Red		6.9	689	26.5	9.90	165.0	14.1	16.3
● Tan 803611	43	● Blue 315300	-	-	-	-	-	-	-
			4.8	482	25.3	9.38	156.3	14.7	16.9
			5.5	551	25.9	9.90	165.0	14.8	17.0
			6.2	620	26.5	10.52	175.3	15.0	17.3
	Dk. Brown		6.9	689	27.1	11.09	184.7	15.1	17.4
● Dk. Brown 803610	48	● Dk. Blue 833500	-	-	-	-	-	-	-
			4.8	482	27.4	10.65	177.5	14.2	16.3
			5.5	551	28.0	11.11	185.1	14.1	16.3
			6.2	620	28.7	11.46	191.0	14.0	16.1
	Dk. Green		6.9	689	29.3	12.15	202.5	14.2	16.4
● Dk. Brown 803610	53	● Dk. Blue 833500	-	-	-	-	-	-	-
			4.8	482	27.7	11.31	188.5	14.7	17.0
			5.5	551	28.3	11.86	197.7	14.8	17.0
			6.2	620	29.0	12.61	210.1	15.0	17.4
	Dk. Blue		6.9	689	29.6	13.29	221.4	15.2	17.6

G-84B NOZZLES

G-85B NOZZLES

LOW-ANGLE NOZZLES**

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

G-85B 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	344	11.3	2.02	33.7	15.9	18.4
			4.1	413	11.9	2.23	37.1	15.8	18.2
			4.5	450	12.5	2.32	38.6	14.8	17.1
			-	-	-	-	-	-	-
●	Lt. Green	●	-	-	-	-	-	-	-
Orange 803603	13	White 315314	3.4	344	14.3	2.59	43.2	12.6	14.6
			4.1	413	14.6	2.79	46.6	13.1	15.1
			4.5	450	14.9	2.93	48.8	13.1	15.2
			-	-	-	-	-	-	-
●	Lt. Blue	●	-	-	-	-	-	-	-
Orange 803603	15	White 315314	3.4	344	15.9	2.93	48.8	11.7	13.5
			4.1	413	15.9	3.29	54.9	13.1	15.1
			4.5	450	16.2	3.38	56.4	13.0	15.0
			4.8	482	16.2	3.52	58.7	13.5	15.6
●	White	●	5.5	551	16.5	3.75	62.5	13.8	16.0
Orange 803603	18	Lt. Green 315313	3.4	344	17.4	3.77	62.8	12.5	14.4
			4.1	413	17.7	4.04	67.4	12.9	14.9
			4.5	450	18.0	4.23	70.4	13.1	15.1
			4.8	482	18.3	4.41	73.4	13.2	15.2
●	Orange	●	5.5	551	18.6	4.66	77.6	13.5	15.6
Orange 803603	20	Lt. Green 315313	3.4	344	18.0	4.07	67.8	12.6	14.5
			4.1	413	18.6	4.43	73.8	12.8	14.8
			4.5	450	18.9	4.50	75.0	12.6	14.5
			4.8	482	19.2	4.68	78.0	12.7	14.7
●	Tan	●	5.5	551	19.5	5.02	83.7	13.2	15.2
Orange 803603	23	Lt. Green 315313	3.4	344	19.8	4.59	76.5	11.7	13.5
			4.1	413	20.1	5.02	83.7	12.4	14.3
			4.5	450	20.4	5.43	90.5	13.0	15.0
			4.8	482	20.4	5.50	91.6	13.2	15.2
●	Green	●	5.5	551	21.0	5.88	98.0	13.3	15.4
Red 803602	25	Green 315310	4.5	450	21.6	6.43	107.1	13.7	15.8
			4.8	482	21.9	6.66	110.9	13.8	16.0
			5.5	551	22.3	7.16	119.2	14.5	16.7
			6.2	620	22.6	7.59	126.4	14.9	17.2
●	Blue	●	6.9	689	22.9	8.04	134.0	15.4	17.8
Red 803602	33	Green 315310	4.5	450	21.9	6.95	115.8	14.4	16.7
			4.8	482	22.3	7.18	119.6	14.5	16.7
			5.5	551	22.9	7.70	128.3	14.7	17.0
			6.2	620	23.5	8.13	135.5	14.8	17.0
●	Grey	●	6.9	689	24.1	8.61	143.5	14.8	17.1
Red 803602	38	Green 315310	4.5	450	23.2	7.93	132.1	14.8	17.1
			4.8	482	23.8	8.22	137.0	14.5	16.8
			5.5	551	24.4	8.88	148.0	14.9	17.2
			6.2	620	25.0	9.36	156.0	15.0	17.3
●	Red	●	6.9	689	25.6	9.88	164.7	15.1	17.4
Red 803602	43	Green 315310	-	-	-	-	-	-	-
			4.8	482	24.7	9.36	156.0	15.4	17.7
			5.5	551	25.3	9.88	164.7	15.4	17.8
			6.2	620	26.2	10.49	174.9	15.3	17.6
●	Dk. Brown	●	6.9	689	27.1	11.06	184.3	15.0	17.4
Dk. Red 803601	48	Dk. Green 315312	-	-	-	-	-	-	-
			4.8	482	25.3	10.52	175.3	16.4	19.0
			5.5	551	25.9	10.99	183.2	16.4	18.9
			6.2	620	27.1	11.74	195.7	16.0	18.4
●	Dk. Green	●	6.9	689	27.7	12.38	206.3	16.1	18.6
Dk. Red 803601	53	Dk. Green 315312	-	-	-	-	-	-	-
			4.8	482	26.5	11.52	191.9	16.4	18.9
			5.5	551	27.1	12.06	201.0	16.4	18.9
			6.2	620	28.0	12.81	213.5	16.3	18.8
●	Dk. Blue	●	6.9	689	28.7	13.54	225.6	16.5	19.0

● = 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.

G-70 & G-75

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

KEY BENEFITS

- G-70B: Full-circle
- G-75B: Full/part-circle (50° to 360°)
- QuickCheck™ arc mechanism (G-70B)
- QuickSet-360 arc mechanism (G-75B)
- Nozzle choices:
  - G-70B: 6 standard trajectory (25°)
  - G-75B: 9 standard trajectory (25°)
- Nozzle range:
  - G-70B: #15 to #28
  - G-75B: #8 to #28
- Exclusive PressurePort™ nozzle technology
- Water-lubricated gear drive
- Check height up to 3 m in elevation change

OPERATING SPECIFICATIONS

- G-70B
  - Radius: 16.2 to 22.9 m
  - Discharge rate: 2.95 to 7.66 m^3/hr; 49.2 to 127.6 l/min
  - Pressure range: 3.4 to 6.9 bar; 340 to 690 kPa
- G-75B
  - Radius: 14.3 to 21.6 m
  - Discharge rate: 1.75 to 7.34 m^3/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 bar; 1,000 kPa

G-70B
Pop-up height: 8 cm
Overall height: 23 cm
Flange diameter: 12 cm
Female inlet: 1¼" (30 mm) Acme

G-75B
Pop-up height: 8 cm
Overall height: 23 cm
Flange diameter: 12 cm
Female inlet: 1¼" (30 mm) Acme

G-70B & G-75B - 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 = G-70 full-circle block rotor, installed #25 nozzle with nozzle pack, standard stocking unit model

G-70B NOZZLE PERFORMANCE DATA*

Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲
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.

G-75B NOZZLE PERFORMANCE DATA*

Nozzle	Pressure		Radius	Flow		Precip mm/hr	
	bar	kPa	m	m³/hr	l/min	■	▲
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

G-70B & G-75B NOZZLES

G-70B

G-75B

G-35

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

KEY BENEFITS

- Full/part-circle (50° to 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 2.91 m^3/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

G-35B
Pop-up height: 8 cm
Overall height: 23 cm
Flange diameter: 12 cm
Female inlet: 1¼" (30 mm) Acme

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

G-835 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.

G-835 NOZZLES

G-990 & G-995

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

KEY BENEFITS

- G-990 – Full-circle
- G-995 – Adjustable arc (40° to 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

OPERATING SPECIFICATIONS

- G-990
  - 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
- G-995
  - 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) 50 Hz; 190 mA (350 mA inrush) 60 Hz solenoid with captive plunger and internal downstream bleed

* All DIH rotors include two 3M DBRY-6 splices for connection to the two-wire path. See **page 196** for critical recommendations on grounding DIH rotors.

G-990C
Pop-up height: 8 cm
Overall height: 34 cm
Flange diameter: 19 cm
Female inlet: 1½" (40 mm) Acme

G-995E
Pop-up height: 8 cm
Overall height: 34 cm
Flange diameter: 19 cm
Female inlet: 1½" (40 mm) Acme

G-990 & G-995 – SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4 + 5

1 Model	2 Valve Options	3 Nozzle	4 Regulation*	5 Options
G-990 = 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 G-990 nozzle*	**P8** = 80 PSI; 5.5 bar; 550 kPa (nozzles 25 to 53) **P1** = 100 PSI; 6.9 bar; 690 kPa (nozzles 53 to 73) **P2** = 120 PSI; 8.3 bar: 830 kPa (nozzle 73)	**S** = SSU*
G-995 = 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 G-995 nozzle* ** SSU = #25 or #53*	**P8** = 80 PSI; 5.5 bar; 550 kPa (nozzles 25 to 53) **P1** = 100 PSI; 6.9 bar; 690 kPa (nozzles 53 to 73) **P2** = 120 PSI; 8.3 bar: 830 kPa (nozzle 73) ** SSU = P8/#25, P8/#53*	**S** = SSU* **Standard stocking unit*

Example:
G-990-E-53-P8-S = G-990 full-circle electric valve-in-head, installed #53 nozzle, 80 PSI; 5.5 bar; 550 kPa regulation, standard stocking unit model

G-990 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

G-995 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.

G-900 NOZZLES

G-900 LOW-ANGLE NOZZLES**

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

Contour Back-Nozzle Capabilities

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

GOLF SWING JOINTS

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

KEY BENEFITS

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

Swing Joints
HSJ-0 = Model ¾"
HSJ-1 = Model 1" (25 mm)
HSJ-2 = Model 1¼" (30 mm)
HSJ-3 = Model 1½" (40 mm)

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

1 Model	2 Inlet Type (from pipe fitting)	3 Outlet Type (to sprinkler inlet)	4 Outlet Style	5 Lay Length
HSJ-0 = ¾" commercial swing joint **HSJ-1** = 1" (25 mm) heavy-duty swing joint **HSJ-2** = 1¼" (30 mm) heavy-duty swing joint **HSJ-3** = 1½" (40 mm) heavy-duty swing joint	**3** = Male NPT **4** = Male Acme* **6** = Male BSP** **7** = Spigot, 10 cm long** **M** = Main Acme H-connection **P** = Main Acme V-connection	**2** = Male NPT **5** = Male BSP *(not available in HSJ-0)* **6** = Enlarging to 1½" (40 mm) male BSP* **8** = Enlarging to 1½" (40 mm) male Acme* **0** = Male Acme **A** = Enlarging/reducing to 1¼" (30 mm) male Acme**	**2** = Single top-out **4** = Triple top-out	**8** = 20 cm lay arm† **12** = 30 cm lay arm **18** = 46 cm lay arm‡

Example:
HSJ-3-M-0-2-12 = HSJ 1½" (40 mm) heavy-duty swing joint, 1½" (40 mm) male Acme horizontal connection to mainline tee, 1½" (40 mm) male Acme single top outlet, 30 cm lay arm length.

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

ACME ADAPTER FITTINGS

Choose Hunter Acme adapter fittings for maximum system design flexibility.

1¼" (30 mm) Models

1¼" (30 mm) male Acme x 1" (25 mm) female NPT	P/N 109325
1¼" (30 mm) male Acme x 1" (25 mm) female BSP	P/N 105329
1¼" (30 mm) male Acme x 1¼" (30 mm) female NPT	P/N 474800
1¼" (30 mm) male Acme x 1¼" (30 mm) female BSP	P/N 474900
1¼" (30 mm) male Acme x 1½" (40 mm) female NPT	P/N 104153
1¼" (30 mm) male Acme x 1½" (40 mm) female BSP	P/N 107262

Acme x Acme Models

1½" (40 mm) male Acme x 1" (25 mm) Acme female	P/N 225300
1½" (40 mm) male Acme x 1¼" (30 mm) Acme female	P/N 225400
1¼" (30 mm) male Acme x 1" (25 mm) Acme female	P/N 225500

1½" (40 mm) Models

1½" (40 mm) male Acme x 1" (25 mm) female NPT	P/N 475400
1½" (40 mm) male Acme x 1" (25 mm) female BSP	P/N 475500
1½" (40 mm) male Acme x 1¼" (30 mm) female NPT	P/N 475200
1½" (40 mm) male Acme x 1¼" (30 mm) female BSP	P/N 475300
1½" (40 mm) male Acme x 1½" (40 mm) female NPT	P/N 475000
1½" (40 mm) male Acme x 1½" (40 mm) female BSP	P/N 475100

B2B Tee Assembly
1½" (40 mm) Acme threaded tee and 40 mm adapter for connecting two swing joints to a single mainline connection in back-to-back installations around greens.

P/N = HSJ-305-015-3 = NPT inlet
P/N = HSJ-305-015-6 = BSP inlet
P/N = HSJ-305-015-M = Acme inlet (shown)

ROTOR ACCESSORIES

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

HOSE SWIVEL ADAPTERS

Models

- Hose swivel adapter for G-90 and G-900 Series (fits ¾" and 1" hose) P/N G90HS100
- Hose swivel adapter for G-800 Series (fits ¾" and 1" hose) P/N G800HS100

Hose Swivel Adapters

RUBBER COVER KITS

Models

- TTS-800 low-bounce rubber cover kit P/N 987200SP
- TTS-800 no-bounce turf cup kit P/N 987100SP
- G-990 rubber cover kit (date codes 06/11 and prior only) P/N 473800
- G-995 rubber cover kit (also G990 date codes 07/11 and after) P/N 473900

Rubber Cover Kit

GOLF TOOLS

Use these helpful tools to simplify installation and maintenance.

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

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

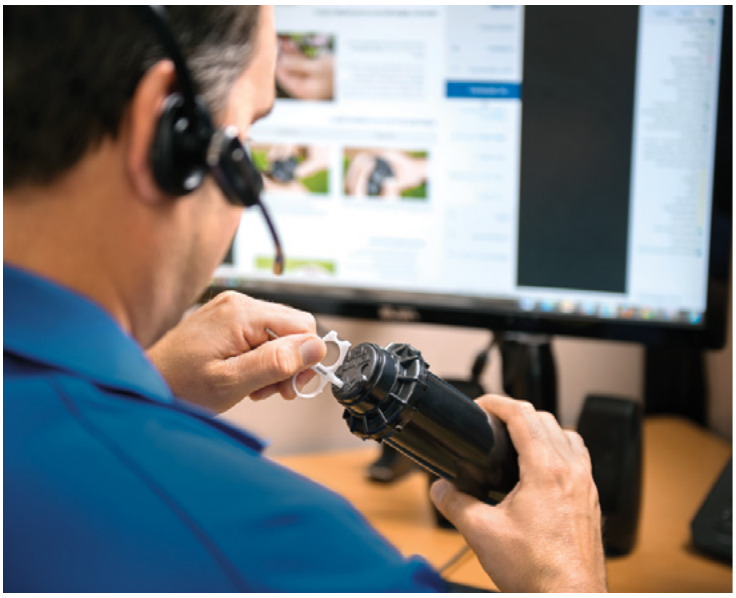
Valve Insertion/ Removal Tool
P/N 280500SP
G-900/G-90 Series

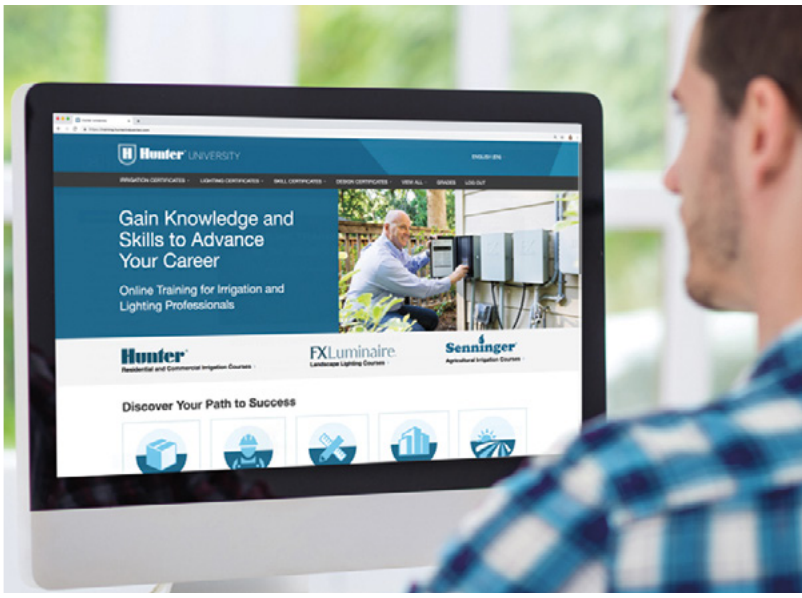
Valve & Snap Ring Insertion/Removal Pliers
P/N 475600SP
G-800 Series

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


LOS ANGELES

TECHNICAL INFORMATION





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PRECIPITATION RATES

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

WHAT IS PRECIPITATION RATE?

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

MATCHED PRECIPITATION RATES

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

90° Arc = 1 GPM; 0.23 m^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 (■):

$$\text{P.R. (in/hr)} = \frac{\text{Flow Rate (GPM) for any Arc} \times 34{,}650}{\text{Degrees of Arc} \times \text{Head Spacing (ft.)} \times \text{Row Spacing (ft.)}}$$

$$\text{P.R. (mm/hr)} = \frac{\text{Flow Rate } (m^3/hr) \text{ for any Arc} \times 360{,}000}{\text{Degrees of Arc} \times \text{Head Spacing (m)} \times \text{Row Spacing (m)}}$$

$$\text{P.R. (mm/hr)} = \frac{\text{Flow Rate (l/min) for any Arc} \times 21{,}600}{\text{Degrees of Arc} \times \text{Head Spacing (m)} \times \text{Row Spacing (m)}}$$

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 (▲):

$$\text{P.R. (in/hr)} = \frac{\text{Flow Rate (GPM) for any Arc} \times 34{,}650}{\text{Degrees of Arc} \times (\text{Head Spacing})^2 \times 0.866}$$

$$\text{P.R. (mm/hr)} = \frac{\text{Flow Rate } (m^3/hr) \text{ for any Arc} \times 360{,}000}{\text{Degrees of Arc} \times (\text{Head Spacing})^2 \times 0.866}$$

$$\text{P.R. (mm/hr)} = \frac{\text{Flow Rate (l/min) for any Arc} \times 21{,}600}{\text{Degrees of Arc} \times (\text{Head Spacing})^2 \times 0.866}$$

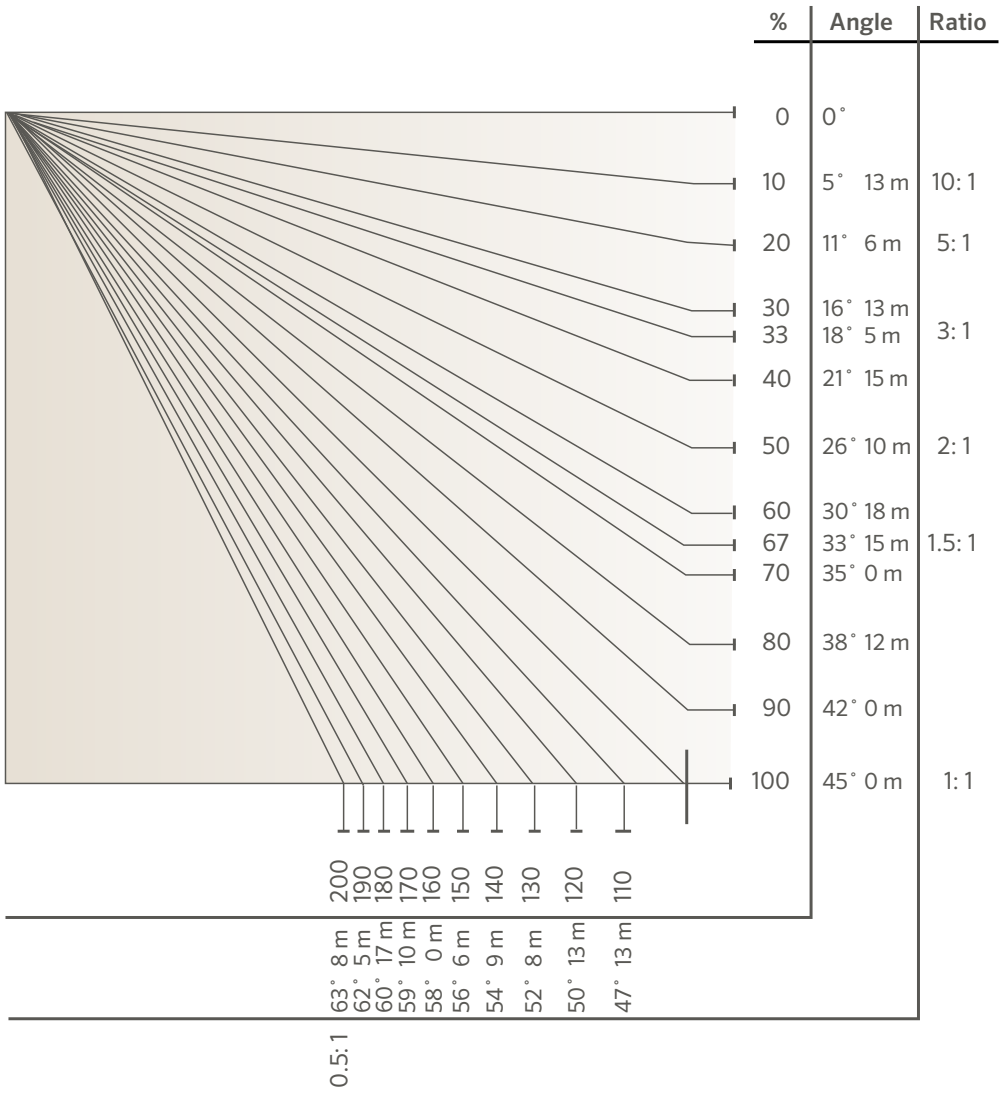
Total Area Method
The precipitation rate for a "system" is the average precipitation rate of all sprinklers in an area, regardless of the spacing, flow rate, or arc for each head. The Total Area Method calculates all the flows of all of the heads in any given area.

$$\text{P.R. (in/hr)} = \frac{\text{Flow (GPM)} \times 96.25}{\text{Total Area (ft.)}}$$

$$\text{P.R. (mm/hr)} = \frac{\text{Flow } (m^3/hr) \times 1{,}000}{\text{Total Area } (m^2)}$$

$$\text{P.R. (mm/hr)} = \frac{\text{Flow (l/min)} \times 60}{\text{Total Area } (m^2)}$$

SLOPE EQUIVALENTS/IRRIGATION



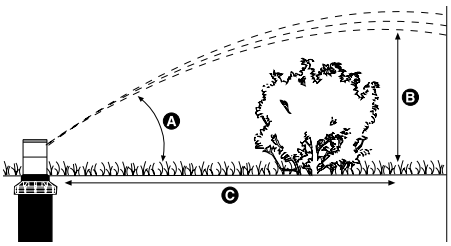
SLOPE IRRIGATION: Maximum precipitation rates for slopes in mm/hr

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:
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 and groundcover conditions.

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®	800SR	2.8	280	18	0.5	Varies
	815	2.8	280	15	0.3	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/I-50 Adjustable	8	3.5	350	25	3.7	9.8
	10	4.0	400	25	4.3	9.8
	13	4.0	400	25	4.3	10.4
	15	4.0	400	25	4.6	12.8
	23	5.0	500	25	5.2	14.0
	25	5.0	500	25	5.2	14.6
I-40/I-50-ON	15	4.0	400	25	4.6	12.8
	18	4.0	400	25	4.8	13.1
	20	5.0	500	25	5.2	13.7
	23	5.0	500	25	5.2	14.0
	25	5.0	500	25	5.2	14.6
	28	5.0	500	25	5.2	15.2

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			
I-80 & I-90 ADV	18	5.5	550	22.5	4.0	9.8
	20	5.5	550	22.5	4.3	10.4
	23	5.5	550	22.5	4.3	11.3
	25	5.5	550	22.5	4.6	12.2
	33	5.5	550	22.5	4.6	12.8
	38	5.5	550	22.5	4.9	14.6
	43	5.5	550	22.5	4.9	14.6
	48	5.5	550	22.5	5.2	16.5
	53	5.5	550	22.5	5.2	17.1
	63	5.5	550	22.5	5.5	19.5
	73	5.5	550	22.5	5.8	20.7
I-80-ON & I-90 36V	15	5.5	550	22.5	3.7	9.8
	18	5.5	550	22.5	4.0	10.4
	20	5.5	550	22.5	4.3	11.6
	23	5.5	550	22.5	4.3	12.5
	25	5.5	550	22.5	4.6	14.0
	33	5.5	550	22.5	4.6	14.0
	38	5.5	550	22.5	4.9	15.3
	43	5.5	550	22.5	4.9	16.5
	48	5.5	550	22.5	5.2	17.1
	53	5.5	550	22.5	5.2	17.7
	63	5.5	550	22.5	5.5	18.9
	73	5.5	550	22.5	5.8	20.7
I-80-ON & I-90 36V Low-Angle	15	5.5	550	22.5	1.8	8.5
	18	5.5	550	22.5	2.1	9.2
	20	5.5	550	22.5	2.1	9.8
	23	5.5	550	22.5	2.1	10.4
	25	5.5	550	22.5	2.4	11.0
	33	5.5	550	22.5	2.4	11.6
	38	5.5	550	22.5	2.7	12.2
	43	5.5	550	22.5	2.7	12.5
	48	5.5	550	22.5	3.1	13.1
	53	5.5	550	22.5	3.4	13.7
	63	5.5	550	22.5	3.7	14.6
	73	5.5	550	22.5	4.0	15.9
I-80 & I-90 ADV Low-Angle	15	5.5	550	22.5	1.8	8.5
	18	5.5	550	22.5	2.1	9.2
	20	5.5	550	22.5	2.1	9.8
	23	5.5	550	22.5	2.1	10.4
	25	5.5	550	22.5	2.4	11.0
	33	5.5	550	22.5	2.4	11.6
	38	5.5	550	22.5	2.7	12.2
	43	5.5	550	22.5	2.7	12.5
	48	5.5	550	22.5	3.1	13.1
	53	5.5	550	22.5	3.4	13.7
	63	5.5	550	22.5	3.7	14.6
	73	5.5	550	22.5	4.0	15.9

PILOT-FC FIELD CONTROLLER ELECTRICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

Supply Voltage
Auto-sensing frequency (50 or 60 Hz)
120 VAC nominal (100 to 132 VAC)[1]
230 VAC nominal (200 to 260 VAC)[1]
Station output: 24 VAC at 1.0 A

CAPACITIES

Station Capacity
80 stations
Up to 20 stations can run simultaneously

Station Solenoid Load
Up to four 24 VAC Hunter golf solenoids per station output[3]

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

PILOT-DH TWO-WAY HUB ELECTRICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

Supply Voltage
Auto-sensing frequency (50 or 60 Hz)
Auto-switching 120/230 VAC nominal (100 to 277 VAC at 50/60 Hz)[1]

CAPACITIES

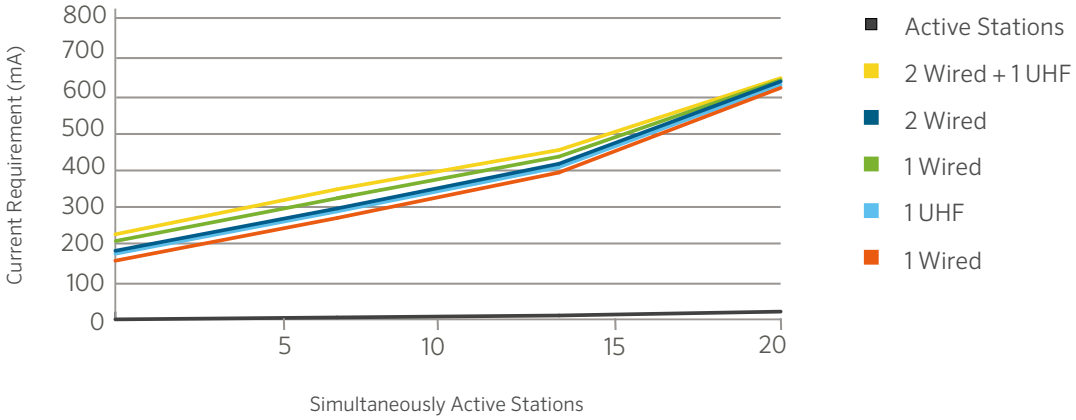
Integrated Two-Way Module Capacity
Up to 999 integrated two-way modules per Pilot-DH two-way hub
Up to 120 24 VAC Hunter golf solenoids on at one time[2]

Integrated Two-Way Module Solenoid Load
Up to two 24 VAC Hunter golf solenoids per integrated two-way module[3]

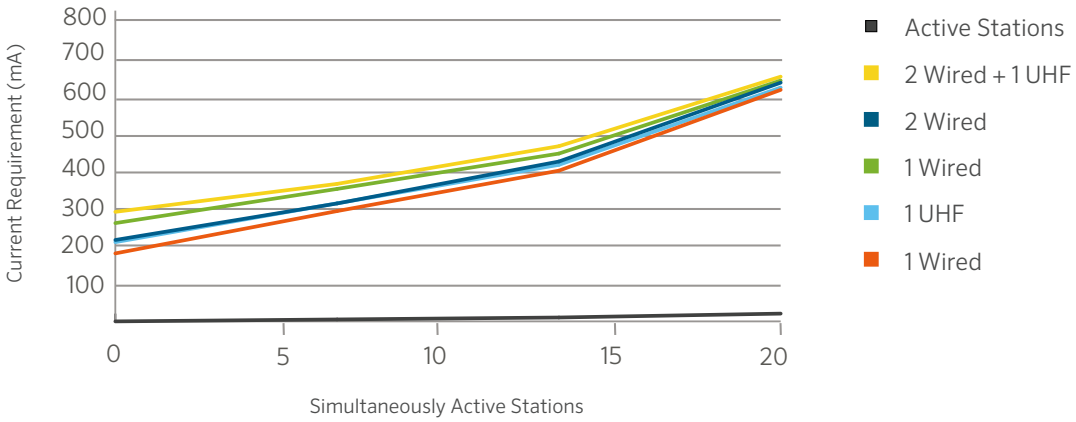
1. The Pilot-DH hub automatically detects supply voltage and frequency.
2. Depends on configuration. Pilot-DH will run up to 30 stations simultaneously per output module.
3. Two solenoids per two-way module does not reduce the maximum simultaneous station count.

PILOT-FC CURRENT REQUIREMENT CHARTS

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



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



CONVERSION FACTORS

CONVERSION FACTORS			
To Convert	**From**	**To**	**Multiply By**
Area	acres	foot^2	43560
	acres	metre^2	4046.8
	metre^2	foot^2	10.764
	foot^2	inch^2	144
	inch^2	centimetre^2	6.452
	hectares	metre^2	10000
	hectares	acres	2.471
Power	kilowatts	horsepower	1.341
Flow	foot^3/minute	metre^3/second	0.0004719
	foot^3/second	metre^3/second	0.02832
	yards^3/minute	metre^3/second	0.01274
	gallon/minute	metre^3/hour	0.22716
	gallon/minute	litre/minute	3.7854
	gallon/minute	litre/second	0.06309
	metre^3/hour	litre/minute	16.645
	metre^3/hour	litre/second	0.2774
	litre/minute	litre/second	60
Length	foot	inch	12
	inch	centimetre	2.54
	foot	metre	0.30481
	kilometre	miles	0.6214
	miles	foot	5280
	miles	metre	1609.34
	millimetre	inch	0.03937
Pressure	PSI	kilopascals	6.89476
	PSI	bar	0.068948
	bar	kilopascals	100
	PSI	feet of head	2.31
Velocity	feet/second	metre/second	0.3048
Volume	feet^3	gallon	7.481
	feet^3	litre	28.32
	metre^3	feet^3	35.31
	metre^3	yard^3	1.3087
	yard^3	feet^3	27
	yard^3	gallon	202
	acres/feet	foot^3	43,560
	gallon	metre^3	0.003785
	gallon	litre	3.785
	imperial gallon	gallon	1.833

FRICTION LOSS CHARTS - UPVC PIPE CLASS 3 (6 BAR)

C = 150 • PRESSURE LOSS (BAR/100 METRES)

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 areas represent velocities over 1.5 m/s. Use with caution when water hammer is a concern.

FRICTION LOSS CHARTS - UPVC PIPE CLASS 4 (10 BAR)

C = 150 • PRESSURE LOSS (BAR/100 METRES)

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 areas represent velocities over 1.5 m/s. Use with caution when water hammer is a concern.

FRICTION LOSS CHARTS - UPVC PIPE CLASS 5 (16 BAR)

C = 150 • PRESSURE LOSS (BAR/100 METRES)

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 areas represent velocities over 1.5 m/s. Use with caution when water hammer is a concern.

FRICTION LOSS CHARTS - SCHEDULE 40 IPS PVC PLASTIC PIPE

C = 150 • PRESSURE LOSS (BAR/100 METRES)

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 areas represent velocities over 1.5 m/s. Use with caution when water hammer is a concern.

FRICTION LOSS CHARTS - SCHEDULE 80 IPS PVC PLASTIC PIPE

C = 150 • PRESSURE LOSS (BAR/100 METRES)

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 areas represent velocities over 1.5 m/s. Use with caution when water hammer is a concern.

FRICTION LOSS CHARTS - HDPE PRESSURE PIPE PE80 SDR 17.6 PN6

C = 140 • PRESSURE LOSS (BAR/100 METRES)

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 areas represent velocities over 1.5 m/s. Use with caution when water hammer is a concern.

FRICTION LOSS CHARTS - HDPE PRESSURE PIPE PE80 SDR 11 PN10

C = 140 • PRESSURE LOSS (BAR/100 METRES)

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 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	0.04																		
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 areas represent velocities over 1.5 m/s. Use with caution when water hammer is a concern.

FRICTION LOSS CHARTS

TABLE OF APPROXIMATE PRESSURE LOSSES FOR PIPE FITTINGS

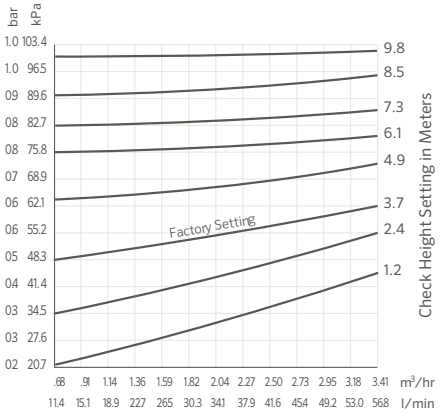
Steel Fitting Type	½"	¾"	1" (25 mm)	1¼" (30 mm)	1½" (40 mm)	2" (50 mm)	2½" (65 mm)	3" (80 mm)	4" (100 mm)	6" (150 mm)	8" (200 mm)
Coupling	0.18	0.24	0.30	0.37	0.46	0.61	0.76	0.91	1.21	1.82	2.40
Run of St. Tee	0.30	0.30	4.60	0.60	0.60	0.76	0.91	1.21	1.52	2.13	3.05
Tee, Side Outlet	0.91	1.38	1.50	2.13	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" (25 mm)	1¼" (30 mm)	1½" (40 mm)	2" (50 mm)	2½" (65 mm)	3" (80 mm)	4" (100 mm)	6" (150 mm)	8" (200 mm)
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

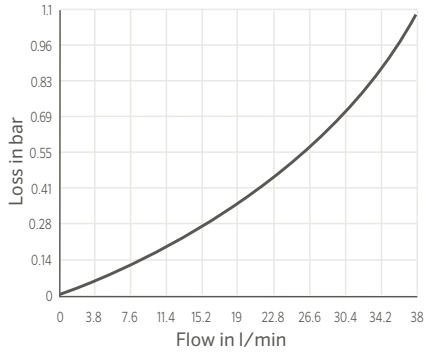
Note:
It is recommended that the charts above only be used when the manufacturer's recommended pressure loss values are not available.

ACCESSORY PRESSURE LOSS CHARTS

HCV PRESSURE LOSS CHART



SWING JOINT FRICTION LOSS



WIRE DATA

STANDARD ANNEALED COPPER AT 20°C

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

PSR WIRE DATA

MAXIMUM WIRE LENGTH, ONE WAY

Model	0.75 mm^2	1.5 mm^2	2.5 mm^2	4 mm^2	6 mm^2	10 mm^2
PSR-22	74 m	118 m	188 m	298 m	473 m	751 m
PSR-52	41 m	65 m	104 m	165 m	262 m	416 m
PSR-53	41 m	65 m	104 m	165 m	262 m	416 m

WIRE SIZING

REQUIRED INFORMATION

1) Actual one-way length of wire between the controllers and the power source or the controllers and valves

2) Allowable voltage loss along the wire circuit

3) Accumulative current flowing through the wire section being sized in amperes

RESISTANCE IS CALCULATED USING THIS FORMULA:

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

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

AVL = Allowable voltage loss

L = Wire length (one way)

I = Inrush current

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

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

VALVE WIRE SIZING EXAMPLE

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

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

$$R = \frac{4{,}000}{444}$$

$$R = 9.01 \text{ ohms/1,000 m}$$

So, wire resistance cannot exceed 9 ohms per 1,000 m. Now go to table #1 and select the proper wire size. Since 1.5 mm² gauge wire has more resistance than 9 ohms per 1,000 m, choose 2.5 mm² 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 (mm²)	Resistance in Ohms per 1,000 m at 20° C
0.5	34.5
1.0	17.2
1.5	11.5
2.5	6.9
4.0	4.3
6.0	2.9

TABLE 2 - ALLOWABLE DISTANCES FOR VARIOUS WIRE SIZES*

Ground Wire (mm²)	Control Wire (mm²) 0.5	1.0	1.5	2.5	4.0	6.0
0.5	157	209	235	261	279	289
1.0	209	314	377	449	503	538
1.5	235	377	470	588	684	754
2.5	261	449	588	783	965	1103
4.0	279	503	684	965	1,257	1,502
6.0	289	538	751	1,103	1,502	1,864

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

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

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 midsummer high
* Warm = between 21˚ and 32˚C as midsummer highs
* Hot = over 32˚C
* Humid = over 50% as average midsummer relative humidity (dry = under 50%)

STATEMENT OF WARRANTY

Hunter Residential and 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, Rigid Risers, Air Relief Valves, RZB
TWO YEARS	**ROTORS**	PGP-ADJ, PGJ, HCV	**CONTROLLERS**	BTT, Eco-Logic, HC, HPC, NODE, NODE-BT, Pro-C Families, Pro-HC, PSR, ROAM, X2, X-Core, XC Hybrid, WAND
	SPRAYS	PS Ultra Family, SJ, FLEXsg, HSBE Family	**SENSORS**	HC Flow Meter
	NOZZLES	Spray Nozzles, PCN, PCB, AFB, MSBN	**MICRO**	ACZ, PCZ, RZWS, Point Source Emitters, Tubing, Multi-Port Emitters, IH Risers, MLD, Eco-Indicator, Multi-Purpose Box, Senninger Regulators, PLD-LOC Fittings
	VALVES	PGV Family	**TOOLS**	SpotShot
THREE YEARS	**CONTROLLERS**	ROAM XL, EZ Decoder System	**MP ROTATOR**	All
FIVE YEARS	**ROTORS**	PGP Ultra, I-20, I-25, I-40, I-50, I-80, and I-90 Families	**CENTRAL**	IMMS Central Control Products, A2CNWRK, WIFIKIT, LANKIT
	SPRAYS	Pro-Spray, Pro-Spray PRS30, and Pro-Spray PRS40 Families	**SENSORS**	Clik Sensors, Flow-Sync, MWS, Solar Sync, Wireless Flow Sensor
	VALVES	HQ, ICV, IBV	**MICRO**	ICZ, PLD, HDL, HDL-COP**, Eco-Mat, Eco-Wrap
	CONTROLLERS	ACC/ACC2 Families, HCC, ICC2, ICD Decoders, ICD-HP, and I-Core/DUAL Families		

Hunter Golf and ST System Irrigation Component* Warranty Products

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

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

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

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

**While the use of copper does not completely remove the chance of root intrusion, it has been shown to assist in its prevention when coupled with proper irrigation scheduling.

Hunter® | *Built on Innovation®*

Statement of Warranty, Continued

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

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

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

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

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

ASAE CERTIFICATION STATEMENT

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

Helping our customers succeed is what drives us. While our passion for innovation and engineering is built into everything we do, it is our commitment to exceptional support that we hope will keep you in the Hunter family of customers for years to come.

Gregory R. Hunter, CEO of Hunter Industries

Gene Smith, President, Landscape Irrigation and Outdoor Lighting

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