

# Product Catalog

VOLUME 41

LANDSCAPE IRRIGATION | *Built on Innovation*<sup>®</sup>



# PAVING THE WAY

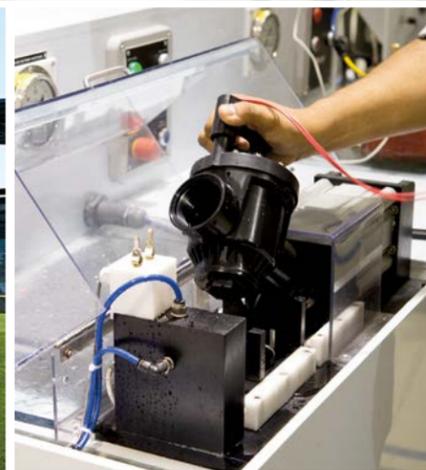
## In New Irrigation Technology

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For decades, Hunter Industries has led the way in irrigation innovation, setting the standard for product excellence, manufacturing quality, and outstanding customer support. Today, we're proud to introduce a new generation of total system solutions that redefine irrigation control — including the SkyCommand™ Wireless Control System, Hunter 360 Software, and Wireless Valve Link. Designed to maximize water savings, enhance system performance, and preserve the beauty of every landscape, these cutting-edge tools empower you to tackle projects of any scale, from intimate residential gardens to expansive commercial installations and smart city developments.

Every product we create is rooted in forward-thinking design, sustainability, and a commitment to your success. Our latest innovations — including the Pro High-Efficiency Nozzles and My Design Landscape web application — make it faster and easier to plan, sell, and deliver high-performing irrigation projects with confidence.

Discover the difference Hunter's latest innovations can make for your projects. Our commitment to smart, sustainable solutions ensures that whatever your landscape needs, we have the tools to help you succeed today and into the future.



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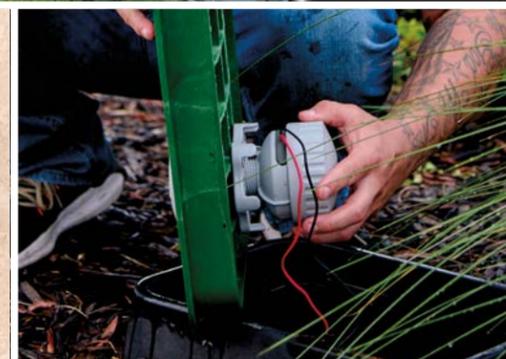
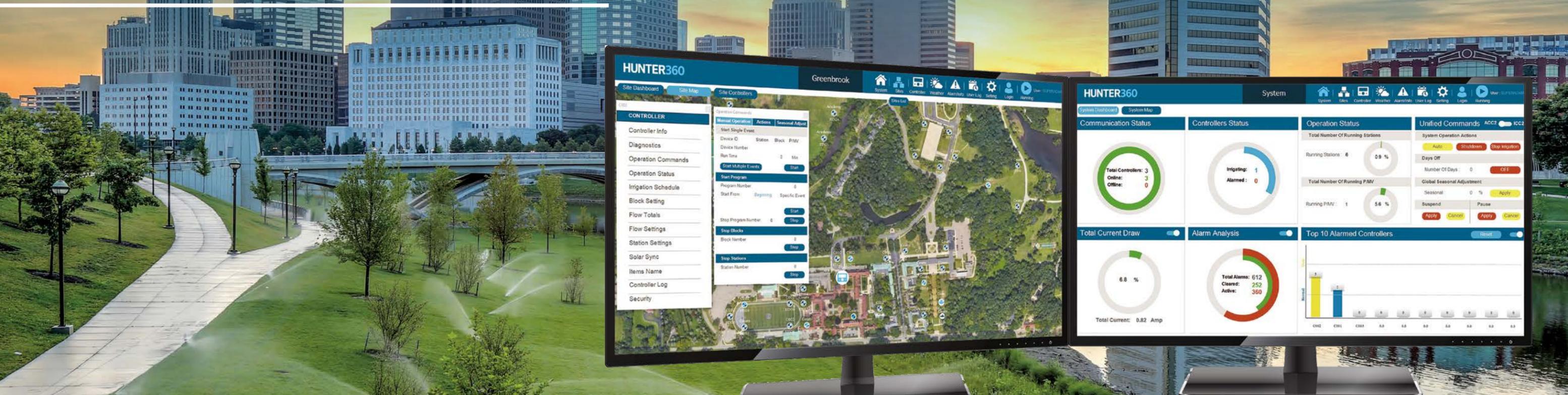
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# ADVANCING IRRIGATION

## Through Innovation



Innovation drives everything we do at Hunter Industries. From small residential installations to fully integrated smart cities, we develop complete irrigation systems, powerful tools, and useful resources to help you manage water as efficiently and sustainably as possible.

That's why we're excited to announce our newest irrigation advancements: the SkyCommand™ Wireless Control System (page 112), Hunter 360 Software (page 121),

Wireless Valve Link (page 128), the ICC2 Controller with Built-In Flow Monitoring (page 110), Pro High-Efficiency Nozzles (page 64), My Design Landscape (page 189), and the improved Hunter University (page 192).

With every new solution we create, our goal is simple: to help you save time; reduce operating costs through water, energy, and labor reductions; and move your business forward.



# 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 4", I-20 Shrub, 4" and 6"



#### STAINLESS STEEL RISER

For unforgiving soil conditions, unpredictable climates, or heavy foot traffic, stainless steel is the best choice.  
Standard on I-40, 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-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-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-80, I-90

#### COLOR-CODED NOZZLES



Nozzles are easier to differentiate in the field for simple installation and quick organization.  
I-25, I-40, 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® Technology stops 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-40-ON	I-80	I-90
INLET SIZE		½"	½"	¾"	¾"	¾"	1"	1"	1"	1½"	1½"
RADIUS	ft.	14' - 34'	14' - 34'	22' - 52'	17' - 46'	17' - 46'	40' - 71'	44' - 69'	52' - 76'	63' - 97'	66' - 103'
FLOW	GPM	0.42 - 4.3	0.42 - 4.3	0.5 - 14.1	0.36 - 14.8	0.36 - 14.8	3.8 - 31.5	7.6 - 29.5	13.0 - 33.7	20.2-58.5	29.5 - 83.8
FEATURES											
RECOMMENDED PRESSURE RANGE	PSI	30 - 50	30 - 50	25 - 70	25 - 70	25 - 70	40 - 100	40 - 100	40 - 100	50-100	80 - 120
OPERATING PRESSURE RANGE	PSI	20 - 100	20 - 100	20 - 100	20 - 100	20 - 100	40 - 100	40 - 100	40 - 100	50 - 100	80 - 120
NOZZLE TRAJECTORY		15°	15°	25°	25°	25°	25°	25°	25°	22.5°	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	7	8
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		● (7')			● (7')	● (7')	● (10')	● (15')	● (15')	● (5')	● (9')

# PGJ

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.

Radius: 15' to 34'  
Flow: 0.42 to 4.3 GPM

## 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: 15' to 34'
- Flow: 0.42 to 4.3 GPM
- Recommended pressure range: 30 to 50 PSI
- Operating pressure range: 20 to 100 PSI
- Precipitation rate: 0.6 in/hr approximately
- Nozzle trajectory: 14° approximately
- Warranty period: 2 years

## FACTORY-INSTALLED OPTIONS

- Drain Check Valve (up to 7' of elevation) excluding PGJ-00
- Reclaimed water ID

## USER-INSTALLED OPTIONS

- Drain Check Valve (up to 7' of elevation) excluding PGJ-00 (P/N 462078SP)
- HC-50F-50M Check Valve (up to 32' of elevation)



**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 = 4" pop-up		V = Drain Check Valve
PGJ-06 = 6" pop-up		R = Drain Check Valve and reclaimed water ID
PGJ-12 = 12" pop-up		

**Examples:**  
PGJ-04 = 4" pop-up, adjustable arc  
PGJ-06-V = 6" pop-up, adjustable arc, with drain Check Valve  
PGJ-12-R = 12" pop-up, adjustable arc, with drain Check Valve and reclaimed water ID

Compatible with:



1/2" Swing Joints  
Page 62



Hunter FlexSG  
Page 62

# SRM

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

Radius: 15' to 34'  
Flow: 0.42 to 4.3 GPM

## KEY BENEFITS

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

## OPERATING SPECIFICATIONS

- Nozzle choices: 8
- Radius: 15' to 34'
- Flow: 0.42 to 4.3 GPM
- Recommended pressure range: 30 to 50 PSI
- Operating pressure range: 20 to 100 PSI
- Precipitation rate: 0.6 in/hr approximately
- Nozzle trajectory: 14° approximately
- Warranty period: 1 year

## USER-INSTALLED OPTIONS

- Drain Check Valve (up to 7' of elevation) (P/N 462078SP)

SRM		SRM NOZZLES
Model	Description	
SRM-04	4" pop-up, adjustable arc, 8 standard nozzles	

SRM



**PGJ-00**  
Overall height: 7"  
Exposed diameter: 1 1/8"  
Inlet size: 1/2"

**PGJ-04**  
Overall height: 7 1/8"  
Pop-up height: 4"  
Exposed diameter: 1 1/8"  
Inlet size: 1/2"

**PGJ-06**  
Overall height: 9 1/8"  
Pop-up height: 6"  
Exposed diameter: 1 1/8"  
Inlet size: 1/2"

**PGJ-12**  
Overall height: 16 3/8"  
Pop-up height: 12"  
Exposed diameter: 1 1/8"  
Inlet size: 1/2"

PGJ PERFORMANCE DATA						PGJ NOZZLES
Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr		
				■	▲	
0.50	30	14	0.42	0.41	0.48	
	40	15	0.50	0.43	0.49	
	50	16	0.58	0.44	0.50	
0.75	30	15	0.64	0.55	0.63	
	40	16	0.75	0.56	0.65	
	50	17	0.85	0.57	0.65	
1.0	30	18	0.85	0.51	0.58	
	40	19	1.0	0.51	0.59	
	50	19	1.1	0.57	0.66	
1.5	30	21	1.3	0.57	0.66	
	40	22	1.5	0.60	0.69	
	50	22	1.7	0.67	0.77	
2.0	30	24	1.7	0.55	0.64	
	40	25	2.0	0.62	0.71	
	50	25	2.3	0.71	0.82	
2.5	30	27	2.2	0.58	0.67	
	40	28	2.5	0.60	0.69	
	50	28	2.8	0.68	0.79	
3.0	30	30	2.5	0.53	0.62	
	40	31	3.0	0.60	0.69	
	50	31	3.4	0.68	0.79	
4.0	30	33	3.7	0.65	0.76	
	40	33	4.0	0.71	0.82	
	50	34	4.3	0.72	0.83	

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



**SRM-04**  
Overall height: 7 1/8"  
Pop-up height: 4"  
Exposed diameter: 1 1/8"  
Inlet size: 1/2"

## SRM-04 PERFORMANCE DATA

Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr	
				■	▲
0.50	30	14	0.42	0.41	0.48
	40	15	0.50	0.43	0.49
	50	16	0.58	0.44	0.50
0.75	30	15	0.64	0.55	0.63
	40	16	0.75	0.56	0.65
	50	17	0.85	0.57	0.65
1.0	30	18	0.85	0.51	0.58
	40	19	1.0	0.51	0.59
	50	19	1.1	0.57	0.66
1.5	30	21	1.3	0.57	0.66
	40	22	1.5	0.60	0.69
	50	22	1.7	0.67	0.77
2.0	30	24	1.7	0.55	0.64
	40	25	2.0	0.62	0.71
	50	25	2.3	0.71	0.82
2.5	30	27	2.2	0.58	0.67
	40	28	2.5	0.60	0.69
	50	28	2.8	0.68	0.79
3.0	30	30	2.5	0.53	0.62
	40	31	3.0	0.60	0.69
	50	31	3.4	0.68	0.79
4.0	30	33	3.7	0.65	0.76
	40	33	4.0	0.71	0.82
	50	34	4.3	0.72	0.83

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

Compatible with:



1/2" Swing Joints  
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Hunter FlexSG  
Page 62

# PGP-ADJ

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

Radius: **22' to 52'**  
Flow: **0.5 to 14.1 GPM**



**PGP-ADJ**  
Overall height: 7¾"  
Pop-up height: 4"  
Exposed diameter: 1¼"  
Inlet size: ¾"

## KEY BENEFITS

- Three types of nozzles available for various landscapes: red standard, blue standard, gray 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

## OPERATING SPECIFICATIONS

- Nozzle choices: 27
- Radius: 22' to 52'
- Flow: 0.5 to 14.1 GPM
- Recommended pressure range: 25 to 70 PSI
- Operating pressure range: 20 to 100 PSI
- Precipitation rate: 0.4 in/hr approximately
- Nozzle trajectory: standard = 25°, low-angle = 13°
- Warranty period: 2 years

## FACTORY-INSTALLED OPTIONS

- Red 5 to 8 Nozzles, Blue 1.5 to 4.0 Nozzles

## USER-INSTALLED OPTIONS

- Drain Check Valve (up to 3' of elevation) (P/N 142300SP)

### PGP-ADJ GRAY LOW-ANGLE NOZZLE PERFORMANCE DATA

Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr	
				■	▲
4LA ● Gray	30	22	1.4	0.56	0.64
	40	24	1.7	0.57	0.66
	50	26	1.8	0.51	0.59
5LA ● Gray	30	25	1.6	0.49	0.57
	40	27	1.9	0.50	0.58
	50	28	2.1	0.52	0.60
6LA ● Gray	30	27	2.1	0.55	0.64
	40	30	2.5	0.53	0.62
	50	33	2.8	0.49	0.57
7LA ● Gray	30	35	3.0	0.47	0.54
	40	32	3.1	0.58	0.67
	50	35	3.5	0.55	0.64
8LA ● Gray	30	37	3.8	0.53	0.62
	40	34	3.9	0.65	0.75
	50	37	4.4	0.62	0.71
9LA ● Gray	30	33	4.3	0.76	0.88
	40	37	5.0	0.70	0.81
	50	40	5.6	0.67	0.78
10LA ● Gray	30	42	6.1	0.67	0.77
	40	38	6.5	0.87	1.00
	50	40	7.3	0.88	1.01
Gray	60	42	8.0	0.87	1.01
	70	44	8.6	0.86	0.99

**Bold** = Recommended pressure

**Note:**

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

### PGP-ADJ RED NOZZLE PERFORMANCE DATA

Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr	
				■	▲
1 ● Red	30	28	0.5	0.12	0.14
	40	29	0.6	0.14	0.16
	50	29	0.7	0.16	0.19
2 ● Red	30	29	0.7	0.16	0.19
	40	30	0.8	0.17	0.20
	50	30	0.9	0.19	0.22
3 ● Red	30	30	0.9	0.19	0.22
	40	31	1.0	0.20	0.23
	50	31	1.2	0.24	0.28
4 ● Red	30	32	1.2	0.23	0.26
	40	33	1.4	0.25	0.29
	50	34	1.6	0.27	0.31
5 ● Red	30	34	1.6	0.30	0.35
	40	36	1.8	0.27	0.31
	50	38	2.0	0.27	0.31
6 ● Red	30	34	2.0	0.33	0.38
	40	36	2.4	0.36	0.41
	50	38	2.7	0.36	0.42
7 ● Red	30	34	2.6	0.43	0.50
	40	38	3.0	0.40	0.46
	50	40	3.4	0.41	0.47
8 ● Red	30	37	3.2	0.45	0.52
	40	39	3.7	0.47	0.54
	50	41	3.9	0.45	0.52
9 ● Red	30	38	3.6	0.48	0.55
	40	41	4.3	0.49	0.57
	50	44	5.2	0.52	0.60
10 ● Red	30	44	6.0	0.60	0.69
	40	44	6.0	0.62	0.71
	50	46	6.8	0.62	0.71
11 ● Red	40	46	8.0	0.73	0.84
	50	48	8.9	0.74	0.86
	60	50	9.8	0.75	0.87
12 ● Red	40	51	10.5	0.78	0.90
	50	46	10.5	0.96	1.10
	60	50	12.7	0.98	1.13
70	52	14.1	1.00	1.16	

**Bold** = Recommended pressure

**Note:**

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

### PGP-ADJ BLUE NOZZLE PERFORMANCE DATA

Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr	
				■	▲
1.5 ● Blue	25	29	1.2	0.27	0.32
	35	31	1.4	0.28	0.32
	45	31	1.5	0.30	0.35
2.0 ● Blue	25	33	1.4	0.25	0.29
	35	33	1.7	0.30	0.35
	45	34	2.0	0.33	0.38
2.5 ● Blue	25	33	1.7	0.30	0.35
	35	35	2.1	0.33	0.38
	45	35	2.5	0.39	0.45
3.0 ● Blue	25	35	2.2	0.35	0.40
	35	36	2.7	0.40	0.46
	45	38	3.0	0.40	0.46
4.0 ● Blue	25	37	3.0	0.42	0.49
	35	39	3.5	0.44	0.51
	45	40	4.0	0.48	0.56
5.0 ● Blue	25	41	4.5	0.52	0.60
	35	37	3.7	0.52	0.60
	45	39	4.5	0.57	0.66
6.0 ● Blue	25	42	5.7	0.62	0.72
	35	40	5.6	0.67	0.78
	45	43	6.0	0.62	0.72
8.0 ● Blue	25	44	6.7	0.67	0.77
	35	44	7.3	0.73	0.84
	45	44	8.0	0.80	0.92
Blue	55	46	9.0	0.82	0.95
	65	46	9.8	0.89	1.03

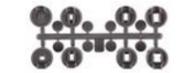
### PGP NOZZLES



Red (P/N 130900)



Blue (P/N 665300)



Gray (P/N 233200)



**PGP-ADJ**

Easy arc and radius adjustment

PGP-ADJ Red Nozzle



# PGP® ULTRA

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

Radius: 17' to 46'  
Flow: 0.36 to 14.8 GPM

## KEY BENEFITS

- Patented automatic arc return feature returns the turret back to the original arc pattern if vandalized; 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: 17' to 46'
- Flow: 0.36 to 14.8 GPM
- Recommended pressure range: 25 to 70 PSI
- Operating pressure range: 20 to 100 PSI
- Precipitation rate: 0.4 in/hr approximately
- Nozzle trajectory: standard = 25°, low-angle = 13°
- Nozzle racks: Blue 1.5 to 8.0, Gray Low-Angle 2.0 to 4.5, Black 0.50 to 3.0, Green 6.0 to 13.0, MPR-25, MPR-30, MPR-35
- Warranty period: 5 years

## FACTORY-INSTALLED OPTIONS

- Drain Check Valve (up to 10' of elevation)
- Reclaimed water ID
- Blue 1.5 to 4.0 Nozzles

## USER-INSTALLED OPTIONS

- Drain Check Valve (up to 3' of elevation) PGP 4" / 6" 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-ULTRA - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Standard Features	3 Feature Options	4 Nozzle Options
PGP-00 = Shrub PGP-04 = 4" pop-up PGP-06 = 6" pop-up PGP-12 = 12" pop-up	Adjustable arc, plastic riser, 8 standard nozzles, and 4 low-angle nozzles	(blank) = No option CV = Drain Check Valve CV-R = Drain Check Valve and reclaimed water ID	Blue 1.5 to 8.0 Gray 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 to 4.0 can be factory-installed

Examples:  
PGP-04 = 4" pop-up, adjustable arc  
PGP-04-2.5 = 4" pop-up, adjustable arc, and 2.5 nozzle  
PGP-12-CV-R-4.0 = 12" pop-up, adjustable arc, with drain check valve and reclaimed water ID, and 4.0 nozzle



**PGP-00**  
Overall height: 7½"  
Exposed diameter: 1¾"  
Inlet size: ¾"



**PGP-04**  
Overall height: 7½"  
Pop-up height: 4"  
Exposed diameter: 1¾"  
Inlet size: ¾"



**PGP-06**  
Overall height: 9⅞"  
Pop-up height: 6"  
Exposed diameter: 1¾"  
Inlet size: ¾"



**PGP-12**  
Overall height: 17"  
Pop-up height: 12"  
Exposed diameter: 1¾"  
Inlet size: ¾"

# I-20

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

Radius: 17' to 46'  
Flow: 0.36 to 14.8 GPM

## KEY BENEFITS

- Patented automatic arc return feature returns the turret back to the original arc pattern if vandalized; 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 Technology stops the flow of water from individual sprinklers to change the nozzle or perform repairs
- Flat-top nozzles allow fast, easy insertion
- QuickCheck™ Arc Mechanism for fast arc adjustment
- Available stainless steel riser for extra durability
- Drain Check Valve prevents low-head drainage (up to 10' of elevation)

## OPERATING SPECIFICATIONS

- Nozzle choices: 34
- Radius: 17' to 46'
- Flow: 0.36 to 14.8 GPM
- Recommended pressure range: 25 to 70 PSI
- Operating pressure range: 20 to 100 PSI
- Precipitation rate: 0.4 in/hr approximately
- Nozzle trajectory: standard = 25°, low-angle = 13°
- Nozzle racks: Blue 1.5 to 8.0, Gray Low-Angle 2.0 to 4.5, Black 0.50 to 3.0, Green 6.0 to 13.0, 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 to 4.0 Nozzles

## USER-INSTALLED OPTIONS

- HSJ-0 prefabricated ¾" PVC Swing Joint

### 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 = 4" pop-up I-20-06 = 6" pop-up I-20-12 = 12" pop-up	Adjustable arc, plastic riser, check valve, 8 standard nozzles, and 4 low-angle nozzles	(blank) = No option NCV = Without Check Valve (only available on 4" model) R = Drain Check Valve and reclaimed water ID	Blue 1.5 to 8.0 Gray 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 to 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 = 4" pop-up I-20-06-SS = 6" pop-up	Adjustable arc, stainless steel riser, check valve, 8 standard nozzles, and 4 low-angle nozzles	(blank) = No option NCV = Without Check Valve (only available on 4" model) R = Drain Check Valve and reclaimed water ID	Blue 1.5 to 8.0 Gray 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 to 4.0 can be factory-installed

Example:  
I-20-12-R-4.0 = 12" pop-up, adjustable arc, with reclaimed water ID, and 4.0 nozzle



**I-20-00**  
Overall height: 7¾"  
Exposed diameter: 1¾"  
Inlet size: ¾"



**I-20-04**  
Overall height: 7⅞"  
Pop-up height: 4"  
Exposed diameter: 1¾"  
Inlet size: ¾"



**I-20-06**  
Overall height: 9⅞"  
Pop-up height: 6"  
Exposed diameter: 1¾"  
Inlet size: ¾"



**I-20-12**  
Overall height: 17"  
Pop-up height: 12"  
Exposed diameter: 1¾"  
Inlet size: ¾"



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

# PGP® ULTRA & I-20 PRB

Radius: **17' to 46'**  
Flow: **0.36 to 9.8 GPM**

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

## KEY BENEFITS

- Pressure-regulated body (45 PSI) reduces high incoming pressure to increase nozzle efficiency (requires dynamic pressure differential: 15 PSI)
- Patented automatic arc return feature returns the turret back to the original arc pattern if vandalized; 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® Technology stops the flow of water from individual sprinklers, to change the nozzle or perform repairs (I-20 only)
- Flat-top nozzles allow fast, easy insertion
- QuickCheck™ Arc Mechanism for fast arc adjustment
- Available stainless steel riser for extra durability
- Drain Check Valve prevents low-head drainage (up to 10' of elevation)

## OPERATING SPECIFICATIONS

- Nozzle choices: 30
- Radius: 17' to 46'
- Flow: 0.36 to 9.8 GPM
- Nozzle discharge pressure: 45 PSI
- Operating pressure range: 35 to 100 PSI
- Recommended pressure range: 60 to 100 PSI
- Precipitation rate: 0.4 in/hr approximately
- Nozzle trajectory: standard = 25°, low-angle = 13°
- Nozzle racks: Blue 1.5 to 8.0, Gray Low-Angle 2.0 to 4.5, Black 0.50 to 3.0, Green 6.0 to 13.0, MPR-25, MPR-30, MPR-35
- Warranty period: 5 years

## FACTORY-INSTALLED OPTIONS

- Reclaimed water ID
- Blue 1.5 to 4.0 Nozzles

## USER-INSTALLED OPTIONS

- HSJ-0 prefabricated 3/4" 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 = 4" 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 to 8.0 = Gray low-angle Black short-radius MPR-25, 30, 35 - Q, T, H, F
I-20-00-PRB = Shrub I-20-04-PRB = 4" pop-up I-20-06-PRB = 6" 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 to 8.0 = Gray low-angle Black short-radius MPR-25, 30, 35 - Q, T, H, F
I-20-04-SS-PRB = 4" pop-up I-20-06-SS-PRB = 6" 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 to 8.0 = Gray low-angle Black short-radius MPR-25, 30, 35 - Q, T, H, F

Examples:  
PGP-04-PRB = 4" pop-up, adjustable arc, plastic riser with no factory installed-nozzle  
I-20-04-PRB-3.0-2.5 = 4" pop-up, adjustable arc, plastic riser with 3.0 nozzle  
I-20-06-SS-PRB-R-MPR-25H = 6" pop-up, adjustable arc, stainless steel riser with MPR-25H



**PGP-00-PRB**  
Overall height: 8 5/8"  
Exposed diameter: 1 1/4"  
Inlet size: 3/4"

**PGP-04-PRB**  
Overall height: 8 1/4"  
Pop-up height: 4"  
Exposed diameter: 1 3/4"  
Inlet size: 3/4"



**I-20-00-PRB**  
Overall height: 8 5/8"  
Exposed diameter: 1 1/4"  
Inlet size: 3/4"

**I-20-04-PRB**  
Overall height: 8 1/4"  
Pop-up height: 4"  
Exposed diameter: 1 3/4"  
Inlet size: 3/4"



**I-20-06-PRB**  
Overall height: 10 5/8"  
Pop-up height: 6"  
Exposed diameter: 1 3/4"  
Inlet size: 3/4"

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

Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr	
				■	▲
1.5 Blue	25	29	1.2	0.27	0.32
	35	31	1.4	0.28	0.32
	45	31	1.5	0.30	0.35
	55	32	1.8	0.34	0.39
2.0 Blue	25	33	1.4	0.25	0.29
	35	33	1.7	0.30	0.35
	45	34	2.0	0.33	0.38
	55	34	2.1	0.35	0.40
2.5 Blue	25	33	1.7	0.30	0.35
	35	35	2.1	0.33	0.38
	45	35	2.5	0.39	0.45
	55	35	2.6	0.41	0.47
3.0 Blue	25	35	2.2	0.35	0.40
	35	36	2.7	0.40	0.46
	45	38	3.0	0.40	0.46
	55	39	3.4	0.43	0.50
4.0 Blue	25	37	3.0	0.42	0.49
	35	39	3.5	0.44	0.51
	45	40	4.0	0.48	0.56
	55	41	4.5	0.52	0.60
5.0 Blue	25	37	3.7	0.52	0.60
	35	39	4.5	0.57	0.66
	45	42	5.0	0.55	0.63
	55	42	5.7	0.62	0.72
6.0 Blue	25	38	4.3	0.57	0.66
	35	40	5.6	0.67	0.78
	45	43	6.0	0.62	0.72
	55	44	6.7	0.67	0.77
8.0 Blue	25	37	6.0	0.84	0.97
	35	41	7.0	0.80	0.93
	45	44	8.0	0.80	0.92
	55	46	9.0	0.82	0.95
	65	46	9.8	0.89	1.03

## I-20-04 Rotor with PRB Body



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

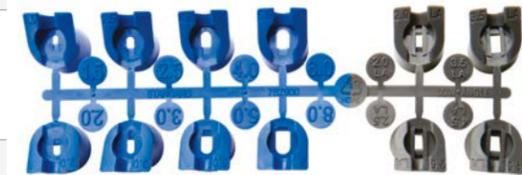
Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr	
				■	▲
2.0 LA Gray	30	25	1.6	0.49	0.57
	40	27	1.9	0.50	0.58
	50	28	2.1	0.52	0.60
	60	30	2.3	0.49	0.57
2.5 LA Gray	30	27	2.1	0.55	0.64
	40	30	2.5	0.53	0.62
	50	33	2.8	0.49	0.57
	60	35	3.0	0.47	0.54
3.5 LA Gray	30	29	2.8	0.64	0.74
	40	32	3.1	0.58	0.67
	50	35	3.5	0.55	0.64
	60	37	3.8	0.53	0.62
4.5 LA Gray	30	29	3.4	0.78	0.90
	40	32	3.9	0.73	0.85
	50	35	4.4	0.69	0.80
	60	37	4.7	0.66	0.76

**Bold** = Recommended pressure

### Note:

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

## Convenient Nozzle Rack



## PGP ULTRA / I-20 / PRB NOZZLES



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.



Flat-front nozzle allows easy alignment during installation



## Pressure Regulation

Continual operating pressure of 45 PSI



## PR-075

Overall height: 2 1/4"  
Inlet/outlet size: 3/4"  
For use under all models 3/4" inlet sprinklers, regulates to 45 PSI

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

Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr	
				■	▲
10 Dk. Green	40	42	8.4	0.92	1.06
	50	43	9.5	0.99	1.14
	60	<b>45</b>	<b>10.5</b>	<b>1.00</b>	<b>1.15</b>
	70	47	11.4	0.99	1.15
13 Dk. Green	40	43	10.9	1.13	1.31
	50	44	12.3	1.22	1.41
	60	<b>45</b>	<b>13.6</b>	<b>1.29</b>	<b>1.49</b>
70	47	14.8	1.29	1.49	
	30	31	4.2	0.84	0.97
	40	35	5.0	0.79	0.91
6.0 LA Dk. Green	50	<b>37</b>	<b>5.8</b>	<b>0.82</b>	<b>0.94</b>
	60	39	6.3	0.80	0.92
8.0 LA Dk. Green	40	37	6.7	0.94	1.09
	50	39	7.7	0.97	1.13
	60	<b>41</b>	<b>8.5</b>	<b>0.97</b>	<b>1.12</b>
70	41	9.2	1.05	1.22	

I-20 Rotor with Blue Standard Nozzle



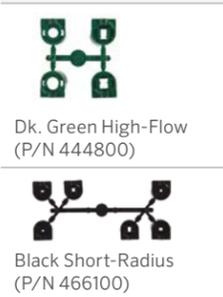
**PGP ULTRA / I-20 / PRB BLACK SHORT-RADIUS NOZZLE PERFORMANCE DATA (18'/25')**

Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr	
				■	▲
0.50 SR Black	30	17	0.36	0.24	0.28
	40	17	0.43	0.29	0.33
	50	<b>18</b>	<b>0.50</b>	<b>0.30</b>	<b>0.34</b>
	60	19	0.57	0.30	0.35
1.0 SR Black	30	17	0.78	0.52	0.60
	40	17	0.90	0.60	0.69
	50	<b>18</b>	<b>1.00</b>	<b>0.59</b>	<b>0.69</b>
60	19	1.10	0.59	0.68	
2.0 SR Black	30	17	1.40	0.93	1.08
	40	17	1.70	1.13	1.31
	50	<b>18</b>	<b>2.00</b>	<b>1.19</b>	<b>1.37</b>
60	19	2.20	1.17	1.35	
0.75 SR Black	30	23	0.58	0.21	0.24
	40	24	0.68	0.23	0.26
	50	<b>25</b>	<b>0.75</b>	<b>0.23</b>	<b>0.27</b>
60	26	0.83	0.24	0.27	
1.5 SR Black	30	23	1.10	0.40	0.46
	40	24	1.30	0.43	0.50
	50	<b>25</b>	<b>1.50</b>	<b>0.46</b>	<b>0.53</b>
60	26	1.60	0.46	0.53	
3.0 SR Black	30	23	2.50	0.91	1.05
	40	24	2.70	0.90	1.04
	50	<b>25</b>	<b>3.00</b>	<b>0.92</b>	<b>1.07</b>
60	26	3.10	0.88	1.02	

**Bold** = Recommended pressure

**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**



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

Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr	
				■	▲
90°	25	23	0.74	0.54	0.62
	35	24	0.88	0.59	0.68
	45	25	1.00	0.62	0.71
	55	25	1.11	0.68	0.79
	65	25	1.21	0.75	0.86
120°	25	23	1.00	0.55	0.63
	35	24	1.21	0.61	0.70
	45	25	1.38	0.64	0.74
	55	25	1.53	0.71	0.82
	65	25	1.67	0.77	0.89
180°	25	23	1.44	0.52	0.61
	35	24	1.73	0.58	0.67
	45	25	1.98	0.61	0.70
	55	25	2.21	0.68	0.79
	65	25	2.41	0.74	0.86
360°	25	23	2.78	0.51	0.58
	35	24	3.34	0.56	0.64
	45	25	3.82	0.59	0.68
	55	25	4.25	0.65	0.76
	65	25	4.63	0.71	0.82

**MPR-25 NOZZLE**



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

Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr	
				■	▲
90°	25	32	1.40	0.53	0.61
	35	34	1.67	0.56	0.64
	45	35	1.92	0.60	0.70
	55	35	2.13	0.67	0.77
	65	35	2.31	0.73	0.84
120°	25	32	1.77	0.50	0.58
	35	34	2.15	0.54	0.62
	45	35	2.46	0.58	0.67
	55	35	2.74	0.65	0.75
	65	35	2.99	0.70	0.81
180°	25	32	2.75	0.52	0.60
	35	34	3.33	0.55	0.64
	45	35	3.81	0.60	0.69
	55	35	4.23	0.66	0.77
	65	35	4.62	0.73	0.84
360°	25	32	5.36	0.50	0.58
	35	34	6.62	0.55	0.64
	45	35	7.58	0.60	0.69
	55	35	8.43	0.66	0.76
	65	35	9.18	0.72	0.83

**MPR-35 NOZZLE**



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

Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr	
				■	▲
90°	25	29	1.03	0.47	0.54
	35	30	1.23	0.53	0.61
	45	30	1.40	0.60	0.69
	55	30	1.56	0.67	0.77
	65	30	1.69	0.72	0.83
120°	25	29	1.34	0.46	0.53
	35	30	1.62	0.52	0.60
	45	30	1.85	0.59	0.69
	55	30	2.06	0.66	0.76
	65	30	2.24	0.72	0.83
180°	25	29	2.15	0.49	0.57
	35	30	2.59	0.55	0.64
	45	30	2.96	0.63	0.73
	55	30	3.30	0.71	0.82
	65	30	3.60	0.77	0.89
360°	25	29	4.24	0.49	0.56
	35	30	5.08	0.54	0.63
	45	30	5.78	0.62	0.71
	55	30	6.39	0.68	0.79
	65	30	6.92	0.74	0.85

**MPR-30 NOZZLE**



PGP-04 Ultra Rotor with MPR-30 Nozzle



# I-25

Radius: **37' to 71'**  
Flow: **3.8 to 31.5 GPM**

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

## KEY BENEFITS

- Patented automatic arc return feature returns the turret back to the original arc pattern if vandalized; 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 installation flexibility and reduced inventory
- Color-coded nozzles make identification easy
- QuickCheck™ Arc Mechanism for fast arc adjustment
- Available stainless steel riser for extra durability
- Drain Check Valve prevents low-head drainage (up to 10' of elevation)

## OPERATING SPECIFICATIONS

- Nozzle choices: 11
- Radius: 37' to 71'
- Flow: 3.8 to 31.5 GPM
- Recommended pressure range: 40 to 100 PSI
- Operating pressure range: 40 to 100 PSI
- Precipitation rates: 0.4 in/hr approximately
- Nozzle trajectory: standard = 25°
- Warranty period: 5 years

## FACTORY-INSTALLED OPTIONS

- Reclaimed water ID
- High-speed rotations

## USER-INSTALLED OPTIONS

- HSJ-1 prefabricated 1" PVC Swing Joint



**I-25-04**  
Overall height: 7¾"  
Pop-up height: 4"  
Exposed diameter: 1¾"  
Inlet size: 1"



**I-25-06**  
Overall height: 10¼"  
Pop-up height: 6"  
Exposed diameter: 1¾"  
Inlet size: 1"



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



**I-25 High-Speed**  
Available as a factory-installed option on 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 = 4" pop-up I-25-06 = 6" pop-up	Adjustable arc, plastic riser, check valve, and 5 nozzles	(blank) = No option R = Reclaimed water ID	4 to 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 = 4" pop-up I-25-06-SS = 6" pop-up	Adjustable arc, stainless steel riser, check valve, and 5 nozzles	(blank) = No option R = Reclaimed water ID HS = High-speed HS-R = High-speed and reclaimed water ID	4 to 28 = Factory-installed nozzle number

Examples:  
I-25-04 = 4" pop-up, adjustable arc  
I-25-04-SS-R-18 = 4" pop-up, adjustable arc, stainless steel riser, reclaimed water ID, and 18 nozzle  
I-25-06-SS = 6" pop-up, adjustable arc, stainless steel riser

I-25 STANDARD NOZZLE PERFORMANCE DATA					
Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr	
				■	▲
04 ● Yellow	40	40	3.8	0.46	0.53
	50	41	4.3	0.49	0.57
	60	42	4.7	0.51	0.59
	70	43	5.1	0.53	0.61
07 ● Orange*	40	45	6.6	0.63	0.72
	50	47	7.0	0.61	0.70
	60	48	7.5	0.63	0.72
	70	49	7.9	0.63	0.73
08 ● Lt. Brown	40	47	7.7	0.67	0.77
	50	49	8.3	0.67	0.77
	60	50	9.2	0.71	0.82
	70	51	9.9	0.73	0.85
10 ● Lt. Green*	50	51	10.1	0.75	0.86
	60	52	11.1	0.79	0.91
	70	53	12.1	0.83	0.96
	80	54	12.9	0.85	0.98
13 ● Lt. Blue	50	53	11.2	0.77	0.89
	60	54	12.3	0.81	0.94
	70	55	13.3	0.85	0.98
	80	55	14.3	0.91	1.05
15 ● Gray*	50	56	13.4	0.82	0.95
	60	57	14.3	0.85	0.98
	70	57	15.2	0.90	1.04
	80	58	16.4	0.94	1.08
18 ● Red	50	58	14.5	0.83	0.96
	60	59	15.7	0.87	1.00
	70	62	16.9	0.85	0.98
	80	63	18.2	0.88	1.02
20 ● Dk. Brown*	60	62	17.8	0.89	1.03
	70	63	19.2	0.93	1.08
	80	64	20.5	0.96	1.11
	90	65	21.8	0.99	1.15
23 ● Dk. Green	60	64	21.9	1.03	1.19
	70	65	23.6	1.08	1.24
	80	66	25.6	1.13	1.31
	90	67	27.0	1.16	1.34
25 ● Dk. Blue*	60	66	23.5	1.04	1.20
	70	68	25.5	1.06	1.23
	80	69	28.0	1.13	1.31
	90	70	29.5	1.16	1.34
28 ● Black	70	68	26.9	1.12	1.29
	80	70	28.7	1.13	1.30
	90	71	30.6	1.17	1.35
	100	71	31.5	1.20	1.39

I-25 HIGH-SPEED NOZZLE PERFORMANCE DATA					
Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr	
				■	▲
04 ● Yellow	40	37	3.8	0.53	0.62
	50	38	4.3	0.57	0.66
	60	38	4.7	0.63	0.72
	70	39	5.1	0.65	0.75
07 ● Orange*	40	40	6.6	0.79	0.92
	50	41	7.0	0.80	0.93
	60	42	7.5	0.82	0.95
	70	44	7.9	0.79	0.91
08 ● Lt. Brown	40	42	7.7	0.84	0.97
	50	43	8.3	0.86	1.00
	60	44	9.2	0.91	1.06
	70	45	9.9	0.94	1.09
10 ● Lt. Green*	50	46	10.1	0.92	1.06
	60	48	11.1	0.93	1.07
	70	49	12.1	0.97	1.12
	80	50	12.9	0.99	1.15
13 ● Lt. Blue	50	48	11.2	0.94	1.08
	60	49	12.3	0.99	1.14
	70	51	13.3	0.98	1.14
	80	51	14.3	1.06	1.22
15 ● Gray*	50	49	13.4	1.07	1.24
	60	51	14.3	1.06	1.22
	70	53	15.2	1.04	1.20
	80	54	16.4	1.08	1.25
18 ● Red	50	50	14.5	1.12	1.29
	60	53	15.7	1.08	1.24
	70	55	16.9	1.08	1.24
	80	57	18.2	1.08	1.25
20 ● Dk. Brown*	60	53	17.8	1.22	1.41
	70	56	19.2	1.18	1.36
	80	58	20.5	1.17	1.35
	90	59	21.8	1.21	1.39
23 ● Dk. Green	60	56	21.9	1.34	1.55
	70	58	23.6	1.35	1.56
	80	60	25.6	1.37	1.58
	90	61	27.0	1.40	1.61
25 ● Dk. Blue*	60	58	23.5	1.34	1.55
	70	62	25.5	1.28	1.47
	80	64	28.0	1.32	1.52
	90	66	29.5	1.30	1.51
28 ● Black	70	60	26.9	1.44	1.66
	80	62	28.7	1.44	1.66
	90	65	30.6	1.39	1.61
	100	67	31.5	1.35	1.56



\* 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-40

Radius: **44' to 76'**  
Flow: **7.6 to 33.7 GPM**

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 vandalized; 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
- Color-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 15' of elevation)

## OPERATING SPECIFICATIONS

- Nozzle choices: 12
- Radius I-40: 44' to 69'
- Radius I-40-ON: 52' to 76'
- Flow I-40: 7.6 to 29.5 GPM
- Flow I-40-ON: 13.0 to 33.7 GPM
- Recommended pressure range: 40 to 100 PSI
- Operating pressure range: 40 to 100 PSI
- Precipitation rate: 0.4 in/hr approximately
- Nozzle trajectory: standard = 25°
- Warranty period: 5 years

## FACTORY-INSTALLED OPTIONS

- Reclaimed water ID
- High-speed rotations

## USER-INSTALLED OPTIONS

- HSJ-1 prefabricated 1" PVC Swing Joint



**I-40-04**  
Overall height: 7 7/8"  
Pop-up height: 4"  
Exposed diameter: 2"  
Inlet size: 1"



**I-40-06**  
Overall height: 10 1/4"  
Pop-up height: 6"  
Exposed diameter: 2"  
Inlet size: 1"



**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 = 4" pop-up I-40-06-SS = 6" pop-up	Adjustable arc, stainless steel riser, check valve, and 6 nozzles	(blank) = No option HS = High-speed HS-R = High-speed and reclaimed water ID R = Reclaimed water ID	8 to 25 = Factory-installed nozzle number

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

1 Opposing Nozzle Model	2 Standard Features	3 Feature Options	4 Nozzle Options
I-40-04-SS-ON = 4" pop-up I-40-06-SS-ON = 6" pop-up	Full-circle, opposing nozzle, stainless steel riser, check valve, and 6 nozzles	(blank) = No option HS = High-speed HS-R = High-speed and reclaimed water ID R = Reclaimed water ID	15 to 28 = Factory-installed nozzle number

**Examples:**  
I-40-04-SS = 4" pop-up, adjustable arc, stainless steel riser, with check valve  
I-40-04-SS-ON-R-23 = 4" pop-up, adjustable arc, stainless steel riser, with check valve, and reclaimed water ID and 23 nozzle  
I-40-06-SS-15 = 6" pop-up, adjustable arc, stainless steel riser, with check valve and 15 nozzle

### I-40 NOZZLE PERFORMANCE DATA

Nozzle	Pressure PSI	Radius ft	Flow GPM	Precip in/hr	
				■	▲
08 Lt. Brown	40	44	7.6	0.76	0.87
	50	45	8.4	0.80	0.92
	60	46	9.2	0.84	0.97
10 Lt. Green	50	49	10.3	0.83	0.95
	60	50	11.3	0.87	1.00
	70	51	12.2	0.90	1.04
13 Lt. Blue	80	51	13.0	0.96	1.11
	50	50	11.1	0.85	0.99
	60	51	12.3	0.91	1.05
15 Gray	70	52	13.3	0.95	1.08
	80	53	14.2	0.97	1.12
	50	54	13.8	0.91	1.05
23 Dk. Green	60	55	15.7	1.00	1.15
	70	57	16.6	0.98	1.14
	80	59	18.3	1.01	1.17
25 Dk. Blue	60	62	21.3	1.07	1.23
	70	64	23.0	1.08	1.25
	80	65	24.5	1.12	1.29
25 Dk. Blue	90	66	25.9	1.14	1.32
	60	66	23.9	1.06	1.22
	70	67	25.8	1.11	1.28
25 Dk. Blue	80	68	27.7	1.15	1.33
	80	69	29.5	1.19	1.38

### I-40 HIGH-SPEED NOZZLE PERFORMANCE DATA

Nozzle	Pressure PSI	Radius ft	Flow GPM	Precip in/hr	
				■	▲
08 Lt. Brown	40	41	7.6	0.87	1.00
	50	41	8.4	0.96	1.11
	60	42	9.2	1.00	1.16
10 Lt. Green	50	45	10.3	0.98	1.13
	60	46	11.3	1.03	1.19
	70	47	12.2	1.06	1.23
13 Lt. Blue	80	47	13.0	1.13	1.31
	50	46	11.1	1.01	1.17
	60	47	12.3	1.07	1.24
15 Gray	70	48	13.3	1.11	1.28
	80	49	14.2	1.14	1.31
	50	51	13.8	1.02	1.18
23 Dk. Green	60	52	15.7	1.12	1.29
	70	53	16.6	1.14	1.31
	80	54	18.3	1.21	1.40
23 Dk. Green	60	58	21.3	1.22	1.41
	70	59	23.0	1.27	1.47
	80	60	24.5	1.31	1.51
25 Dk. Blue	90	61	25.9	1.34	1.55
	60	59	23.9	1.32	1.53
	70	61	25.8	1.33	1.54
25 Dk. Blue	80	62	27.7	1.39	1.60
	80	63	29.5	1.43	1.65

### I-40 NOZZLES



### I-40 Opposing Nozzle 360° Model



**I-40 Turf Cup Kit Option**  
Available as a field-installed option on all models  
P/N TURFCUPKIT140

### I-40 DUAL OPPOSING NOZZLE PERFORMANCE DATA

Nozzle	Pressure PSI	Radius ft	Flow GPM	Precip in/hr	
				■	▲
15 Gray	50	52	13.0	0.46	0.53
	60	54	13.2	0.44	0.50
	70	56	14.4	0.44	0.51
18 Red	80	57	15.5	0.46	0.53
	50	58	13.7	0.39	0.45
	60	59	15.2	0.42	0.49
20 Dk. Brown	70	60	16.6	0.44	0.51
	80	62	17.8	0.45	0.51
	60	63	19.1	0.46	0.53
23 Dk. Green	70	64	20.9	0.49	0.57
	80	66	22.3	0.49	0.57
	90	66	23.9	0.53	0.61
25 Dk. Blue	60	65	20.4	0.46	0.54
	70	66	22.3	0.49	0.57
	80	67	24.0	0.51	0.59
25 Dk. Blue	90	68	25.6	0.53	0.62
	60	66	22.0	0.49	0.56
	70	68	24.0	0.50	0.58
28 Black	80	69	25.9	0.52	0.60
	90	70	27.2	0.53	0.62
	70	70	28.9	0.57	0.66
28 Black	80	72	30.9	0.57	0.66
	90	74	32.9	0.58	0.67
	100	76	33.7	0.56	0.65

### I-40 NOZZLES



Opposing

Front



Back



#### Notes:

All precipitation rates calculated for 180° operation.  
For the precipitation rate for a 360° sprinkler, divide by 2.  
Precipitation rates for the ON Opposing Nozzle model are calculated at 360°.

# I-80

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

Radius: **63' to 97'**  
Flow: **20.2 to 59.6 GPM**

## KEY BENEFITS

- Exclusive Total-Top-Service (TTS) design provides convenient no-dig servicing
- Exclusive PressurePort™ Technology creates exceptional nozzle uniformity
- Forward-facing triple nozzles (I-80) or opposing triple nozzles (I-80-ON) create uniform nozzle profiles in part and full-circle applications
- QuickCheck™ Arc Mechanism (I-80) for fast arc adjustment and review of the arc setting
- QuickSet-360 Arc Mechanism (I-80) converts adjustable arc rotor to full-circle in an instant
- Part- and full-circle in one model provides flexible installation options and reduces inventory (I-80)
- Ratcheting stainless steel riser allows setting of right-side fixed arc alignment to the landscape without rotor disassembly
- Drain Check Valve prevents low-head drainage (up to 5' of elevation)

## OPERATING SPECIFICATIONS

- I-80
  - Standard 22.5° nozzle choices: 7
  - Radius: 65' to 94'
  - Flow: 20.2 to 59.6 GPM
  - Pressure range: 50 to 100 PSI
- I-80-ON
  - Standard 22.5° nozzle choices: 7
  - Radius: 63' to 97'
  - Flow: 21.6 to 58.5 GPM
  - Pressure range: 65 to 100 PSI
- Precipitation rates: 0.45 in/hr approximately
- Warranty period: 5 years
- All I-80 Rotors are pressure-rated at 150 PSI

## FACTORY-INSTALLED OPTIONS

- Exclusive Turf Cup option for an aesthetically clean and safe installation:
  - No-dig arc adjustments
  - Quick-release turf cup assembly
  - Threads in cup lock/retain the turf
- No-dig servicing of riser assembly

## USER-INSTALLED OPTIONS

- Rubber Cover Kit: P/N 959300SP
- Turf Cup Kit: P/N 959400SP
- HSJ prefabricated PVC Swing Joints
- Reclaimed water ID: P/N 450105



**I-80-04-SS Pop-Up**  
**I-80-04-SS-ON Pop-Up**  
Overall height: 9¾"  
Pop-up height: 3¾"  
Exposed diameter: 4¾"  
Inlet size: 1½"

**I-80-04-SS-TC Turf Cup**  
**I-80-04-SS-ON-TC Turf Cup**  
Overall height: 11½"  
Pop-up height: 3¾"  
Exposed diameter: 3½"  
Inlet size: 1½"



**I-80 Turf Cup Kit**  
P/N 959400SP



**I-80 Rubber Cover Kit**  
P/N 959300SP

## I-80 NOZZLE PERFORMANCE DATA\*

Nozzle Set	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr			
				■	▲		
Orange 803603 ●	23 Green	Lt. Green	50	65	20.2	0.46	0.53
		315313	60	66	22.1	0.49	0.56
		●	65	67	23.9	0.51	0.59
		●	70	67	24.2	0.52	0.60
Orange 803603 ●	25 Blue	Lt. Green	65	71	28.3	0.54	0.62
		315313	70	72	29.3	0.54	0.63
		●	80	73	31.5	0.57	0.66
		●	90	74	33.4	0.59	0.68
Orange 803603 ●	33 Gray	Lt. Green	65	72	30.6	0.57	0.66
		315313	70	73	31.6	0.57	0.66
		●	80	75	33.9	0.58	0.67
		●	90	77	35.8	0.58	0.67
Orange 803603 ●	38 Red	Lt. Green	65	76	34.9	0.58	0.67
		315313	70	78	36.2	0.57	0.66
		●	80	80	39.1	0.59	0.68
		●	90	82	41.2	0.59	0.68
Orange 803603 ●	43 Dk. Brown	Lt. Green	70	81	41.2	0.60	0.70
		315313	80	83	43.5	0.61	0.70
		●	90	86	46.2	0.60	0.69
		●	100	89	48.7	0.59	0.68
Orange 803603 ●	48 Dk. Green	Lt. Green	70	83	46.3	0.65	0.75
		315313	80	85	48.4	0.64	0.74
		●	90	89	51.7	0.63	0.73
		●	100	91	54.5	0.63	0.73
Orange 803603 ●	53 Dk. Blue	Lt. Green	70	87	50.7	0.64	0.74
		315313	80	89	53.1	0.65	0.75
		●	90	92	56.4	0.64	0.74
		●	100	94	59.6	0.65	0.75

● = 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-80 NOZZLES



## I-80-ON NOZZLE PERFORMANCE DATA\*

Nozzle Set	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr			
				■	▲		
Tan 803611 ●	23 Green	Lt. Blue	50	63	21.6	0.52	0.60
		315311	60	65	23.0	0.52	0.61
		●	65	66	24.0	0.53	0.61
		●	70	67	24.9	0.53	0.62
Tan 803611 ●	25 Blue	Lt. Blue	65	71	28.6	0.55	0.63
		315311	70	73	29.7	0.54	0.62
		●	80	74	31.7	0.56	0.64
		●	90	75	33.7	0.58	0.67
Tan 803611 ●	33 Gray	Lt. Blue	65	74	30.9	0.54	0.63
		315311	70	75	32.0	0.55	0.63
		●	80	77	34.2	0.56	0.64
		●	90	79	36.2	0.56	0.64
Tan 803611 ●	38 Red	Lt. Blue	65	77	35.1	0.57	0.66
		315311	70	79	36.6	0.56	0.65
		●	80	82	38.9	0.56	0.64
		●	90	84	41.3	0.56	0.65
Tan 803611 ●	43 Dk. Brown	Lt. Blue	70	83	41.3	0.58	0.67
		315311	80	85	43.6	0.58	0.67
		●	90	87	46.3	0.59	0.68
		●	100	89	48.8	0.59	0.68
Tan 803611 ●	48 Dk. Green	Lt. Blue	70	90	46.9	0.56	0.64
		315311	80	92	48.9	0.56	0.64
		●	90	94	50.5	0.55	0.63
		●	100	96	53.5	0.56	0.65
Tan 803611 ●	53 Dk. Blue	Lt. Blue	70	91	49.8	0.58	0.67
		315311	80	93	52.2	0.58	0.67
		●	90	95	55.5	0.59	0.68
		●	100	97	58.5	0.60	0.69

● = Nozzle plug P/N 315300 installed in the front side of the nozzle housing.

I-80 - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4		
1 Model	2 Standard Features	3 Nozzle Options
I-80-04-SS = 4" pop-up	Adjustable arc, stainless steel riser, check valve, and 15 nozzle options	23 to 53 = Factory-installed nozzle number, no nozzle pack
I-80-04-SS-TC = 4" pop-up with turf cup	Adjustable arc, stainless steel riser, check valve, factory-installed turf cup, and 15 nozzle options	
I-80-04-SS-ON = 4" pop-up	Full-circle, opposing nozzle, stainless steel riser, check valve, and 15 nozzle options	23 to 53 = Factory-installed nozzle number, no nozzle pack
I-80-04-SS-ON-TC = 4" pop-up with turf cup	Full-circle, opposing nozzle, stainless steel riser, check valve, factory-installed turf cup, and 15 nozzle options	

Examples:  
 I-80-04-SS-25 = 4" pop-up, adjustable arc, stainless steel riser, check valve, and factory-installed 25 nozzle  
 I-80-04-SS-ON-38 = 4" pop-up, stainless steel riser, check valve, opposing nozzle full-circle, and factory-installed 38 nozzle  
 I-80-04-SS-ON-TC-48 = 4" pop-up, stainless steel riser, check valve, opposing nozzle full-circle, factory-installed turf cup, and factory-installed 48 nozzle

# I-90

Radius: **66' to 103'**  
Flow: **29.5 to 83.8 GPM**

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

## KEY BENEFITS

- Exclusive PressurePort™ Technology creates exceptional nozzle uniformity
- Forward-facing triple nozzles (I-90), opposing triple nozzles (I-90-ON) create uniform nozzle profiles in part- and full-circle applications
- QuickCheck™ Arc Mechanism for fast arc adjustment and review of the arc setting
- Part- and full-circle in one model provides flexible installation options and decreases inventory (I-90)
- Drain Check Valve prevents low-head drainage (up to 9' of elevation)

## OPERATING SPECIFICATIONS

- I-90 nozzle choices: 8
- Radius I-90 ADV: 66' to 97'
- Radius I-90 36V: 73' to 103'
- Flow I-90 ADV: 29.5 to 83.8 GPM
- Flow I-90 36V: 30.5 to 83.3 GPM
- Recommended pressure range: 80 to 120 PSI
- Operating pressure range: 80 to 150 PSI
- Precipitation rate: 0.75 in/hr approximately
- Warranty period: 5 years

## FACTORY-INSTALLED OPTIONS

- Reclaimed water ID

## USER-INSTALLED OPTIONS

- Rubber Cover Kit: P/N 234200
- Turf Cup Kit: P/N 467955
- HSJ prefabricated PVC 1½" Swing Joints



**I-90**  
Overall height: ADV/36V: 11"  
Pop-up height: 3"  
Exposed diameter: 3½"  
Inlet size: 1½"



**Turf Cup Kit**  
P/N 467955



**Rubber Cover Kit**  
P/N 234200



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

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

1 Model	2 Standard Features	3 Feature Options	4 Nozzle Options
I-90 = 3" pop-up	Plastic riser, check valve, and 8 nozzles	<b>ADV</b> = Adjustable arc <b>ARV</b> = Adjustable arc and reclaimed water ID <b>36V</b> = Full-circle, opposing nozzles <b>3RV</b> = Full-circle, opposing nozzles, and reclaimed water ID	<b>25 to 73</b> = Factory-installed nozzle number

**Examples:**  
 I-90-ADV = 3" pop-up, adjustable arc  
 I-90-36V-43 = 3" pop-up, full-circle, opposing nozzles, and 43 nozzle  
 I-90-3RV-63 = 3" pop-up, full-circle, opposing nozzles, reclaimed water ID, and 63 nozzle

I-90-ADV NOZZLE PERFORMANCE DATA					I-90-36V NOZZLE PERFORMANCE DATA					I-90 NOZZLES		
Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr		Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr		ADV & 36V
				■	▲					■	▲	
25 ● Lt. Blue	80	66	29.5	1.30	1.51	25 ● Lt. Blue	80	73	30.5	0.55	0.64	
	90	67	31.5	1.35	1.56		90	75	32.4	0.55	0.64	
	100	68	33.2	1.38	1.60		100	76	34.3	0.57	0.66	
	110	69	35.6	1.44	1.66		110	78	36.5	0.58	0.67	
33 ● Gray	80	68	36.2	1.51	1.74	33 ● Gray	80	77	36.3	0.59	0.68	
	90	69	38.2	1.54	1.78		90	78	38.4	0.61	0.70	
	100	70	40.4	1.59	1.83		100	80	40.6	0.61	0.71	
	110	71	42.6	1.63	1.88		110	81	42.7	0.63	0.72	
38 ● Red	80	72	40.6	1.51	1.74	38 ● Red	80	80	40.6	0.61	0.71	
	90	73	43.0	1.55	1.79		90	82	42.9	0.61	0.71	
	100	75	45.4	1.55	1.79		100	83	45.3	0.63	0.73	
	110	76	47.6	1.59	1.83		110	85	47.7	0.64	0.73	
43 ● Dk. Brown	80	74	46.1	1.62	1.87	43 ● Dk. Brown	80	83	46.2	0.65	0.75	
	90	74	48.5	1.70	1.97		90	84	48.6	0.66	0.77	
	100	75	50.7	1.74	2.00		100	85	50.9	0.68	0.78	
	110	77	53.4	1.73	2.00		110	86	53.4	0.69	0.80	
48 ● Dk. Green	80	77	50.2	1.63	1.88	48 ● Dk. Green	80	86	49.6	0.65	0.75	
	90	79	52.6	1.62	1.87		90	89	52.5	0.64	0.74	
	100	81	55.1	1.62	1.87		100	90	54.8	0.65	0.75	
	110	82	57.5	1.65	1.90		110	91	57.3	0.67	0.77	
53 ● Dk. Blue*	80	81	54.9	1.61	1.86	53 ● Dk. Blue*	80	89	54.2	0.66	0.76	
	90	84	57.2	1.56	1.80		90	90	56.7	0.67	0.78	
	100	86	59.5	1.55	1.79		100	92	59.2	0.67	0.78	
	110	87	62.1	1.58	1.82		110	93	61.7	0.69	0.79	
63 ● Black	120	88	64.4	1.60	1.85	120	94	64.2	0.70	0.81		
	80	86	62.3	1.62	1.87	63 ● Black	80	92	63.2	0.72	0.83	
	90	88	65.5	1.63	1.88		90	94	65.9	0.72	0.83	
	100	90	69.0	1.64	1.89		100	96	69.4	0.72	0.84	
110	91	71.9	1.67	1.93	110		97	72.0	0.74	0.85		
73 ● Orange	120	92	74.7	1.70	1.96	120	98	74.9	0.75	0.87		
	80	89	72.7	1.77	2.04	73 ● Orange	80	96	72.1	0.75	0.87	
	90	91	75.4	1.75	2.02		90	98	75.0	0.75	0.87	
	100	93	78.1	1.74	2.01		100	99	77.8	0.76	0.88	
110	95	80.9	1.73	1.99	110		102	80.5	0.74	0.86		
120	97	83.8	1.71	1.98	120	103	83.3	0.76	0.87			

\* 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



# HSJ SWING JOINTS

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

## KEY BENEFITS

- Strength, longevity, and contamination resistance
  - Prefabricated PVC design with O-ring seals
- Configurations to meet every installation requirement
  - Available in all popular inlet and outlet configurations
  - Choose from 8", 12", or 18" lay arm lengths
  - Single top-out or triple top-out designs

### Swing Joints

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



### HSJ 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
<b>HSJ-0</b> = ¾" commercial Swing Joint <b>HSJ-1</b> = 1" heavy-duty Swing Joint <b>HSJ-2</b> = 1¼" heavy-duty Swing Joint <b>HSJ-3</b> = 1½" heavy-duty Swing Joint	<b>2</b> = Spigot, short  <b>3</b> = Male NPT  <b>7</b> = Spigot, 4" long*  <small>* Not available HSJ-0</small>	<b>2</b> = Male NPT 	<b>2</b> = Single top-out  <b>4</b> = Triple top-out 	<b>08</b> = 8" lay arm*  <b>12</b> = 12" lay arm  <b>18</b> = 18" lay arm  <small>* HSJ-0 only</small>

**Example:**  
 HSJ-1-3-2-2-12 = HSJ 1" heavy-duty Swing Joint, 1" NPT inlet, 1" male NPT single top-out outlet, 12" lay arm length

# HCV CHECK VALVES

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

## KEY BENEFITS

- Adjustment access through top of valve
- Adjusts to compensate for elevational changes up to 32'
- 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 197](#)

### HCV 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 Check Valves**  
 Overall height: 3"

# SNAPLOK™ COMBO KITS

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

## KEY BENEFITS

- Highly effective solution for quick-coupler stabilization
- SnapLok design includes:
  - Heavy-duty PVC and brass outlet construction
  - Anti-rotation coupler locking feature
  - Accommodates both rebar and pipe stabilization
- Solves common quick-coupler stabilization and unthreading concerns
  - Unique SnapLok outlet with integrated brass thread outlet
- See the HSJ Swing Joints on [page 30](#)



**Quick Coupler with SnapLok**  
 Equipped with HSJ-1 Swing Joint

### SNAPLOK COMBO KITS - 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
<b>HSJ-1</b> = 1" heavy-duty Swing Joint	<b>3</b> = Male NPT 	<b>S</b> = Male 1" brass NPT SnapLok  <b>T</b> = Male ¾" brass NPT/BSP SnapLok 	<b>2</b> = Single top-out 	<b>12</b> = 12" lay arm  <b>18</b> = 18" lay arm 

# SHRUB ROTOR STAKING KIT

Securely mount shrub rotors like PGP-00 and I-20-00 above ground — ideal for slopes or areas with surface or shallow piping.

## KEY BENEFITS

- Simply slides over the top of a #4 rebar stake (⅝" diameter, 16" length; not included) and attaches to the rotor with a provided heavy-duty UV-resistant zip tie



**Shrub Rotor Staking Kit**  
 P/N 463551SP

SnapLok is a trademark of LASCO Fittings Inc.

# ST-90

The ST-90 Synthetic Turf Rotor is designed for installation in natural turf adjacent to the playing surface — the perfect solution for small and midsize fields.

### 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: 103' to 120'
- Flow: 74.5 to 92.0 GPM
- Operating pressure range: 100 to 120 PSI
- Precipitation rate: 1.25 in/hr approximately
- Warranty period: 5 years for component parts

### USER-INSTALLED OPTIONS

- Rubber Cover Kit ST-90: P/N 234200SP

ST ROTOR	
Model	Description
ST-90-XX	3" pop-up, jar-top cap, adjustable arc, plastic riser, NPT inlet threads, 73 or 83 preinstalled nozzle



**ST-90\***  
 Overall height: 11½"  
 Pop-up height: 3"  
 Diameter: 5½"  
 Inlet size: 1½" NPT

\*Not for use with the ST Vault

ST-90 NOZZLE PERFORMANCE DATA					
Nozzle	Pressure PSI	Radius ft	Flow GPM	Precip in/hr	
				■	▲
<b>73</b> ●	100	103	74.5	1.35	1.56
	110	109	77.0	1.25	1.44
Orange	120	115	79.6	1.16	1.34
<b>83</b> ●	100	112	84.2	1.29	1.49
	110	116	88.1	1.26	1.46
Tan	120	120	92.0	1.23	1.42

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

# 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-80 and I-90 Rotors with 1½" inlets
- HSJ-5 for high-flow ST-1700-V Rotor with 2" inlet

**High-Flow Swing Joints**  
 HSJ-4 = 2" model



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 = 2" heavy-duty Swing Joint	3 = 2" male NPT, horizontal side connection	7 = 1½" male NPT	2 = Single top-out	12 = 12" lay arm
HSJ-5 = 3" heavy-duty Swing Joint	3 = 3" male NPT, horizontal side connection	8 = 2" male NPT	3 = Standard factory-fabricated	12 = 12" lay arm

**Example:**  
 HSJ-4-3-7-2-12 = HSJ 2" heavy-duty Swing Joint, 2" male NPT horizontal side connection to piping, 1½" male NPT outlet to sprinkler, single top-out, and 12" lay arm

# ST SYSTEMS

# ST-1200-BR

The cost-effective ST-1200-BR Rotor 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: 67' to 115'
- Flow: 27.0 to 131.0 GPM
- Pressure range: 30 to 85 PSI



**ST-1200-BR**  
Overall height: 12"  
Overall length: 12" (Long Barrel)  
Overall width: 3¾"  
Inlet size: 1½" BSP\*

**Included**  
Short and long barrels

\*Use P/N 241401SP 1½" male spigot x 1½" BSP adapter if needed

ST-1200-BR Rotor Installed



ST-1200-BR NOZZLE PERFORMANCE DATA						
Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr		
				■	▲	
10 ●	30	67	27.0	1.16	1.34	
	45	75	32.8	1.12	1.30	
	Black	60	85	38.1	1.02	1.17
	75	90	43.5	1.03	1.19	
12 ●	30	68	33.6	1.40	1.62	
	45	78	41.2	1.30	1.51	
	Black	60	88	47.6	1.18	1.37
	75	98	53.1	1.06	1.23	
14 ●	30	70	45.7	1.80	2.07	
	45	86	56.0	1.46	1.68	
	Black	60	100	64.7	1.25	1.44
	75	110	72.5	1.15	1.33	
16 ●	30	72	59.5	2.21	2.55	
	45	93	73.0	1.62	1.88	
	Black	60	103	84.3	1.53	1.77
	75	116	80.9	1.16	1.34	
18 ●	30	95	92.5	1.97	2.28	
	45	104	107.0	1.90	2.20	
	Black	60	111	119.5	1.87	2.16
	75	115	131.0	1.91	2.20	

# ST-1600-HS-BR

In addition to synthetic turf, this heavy-duty rotor is designed for irrigating pastures, horse arenas, dust control, and natural turf areas.

## KEY BENEFITS

- Nozzle choices: 6 (included)
- Standard nozzle: 20
- Nozzle range: 16 to 26
- Nozzle trajectory: 25°
- Isolated, grease-lubricated gear drive
- Movable stops with left and right arc adjustment
- Arc setting 40° to non-reversing 360°
- Ratcheting nozzle turret

## OPERATING SPECIFICATIONS

- Radius: 107' to 165'
- Flow: 96.2 to 326.8 GPM



**ST-1600-HS-BR**  
Overall height: 8¾"  
Diameter: 8¼"  
Inlet size: 2" BSP\*

\*Use P/N 241400SP 2" male spigot x 2" male BSP adapter if needed

## ST-1600 NOZZLE PERFORMANCE DATA\*

Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr		
				■	▲	
16 ●	60	107	96.2	1.63	1.88	
	70	115	107.3	1.57	1.81	
	Black	90	121	117.8	1.54	1.78
	100	128	127.3	1.50	1.73	
	115	135	137.4	1.46	1.69	
18 ●	60	112	107.0	1.66	1.91	
	70	121	119.4	1.56	1.80	
	Black	90	128	131.0	1.54	1.78
	100	133	141.3	1.54	1.78	
	115	141	153.2	1.48	1.71	
20 ●	60	115	144.0	2.10	2.43	
	70	128	160.9	1.89	2.18	
	Black	90	141	176.5	1.71	1.97
	100	144	190.5	1.76	2.03	
	115	148	204.2	1.80	2.08	
22 ●	60	118	171.5	2.37	2.73	
	70	130	191.8	2.20	2.54	
	Black	90	144	210.0	1.94	2.24
	100	151	226.9	1.84	2.12	
	115	157	243.1	1.89	2.18	
24 ●	60	121	202.1	2.64	3.05	
	70	133	225.9	2.46	2.84	
	Black	90	148	247.6	2.19	2.52
	100	156	267.4	2.12	2.45	
	115	160	286.4	2.16	2.49	
26 ●	60	126	233.2	2.83	3.27	
	70	136	260.4	2.71	3.13	
	Black	90	151	284.5	2.40	2.77
	100	160	307.0	2.31	2.67	
	115	165	326.8	2.32	2.68	

### Note:

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

\* All radius measurements are taken at standard rotation speeds. Slowing rotation to the minimum rotation speed will add 10+ feet to the radius.

ST-1600-HS-BR Rotor Installed



# ST-1600-KIT / ST-1600-HS-B

This all-in-one solution offers unmatched cleaning, cooling, and flushing capabilities to prepare synthetic sports fields for play.

## KEY BENEFITS

- Nozzle choices: 6 (included)
- Standard nozzle: 20
- Nozzle range: 16 to 26
- Nozzle trajectory: 25°
- Isolated, grease-lubricated gear drive
- Movable stops (left and right) arc adjustment
- Arc setting: 40° to non-reversing 360°
- Ratcheting nozzle turret
- Adjustable speed of rotation: 0 to 65 seconds (high-speed models, 180° at 120 PSI)
- Warranty period: 5 years for component parts

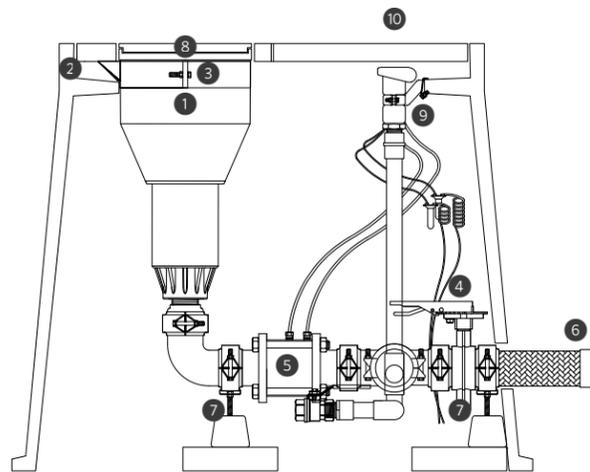
## OPERATING SPECIFICATIONS

- Radius: 107' to 165'
- Flow: 96.2 to 326.8 GPM
- Operating pressure range: 60 to 120 PSI
- Precipitation rate: 2.25 in/hr approximately

## USER-INSTALLED OPTIONS

- Simulated concrete cover for attachment to the top of the flattened Infill Barrier System (used with vault): P/N ST-FRP-1600
- ST-approved adhesive for attaching artificial turf, track, or simulated concrete (ST-FRP-1600) to Infill Barrier System: P/N ST-ADH-K
- ST-1600 Short-Radius Nozzle Kit: P/N 959900
- Adapter (if needed), 2" male spigot x 2" male BSP: P/N 241400SP (Not for use with kit)
- DC-Latching Solenoid Kit: P/N ST-LSA

## ST-1600-KIT



## ST-1600-KIT COMPONENTS

Figure	Components	Qty	Description
1	ST-1600-HS-B	1	High-speed pop-up, adjustable arc (40° to 360°), 2" BSP inlet
2	ST-243636-B	1	Composite vault
3	ST-BKT-1600	1	Rotor vault hanger and grade adjustment bracket for ST-1600-HS-B Rotor
4	ST-BVF30-K	1	Manifold butterfly valve and Victaulic® coupling fitting kit (includes galvanized, grooved x male BSP rotor adapter fitting)
5	ST-V30-KV	1	3" metal control valve, 3" grooved Victaulic inlet/outlet fittings, solenoid, and on-off-auto selector manifold
6	ST-H30-K	1	Stainless steel inlet hose, 3" NPT inlet
7	ST-SPT-K	2	Adjustable manifold support stand; two required per vault
8	ST-IBS-1600	1	Infill Barrier System Rubber Cover Kit for ST-1600-HS-B Rotor
9	ST-BKT-QCV	1	Hanger bracket for HQ-5-RC Quick Coupler
10	HQ-5-RC	1	Quick Coupler, 1" NPT inlet, 1¼" outlet for key

Victaulic is a trademark of Victaulic Company.



**ST-1600-HS-B (High-Speed)**  
Overall height: 22½"  
Pop-up height: 5"  
Diameter: 14"  
Inlet size: 2" BSP



**ST-1600 / ST-1700 Tool**  
P/N 517600SP  
For gear-drive installation and removal

## ST Infill Barrier System

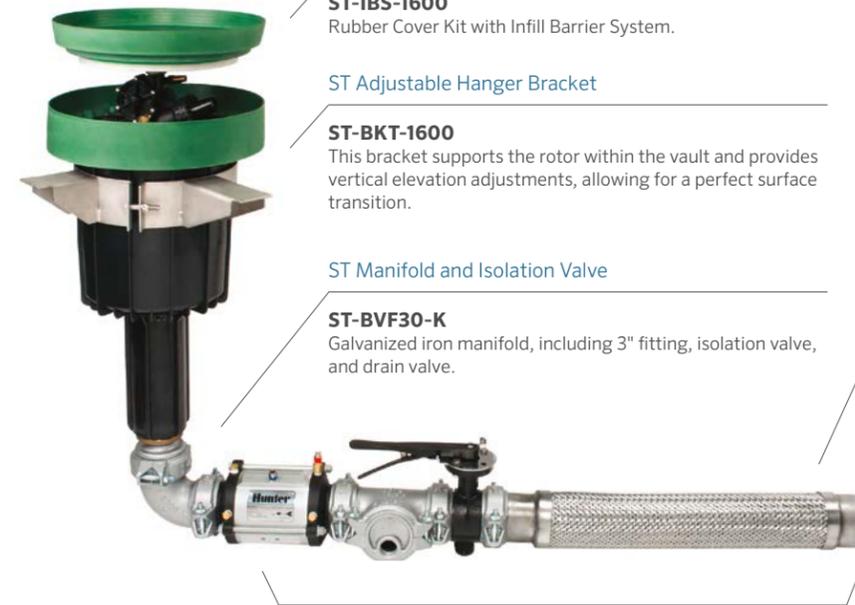
**ST-IBS-1600**  
Rubber Cover Kit with Infill Barrier System.

## 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**  
Galvanized iron manifold, including 3" fitting, isolation valve, and 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 2" vertically adjustable support rail (two required under manifold).



## ST Flexible Stainless Steel Inlet Hose

**ST-H30-K**  
3" ultra-flexible, corrugated, stainless steel hose with stainless steel support braiding.

## ST Low-Loss, Slow-Opening Valve

**ST-V30-KV**  
Heavy-duty 3" low-pressure-loss valve (2.2 PSI at 272 GPM). Includes on-off-auto selector and solenoid (not shown).

## ST-1600 NOZZLE PERFORMANCE DATA\*

Nozzle	Pressure PSI	Radius ft	Flow GPM	Precip in/hr	
				■	▲
16 ●	60	107	96.2	1.63	1.88
	70	115	107.3	1.57	1.81
	90	121	117.8	1.54	1.78
	100	128	127.3	1.50	1.73
18 ●	60	112	107.0	1.66	1.91
	70	121	119.4	1.56	1.80
	90	128	131.0	1.54	1.78
	100	133	141.3	1.54	1.78
20 ●	60	115	144.0	2.10	2.43
	70	128	160.9	1.89	2.18
	90	141	176.5	1.71	1.97
	100	144	190.5	1.76	2.03
22 ●	60	118	171.5	2.37	2.73
	70	130	191.8	2.20	2.54
	90	144	210.0	1.94	2.24
	100	151	226.9	1.84	2.12
24 ●	60	121	202.1	2.64	3.05
	70	133	225.9	2.46	2.84
	90	148	247.6	2.19	2.52
	100	156	267.4	2.12	2.45
26 ●	60	126	233.2	2.83	3.27
	70	136	260.4	2.71	3.13
	90	151	284.5	2.40	2.77
	100	160	307.0	2.31	2.67
	115	165	326.8	2.32	2.68

### Note:

All precipitation rates are calculated for 180° operation. For the precipitation rate of a 360° sprinkler, divide by 2.  
\* All radius measurements are taken at standard rotation speeds. Slowing rotation to the minimum rotation speed will add 10+ feet to the radius.

## SEAMLESS INTEGRATION

Blends in perfectly with the surrounding synthetic surface.



## ST VAULTS

The heavy-duty, tapered fiberglass and polymer-concrete construction includes precast 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-V30-KV 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-243636-B:** Includes 3" thick, 4-piece PC cover set

**Main cover:** 24" x 36"  
**Overall height:** 36"  
**Body weight:** 170 lb  
**Total weight:** 320 lb  
**Base pad:** 42" x 48"  
**Quick-access ports:** 2



① Quick Coupler ② On-Off-Auto Selector

# ST-1700-V

The ST-1700-V Synthetic Turf Rotor features a Valve-in-Head and Total-Top-Serviceability design for easy installation and maintenance.

## KEY BENEFITS

- Nozzle choices: 5 ranging from nozzles 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 provides smooth operation
- Arc adjustment: movable stops for left/right arc adjustment

## OPERATING SPECIFICATIONS

- Radius: 105' to 157'
- Flow: 92.4 to 259.0 GPM
- Operating pressure range: 60 to 115 PSI
- Arc setting: 40° to non-reversing 360°
- Speed of rotation: 80 seconds at 90 PSI (single 180° sweep)
- Precipitation rate: 1.8 in/hr approximately
- Warranty period: 5 years for component parts

## USER-INSTALLED OPTIONS

- Infill Barrier System Rubber Cover Kit: P/N ST-IBS-1700
- Short-Radius Nozzle Kit: P/N 959900
- Optional High-Flow Swing Joint, 3" male inlet to 2" male outlet, 12" length: P/N HSJ-5-3-8-3-12

### ST-1700-V NOZZLE PERFORMANCE DATA

Nozzle	Pressure PSI	Radius ft	Flow GPM	Precip in/hr*	
				■	▲
16 ●	60	105	92.4	1.61	1.86
	70	115	100.1	1.46	1.69
	90	121	114.0	1.49	1.72
	100	126	123.8	1.49	1.73
	115	131	134.1	1.50	1.73
18 ●	60	112	106.9	1.65	1.91
	70	120	114.8	1.54	1.78
	90	126	127.0	1.53	1.77
	100	131	137.0	1.53	1.77
	115	138	148.9	1.51	1.74
20 ●	60	115	134.1	1.96	2.26
	70	128	151.0	1.78	2.05
	90	134	163.9	1.75	2.02
	100	141	179.8	1.74	2.01
	115	148	193.5	1.71	1.97
22 ●	60	116	153.6	2.18	2.52
	70	128	174.0	2.05	2.36
	90	141	188.8	1.83	2.11
	100	149	205.9	1.78	2.06
	115	154	222.0	1.80	2.08
24 ●	60	121	177.1	2.32	2.67
	70	133	200.9	2.19	2.53
	90	144	221.8	2.05	2.37
	100	154	239.7	1.94	2.24
	115	157	258.7	2.01	2.32

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



**ST-1700-V Rotor**  
Overall height: 26¾"  
Pop-up height: 5"  
Top: 13" x 15¼"  
Inlet size: 2" NPT



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



**Snap Ring Removal Tool**  
P/N 251000SP



**Infill Barrier System Rubber Cover Kit**  
P/N ST-IBS-1700

# STG-900

This top-quality, long-range system is specially designed for 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°
- Warranty period: 5 years for component parts

## OPERATING SPECIFICATIONS

- Radius: 103' to 120'
- Flow: 74.5 to 92.0 GPM
- Operating pressure range: 100 to 120 PSI
- Precipitation rate: 1.25 in/hr approximately

## USER-INSTALLED OPTIONS

- Rubber Cover Kit STG-900: P/N 473900SP

### STG-900 NOZZLE PERFORMANCE DATA

Nozzle	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr	
				■	▲
73 ●	100	103	74.5	1.35	1.56
	110	109	77.0	1.25	1.44
	Orange	120	115	79.6	1.16
83 ●	100	112	84.2	1.29	1.49
	110	116	88.1	1.26	1.46
	Tan	120	120	92.0	1.23

#### Notes:

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



**STG-900\***  
Overall height: 14"  
Pop-up height: 3"  
Diameter: 8"  
Inlet size: 1½" Acme

# 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 Nozzle 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 1.0 in/hr, irrigating at a low precipitation rate is essential to reduce runoff and increase efficiency.

The MP Rotator Standard Nozzle applies water at 0.4 in/hr, while the MP800 Nozzle has a precipitation rate of 0.8 in/hr. Either choice will avoid runoff, save water, and prevent erosion.

#### MP ROTATOR Standard Nozzles



- 8' to 35'**
- Maximum water efficiency
  - Slowest precipitation rate
  - More heads on one zone

#### MP ROTATOR MP800 Nozzles



- 6' to 24'**
- Small spaces
  - Tight water windows
  - Spray retrofit solution

#### MP ROTATOR Strip Nozzles



- 5' wide**
- Rectangular spaces
  - Pair with MP Standard or MP800 Nozzles

# MP ROTATOR® STANDARD

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

Radius: 8' to 35'

0.4  
in/hr

## KEY BENEFITS

- Low precipitation rate of approximately 0.4 in/hr — lowest in the industry
- 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
- For vandal resistance, the arc is adjustable only when the MP Rotator Nozzle is running
- Removable filter screen prevents nozzle from clogging
- Color-coded for easy identification

## OPERATING SPECIFICATIONS

- Radius reduction up to approximately 25% on all models
- Recommended operating pressure: 40 PSI
- Minimum radius setting achieved at 30 PSI
- Warranty period: 3 years

## OPTIONS

- Pair with Pro-Spray® PRS40 Sprinkler Body for pressure regulation to 40 PSI for nominal radius settings
- Pair with Pro-Spray PRS30 Sprinkler Body for pressure regulation to 30 PSI for minimum radius settings

### MP-1000: 8' to 15' radius



**MP-1000-90**  
90° to 210°

**MP-1000-210**  
210° to 270°

**MP-1000-360**  
360°

### MP-2000: 13' to 21' radius



**MP-2000-90**  
90° to 210°

**MP-2000-210**  
210° to 270°

**MP-2000-360**  
360°

### MP-3000: 22' to 30' radius



**MP-3000-90**  
90° to 210°

**MP-3000-210**  
210° to 270°

**MP-3000-360**  
360°

### MP-3500: 31' to 35' radius



**MP-3500-90**  
90° to 210°

## MP ROTATOR PERFORMANCE DATA

Arc	Pressure PSI	MP-1000 Radius: 8' to 15' Adjustable Arc and Full-Circle			MP-2000 Radius: 13' to 21' Adjustable Arc and Full-Circle			MP-3000 Radius: 22' to 30' Adjustable Arc and Full-Circle				
		Radius ft	Flow GPM	Precip in/hr	Radius ft	Flow GPM	Precip in/hr	Radius ft	Flow GPM	Precip in/hr		
90°	30	12	0.17	0.45	18	0.38	0.45	0.52	27	0.76	0.40	0.46
	35	13	0.19	0.43	19	0.40	0.43	0.49	28	0.82	0.40	0.46
	<b>40</b>	<b>14</b>	<b>0.21</b>	<b>0.41</b>	<b>20</b>	<b>0.43</b>	<b>0.41</b>	<b>0.48</b>	<b>30</b>	<b>0.86</b>	<b>0.37</b>	<b>0.42</b>
	45	14	0.23	0.45	21	0.46	0.40	0.46	30	0.90	0.39	0.44
	50	15	0.25	0.43	21	0.47	0.41	0.47	30	0.95	0.41	0.47
180°	30	12	0.34	0.45	17	0.64	0.43	0.49	27	1.58	0.42	0.48
	35	13	0.38	0.43	18	0.71	0.42	0.49	28	1.70	0.42	0.48
	<b>40</b>	<b>14</b>	<b>0.42</b>	<b>0.41</b>	<b>19</b>	<b>0.77</b>	<b>0.41</b>	<b>0.47</b>	<b>30</b>	<b>1.82</b>	<b>0.39</b>	<b>0.45</b>
	45	14	0.44	0.43	20	0.85	0.41	0.47	30	1.93	0.41	0.48
	50	15	0.50	0.43	21	0.91	0.40	0.46	30	2.04	0.44	0.50
210°	30	12	0.40	0.46	17	0.75	0.43	0.49	27	1.84	0.42	0.48
	35	13	0.45	0.44	18	0.81	0.41	0.48	28	1.99	0.42	0.48
	<b>40</b>	<b>14</b>	<b>0.49</b>	<b>0.41</b>	<b>19</b>	<b>0.86</b>	<b>0.39</b>	<b>0.45</b>	<b>30</b>	<b>2.12</b>	<b>0.39</b>	<b>0.45</b>
	45	14	0.51	0.43	20	0.91	0.38	0.43	30	2.25	0.41	0.48
	50	15	0.57	0.42	21	0.98	0.37	0.42	30	2.37	0.43	0.50
270°	30	12	0.48	0.43	17	0.95	0.42	0.49	27	2.37	0.42	0.48
	35	13	0.53	0.40	18	1.03	0.41	0.47	28	2.55	0.42	0.48
	<b>40</b>	<b>14</b>	<b>0.63</b>	<b>0.41</b>	<b>19</b>	<b>1.10</b>	<b>0.39</b>	<b>0.45</b>	<b>30</b>	<b>2.73</b>	<b>0.39</b>	<b>0.45</b>
	45	14	0.67	0.44	20	1.17	0.38	0.43	30	2.89	0.41	0.48
	50	15	0.72	0.41	21	1.23	0.36	0.41	30	3.06	0.44	0.50
360°	30	12	0.69	0.46	17	1.28	0.43	0.49	27	3.15	0.42	0.48
	35	13	0.77	0.44	18	1.37	0.41	0.47	28	3.40	0.42	0.48
	<b>40</b>	<b>14</b>	<b>0.84</b>	<b>0.41</b>	<b>19</b>	<b>1.48</b>	<b>0.39</b>	<b>0.46</b>	<b>30</b>	<b>3.64</b>	<b>0.39</b>	<b>0.45</b>
	45	14	0.88	0.43	20	1.57	0.38	0.44	30	3.86	0.41	0.48
	50	15	0.98	0.42	21	1.68	0.37	0.42	30	4.07	0.44	0.50
55	15	1.01	0.43	21	1.74	0.38	0.44	30	4.27	0.46	0.53	

**Bold** = Optimal pressure for the MP Rotator Nozzle is 40 PSI. This can easily be achieved by using it with the pressure-regulated Pro-Spray PRS40 Sprinkler Body at 40 PSI.

MP ROTATOR - SPECIFICATION BUILDER: ORDER 1 + 2	
1 Model	2 Options
<b>MP-1000-90</b> = 8' to 15' radius, adjustable from 90° to 210°	<b>(blank)</b> = No option  <b>HT</b> = Male threaded version (Not available in 3500 and 1000-210)
<b>MP-1000-210</b> = 8' to 15' radius, adjustable from 210° to 270°	
<b>MP-1000-360</b> = 8' to 15' radius, 360°	
<b>MP-2000-90</b> = 13' to 21' radius, adjustable from 90° to 210°	
<b>MP-2000-210</b> = 13' to 21' radius, adjustable from 210° to 270°	
<b>MP-2000-360</b> = 13' to 21' radius, 360°	
<b>MP-3000-90</b> = 22' to 30' radius, adjustable from 90° to 210°	
<b>MP-3000-210</b> = 22' to 30' radius, adjustable from 210° to 270°	
<b>MP-3000-360</b> = 22' to 30' radius, 360°	
<b>MP-3500-90</b> = 31' to 35' radius, adjustable from 90° to 210°	
<b>MP-LCS-515</b> = Left corner strip, 5' x 15'	
<b>MP-RCS-515</b> = Right corner strip, 5' x 15'	
<b>MP-SS-530</b> = Side strip, 5' x 30'	
<b>MP-CORNER</b> = 8' to 15' radius, adjustable from 45° to 105°	

Works best with Pro-Spray PRS40



Compatible with:



Pro-Spray PRS40  
Page 60

MP ROTATOR PERFORMANCE DATA

**MP-3500**  
 Radius: 31' to 35'  
 Adjustable Arc  
 ● Light Brown: 90° to 210°

Arc	Pressure PSI	Radius ft	Flow GPM	Precip in/hr	
				■	▲
90° 	30	34	1.13	0.38	0.43
	35	34	1.21	0.40	0.47
	<b>40</b>	<b>35</b>	<b>1.28</b>	<b>0.40</b>	<b>0.46</b>
	45	35	1.38	0.43	0.50
	50	35	1.43	0.45	0.52
180° 	30	34	2.24	0.37	0.43
	35	34	2.65	0.44	0.51
	<b>40</b>	<b>35</b>	<b>2.86</b>	<b>0.45</b>	<b>0.52</b>
	45	35	3.10	0.49	0.56
	50	35	3.21	0.50	0.58
210° 	30	34	2.84	0.41	0.47
	35	34	3.08	0.44	0.51
	<b>40</b>	<b>35</b>	<b>3.29</b>	<b>0.44</b>	<b>0.51</b>
	45	35	3.54	0.48	0.55
	50	35	3.76	0.51	0.59
55	35	3.94	0.53	0.61	

**Bold** = Optimal pressure for the MP Rotator Nozzle is 40 PSI. This can easily be achieved by using it with the pressure-regulated Pro-Spray PRS40 Sprinkler Body at 40 PSI.

MP-3500



MP ROTATOR PERFORMANCE DATA

**MP Corner**  
 Radius: 8' to 15'  
 Adjustable Arc  
 ● Turquoise: 45° to 105°

Arc	Pressure PSI	Radius ft.	Flow GPM
45° 	30	12	0.17
	35	13	0.18
	<b>40</b>	<b>14</b>	<b>0.19</b>
	45	14	0.21
	50	14	0.22
90° 	30	12	0.34
	35	13	0.36
	<b>40</b>	<b>14</b>	<b>0.39</b>
	45	14	0.41
	50	15	0.43
105° 	30	12	0.39
	35	13	0.42
	<b>40</b>	<b>14</b>	<b>0.45</b>
	45	14	0.48
	50	15	0.51
55	15	0.53	

**Bold** = Recommended pressure

MP Corner



**MP-CORNER**  
 Corner  
 8' to 15'

Male Threaded



**MP-HT**  
 Male Threaded

MP Accessories



**MPTOOL**  
 Adjusts all MP Rotator  
 Nozzles



**MPSTICK**  
 Snaps onto any length of  
 1" PVC to allow standing  
 adjustment of both radius  
 and arc.  
*PVC pipe not included.*

MP ROTATOR PERFORMANCE DATA

● **MP-LCS-515:** Ivory, MP Left Corner Strip  
 ● **MP-RCS-515:** Copper, MP Right Corner Strip  
 ● **MP-SS-530:** Brown, MP Side Strip

	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr	
				■	▲
<b>MP Left Corner Strip</b> 	30	4 x 14	0.17	1.17	0.58
	35	5 x 15	0.18	0.92	0.46
	<b>40</b>	<b>5 x 15</b>	<b>0.19</b>	<b>0.98</b>	<b>0.49</b>
	45	5 x 15	0.21	1.08	0.54
	50	5 x 16	0.23	1.11	0.55
<b>MP Right Corner Strip</b> 	30	4 x 14	0.17	1.17	0.58
	35	5 x 15	0.18	0.92	0.46
	<b>40</b>	<b>5 x 15</b>	<b>0.19</b>	<b>0.98</b>	<b>0.49</b>
	45	5 x 15	0.21	1.08	0.54
	50	5 x 16	0.23	1.11	0.55
<b>MP Side Strip</b> 	30	4 x 28	0.33	1.13	0.57
	35	5 x 29	0.36	0.96	0.48
	<b>40</b>	<b>5 x 30</b>	<b>0.38</b>	<b>0.98</b>	<b>0.49</b>
	45	5 x 31	0.41	1.02	0.51
	50	6 x 32	0.44	0.88	0.44
55	6 x 33	0.47	0.92	0.46	

MP Rotator Strip Nozzles



**MP-LCS-515**  
 Left Corner Strip  
 5' x 15'



**MP-RCS-515**  
 Right Corner Strip  
 5' x 15'



**MP-SS-530**  
 Side Strip  
 5' x 30'



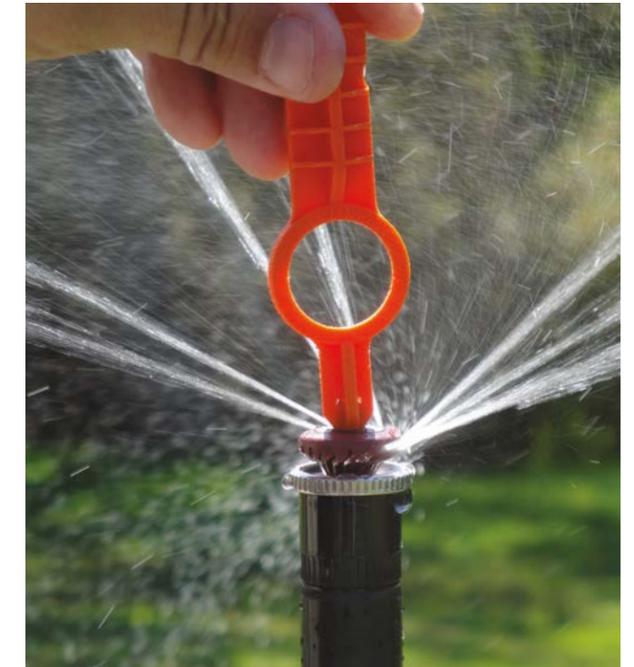
**Bold** = Recommended pressure  
**Note:** To match the precipitation rate of MP Rotator Standard models, use single-row or triangular spacing. To match the precipitation rate of MP Rotator MP800 Nozzles, use rectangular spacing.

See page 198 for precipitation rate calculation.

MP Corner



MP Rotator Tool for easy adjustments



# MP ROTATOR® MP800

The MP800 Nozzle offers a higher precipitation rate designed for small spaces and heavier water applications.

Radius: 6' to 24'

0.8  
in/hr

## KEY BENEFITS

- Precipitation rate of approximately 0.8 in/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
- For vandal resistance, the arc is adjustable only when the MP Rotator Nozzle is running
- Removable filter screen prevents nozzle clogging
- Color-coded for easy identification

## OPERATING SPECIFICATIONS

- Radius reduction up to approximately 25% on all models
- Recommended operating pressure: 40 PSI
- Minimum radius setting achieved at 30 PSI
- Filtration recommended on dirty water applications
- Warranty period: 3 years

## OPTIONS

- Pair with Pro-Spray® PRS40 Sprinkler Body for pressure regulation to 40 PSI for nominal radius settings
- Pair with Pro-Spray PRS30 Sprinkler Body for pressure regulation to 30 PSI for minimum radius settings

### MP-800SR: 6' to 12' radius



**MP-800SR-90**  
90° to 210°



**MP-800SR-360**  
360°

### MP-815: 8' to 16' radius



**MP-815-90**  
90° to 210°



**MP-815-210**  
210° to 270°



**MP-815-360**  
360°

### MP-820: 15' to 24' radius



**MP-820-90**  
90° to 210°



**MP-820-210**  
210° to 270°



**MP-820-360**  
360°

MP-800SR-90



MP-815-90



## MP ROTATOR NOZZLE PERFORMANCE DATA

Arc	Pressure PSI	MIN RADIUS				MAX RADIUS				MP-800SR				MP-815				MP-820			
		Radius ft	Flow GPM	Precip in/hr ■ ▲																	
90° ◐	30	6	0.13	8	0.17	0.90	1.04	14	0.42	0.83	0.95	20	0.85	0.82	0.94	20	0.85	0.82	0.94		
	35	7	0.15	9	0.21	0.89	1.03	15	0.46	0.79	0.91	21	0.93	0.81	0.94	21	0.93	0.81	0.94		
	<b>40</b>	<b>8</b>	<b>0.16</b>	<b>10</b>	<b>0.23</b>	<b>0.83</b>	<b>0.96</b>	<b>15</b>	<b>0.49</b>	<b>0.84</b>	<b>0.97</b>	<b>22</b>	<b>0.97</b>	<b>0.77</b>	<b>0.89</b>	<b>22</b>	<b>0.97</b>	<b>0.77</b>	<b>0.89</b>		
	45	8	0.18	11	0.25	0.80	0.92	16	0.52	0.78	0.90	23	1.06	0.77	0.89	23	1.06	0.77	0.89		
	50	9	0.19	11	0.27	0.79	0.92	16	0.55	0.83	0.96	24	1.11	0.74	0.85	24	1.11	0.74	0.85		
55	10	0.20	12	0.28	0.80	0.93	16	0.58	0.87	1.01	24	1.16	0.77	0.89	24	1.16	0.77	0.89			
180° ◑	30	6	0.26	8	0.33	0.88	1.02	13	0.75	0.85	0.99	20	1.72	0.83	0.96	20	1.72	0.83	0.96		
	35	7	0.29	9	0.38	0.85	0.99	14	0.86	0.84	0.98	21	1.82	0.79	0.91	21	1.82	0.79	0.91		
	<b>40</b>	<b>8</b>	<b>0.32</b>	<b>10</b>	<b>0.42</b>	<b>0.81</b>	<b>0.93</b>	<b>15</b>	<b>0.93</b>	<b>0.80</b>	<b>0.92</b>	<b>22</b>	<b>2.01</b>	<b>0.80</b>	<b>0.92</b>	<b>22</b>	<b>2.01</b>	<b>0.80</b>	<b>0.92</b>		
	45	8	0.36	11	0.46	0.77	0.88	15	0.96	0.82	0.95	22	2.06	0.82	0.95	22	2.06	0.82	0.95		
	50	9	0.38	11	0.48	0.76	0.88	16	1.06	0.80	0.92	23	2.21	0.80	0.93	23	2.21	0.80	0.93		
55	10	0.40	12	0.50	0.73	0.84	16	1.11	0.83	0.96	24	2.36	0.79	0.91	24	2.36	0.79	0.91			
210° ◒	30	6	0.30	8	0.35	0.80	0.93	13	0.88	0.86	0.99	20	1.94	0.80	0.92	20	1.94	0.80	0.92		
	35	7	0.34	9	0.38	0.77	0.89	14	0.96	0.81	0.93	21	2.10	0.78	0.91	21	2.10	0.78	0.91		
	<b>40</b>	<b>8</b>	<b>0.37</b>	<b>10</b>	<b>0.43</b>	<b>0.81</b>	<b>0.91</b>	<b>15</b>	<b>1.10</b>	<b>0.81</b>	<b>0.93</b>	<b>22</b>	<b>2.36</b>	<b>0.81</b>	<b>0.93</b>	<b>22</b>	<b>2.36</b>	<b>0.81</b>	<b>0.93</b>		
	45	8	0.42	10	0.45	0.82	0.95	15	1.16	0.85	0.98	22	2.39	0.81	0.94	22	2.39	0.81	0.94		
	50	9	0.44	11	0.49	0.73	0.85	16	1.24	0.80	0.92	23	2.52	0.79	0.91	23	2.52	0.79	0.91		
55	10	0.47	12	0.56	0.70	0.81	16	1.30	0.84	0.97	24	2.66	0.76	0.88	24	2.66	0.76	0.88			
270° ◓	30	6	0.26	8	0.33	0.88	1.02	13	0.75	0.85	0.99	20	1.72	0.83	0.96	20	1.72	0.83	0.96		
	35	7	0.29	9	0.38	0.85	0.99	14	0.86	0.84	0.98	21	1.82	0.79	0.91	21	1.82	0.79	0.91		
	<b>40</b>	<b>8</b>	<b>0.32</b>	<b>10</b>	<b>0.42</b>	<b>0.81</b>	<b>0.93</b>	<b>15</b>	<b>0.93</b>	<b>0.80</b>	<b>0.92</b>	<b>22</b>	<b>2.01</b>	<b>0.80</b>	<b>0.92</b>	<b>22</b>	<b>2.01</b>	<b>0.80</b>	<b>0.92</b>		
	45	8	0.36	11	0.46	0.77	0.88	15	0.96	0.82	0.95	22	2.06	0.82	0.95	22	2.06	0.82	0.95		
	50	9	0.38	11	0.48	0.76	0.88	16	1.06	0.80	0.92	23	2.21	0.80	0.93	23	2.21	0.80	0.93		
55	10	0.40	12	0.50	0.73	0.84	16	1.11	0.83	0.96	24	2.36	0.79	0.91	24	2.36	0.79	0.91			
360° ●	30	6	0.30	8	0.35	0.80	0.93	13	0.88	0.86	0.99	20	1.94	0.80	0.92	20	1.94	0.80	0.92		
	35	7	0.34	9	0.38	0.77	0.89	14	0.96	0.81	0.93	21	2.10	0.78	0.91	21	2.10	0.78	0.91		
	<b>40</b>	<b>8</b>	<b>0.37</b>	<b>10</b>	<b>0.43</b>	<b>0.81</b>	<b>0.91</b>	<b>15</b>	<b>1.10</b>	<b>0.81</b>	<b>0.93</b>	<b>22</b>	<b>2.36</b>	<b>0.81</b>	<b>0.93</b>	<b>22</b>	<b>2.36</b>	<b>0.81</b>	<b>0.93</b>		
	45	8	0.42	10	0.45	0.82	0.95	15	1.16	0.85	0.98	22	2.39	0.81	0.94	22	2.39	0.81	0.94		
	50	9	0.44	11	0.49	0.73	0.85	16	1.24	0.80	0.92	23	2.52	0.79	0.91	23	2.52	0.79	0.91		
55	10	0.47	12	0.56	0.70	0.81	16	1.30	0.84	0.97	24	2.66	0.76	0.88	24	2.66	0.76	0.88			

**Bold** = Optimal pressure for the MP Rotator Nozzle is 40 PSI. This can easily be achieved by using it with the pressure-regulated Pro-Spray PRS40 Sprinkler Body at 40 PSI.

MP-820-90



Compatible with:



HY Filter for  
MP-800SR  
Page 159



Pro-Spray PRS30  
and PRS40  
Page 58 and  
Page 60

# MP ROTATOR STAKE KIT

Designed for easy implementation with any water-efficient MP Rotator Nozzle, MP Stake Kits come preassembled for quick installation in the field.

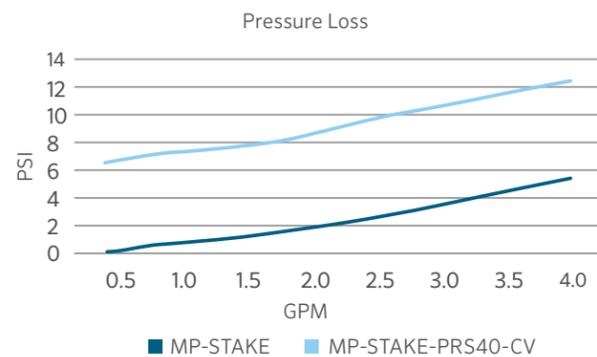
Models: **Standard and Pressure-Regulated Staking Kits**

## KEY BENEFITS

- Pair with any high-efficiency MP Rotator Nozzle to simplify temporary irrigation
- Preassembled for fast and easy installation in the field
- Standard kit includes a 26" stake, nozzle adapter, 0.345" tubing, and ½" threaded male fitting for quick connection
- For maximum water savings, upgrade to a 40 PSI pressure regulator and Hunter Check Valve

## OPERATING SPECIFICATIONS

- Operational pressure range: 30 to 70 PSI



**MP-STAKE**  
Total height: 28"  
Male threaded connection: ½"

**MP-STAKE-PRS40-CV**  
Total height: 34"  
Male threaded connection: ½"

Compatible with:



All MP Rotator Nozzles  
Page 42



Spray Nozzles  
Page 63

MP-STAKE-PRS40-CV Installation



MP-STAKE MODELS	
Model	Description
MP-STAKE	26" stake, 0.345" tubing to ½" male fitting, PROS-00 shrub adapter (total height: 28")
MP-STAKE-PRS40-CV	26" stake, 0.345" tubing to ½" male fitting, Hunter Check Valve, PROS-00-PRS40 pressure-regulated shrub adapter (total height: 34")

# MP ROTATOR® NOZZLES

The industry's most efficient sprinkler nozzles

## KEY BENEFITS

### Proven Reliability

Double-pop design ensures nozzles pop up from their protected position after the riser is extended, protecting them from external debris

### Matched Precipitation

The same amount of water is applied across the landscape at any arc and radius

### Unmatched Efficiency

Multiple rotating, wind-resistant streams apply water slowly and evenly, eliminating runoff and resulting in high distribution uniformity for even coverage

### Durable Design

The removable inlet filter keeps the sprinkler free of internal debris

### Highly Versatile

With the widest radius range from 5' wide strips up to 35', MP Rotator Nozzles provides highly efficient irrigation across a diverse range of applications



**MP Rotator Standard**  
8' to 35'

Maximize water efficiency with the lowest precipitation rate across the widest radius range in the industry.



**MP Rotator MP800**  
6' to 24'

Optimal solution for heavy water application needs, such as tight water windows and spray retrofits.



**MP Rotator Strips**  
5' wide

For added flexibility in rectangular spaces, pair with MP Standard or MP800 Nozzles.

# SPRAY SPRINKLER BODIES

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# SPRAY SPRINKLER BODY ADVANCED FEATURES



## CO-MOLDED WIPER SEAL

Molded 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 0.5 GPM (10' 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 REGULATION

Pressure-regulated Pro-Spray® Sprinkler Bodies optimize the performance of the nozzle, reducing flow rates and preventing misting. The brown PRS30 model regulates pressures to 30 PSI for spray nozzles. The gray PRS40 model regulates pressures to 40 PSI when paired with the efficient MP Rotator Nozzle.

## 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. Pro-Spray caps 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 SPRINKLER BODY COMPARISON CHART

QUICK SPECS		PS ULTRA	PRO-SPRAY®	PRO-SPRAY PRS30	PRO-SPRAY PRS40
POP-UP HEIGHT	in.	2, 4, 6	Shrub, 2, 3, 4, 6, 12	Best for Spray Nozzles Shrub, 3, 4, 6, 12	Best for MP Rotator® Nozzles Shrub, 3, 4, 6, 12
PRESSURE-REGULATED	PSI	N/A	N/A	30	40
FEATURES					
PREINSTALLED NOZZLE		5SS, 8A-HE, 10A-HE, 12A-HE, 15A-HE, 17A-HE	N/A	N/A	N/A
CAP COLOR		Black	Black	Brown	Gray
CHECK VALVES		Field-Installed	Field-Installed or Factory-Installed	Field-Installed or Factory-Installed	Field-Installed or 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
DIRECTIONAL FLUSH PLUG		●	●	●	●
CO-MOLDED WIPER SEAL			●	●	●
RECLAIMED CAP			●	●	●
PRESSURE REGULATION				●	●
FLOGUARD™ TECHNOLOGY				●	●
EPA WATERSENSE CERTIFIED				●	●
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 offering preinstalled, high-efficiency nozzles for faster installation.

## KEY BENEFITS

- Optional Pro High-Efficiency Nozzles provide matched precipitation of 1.6 in/hr from 8' to 17' across the 0° to 360° adjustable arc range
- 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
- 2" and 4" models can retrofit into older style PS models
- Compatible with all female-threaded nozzles

## OPERATING SPECIFICATIONS

- Operational pressure range: 20 to 70 PSI
- Warranty period: 2 years

## FACTORY-INSTALLED OPTIONS

- Flush plug (large filter screen not included)
- Pro High-Efficiency Nozzles 8A-HE, 10A-HE, 12A-HE, 15A-HE, and 17A-HE
- SS-530 Side Strip Nozzle (SKU 5SS) — 5' x 30'
- Large inlet filter screen included in 4" and 6" preinstalled nozzle models

## USER-INSTALLED OPTIONS

- Check valve installs in filter screen for 4" and 6" models (up to 7' of elevation; P/N 462237SP)
- Large inlet filter screen (P/N 162900SP)
- Shutoff nozzle (P/N 916400SP)



**PSU-02**  
Retracted height: 5"  
Pop-up height: 2"  
Exposed diameter: 1¼"  
Inlet size: ½"



**PSU-04**  
Retracted height: 7¼"  
Pop-up height: 4"  
Exposed diameter: 1¼"  
Inlet size: ½"



**PSU-06**  
Retracted height: 9½"  
Pop-up height: 6"  
Exposed diameter: 1¼"  
Inlet size: ½"

## PS ULTRA WITH PRO HIGH-EFFICIENCY NOZZLE - PERFORMANCE DATA

Arc	Pressure PSI	8A-HE			10A-HE				
		Radius ft	Flow GPM	Precip in/hr ■ ▲	Radius ft	Flow GPM	Precip in/hr ■ ▲		
90°	20	7	0.23	1.81	2.09	9	0.36	1.71	1.98
	25	7	0.27	2.12	2.45	9	0.41	1.95	2.25
	30	8	0.28	1.68	1.95	10	0.44	1.69	1.96
	35	8	0.32	1.93	2.22	10	0.48	1.85	2.13
180°	20	7	0.44	1.71	1.97	9	0.70	1.66	1.92
	25	7	0.49	1.93	2.22	9	0.78	1.85	2.13
	30	8	0.55	1.65	1.90	10	0.86	1.65	1.90
	35	8	0.63	1.88	2.17	10	0.93	1.79	2.07
270°	20	7	0.65	1.71	1.97	9	1.05	1.66	1.92
	25	7	0.74	1.93	2.22	9	1.17	1.85	2.13
	30	8	0.82	1.65	1.90	10	1.28	1.65	1.90
	35	8	0.94	1.88	2.17	10	1.40	1.79	2.07
360°	20	7	0.87	1.71	1.97	9	1.40	1.66	1.92
	25	7	0.98	1.93	2.22	9	1.55	1.85	2.13
	30	8	1.10	1.65	1.90	10	1.71	1.65	1.90
	35	8	1.25	1.88	2.17	10	1.86	1.79	2.07
40	9	1.36	1.62	1.87	10	2.00	1.93	2.22	

PSU-04-10A-HE Pro High-Efficiency Nozzle



PS ULTRA - SPECIFICATION BUILDER: ORDER 1 + 2	
1 Model	2 Nozzles
PSU-02 = 2" pop-up	(blank) = Flush plug, no large filter screen
PSU-04 = 4" pop-up	8A-HE = 8' adjustable, high-efficiency nozzle
PSU-06 = 6" pop-up	10A-HE = 10' adjustable, high-efficiency nozzle
	12A-HE = 12' adjustable, high-efficiency nozzle
	15A-HE = 15' adjustable, high-efficiency nozzle
	17A-HE = 17' adjustable, high-efficiency nozzle
	5SS = 5' x 30' side strip (2" and 4" only)

Examples:  
PSU-02 - 5SS = 2" pop-up, with a 5' x 30' side strip  
PSU-06 - 10A-HE = 6" pop-up, with a 10' adjustable, high-efficiency nozzle  
PSU-04 = 4" pop-up, with flush plug, large filter screen not included

PS ULTRA WITH PRO HIGH-EFFICIENCY NOZZLE - PERFORMANCE DATA



**12A-HE**  
● Brown  
12' radius  
Adjustable from 0° to 360°  
Trajectory: 25°

**15A-HE**  
● Black  
15' radius  
Adjustable from 0° to 360°  
Trajectory: 25°

**17A-HE**  
● Gray  
17' radius  
Adjustable from 0° to 360°  
Trajectory: 25°

Arc	Pressure PSI	Radius ft	Flow			Precip in/hr			Radius ft	Flow GPM	Precip in/hr		
			GPM	■	▲	■	▲	GPM			■	▲	
90°	20	11	0.53	1.69	1.95	14	0.78	1.53	1.77	16	0.95	1.43	1.66
	25	11	0.59	1.88	2.17	14	0.88	1.73	2.00	16	1.07	1.60	1.85
	<b>30</b>	<b>12</b>	<b>0.63</b>	<b>1.68</b>	<b>1.95</b>	<b>15</b>	<b>0.96</b>	<b>1.64</b>	<b>1.90</b>	<b>17</b>	<b>1.24</b>	<b>1.65</b>	<b>1.91</b>
	35	12	0.70	1.87	2.16	15	1.07	1.83	2.11	17	1.29	1.72	1.99
180°	20	11	1.03	1.63	1.88	14	1.53	1.50	1.73	16	1.77	1.33	1.53
	25	11	1.12	1.78	2.06	14	1.69	1.66	1.91	16	2.04	1.53	1.77
	<b>30</b>	<b>12</b>	<b>1.22</b>	<b>1.63</b>	<b>1.88</b>	<b>15</b>	<b>1.87</b>	<b>1.60</b>	<b>1.85</b>	<b>17</b>	<b>2.36</b>	<b>1.57</b>	<b>1.82</b>
	35	12	1.33	1.78	2.05	15	2.05	1.75	2.03	17	2.47	1.64	1.90
270°	20	11	1.54	1.63	1.88	14	2.29	1.50	1.73	16	2.65	1.33	1.53
	25	11	1.68	1.78	2.06	14	2.53	1.66	1.91	16	3.05	1.53	1.77
	<b>30</b>	<b>12</b>	<b>1.83</b>	<b>1.63</b>	<b>1.88</b>	<b>15</b>	<b>2.81</b>	<b>1.60</b>	<b>1.85</b>	<b>17</b>	<b>3.54</b>	<b>1.57</b>	<b>1.82</b>
	35	12	2.00	1.78	2.05	15	3.08	1.75	2.03	17	3.70	1.64	1.90
360°	20	11	2.05	1.63	1.88	14	3.05	1.50	1.73	16	3.53	1.33	1.53
	25	11	2.24	1.78	2.06	14	3.37	1.66	1.91	16	4.07	1.53	1.77
	<b>30</b>	<b>12</b>	<b>2.44</b>	<b>1.63</b>	<b>1.88</b>	<b>15</b>	<b>3.74</b>	<b>1.60</b>	<b>1.85</b>	<b>17</b>	<b>4.72</b>	<b>1.57</b>	<b>1.82</b>
	35	12	2.66	1.78	2.05	15	4.10	1.75	2.03	17	4.93	1.64	1.90
40	12	2.92	1.95	2.25	15	4.43	1.90	2.19	17	5.30	1.77	2.04	

Bold = Recommended pressure

STRIP PATTERN NOZZLE PERFORMANCE DATA

Model	Pressure PSI	Width x Length ft.	Flow GPM
<b>SS-530</b>	20	4 x 28	1.10
	25	5 x 30	1.20
	<b>30</b>	<b>5 x 30</b>	<b>1.30</b>
	35	5 x 30	1.40
	40	5 x 30	1.50

Bold = Recommended pressure

# PRO-SPRAY®

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

## KEY BENEFITS

- Industry's strongest spray body for years of reliable performance
- Co-molded wiper seal made from chemical- and chlorine-resistant materials
- Innovative seal design prevents cap-to-body leaks, even with a loose cap
- 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
- Compatible with all female-threaded nozzles

## OPERATING SPECIFICATIONS

- Operational pressure range: 15 to 100 PSI
- Warranty period: 5 years

## FACTORY-INSTALLED OPTIONS

- Check valve available for 4", 6", and 12" models (up to 10' of elevation)
- Reclaimed water ID cap

## USER-INSTALLED OPTIONS

- Drain check valve (up to 10' 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 Models

- PROS-00 = Shrub adapter
- PROS-02 = 2" pop-up
- PROS-03 = 3" pop-up
- PROS-04 = 4" pop-up
- PROS-06 = 6" pop-up (no side inlet)
- PROS-12 = 12" pop-up (no side inlet)

### 2 Options

- (blank) = No option
- CV = Factory-installed drain check valve (Pop-up models only)
- R = Factory-installed reclaimed body cap (Shrub molded in purple)

## PRO-SPRAY (SIDE INLET) MODELS

### Model

- PROS-06-SI = 6" pop-up with side inlet
- PROS-12-SI = 12" pop-up with side inlet

### Examples:

- PROS-04 = 4" pop-up
- PROS-06-CV = 6" pop-up, drain check valve
- PROS-12-CV-R = 12" pop-up, drain check valve, reclaimed body cap



**PROS-00**  
Retracted height: 1½"  
Inlet size: ½"

**PROS-02**  
Retracted height: 4"  
Pop-up height: 2"  
Exposed diameter: 2¼"  
Inlet size: ½"



**PROS-03**  
Retracted height: 5"  
Pop-up height: 3"  
Exposed diameter: 2¼"  
Inlet size: ½"

**PROS-04**  
Retracted height: 5⅞"  
Pop-up height: 4"  
Exposed diameter: 2¼"  
Inlet size: ½"



[A] **PROS-06-SI**  
[B] **PROS-06**  
Retracted height: 8¾"  
Pop-up height: 6"  
Exposed diameter: 2¼"  
Inlet size: ½"

[A] **PROS-12-SI**  
[B] **PROS-12**  
Retracted height: 16⅞"  
Pop-up height: 12"  
Exposed diameter: 2¼"  
Inlet size: ½"

Compatible with:  
½" Swing Joints  
Page 62

# PRO-SPRAY® PRS30

To maintain consistent performance and reduce water waste, the Pro-Spray PRS30 Sprinkler Body is pressure-regulated to an optimal pressure of 30 PSI.

## KEY BENEFITS

- Industry's strongest spray sprinkler body for years of reliable performance
- Pressure-regulated to 30 PSI for optimal nozzle performance
- Brown cap for easy field identification
- Co-molded 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
- Compatible with all female-threaded nozzles

## OPERATING SPECIFICATIONS

- Operational pressure range: 15 to 100 PSI
- Warranty period: 5 years

## FACTORY-INSTALLED OPTIONS

- Check valve available for 4", 6", and 12" models (up to 14' of elevation)
- Reclaimed water identification
- FloGuard Technology available for check valve models

## USER-INSTALLED OPTIONS

- Check valve: P/N 437400SP
  - Up to 10' of elevation for 3" model
  - Up to 14' of elevation for 4", 6", and 12" models
- 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

Optional factory-installed purple reclaimed water caps



### FloGuard Technology

Eliminate water waste in the event of a missing nozzle



### EPA WaterSense® Certified

Recognized as a responsible water-saving tool by the U.S. Environmental Protection Agency



**PROS-00-PRS30**  
Retracted height: 4½"  
Inlet size: ½"



**PROS-03-PRS30**  
Retracted height: 5"  
Pop-up height: 3"  
Exposed diameter: 2¼"  
Inlet size: ½"



**PROS-04-PRS30**  
Retracted height: 5⅞"  
Pop-up height: 4"  
Exposed diameter: 2¼"  
Inlet size: ½"



[A] **PROS-06-SI-PRS30**  
[B] **PROS-06-PRS30**  
Retracted height: 8¾"  
Pop-up height: 6"  
Exposed diameter: 2¼"  
Inlet size: ½"



[A] **PROS-12-SI-PRS30**  
[B] **PROS-12-PRS30**  
Retracted height: 16½"  
Pop-up height: 12"  
Exposed diameter: 2¼"  
Inlet size: ½"

## PRO-SPRAY PRS30 - SPECIFICATION BUILDER: ORDER 1 + 2 + 3

1 Model	2 Feature Options	3 Specialty Options
<b>PROS-00-PRS30</b> = 30 PSI regulated shub adapter <b>PROS-03-PRS30</b> = 30 PSI regulated 3" pop-up <b>PROS-04-PRS30</b> = 30 PSI regulated 4" pop-up <b>PROS-06-PRS30</b> = 30 PSI regulated 6" pop-up <b>PROS-12-PRS30</b> = 30 PSI regulated 12" pop-up	<b>(blank)</b> = No option <b>CV</b> = Factory-installed drain check valve (4", 6", and 12" models only)	<b>(blank)</b> = No option <b>R</b> = Factory-installed reclaimed body cap <b>F</b> = FloGuard Technology (4", 6", and 12" models only) <b>F-R</b> = FloGuard Technology with reclaimed body cap (4", 6", and 12" models only)

## PRO-SPRAY PRS30 (SIDE INLET) MODELS

### Model

**PROS-06-SI-PRS30** = 30 PSI regulated 6" pop-up with side inlet

**PROS-12-SI-PRS30** = 30 PSI regulated 12" pop-up with side inlet

### Examples:

**PROS-06-SI-PRS30** = 6" pop-up with side inlet regulated at 30 PSI  
**PROS-06-PRS30-CV** = 6" pop-up regulated at 30 PSI, drain check valve  
**PROS-12-PRS30-CV-F-R** = 12" pop-up regulated at 30 PSI, drain check valve, and FloGuard Technology with reclaimed body cap

## Compatible with:



**Pro High-Efficiency Nozzles**  
Page 64

**Pro Fixed Nozzles**  
Page 66



**½" Swing Joints**  
Page 62

# PRO-SPRAY® PRS40

To optimize MP Rotator® Nozzle performance, the Pro-Spray PRS40 Sprinkler Body is pressure-regulated to 40 PSI.

## KEY BENEFITS

- Industry's strongest spray sprinkler body for years of reliable performance
- Pressure-regulated to 40 PSI for the MP Rotator Nozzle
- Gray cap for easy field identification
- Co-molded 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: 15 to 100 PSI
- Warranty period: 5 years

## FACTORY-INSTALLED OPTIONS

- Check valve available for 4", 6", and 12" models (up to 14' of elevation)
- Reclaimed water identification
- FloGuard Technology available for pop-up models

## USER-INSTALLED OPTIONS

- Check valve: P/N 437400SP
  - Up to 10' of elevation for 3" model
  - Up to 14' of elevation for 4", 6", and 12" models
- 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**  
Optional factory-installed purple reclaimed water caps



**FloGuard Technology**  
Eliminate water waste in the event of a missing nozzle



**EPA WaterSense® Approved**  
Recognized as a responsible water-saving tool by the U.S. Environmental Protection Agency



**PROS-00-PRS40**  
Retracted height: 4½"  
Inlet size: ½"

**PROS-03-PRS40**  
Retracted height: 5"  
Pop-up height: 3"  
Exposed diameter: 2¼"  
Inlet size: ½"



**PROS-04-PRS40-CV**  
Retracted height: 5⅞"  
Pop-up height: 4"  
Exposed diameter: 2¼"  
Inlet size: ½"



**PROS-06-PRS40-CV**  
Retracted height: 8¾"  
Pop-up height: 6"  
Exposed diameter: 2¼"  
Inlet size: ½"

**PROS-12-PRS40-CV**  
Retracted height: 16⅞"  
Pop-up height: 12"  
Exposed diameter: 2¼"  
Inlet size: ½"

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

1 Model	2 Feature Options	3 Specialty Options
<b>PROS-00-PRS40</b> = 40 PSI regulated shrub adapter <b>PROS-03-PRS40</b> = 40 PSI regulated 3" pop-up <b>PROS-04-PRS40</b> = 40 PSI regulated 4" pop-up <b>PROS-06-PRS40</b> = 40 PSI regulated 6" pop-up <b>PROS-12-PRS40</b> = 40 PSI regulated 12" pop-up	<b>(blank)</b> = No option <b>CV</b> = Factory-installed drain check valve (4", 6", and 12" models only)	<b>(blank)</b> = No option <b>R</b> = Factory-installed reclaimed body cap <b>F</b> = FloGuard Technology (4", 6", and 12" models only) <b>F-R</b> = FloGuard Technology with reclaimed body cap (4", 6", and 12" models only)

## PRO-SPRAY PRS40 (SIDE INLET) MODELS

Model
<b>PROS-06-SI-PRS40</b> = 40 PSI regulated 6" pop-up with side inlet
<b>PROS-12-SI-PRS40</b> = 40 PSI regulated 12" pop-up with side inlet

**Examples:**  
**PROS-06-SI-PRS40** = 6" pop-up with side inlet regulated at 40 PSI  
**PROS-06-PRS40-CV** = 6" pop-up regulated at 40 PSI, drain check valve  
**PROS-12-PRS40-CV-F-R** = 12" pop-up regulated at 40 PSI, drain check valve, and FloGuard Technology with reclaimed body cap

Compatible with:



**MP Rotator Nozzles**  
Page 42



**½" Swing Joints**  
Page 62

# SPRAY ACCESSORIES

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

## SJ SWING JOINTS

### Features

- Unique swivel ells on both ends for easy installation in any configuration
- Airtight connection points for long-term reliability

### Models

- SJ-506: ½" threaded x 6" length standard
- SJ-7506: ½" x ¾" threaded x 6" length
- SJ-706: ¾" threaded x 6" length
- SJ-512: ½" threaded x 12" length
- SJ-7512: ½" x ¾" threaded x 12" length
- SJ-712: ¾" threaded x 12" length

### Operating Specifications

- Pressure-rated to 150 PSI
- Warranty period: 2 years

## HUNTER SPIRAL BARB ELBOWS

### Features

- Improved bigger, stronger design
- Compatible with FlexSG Tubing and other brands for a customized swing joint
- Spiral-to-barb design for easier installation
- Acetal material for sharp barbs

### Models

- HSBE-050: ½" male thread x spiral barb elbow
- HSBE-075: ¾" male thread x spiral barb elbow

### Operating Specifications

- Operating pressure: Up to 80 PSI
- Warranty period: 2 years

## FLEXSG TUBING

### Features

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

### Models

- FLEXSG-100: 100' roll
- FLEXSG-18: 18" pre-cut lengths

### Operating Specifications

- Operating pressure: up to 80 PSI
- Warranty period: 2 years

## PRO-SPRAY SHUTOFF CAP

### Features

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

### Models

- 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

- P/N 916400SP



**SJ Swing Joints**  
6" and 12" links



**Spiral Barb Elbows**  
P/N HSBE-050, P/N HSBE-075



**FlexSG Tubing**  
100' and 18" pre-cut lengths  
Inside diameter: 0.49"

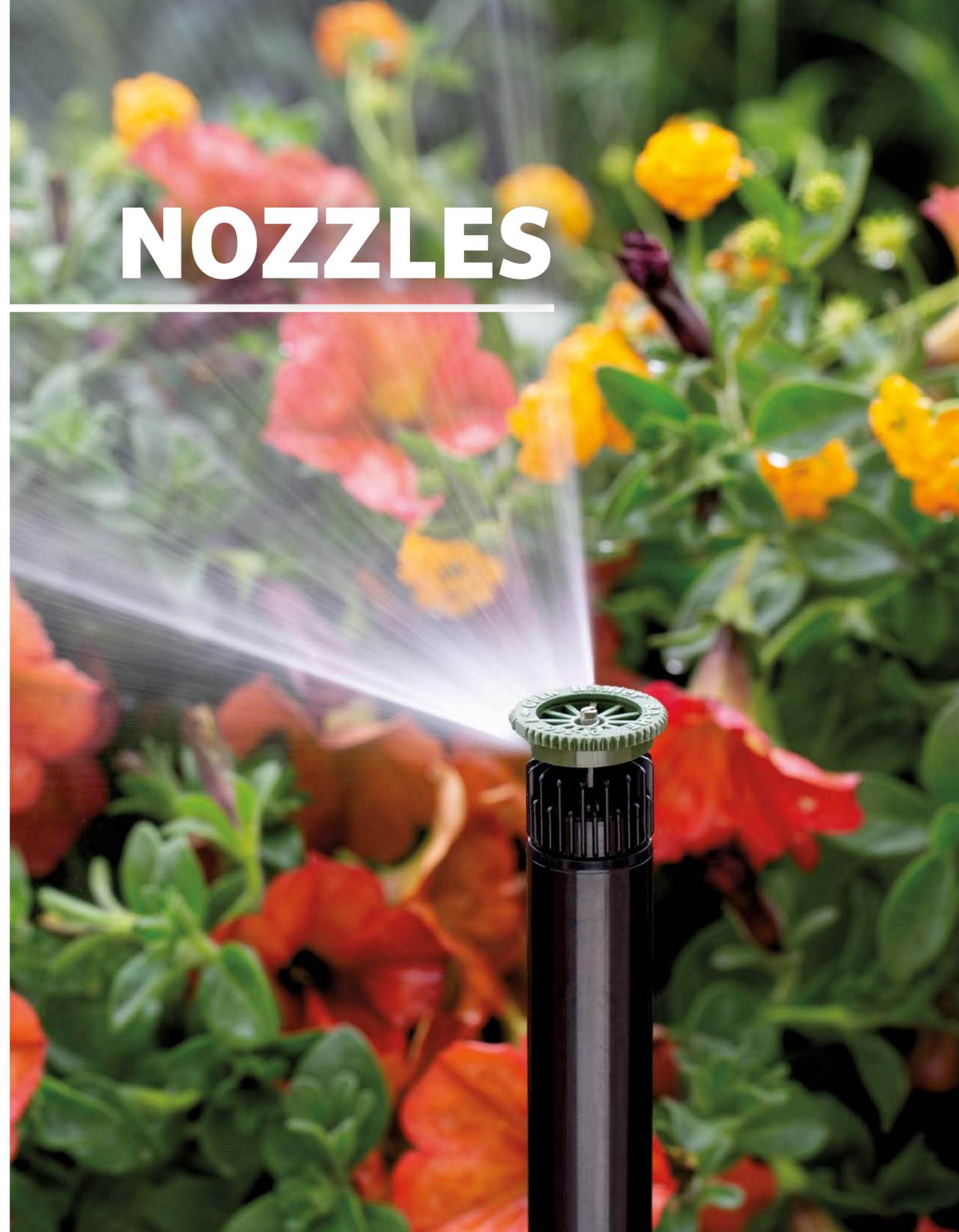


**Pro-Spray Shutoff Cap**  
P/N 213600SP



**Shutoff Nozzle**  
P/N 916400SP

# NOZZLES



# PRO HIGH-EFFICIENCY NOZZLES

Pro High-Efficiency Nozzles provide increased efficiency for spray systems through high uniformity from the spray pattern at a matched precipitation rate across the line.

## KEY BENEFITS

- High-efficiency performance from a high-uniformity spray pattern
- Matched precipitation of 1.6 in/hr from 8' to 17' across the 0° to 360° adjustable arc range
- Smooth spray pattern with well-defined edges for targeted landscape irrigation
- Color-coded with natural hues to blend with the landscape and provide easy field identification

## ADDITIONAL FEATURES

- Simple arc adjustment using the easy-grip nozzle top
- Thick nozzle top offers long-lasting durability against equipment damage
- Fast installation with clear identification of spray pattern edges

## OPERATING SPECIFICATIONS

- Recommended operating pressure: 30 PSI
- Pair with Pro-Spray® PRS30 Sprinkler Bodies for pressure regulation to 30 PSI
- Warranty period: 2 years



**8A-HE Nozzle**  
Radius: 8'



**10A-HE Nozzle**  
Radius: 10'



**12A-HE Nozzle**  
Radius: 12'



**15A-HE Nozzle**  
Radius: 15'



**17A-HE Nozzle**  
Radius: 17'

## PRO HIGH-EFFICIENCY NOZZLES PERFORMANCE DATA



**8A-HE**  
● Olive Green  
8' radius  
Adjustable from 0° to 360°  
Trajectory: 20°

**10A-HE**  
● Dark Blue  
10' radius  
Adjustable from 0° to 360°  
Trajectory: 25°

Arc	Pressure PSI	Radius ft	Flow			Precip in/hr			
			GPM	■	▲	ft	GPM	■	▲
90°	20	7	0.23	1.81	2.09	9	0.36	1.71	1.98
	25	7	0.27	2.12	2.45	9	0.41	1.95	2.25
	<b>30</b>	<b>8</b>	<b>0.28</b>	<b>1.68</b>	<b>1.95</b>	<b>10</b>	<b>0.44</b>	<b>1.69</b>	<b>1.96</b>
	35	8	0.32	1.93	2.22	10	0.48	1.85	2.13
180°	20	7	0.44	1.71	1.97	9	0.70	1.66	1.92
	25	7	0.49	1.93	2.22	9	0.78	1.85	2.13
	<b>30</b>	<b>8</b>	<b>0.55</b>	<b>1.65</b>	<b>1.90</b>	<b>10</b>	<b>0.86</b>	<b>1.65</b>	<b>1.90</b>
	35	8	0.63	1.88	2.17	10	0.93	1.79	2.07
270°	20	7	0.65	1.71	1.97	9	1.05	1.66	1.92
	25	7	0.74	1.93	2.22	9	1.17	1.85	2.13
	<b>30</b>	<b>8</b>	<b>0.82</b>	<b>1.65</b>	<b>1.90</b>	<b>10</b>	<b>1.28</b>	<b>1.65</b>	<b>1.90</b>
	35	8	0.94	1.88	2.17	10	1.40	1.79	2.07
360°	20	7	0.87	1.71	1.97	9	1.40	1.66	1.92
	25	7	0.98	1.93	2.22	9	1.55	1.85	2.13
	<b>30</b>	<b>8</b>	<b>1.10</b>	<b>1.65</b>	<b>1.90</b>	<b>10</b>	<b>1.71</b>	<b>1.65</b>	<b>1.90</b>
	35	8	1.25	1.88	2.17	10	1.86	1.79	2.07
40	9	1.36	1.62	1.87	10	2.00	1.93	2.22	

## PRO HIGH-EFFICIENCY NOZZLES PERFORMANCE DATA



**12A-HE**  
● Brown  
12' radius  
Adjustable from 0° to 360°  
Trajectory: 25°



**15A-HE**  
● Black  
15' radius  
Adjustable from 0° to 360°  
Trajectory: 25°



**17A-HE**  
● Gray  
17' radius  
Adjustable from 0° to 360°  
Trajectory: 25°

Arc	Pressure PSI	Radius ft	Flow			Precip in/hr			Radius ft	Flow GPM	Precip in/hr		
			GPM	■	▲	ft	GPM	■			▲		
90°	20	11	0.53	1.69	1.95	14	0.78	1.53	1.77	16	0.95	1.43	1.66
	25	11	0.59	1.88	2.17	14	0.88	1.73	2.00	16	1.07	1.60	1.85
	<b>30</b>	<b>12</b>	<b>0.63</b>	<b>1.68</b>	<b>1.95</b>	<b>15</b>	<b>0.96</b>	<b>1.64</b>	<b>1.90</b>	<b>17</b>	<b>1.24</b>	<b>1.65</b>	<b>1.91</b>
	35	12	0.70	1.87	2.16	15	1.07	1.83	2.11	17	1.29	1.72	1.99
180°	20	11	1.03	1.63	1.88	14	1.53	1.50	1.73	16	1.77	1.33	1.53
	25	11	1.12	1.78	2.06	14	1.69	1.66	1.91	16	2.04	1.53	1.77
	<b>30</b>	<b>12</b>	<b>1.22</b>	<b>1.63</b>	<b>1.88</b>	<b>15</b>	<b>1.87</b>	<b>1.60</b>	<b>1.85</b>	<b>17</b>	<b>2.36</b>	<b>1.57</b>	<b>1.82</b>
	35	12	1.33	1.78	2.05	15	2.05	1.75	2.03	17	2.47	1.64	1.90
270°	20	11	1.54	1.63	1.88	14	2.29	1.50	1.73	16	2.65	1.33	1.53
	25	11	1.68	1.78	2.06	14	2.53	1.66	1.91	16	3.05	1.53	1.77
	<b>30</b>	<b>12</b>	<b>1.83</b>	<b>1.63</b>	<b>1.88</b>	<b>15</b>	<b>2.81</b>	<b>1.60</b>	<b>1.85</b>	<b>17</b>	<b>3.54</b>	<b>1.57</b>	<b>1.82</b>
	35	12	2.00	1.78	2.05	15	3.08	1.75	2.03	17	3.70	1.64	1.90
360°	20	11	2.05	1.63	1.88	14	3.05	1.50	1.73	16	3.53	1.33	1.53
	25	11	2.24	1.78	2.06	14	3.37	1.66	1.91	16	4.07	1.53	1.77
	<b>30</b>	<b>12</b>	<b>2.44</b>	<b>1.63</b>	<b>1.88</b>	<b>15</b>	<b>3.74</b>	<b>1.60</b>	<b>1.85</b>	<b>17</b>	<b>4.72</b>	<b>1.57</b>	<b>1.82</b>
	35	12	2.66	1.78	2.05	15	4.10	1.75	2.03	17	4.93	1.64	1.90
40	12	2.92	1.95	2.25	15	4.43	1.90	2.19	17	5.30	1.77	2.04	

**Bold** = Recommended pressure

**Note:** The Pro-Spray PRS30 Sprinkler Body's built-in pressure regulator controls output to a maximum of 30 PSI. Adjusting the radius reduction screw may be required to achieve catalog radius and flow.

## Pro High-Efficiency Nozzles



# PRO FIXED NOZZLES

Pro Fixed 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 minimize misting with better uniformity
- Sturdy construction ensures reliable performance
- Color-coded for easy field identification

## OPERATING SPECIFICATIONS

- Recommended operating pressure: 30 PSI
- Pair with Pro-Spray® PRS30 Sprinkler Bodies for pressure regulation to 30 PSI
- Warranty period: 2 years

PRO FIXED NOZZLES						
ARC	5	8	10	12	15	17
Q						
T	Use 4A/6A Nozzle					Use 17A Nozzle
H						
F						Use 17A Nozzle
	5'	8'	10'	12'	15'	17'

Pro Fixed Nozzles



## PRO FIXED NOZZLES PERFORMANCE DATA

														
		5 5' radius Fixed: ¼, ½, Full Trajectory: 0° ● Blue				8 8' radius Fixed: ¼, ½, Full Trajectory: 15° ● Brown				10 10' radius Fixed: ¼, ½, Full Trajectory: 15° ● Red				
Arc	Position	Pressure PSI	Radius ft	Flow GPM	Precip in/hr	Radius ft	Flow GPM	Precip in/hr	Radius ft	Flow GPM	Precip in/hr			
90°	Q	20	4	0.09	2.25	2.60	7	0.20	1.54	1.78	9	0.34	1.63	1.88
		25	4	0.11	2.54	2.94	8	0.22	1.33	1.53	10	0.39	1.48	1.71
		30	5	<b>0.12</b>	<b>1.80</b>	<b>2.08</b>	<b>8</b>	<b>0.24</b>	<b>1.46</b>	<b>1.69</b>	<b>10</b>	<b>0.42</b>	<b>1.63</b>	<b>1.89</b>
		35	6	0.13	1.36	1.57	9	0.26	1.25	1.45	11	0.46	1.47	1.69
		40	6	0.14	1.46	1.69	9	0.28	1.34	1.55	11	0.49	1.57	1.82
120°	T	20	Use Hunter 4A or 6A Nozzle				7	0.26	1.54	1.78	9	0.46	1.63	1.88
		25	Use Hunter 4A or 6A Nozzle				8	0.29	1.33	1.53	10	0.51	1.48	1.71
		30	Use Hunter 4A or 6A Nozzle				<b>8</b>	<b>0.32</b>	<b>1.46</b>	<b>1.69</b>	<b>10</b>	<b>0.57</b>	<b>1.63</b>	<b>1.89</b>
		35	Use Hunter 4A or 6A Nozzle				9	0.35	1.25	1.45	11	0.61	1.47	1.69
		40	Use Hunter 4A or 6A Nozzle				9	0.38	1.34	1.55	11	0.66	1.57	1.82
180°	H	20	4	0.19	2.25	2.60	7	0.38	1.49	1.72	9	0.70	1.67	1.92
		25	4	0.21	2.54	2.94	8	0.43	1.28	1.48	10	0.79	1.53	1.76
		30	5	<b>0.23</b>	<b>1.80</b>	<b>2.08</b>	<b>8</b>	<b>0.47</b>	<b>1.41</b>	<b>1.63</b>	<b>10</b>	<b>0.88</b>	<b>1.69</b>	<b>1.95</b>
		35	6	0.25	1.36	1.57	9	0.51	1.21	1.39	11	0.95	1.52	1.75
		40	6	0.27	1.46	1.69	9	0.54	1.29	1.49	11	1.03	1.63	1.89
360°	F	20	4	0.37	2.25	2.60	7	0.78	1.54	1.78	9	1.29	1.53	1.77
		25	4	0.42	2.54	2.94	8	0.88	1.33	1.53	10	1.45	1.39	1.61
		30	5	<b>0.47</b>	<b>1.80</b>	<b>2.08</b>	<b>8</b>	<b>0.97</b>	<b>1.46</b>	<b>1.69</b>	<b>10</b>	<b>1.59</b>	<b>1.53</b>	<b>1.76</b>
		35	6	0.51	1.36	1.57	9	1.05	1.25	1.45	11	1.72	1.37	1.58
		40	6	0.55	1.46	1.69	9	1.13	1.34	1.55	11	1.84	1.46	1.69

Bold = Recommended pressure

## PRO FIXED NOZZLES PERFORMANCE DATA

														
		12 12' radius Fixed: ¼, ½, ¾, Full Trajectory: 28° ● Green				15 15' radius Fixed: ¼, ½, ¾, Full Trajectory: 28° ● Black				17 17' radius Fixed: ¼, ½ Trajectory: 28° ● Gray				
Arc	Position	Pressure PSI	Radius ft	Flow GPM	Precip in/hr	Radius ft	Flow GPM	Precip in/hr	Radius ft	Flow GPM	Precip in/hr			
90°	Q	20	11	0.54	1.71	1.98	14	0.78	1.53	1.77	16	0.93	1.40	1.61
		25	12	0.61	1.62	1.87	15	0.88	1.51	1.74	17	1.05	1.39	1.61
		30	12	<b>0.67</b>	<b>1.78</b>	<b>2.06</b>	<b>15</b>	<b>0.97</b>	<b>1.67</b>	<b>1.92</b>	<b>17</b>	<b>1.15</b>	<b>1.54</b>	<b>1.77</b>
		35	13	0.72	1.65	1.90	16	1.06	1.59	1.84	18	1.25	1.49	1.72
		40	13	0.78	1.77	2.04	17	1.14	1.52	1.75	19	1.34	1.43	1.65
120°	T	20	11	0.72	1.71	1.98	14	1.04	1.53	1.77	Use Hunter 17A Nozzle			
		25	12	0.81	1.62	1.87	15	1.17	1.51	1.74				
		30	12	<b>0.89</b>	<b>1.78</b>	<b>2.06</b>	<b>15</b>	<b>1.30</b>	<b>1.67</b>	<b>1.92</b>				
		35	13	0.97	1.65	1.90	16	1.41	1.59	1.84				
		40	13	1.04	1.77	2.04	17	1.52	1.52	1.75				
180°	H	20	11	1.05	1.67	1.93	14	1.51	1.48	1.71	16	1.91	1.43	1.66
		25	12	1.18	1.58	1.83	15	1.69	1.45	1.67	17	2.15	1.43	1.65
		30	12	<b>1.30</b>	<b>1.74</b>	<b>2.01</b>	<b>15</b>	<b>1.86</b>	<b>1.59</b>	<b>1.84</b>	<b>17</b>	<b>2.37</b>	<b>1.58</b>	<b>1.82</b>
		35	13	1.42	1.61	1.86	16	2.02	1.52	1.75	18	2.57	1.53	1.76
		40	13	1.52	1.73	2.00	17	2.16	1.44	1.66	19	2.76	1.47	1.70
360°	F	20	11	2.17	1.72	1.99	14	3.04	1.49	1.72	Use Hunter 17A Nozzle			
		25	12	2.45	1.63	1.89	15	3.41	1.46	1.69				
		30	12	<b>2.70</b>	<b>1.80</b>	<b>2.08</b>	<b>15</b>	<b>3.75</b>	<b>1.61</b>	<b>1.85</b>				
		35	13	2.93	1.67	1.93	16	4.07	1.53	1.76				
		40	13	3.15	1.80	2.07	17	4.36	1.45	1.68				

Bold = Recommended pressure

# PRO ADJUSTABLE NOZZLES

Choose Pro Adjustable Nozzles for adjustable-arc, short-radius needs.

## 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 minimize misting with better uniformity

## ADDITIONAL FEATURES

- Even distribution results in better coverage
- Color-coded for easy field identification

## OPERATING SPECIFICATIONS

- Recommended operating pressure: 30 PSI
- Pair with Pro-Spray PRS30 pop-up for pressure regulation to 30 PSI
- Warranty period: 2 years



4A  
Radius: 4'



6A  
Radius: 6'

### PRO ADJUSTABLE NOZZLES PERFORMANCE



4A

● Lt. Green

4' radius  
Adjustable from  
0° to 360°  
Trajectory: 0°



6A

● Lt. Blue

6' radius  
Adjustable from  
0° to 360°  
Trajectory: 0°

Arc	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr		Radius ft.	Flow GPM	Precip in/hr	
				■	▲			■	▲
45° ▶	20	3	0.10	7.29	8.42	5	0.15	4.19	4.84
	25	3	0.11	7.12	8.22	5	0.17	4.36	5.03
	<b>30</b>	<b>4</b>	<b>0.13</b>	<b>6.26</b>	<b>7.22</b>	<b>6</b>	<b>0.18</b>	<b>3.85</b>	<b>4.45</b>
	35	4	0.14	6.11	7.06	6	0.18	3.55	4.10
90° ◐	20	3	0.19	6.93	8.00	5	0.30	4.19	4.84
	25	3	0.20	6.47	7.47	5	0.34	4.49	5.18
	<b>30</b>	<b>4</b>	<b>0.22</b>	<b>5.29</b>	<b>6.11</b>	<b>6</b>	<b>0.37</b>	<b>3.96</b>	<b>4.57</b>
	35	4	0.24	5.24	6.05	6	0.38	3.75	4.32
120° ◑	20	3	0.28	7.65	8.84	5	0.37	3.88	4.48
	25	3	0.30	7.28	8.40	5	0.38	3.76	4.35
	<b>30</b>	<b>4</b>	<b>0.34</b>	<b>6.14</b>	<b>7.09</b>	<b>6</b>	<b>0.44</b>	<b>3.53</b>	<b>4.08</b>
	35	4	0.36	5.81	6.71	6	0.46	3.40	3.93
180° ◒	20	3	0.34	6.20	7.16	5	0.50	3.49	4.03
	25	3	0.38	6.15	7.10	5	0.54	3.56	4.12
	<b>30</b>	<b>4</b>	<b>0.45</b>	<b>5.41</b>	<b>6.25</b>	<b>6</b>	<b>0.60</b>	<b>3.21</b>	<b>3.70</b>
	35	4	0.46	5.02	5.80	6	0.64	3.15	3.64
240° ◓	20	3	0.58	7.93	9.15	5	0.73	3.82	4.42
	25	3	0.62	7.52	8.68	5	0.78	3.86	4.46
	<b>30</b>	<b>4</b>	<b>0.68</b>	<b>6.14</b>	<b>7.09</b>	<b>6</b>	<b>0.88</b>	<b>3.53</b>	<b>4.08</b>
	35	4	0.74	6.06	6.99	6	0.92	3.40	3.93
270° ◔	20	3	0.62	7.53	8.70	5	0.88	4.10	4.73
	25	3	0.66	7.12	8.22	5	0.98	4.31	4.98
	<b>30</b>	<b>4</b>	<b>0.73</b>	<b>5.86</b>	<b>6.76</b>	<b>6</b>	<b>1.10</b>	<b>3.92</b>	<b>4.53</b>
	35	4	0.78	5.67	6.55	6	1.15	3.78	4.36
360° ◕	20	3	0.66	6.01	6.94	5	1.05	3.67	4.23
	25	3	0.72	5.82	6.72	5	1.10	3.63	4.19
	<b>30</b>	<b>4</b>	<b>0.80</b>	<b>4.81</b>	<b>5.56</b>	<b>6</b>	<b>1.26</b>	<b>3.37</b>	<b>3.89</b>
	35	4	0.86	4.69	5.42	6	1.30	3.20	3.70
40	4	0.90	4.47	5.17	6	1.40	3.29	3.80	

**Bold** = Recommended pressure

**Note:** The Pro-Spray PRS30's built-in pressure regulator controls output to a maximum of 30 PSI. Adjusting the radius reduction screw may be required to achieve catalog radius and flow.

# 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 30 GPH max flow at 30 PSI
- Built to last for a robust overhead solution for small spaces

## OPERATING SPECIFICATIONS

- Recommended operating pressure: 30 PSI
- Pair with Pro-Spray PRS30 pop-up for pressure regulation to 30 PSI

### SHORT-RADIUS NOZZLES PERFORMANCE DATA

● Lt. Brown

Arc	Pressure PSI	Position	Radius ft.	Flow		*Precip in/hr
				GPM	GPH	
90° ◐	20	2Q	2	0.09	5.4	2.17
	25		2	0.10	6.0	2.41
	<b>30</b>		2	<b>0.11</b>	<b>6.6</b>	<b>2.65</b>
	35		2	0.13	7.8	3.13
180° ◒	20	2H	2	0.14	8.4	3.37
	25		2	0.15	9.0	1.80
	<b>30</b>		2	<b>0.20</b>	<b>12.0</b>	<b>2.41</b>
	35		2	0.20	12.0	2.41
40	2	0.21	12.6	2.53		

### SHORT-RADIUS NOZZLES PERFORMANCE DATA

● Lt. Green

Arc	Pressure PSI	Position	Radius ft.	Flow		*Precip in/hr
				GPM	GPH	
90° ◐	20	4Q	4	0.18	10.8	1.08
	25		4	0.20	12.0	1.20
	<b>30</b>		4	<b>0.20</b>	<b>12.0</b>	<b>1.20</b>
	35		4	0.22	13.2	1.32
180° ◒	20	4H	4	0.24	14.4	1.44
	25		4	0.33	19.8	0.99
	<b>30</b>		4	<b>0.34</b>	<b>20.4</b>	<b>1.02</b>
	35		4	0.40	24.0	1.20
40	4	0.44	26.4	1.32		

### SHORT-RADIUS NOZZLES PERFORMANCE DATA

● Lt. Blue

Arc	Pressure PSI	Position	Radius ft.	Flow		*Precip in/hr
				GPM	GPH	
90° ◐	20	6Q	6	0.22	13.2	0.59
	25		6	0.24	14.4	0.64
	<b>30</b>		6	<b>0.30</b>	<b>18.0</b>	<b>0.80</b>
	35		6	0.30	18.0	0.80
180° ◒	20	6H	6	0.30	18.0	0.80
	25		6	0.40	24.0	0.53
	<b>30</b>		6	<b>0.44</b>	<b>26.4</b>	<b>0.59</b>
	35		6	0.52	31.2	0.70
40	6	0.54	32.4	0.72		

**Bold** = Recommended pressure

\*Precipitation rate shown without overlap



2Q  
Radius: 2'



2H  
Radius: 2'



4Q  
Radius: 4'



4H  
Radius: 4'

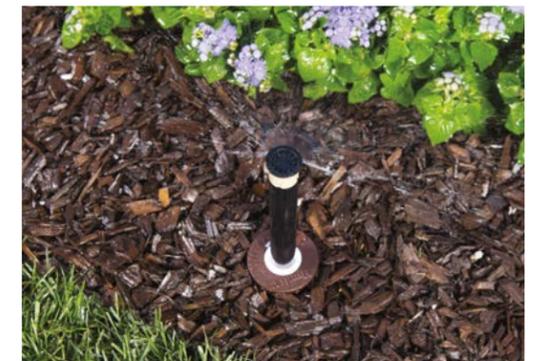


6Q  
Radius: 6'



6H  
Radius: 6'

Short-Radius Micro Spray Nozzle



# STRIP PATTERN NOZZLES

Irrigate narrow turf and planter areas accurately with fixed arc Strip Pattern 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: 30 PSI
- Pair with Pro-Spray® PRS30 pop-up for pressure regulation to 30 PSI
- Warranty period: 2 years

STRIP PATTERN NOZZLE PERFORMANCE DATA			
Arc	Pressure PSI	Width x Length	Flow GPM
LCS-515	20	4' x 14'	0.55
	25	5' x 15'	0.60
	<b>30</b>	5' x 15'	<b>0.65</b>
	35	5' x 15'	0.70
RCS-515	20	4' x 14'	0.55
	25	5' x 15'	0.60
	<b>30</b>	5' x 15'	<b>0.65</b>
	35	5' x 15'	0.70
SS-530	20	4' x 28'	1.10
	25	5' x 30'	1.20
	<b>30</b>	5' x 30'	<b>1.30</b>
	35	5' x 30'	1.40
SS-918	20	8' x 17'	1.45
	25	9' x 18'	1.58
	<b>30</b>	9' x 18'	<b>1.72</b>
	35	9' x 18'	1.88
CS-530	20	4' x 28'	1.10
	25	5' x 30'	1.20
	<b>30</b>	5' x 30'	<b>1.30</b>
	35	5' x 30'	1.40
ES-515	20	4' x 14'	0.55
	25	5' x 15'	0.60
	<b>30</b>	5' x 15'	<b>0.65</b>
	35	5' x 15'	0.70
40	5' x 15'	0.75	

**Bold** = Recommended pressure

See page 198 for precipitation rate calculation.



**Left Corner Strip**  
Rectangle: 5' x 15'



**Right Corner Strip**  
Rectangle: 5' x 15'



**Side Strip**  
Rectangle: 5' x 30'



**Side Strip**  
Rectangle: 9' x 18'



**Center Strip**  
Rectangle: 5' x 30'



**End Strip**  
Rectangle: 5' x 15'

RCS-515



# 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® Sprinkler Bodies

## OPERATING SPECIFICATIONS

- Recommended operating pressure for the most consistent performance: 30 PSI
- Warranty period: 2 years

### MULTI-STREAM BUBBLER PERFORMANCE DATA

Arc	Model	Flow GPM	Radius ft
●	MSBN-25V*	0.25	1.5
	MSBN-50V*	0.50	2.5
●	MSBN-25Q	0.25	1.0
	MSBN-50Q	0.50	1.5
●	MSBN-50H	0.50	1.0
	MSBN-10H	1.00	1.5
●	MSBN-10F	1.00	1.0
	MSBN-20F	2.00	1.5

Multi-Stream Bubbler



### Notes:

Typical spacing is 2' to 4'. Flow rates shown are based on pressures between 15 and 70 PSI. \*For a 6" pop-up, the radius is 2' at 0.25 GPM and 3' at 0.50 GPM.



### MSBN Installed on PROS-04

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

### PCN PERFORMANCE DATA

Model	Flow GPM	Pattern Type
● 25	0.25	Trickle
● 50	0.50	Trickle
● 10	1.00	Umbrella
● 20	2.00	Umbrella

PCN



### Notes:

Typical spacing 2' to 4'. Flows shown for pressures between 15 and 70 PSI.

### 5-CST-B BUBBLER NOZZLE PERFORMANCE DATA

Pressure (PSI)	Radius (ft.)	Flow (GPM)
20	5	0.30
25	5	0.32
<b>30</b>	<b>5</b>	<b>0.38</b>
35	5	0.40
40	5	0.42

5-CST-B



### MULTI-STREAM BUBBLER NOZZLES



**MSBN-25Q/25V**  
Flow: 0.25 GPM



**MSBN-50Q/50H/50V**  
Flow: 0.50 GPM



**MSBN-10H/10F**  
Flow: 1.0 GPM



**MSBN-20F**  
Flow: 2.0 GPM

### PCN BUBBLER NOZZLES



**PCN-25**  
Flow: 0.25 GPM



**PCN-50**  
Flow: 0.50 GPM



**PCN-10**  
Flow: 1.0 GPM



**PCN-20**  
Flow: 2.0 GPM

### 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 GPM	Pattern Type
	25	0.25	Trickle
	50	0.50	Trickle
	10	1.00	Umbrella
	20	2.00	Umbrella

#### Notes:

Typical spacing 2' to 4'. Flows shown for pressures between 15 and 70 PSI.

PCB



### PRESSURE-COMPENSATING BUBBLERS



PCB



PCB-R

### AFB PERFORMANCE DATA

	Model	Flow GPM	Pattern Type
	AFB	< 2.0	Trickle/ Umbrella

AFB



### ADJUSTABLE FLOOD BUBBLER



AFB

# HUNTER PRO-SPRAY® SPRINKLER BODIES AND NOZZLES

The most trusted spray solutions in the industry

Choose the right spray system from the start! The Hunter Pro-Spray Sprinkler Body lets you simplify inventory, save time, speed service calls, and ensure years of beautiful, healthy landscapes for your customers.

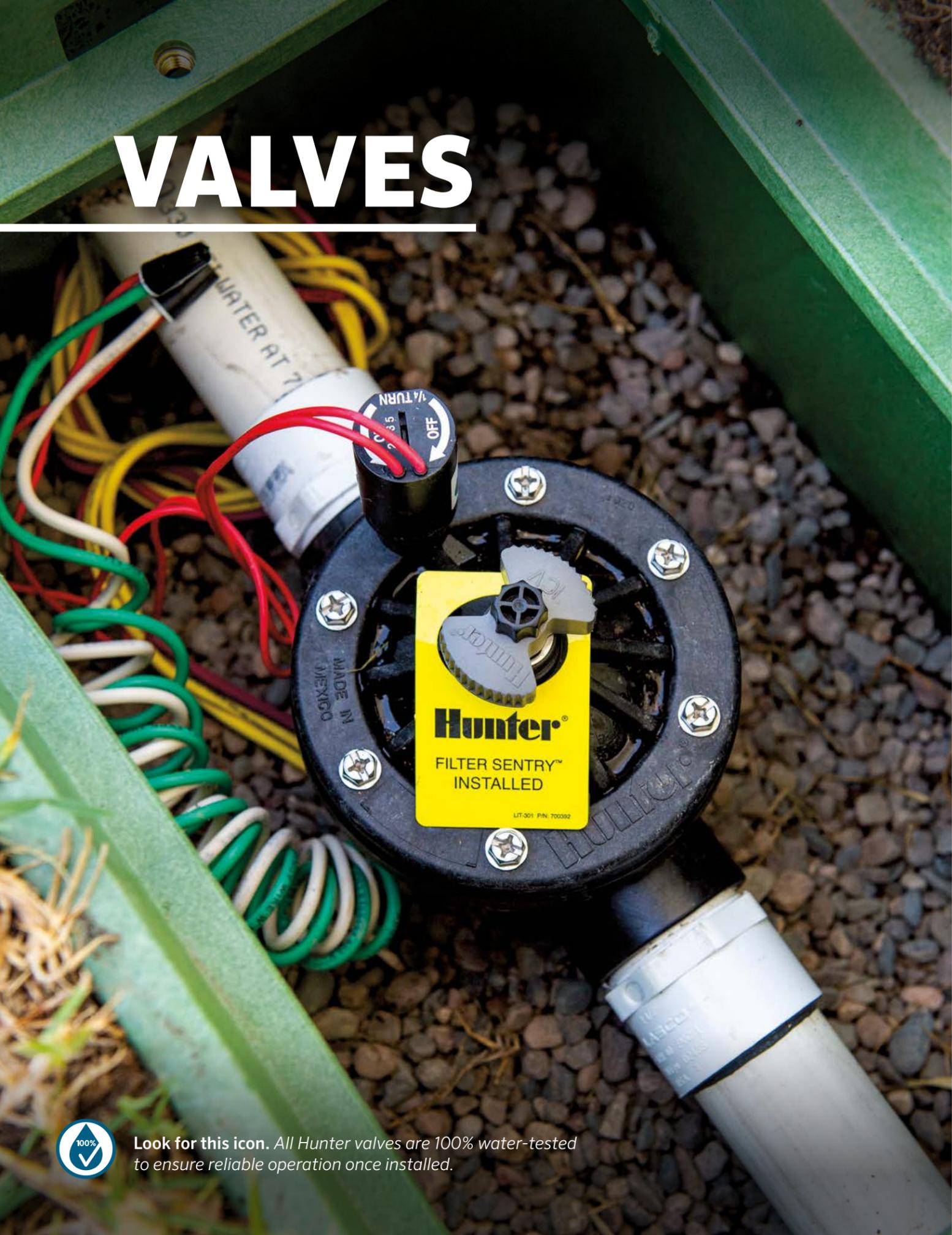
With a reputation as the industry's strongest, most versatile spray body, it's also compatible with a wide array of high-performing nozzles for maximum performance and even watering in all types of applications.

**HUNTER PRO-SPRAY**

- Ensure leak-free performance** with a co-molded wiper seal
- Directional flush plug design** for cleaner installation
- Make retrofitting a breeze** with a durable, interchangeable cap
- Stop water waste in the event of a missing nozzle** with optional FloGuard™ Technology
- Simplify inventory management** with the same body across all models
- Optimize field performance** with a pressure-regulated riser
- Stop runoff** with a field- or factory-installed check valve

**PRO HIGH-EFFICIENCY NOZZLES**  
High-uniformity spray pattern with well-defined edges for targeted landscape irrigation

# VALVES



Look for this icon. 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"	1½", 2"	1", 1½", 2", 3"	1", 1½", 2", 3"	1", 1½", 2", 3"
FLOW (GPM)	0.2 to 40	20 to 150	0.1 to 300	0.1 to 300	0.1 to 300
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® MECHANISM			User-Installed	Factory-Installed	Factory-Installed
ACCU SYNC® CAPABLE	●	●	●	●	●
RECLAIMED WATER ID HANDLE	User-Installed	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		●	●	●	●

VALVES

## Advanced Features

### ACCU SYNC PRESSURE REGULATORS

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 MECHANISM

For use with:  
ICV, IBV

The Filter Sentry Mechanism 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.



All Hunter valves are 100% water-tested to ensure reliable operation once installed. From residential to commercial applications, high pressure to low pressure, and clean water to dirty water, Hunter valves keep systems running flawlessly day in and day out.

# 1" PGV AND 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 maximizes efficiency and prolongs the life of the system

## USER-INSTALLED OPTIONS

- Accu Sync™ Pressure Regulator at the valve; see page 83
- DC-Latching Solenoid for battery-operated controllers (P/N 458200)
- Solenoid conduit cover (P/N 464322)

## FACTORY-INSTALLED OPTIONS

- LS: Valve without solenoid
- DC: DC-Latching Solenoid for battery-operated controllers; see page 86
- JT: Jar-top models

## OPERATING SPECIFICATIONS

- Flow: 0.2 to 40 GPM
- Recommended pressure range: 20 to 150 PSI
- Temperature rating: 150°F
- 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



**PGV-100-G VALVE**  
Inlet diameter: 1"  
Height: 5"  
Length: 4½"  
Width: 2½"



**PGV-101-G VALVE**  
Inlet diameter: 1"  
Height: 5"  
Length: 4½"  
Width: 2½"



**PGV-100-JT-G VALVE**  
Inlet diameter: 1"  
Height: 5½"  
Length: 4½"  
Width: ¾"



**PGV-101-JT-G VALVE**  
Inlet diameter: 1"  
Height: 5½"  
Length: 4½"  
Width: ¾"



**Double-Beaded Diaphragm**



**Captive Bonnet Bolts**

### PGV - SPECIFICATION BUILDER : ORDER 1 + 2 + 3 + 4 + 5

1 Model	2 Standard Features	3 Feature Options	4 Options	5 User-Installed Options
PGV-100 = 1"	Globe valve, without flow control, threaded inlet/outlet	<b>G</b> = Female threaded inlet/outlet	<b>DC</b> = DC-Latching Solenoid for battery-operated controllers	<b>AS-ADJ</b> = Adjustable Accu Sync Pressure Regulator
PGV-101 = 1"	Globe valve, with flow control, threaded inlet/outlet	<b>G-S</b> = Slip inlet /outlet  <b>MB</b> = Male NPT inlet/ 1" poly barb outlet  <b>MB-075</b> = Male NPT inlet/ ¾" poly barb outlet  <b>MB-125</b> = Male NPT inlet/ 1¼" poly barb outlet  <b>MM</b> = Male NPT inlet/ Male NPT outlet	<b>LS</b> = Less solenoid  <b>Blank</b> = No options	<b>458200</b> = DC-Latching Solenoid for battery-operated controllers  <b>269205</b> = Reclaimed flow control handle  <b>LIT-700</b> = Reclaimed ID tag
PGV-100-A = 1"	Angle valve, without flow control, threaded inlet/outlet	<b>Blank</b> = No options	<b>Blank</b> = No options	
PGV-101-A = 1"	Angle valve, with flow control, threaded inlet/outlet			

Example:  
PGV-101-MM = 1" PGV globe valve, with flow control, with male NPT inlet and outlet

### PGV JAR-TOP - SPECIFICATION BUILDER : ORDER 1 + 2 + 3 + 4 + 5

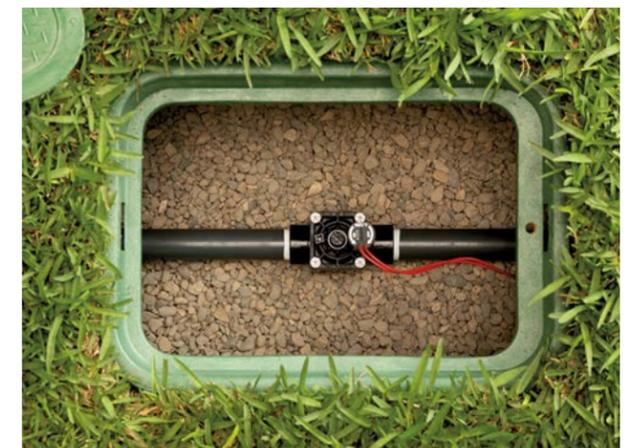
1 Model	2 Standard Features	3 Feature Options	4 Options	5 User-Installed Options
PGV-100-JT = 1"	Globe valve, without flow control, threaded inlet/outlet	<b>G</b> = Female threaded inlet/outlet	<b>DC</b> = DC-Latching Solenoid for battery-operated controllers	<b>AS-ADJ</b> = Adjustable Accu Sync Pressure Regulator
PGV-101-JT = 1"	Globe valve, with flow control, threaded inlet/outlet	<b>G-S</b> = Slip inlet /outlet  <b>MB</b> = Male NPT inlet/1" poly barb outlet  <b>MB-075</b> = Male NPT inlet/ ¾" poly barb outlet  <b>MB-125</b> = Male NPT inlet/ 1¼" poly barb outlet  <b>MM</b> = Male NPT inlet/ Male NPT outlet	<b>LS</b> = Less solenoid	<b>458200</b> = DC-Latching Solenoid for battery-operated controllers  <b>269205</b> = Reclaimed flow control handle  <b>LIT-700</b> = Reclaimed ID tag

Example:  
PGV-101-JT-MM = 1" PGV globe valve, with jar-top bonnet, with flow control, with male NPT inlet and outlet

### PGV PRESSURE LOSS IN PSI

GPM	Globe	Angle	Male x Male	Male x Barb
1	3	1	2	2
5	4	1	2	2
10	4	1	2	2
15	5	1	3	3
20	5	2	4	4
25	6	2	7	6
30	8	3	10	10
40	14	5	18	16

### PGV-100G Valve Installed



# PGV-ASV



Gain simple and trouble-free operation without the need for a separate backflow preventer.

## 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
- Removable anti-siphon cap for simple servicing
- Encapsulated solenoid with captive plunger used on every Hunter valve provides hassle-free service
- Flow control maximizes efficiency and prolongs the life of the system

## USER-INSTALLED OPTIONS

- Accu Sync® Pressure Regulator at the valve\*
- DC-Latching Solenoid for battery-operated controllers (P/N 458200)

## FACTORY-INSTALLED OPTIONS

- LS: Valve without solenoid
- DC: DC-Latching Solenoid for battery-operated controllers; [see page 86](#)

## OPERATING SPECIFICATIONS

- Flow: 0.2 to 40 GPM
- Recommended pressure range: 20 to 150 PSI
- Temperature rating: 150°F
- Warranty period: 2 years

\* Accu Sync product information on [page 83](#)



**PGV-075-ASV VALVE**  
Inlet diameter: ¾"  
Height: 5½"  
Length: 5¾"  
Width: 2½"



**PGV-101-ASV VALVE**  
Inlet diameter: 1"  
Height: 5½"  
Length: 6¼"  
Width: 2½"

**Double-Beaded Diaphragm**



PGV-ASV - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4			
1 Model	2 Standard Features	3 Feature Options	4 User-Installed Options
PGV-075-ASV = ¾"	Anti-siphon valve with flow control, threaded inlet/outlet	<b>(blank)</b> = No option	<b>AS-ADJ</b> = Adjustable Accu Sync Pressure Regulator
PGV-101-ASV = 1"			<b>458200</b> = DC-Latching Solenoid for battery-operated controllers
PGV-075-ASV-S = ¾"	Anti-siphon valve with flow control, slip inlet/outlet	<b>LS</b> = Less solenoid	<b>607105</b> = Reclaimed flow control handle
PGV-101-ASV-S = 1"			<b>LIT-700</b> = Reclaimed ID tag

Example:  
PGV-101-ASV-S = 1" PGV anti-siphon valve with slip inlet and outlet

PGV-ASV PRESSURE LOSS IN PSI		
Flow (GPM)	¾"	1"
1	1	1
5	2	2
10	2	2
15	3	3
20	6	6
25		6
30		9
35		16
40		20

# 1½" AND 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
- 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
- Flow control maximizes efficiency and prolongs the life of the system

## USER-INSTALLED OPTIONS

- Accu Sync® Pressure Regulator at the valve\*
- DC-Latching Solenoid for battery-operated controllers (P/N 458200)
- 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-operated controllers; [see page 86](#)

## OPERATING SPECIFICATIONS

- Flow:
  - PGV-151: 20 to 120 GPM
  - PGV-201: 20 to 150 GPM
- Recommended pressure range: 20 to 150 PSI
- Temperature rating: 150°F
- 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 83](#)

PGV 1½" & 2" - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4			
1 Model	2 Standard Features	3 Feature Options	4 User-Installed Options
PGV-151 = 1½"	Globe/angle valve with flow control	<b>(blank)</b> = No option	<b>AS-ADJ</b> = Adjustable Accu Sync Pressure Regulator
PGV-201 = 2"			<b>DC</b> = DC-Latching Solenoid for battery-operated controllers
		<b>LS</b> = Less solenoid	<b>458200</b> = DC-Latching Solenoid for battery-operated controllers
			<b>607105</b> = Reclaimed flow control handle
			<b>LIT-700</b> = Reclaimed ID tag

Example:  
PGV-201-AS-ADJ = 2" PGV globe/angle valve with flow control, user-installed adjustable Accu Sync Pressure Regulator

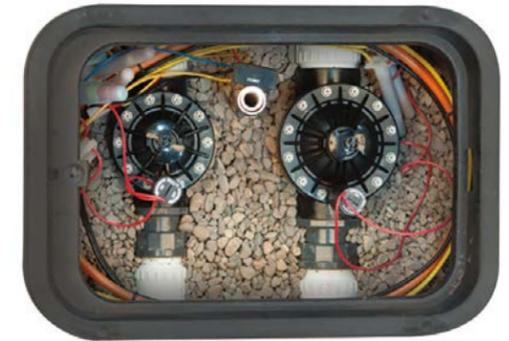


**PGV-151 VALVE**  
Inlet diameter: 1½"  
Height: 7½"  
Length: 5¾"  
Width: 4½"



**PGV-201 VALVE**  
Inlet diameter: 2"  
Height: 8"  
Length: 6¾"  
Width: 5½"

PGV Installed



PGV PRESSURE LOSS IN PSI				
Flow GPM	1½" Globe	1½" Angle	2" Globe	2" Angle
20	3	3	1	1
30	3	3	1	2
35	3	3	2	2
40	3	3	2	2
50	4	3.5	1	1
60	5	4	2	2
80	5.5	4.5	3	2
100	9	8	5	3
120	11.5	10.5	6	5
135			8	7
150			10	9



This dependable valve works seamlessly with highly demanding systems.

## KEY BENEFITS

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

## USER-INSTALLED OPTIONS

- Accu Sync® Pressure Regulator at the valve
- DC-Latching Solenoid for battery-operated controllers: P/N 458200
- Filter Sentry Mechanism easily added to an installed valve\*
- Solenoid conduit cover: P/N 464322

## FACTORY-INSTALLED OPTIONS

- LS: Valve without solenoid
- DC: DC-Latching Solenoid for battery-operated controllers; **see page 86**
- FS: Filter Sentry
- FS-R: Reclaimed option with Filter Sentry Mechanism, purple control knob, and purple, chlorine-resistant diaphragm (available only on 1½" and 2" models)

## OPERATING SPECIFICATIONS

- Flow:
  - ICV-101G: 0.1 to 40 GPM
  - ICV-151G: 0.1 to 150 GPM
  - ICV-201G: 0.1 to 200 GPM
  - ICV-301: 0.1 to 300 GPM
- Recommended pressure range: 20 to 220 PSI
- Temperature rating: 150°F
- 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 83**



**ICV-101G VALVE**  
Inlet diameter: 1"  
Height: 5½"  
Length: 4¾"  
Width: 4"



**ICV-151G VALVE**  
Inlet diameter: 1½"  
Height: 7⅞"  
Length: 6⅞"  
Width: 5½"



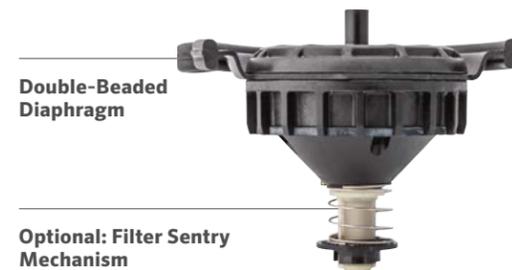
**ICV-201G VALVE**  
Inlet diameter: 2"  
Height: 7⅞"  
Length: 6⅞"  
Width: 5½"



**ICV-301 VALVE**  
Inlet diameter: 3"  
Height: 10¾"  
Length: 9"  
Width: 7⅞"



**ICV-R VALVE**  
Inlet diameter: 1", 1½", 2", and 3"  
Height: 7⅞"  
Length: 6⅞"  
Width: 5½"



**Double-Beaded Diaphragm**

**Optional: Filter Sentry Mechanism**

## ICV 1", 1½", 2", & 3" - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1	Model	2	Standard Features	3	Feature Options	4	User-Installed Options
	ICV-101G = 1" ICV-151G = 1½" ICV-201G = 2" ICV-301 = 3"		Globe valve with flow control  Globe / Angle valve with flow control		(blank) = No option  FS = Filter Sentry Mechanism  FS-R = Purple reclaimed Filter Sentry Mechanism and ID tag (except 3" model)  DC = DC-Latching Solenoid for battery-operated controllers  LS = Less solenoid		AS-ADJ = Adjustable Accu Sync Pressure Regulator  458200 = DC-Latching Solenoid for battery-operated controllers  561205 = Reclaimed flow control handle (1", 1½", 2" only)  LIT-700 = Reclaimed ID tag

### Example:

ICV-201G-AS-ADJ = 2" ICV globe valve with flow control, user-installed adjustable Accu Sync Pressure Regulator

## ICV PRESSURE LOSS (AT OPTIMAL FLOWS) IN PSI

Flow (GPM)	1" Globe	1½" Globe	2" Globe	3" Globe	3" Angle
0.1	2.0				
0.5	2.0				
1	2.0				
5	2.5				
10	3.0				
15	3.0				
20	3.0	1.5			
30	9.0	1.5			
40	20.0	1.7	0.8		
50		2.2	1.2		
60		3.0	1.7		
75		3.9	2.4		
90		5.5	3.2		
100		7.0	4.2		
120		10.9	6.5		
135		12.7	7.9		
150		16.2	9.8	2.5	1.9
175			13.3	3.0	2.4
200			17.7	4.1	3.3
225				5.3	4.3
250				6.7	5.5
275				8.3	6.9
300				10.1	8.5

**Double-Beaded Chlorine-Resistant Diaphragm**



**Filter Sentry Mechanism**

**Captive Bonnet Bolts**





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 maximizes efficiency and prolongs the life of the system

## USER-INSTALLED OPTIONS

- Accu Sync® Pressure Regulator at the valve\*
- DC-Latching Solenoid for battery-operated controllers (P/N 458200)
- Solenoid conduit cover (P/N 464322)

## FACTORY-INSTALLED OPTIONS

- DC: DC-Latching Solenoid for battery-operated controllers; **see page 86**

## OPERATING SPECIFICATIONS

- Flow:
  - IBV-101G: 0.1 to 40 GPM
  - IBV-151G: 0.1 to 150 GPM
  - IBV-201G: 0.1 to 200 GPM
  - IBV-301G: 0.1 to 300 GPM
- Recommended pressure range: 20 to 220 PSI
- Temperature rating: 150°F
- 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 83**



**IBV-101G-FS VALVE**  
Inlet diameter: 1"  
Height: 5¼"  
Length: 4½"  
Width: 3"



**IBV-151G-FS VALVE**  
Inlet diameter: 1½"  
Height: 6½"  
Length: 6"



**IBV-201G-FS VALVE**  
Inlet diameter: 2"  
Height: 7"  
Length: 6"  
Width: 5¼"



**IBV-301G-FS VALVE**  
Inlet diameter: 3"  
Height: 9"  
Length: 8½"  
Width: 7"



**Double-Beaded Diaphragm**

**Filter Sentry Mechanism**

IBV PRESSURE LOSS (AT OPTIMAL FLOWS) IN PSI				
Flow GPM	1"	1½"	2"	3"
0.1	2.0			
0.5	2.0			
1	2.0			
5	2.5			
10	3.0			
15	3.0			
20	3.0	1.5		
30	4.0	1.5		
40	7.0	1.7	0.8	
50		2.2	1.2	
60		3.0	1.7	
75		3.9	2.4	
90		5.5	3.2	
100		7.0	4.2	
120		10.9	6.5	
135		12.7	7.9	
150		16.2	9.8	2.5
175			13.3	3.0
200			17.7	4.1
225				5.3
250				6.7
275				8.3
300				10.1

**Note:**  
Charts based on full-open flow-control position

## IBV 1", 1½", 2" & 3" - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Standard Features	3 Feature Options	4 User-Installed Options
IBV-101G-FS = 1"	Brass globe valve with flow control, Filter Sentry Mechanism	(blank) = No option	AS-ADJ = Adjustable Accu Sync Pressure Regulator
IBV-151G-FS = 1½"		R = Purple reclaimed Filter Sentry Mechanism and ID tag (except 3" model)	458200 = DC-Latching Solenoid for battery-operated controllers
IBV-201G-FS = 2"		DC = DC-Latching Solenoid for battery-operated controllers	899605 = Reclaimed flow control handle
IBV-301G-FS = 3"		LS = Less solenoid	LIT-700 = Reclaimed ID tag

**Examples:**  
IBV-201G-FS-AS-ADJ = 2" IBV brass globe valve with flow control, Filter Sentry Mechanism, user-installed adjustable Accu Sync Pressure Regulator

# ACCU SYNC® PRESSURE REGULATOR

These robust solutions provide a simple way to achieve unparalleled pressure regulation for optimal performance.

## OPERATING SPECIFICATIONS

- Regulation from 20 to 100 PSI
- Static pressure: 150 PSI
- Required dynamic pressure differential: 15 PSI
- Works with AC and DC-Latching Solenoids
- Works with any Hunter valve
- Warranty period: 2 years

### ACCU SYNC VALVE RECOMMENDED FLOW RANGE

Valve	Flow GPM
PGV-100/101	15 to 40
PGV-151	20 to 120
PGV-201	40 to 150
ICV-101	15 to 40
ICV-151	20 to 150
ICV-201	40 to 200
ICV-301	150 to 300
IBV-101	15 to 40
IBV-151	20 to 150
IBV-201	40 to 200
IBV-301	150 to 300

### ACCU SYNC APPLICATIONS

- **Adjustable 20-100 PSI** For full customization, the adjustable Accu Sync can regulate pressure from 20 to 100 PSI

### ACCU SYNC PRESSURE REGULATOR - SPECIFICATION BUILDER: ORDER 1 + 2

1 Model	2 Inlet/Outlet
ACCU SYNC	ADJ = Adjustable Pressure Regulator (20-100 PSI)

**Example:**  
ICV-201G-B-AS-ADJ = 2" ICV globe valve with flow control, user-installed adjustable Accu Sync Pressure Regulator

## ADJUSTABLE



**ACCU SYNC-ADJ PRESSURE REGULATOR**  
Height with solenoid: 3¼"

## ADAPTER



## SOLENOID ADAPTER



### Installation

Accu Sync shown installed on ICV Valve

# QUICK COUPLERS

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

## KEY BENEFITS

- 100% interchangeable with major brands
- Red brass and stainless steel construction
- Heavy-duty thermoplastic locking and non-locking covers
- Optional winged stabilization and Acme key connection
- Stainless steel lug on 1" and 1¼" keys
- Spring-loaded covers with stainless steel springs for positive closing and protection of valve's sealing components
- Warranty period: 5 years
- See the SnapLok combo kits on [page 31](#)



Quick Couplers

## QUICK COUPLER, KEY, AND HOSE SWIVEL CHARTS

Model	Inlet Threads	Slots	Body	Color*	Locking	Key	Swivels
HQ-3-RC	¾"	2	1-piece	Yellow	No	HK-33	HS-0
HQ-33-DRC	¾"	2	2-piece	Yellow	No	HK-33	HS-0
HQ-33-DLRC	¾"	2	2-piece	Yellow	Yes	HK-33	HS-0
HQ-44-RC	1" NPT	1	2-piece	Yellow	No	HK-44	HS-1 or HS-2
HQ-44-LRC	1" NPT	1	2-piece	Yellow	Yes	HK-44	HS-1 or HS-2
HQ-44-RC-AW	1" NPT	Acme	2-piece wing**	Yellow	No	HK-44A	HS-1 or HS-2
HQ-44-LRC-AW	1" NPT	Acme	2-piece wing**	Yellow	Yes	HK-44A	HS-1 or HS-2
HQ-5-RC	1" NPT	1	1-piece	Yellow	No	HK-55	HS-1 or HS-2
HQ-5-LRC	1" 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 stabilization wings.



HQ-3-RC HQ-5-RC HK-33 HQ-33-DLRC-R HQ-44-LRC HK-44



Non-locking Locking Reclaimed



HQ-44-LRC-AW-R HK-44A



HLK

### Reclaimed Water Option

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

## QUICK COUPLER - SPECIFICATION BUILDER: ORDER 1 + 2 + 3

1 Model	2 Cover Options	3 Additional Options
HQ-3 = ¾" inlet, 1-piece body, 2 slots	RC = Yellow rubber cover	(blank) = No option
HQ-5 = 1" inlet, 1-piece body, 1 slot	LRC = Yellow locking rubber cover (Not available for HQ-3 body)	AW = Acme key with anti-rotation wings (Only available for HQ-44 body)
HQ-33-D = ¾" inlet, 2-piece body, 2 slots		R = Purple locking cover (reclaimed water ID; only available for LRC models)
HQ-44 = 1" inlet, 2-piece body, 1 slot or Acme key socket		

### Examples:

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

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

HQ-44-LRC-R = HQ-44 valve with locking rubber cover and reclaimed water ID

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

## KEYS

Model	Compatible Valve	Compatible Swivel
HK-33 = ¾" valve, ¾" key inlet	HQ-3, HQ-33	HS-0
HK-44 = 1" valve, 1" key inlet	HQ-44	HS-1, HS-2
HK-44A = 1" valve, Acme key inlet	HQ-44-AW	HS-1, HS-2
HK-55 = 1" valve, 1¼" key inlet	HQ-5	HS-1, HS-2

## HS HOSE SWIVELS

Model	Compatible Key
HS-0 = ¾" inlet, ¾" hose outlet	HK-33
HS-1 = 1" inlet, ¾" hose outlet	HK-44, HK-44A, HK-55
HS-2 = 1" inlet, 1" hose outlet	HK-44, HK-44A, HK-55

## HQ PRESSURE LOSS IN PSI

Flow (GPM)	HQ-3	HQ-33	HQ-44	HQ-5
5	0.8	1.0		
10	1.8	2.0		
15	4.1	4.3	2.2	
20	7.2	7.6	4.4	1.0
30			11.5	3.0
40				6.3
50				9.2
60				13.0
70				19.8



HS-0 HS-1 HS-2

# DC-LATCHING SOLENOID

*This versatile solenoid enables valve operation with battery-operated controllers.*

## KEY BENEFITS

- Compatible with all Hunter irrigation valves
- Compatible with NODE, NODE-BT, XC Hybrid, Wireless Valve Link, and SkyCommand control systems
- Captive plunger offers easy servicing of solenoid
- Manual quarter-turn on/off control

## OPERATING SPECIFICATIONS

- Minimum opening/operating voltage: 6 VDC
- Maximum recommended voltage: 9 VDC
- Coil resistance: 4.8 ohms nominal
- Pulse width: 250 milliseconds
- Wire leads: 22" of 18 AWG black/red UL-approved wire

**Note:** See battery-operated controller product pages for wiring distances



### DC-Latching Solenoid

P/N 458200: One black (common) wire and one red (station) wire

# AC SOLENOID

*The standard solenoid for all electric controllers.*

## KEY BENEFITS

- Compatible with all Hunter irrigation valves
- Captive plunger offers easy servicing of solenoid
- Manual quarter-turn on/off control
- Wire leads: 14" of 18 AWG red UL-approved wire

## OPERATING SPECIFICATIONS

- Minimum operating voltage: 20.5 VAC
- Maximum recommended voltage: 24 VAC
  - 350 mA inrush, 190 mA holding, 60 HZ
  - 370 mA inrush, 210 mA holding, 50 HZ
- Coil resistance: 23 to 28 ohms nominal



### AC Solenoid

P/N 606800: One red (common) and one red (station) wire



# CONTROLLERS

# CONTROLLER SELECTION GUIDE

## Platform AC-Powered Controllers

### STANDARD

Details on [page 90](#)

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

**X-Core®**  
Stations: 2, 4, 6, 8  
[page 91](#)



### HYDRAWISE®

Details on [page 92](#)

The Wi-Fi controller solution designed for contractors. The Hydrawise Irrigation Management Platform is simple to set up, easy to use, and packed with helpful remote irrigation management features. Built-in system monitoring and a suite of powerful tools make saving water and managing multiple sites easy.

**X2™**  
Stations: 4, 6, 8, 14  
[page 96](#)



**X2 with WAND**  
Stations: 4, 6, 8, 14  
[page 97](#)



**Pro-HC**  
Stations: 6, 12, 24  
[page 98](#)



**HPC**  
Stations: 4 to 32  
[page 99](#)



**HCC**  
Stations: 8 to 54  
[page 100](#)



### CENTRALUS™

Details on [page 102](#)

Add cloud-based control and monitoring for Hunter SkyCommand Systems and commercial-grade ACC2, MCC, ICC2, and Pro-C Controllers with the mobile-friendly Centralus Irrigation Management Platform.

**Pro-C®**  
Stations: 4 to 32  
[page 111](#)



**ICC2**  
Stations: 8 to 54  
[page 110](#)



**MCC**  
Stations: 8 to 108  
[page 108](#)



**ACC2**  
Stations: 12 to 54 conventional, 1 to 225 with two-wire  
[page 106](#)



**SKYCOMMAND**  
Stations: Unlimited, up to 400 per site  
[page 112](#)



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 Battery-Operated Controllers

### INDEPENDENT

Details on [page 114](#)

Battery-operated 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 117](#)



**XC Hybrid**  
Stations: 6, 12  
[page 119](#)



### BLUETOOTH®

Details on [page 114](#)

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

**BTT**  
Zones: 1, 2  
[page 116](#)



**NODE-BT**  
Stations: 1, 2, 4  
[page 118](#)



-  **H360** A complete, self-contained software package ready for networks and automation systems via Ethernet
-  Flow sensor compatible for flow monitoring and additional water savings
-  The Wireless Valve Link (WVL) uses LoRa® Technology so you can connect valves without running costly wires or cutting into hardscape
-  Two-wire option enables easy system expansion after installation

# STANDARD CONTROLLERS



## X-CORE®

Perfect for tract homes and entry-level residential systems, this simple and intuitive controller provides basic irrigation capabilities with convenient add-on options for smart watering adjustments and remote operation.

### KEY BENEFITS

- Number of stations:
  - 2, 4, 6, or 8 (fixed models)
  - Separate indoor and outdoor models for a variety of installation environments
- 3 automatic programs with 4 start times per program, and up to 4-hour run times per station
- Add a Solar Sync® Sensor to save water based on local weather conditions
- QuickCheck™ Technology provides simple diagnostics of faulty field wiring
- Hide Programs setting shows 1 program and 1 start time for simplification
- 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
- 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, UKCA, RCM, ISED
- Warranty period: 2 years



**Plastic Indoor**  
Height: 6½"  
Width: 5¾"  
Depth: 2"



**Plastic Outdoor**  
Height: 8¾"  
Width: 7"  
Depth: 3¾"

Compatible with:



**Solar Sync Sensor**  
Page 142



**ROAM Remote**  
Page 132



**Soil-Clik Sensor**  
Page 143

X-CORE	
Model	Description
XC-200i	Fixed 2-station, plastic indoor wall mount
XC-400i	Fixed 4-station, plastic indoor wall mount
XC-400	Fixed 4-station, plastic outdoor wall mount with plug
XC-600i	Fixed 6-station, plastic indoor wall mount
XC-600	Fixed 6-station, plastic outdoor wall mount with plug
XC-800i	Fixed 8-station, plastic indoor wall mount
XC-800	Fixed 8-station, plastic outdoor wall mount with plug



**EPA WaterSense®**  
Recognized as a responsible water-saving tool when used with a Solar Sync Sensor



# HYDRAWISE<sup>®</sup> CONTROLLERS

A healthy, beautiful landscape needs just the right amount of water to thrive. The Hydrowise Irrigation Management Platform automatically adjusts your irrigation according to local weather. Choose from a complete lineup of Hydrowise-enabled controllers to maximize water and money savings in any setting.

## HYDRAWISE CONTROLLER COMPARISON CHART

CONTROLLER MODELS	MAXIMUM STATIONS	SENSOR INPUTS	TWO-WIRE	REMOTE CONTROL	WEB ACCESS	FLOW
X2™	14	1	N/A	ROAM, ROAM LR, Hydrowise App (WAND Module)	Hydrowise: Wi-Fi (WAND Module)	N/A
X2 with WAND	14	1	N/A	ROAM, ROAM LR, Hydrowise App	Hydrowise: Wi-Fi	N/A
PRO-HC	24	2	N/A	Hydrowise App	Hydrowise: Wi-Fi	HC Flow Meter (wired or wireless), U-Wave™ Flow Sensor
HPC	32	2	EZDS	ROAM, ROAM LR, Hydrowise App	Hydrowise: Wi-Fi	HC Flow Meter (wired or wireless), U-Wave Flow Sensor
HCC	54	2	EZDS	ROAM, ROAM LR, Hydrowise App	Hydrowise: Wi-Fi	HC Flow Meter (wired or wireless), U-Wave Flow Sensor

# HYDRAWISE® SOFTWARE

As the industry's best Wi-Fi control solution, the Hydrowise Irrigation Management 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 Technology 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.

### 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 Labor

### 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.

All trademarks are property of their respective owners.



## Build a Stronger Business

### BUILD A STRONGER BUSINESS

Add services, grow revenue, increase customer satisfaction, and rest assured that Hydrowise 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 Hydrowise account.

### MULTI-SITE MANAGER

Manage many customers or multiple sites with our unique business tools:

- Summary of all controllers
- List view of customers/sites
- Search for customers and controllers
- View all controller events and logs
- View all controller alerts
- Branded automatic email reporting to customers
- Global control settings
  - Alerts
  - Watering Schedules
  - Start Times
  - Watering Triggers
- Quick select controllers
- 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.



## Manage from Anywhere

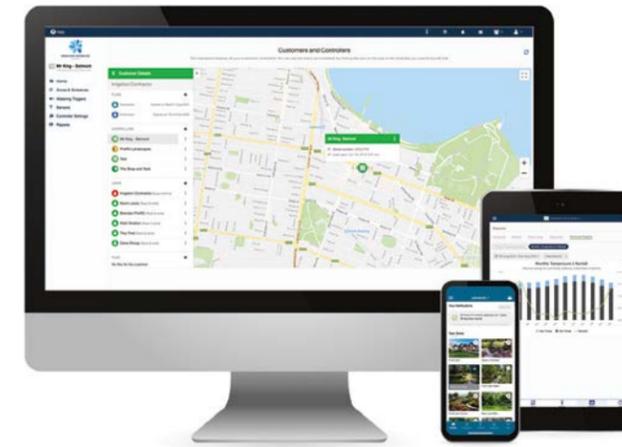
### GLOBAL APP AND WEB ACCESS

Sit back and relax. With Hydrowise, 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

Hydrowise integrates seamlessly with HomeSeer™.

## What's New with Hydrowise



- The Hydrowise App provides key notifications and detailed zone information; it also allows search by serial number
- The HPC Controller is now compatible with the EZ Decoder System up to 32 stations
- The HPC Controller has two sensor ports for any Clik Sensor, HC Flow Meter, or U-Wave Ultrasonic Flow Sensor
- Create custom reports for water savings and automatically email them to your customers
- The WAND Module for X2 Controllers provides super-fast Bluetooth remote, Wi-Fi setup, and a convenient copy-paste schedule function



Access to Hydrowise Software is free for all users worldwide. To learn more, visit [hydrowise.com](http://hydrowise.com).



### EPA WaterSense® Approved

Recognized as a responsible water-saving tool by the U.S. Environmental Protection Agency



### X2 Controller with WAND Module

4-, 6-, 8-, and 14-station count



### Pro-HC Controller

6-, 12-, and 24-station count



### HPC Controller

4- to 32-station count, EZDS two-wire option



### HCC Controller

8- to 54-station count, EZDS two-wire option, Wireless Valve Link (WVL) compatible



### HC Flow Meter

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

Not available for X2 Controller

# X2™

This online-capable controller offers Rapid Programming™ Technology 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™ Technology provides simple diagnostics of faulty field wiring
- Pre-wired with 48" lead and plug
- Hide Programs option shows one program and one start time for simplification
- 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 updates without changing run times

## OPERATING SPECIFICATIONS

- Transformer input: 120 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 IP55 (outdoor), UL, cUL, FCC, CE, UKCA, RCM, ISED
- Warranty period: 2 years



**X2**  
Height: 9"  
Width: 7½"  
Depth: 3½"

X2	
Model	Description
X2-400	Fixed 4-station, plastic outdoor wall mount with plug
X2-600	Fixed 6-station, plastic outdoor wall mount with plug
X2-800	Fixed 8-station, plastic outdoor wall mount with plug
X2-1400	Fixed 14-station, plastic outdoor wall mount with plug

Compatible with:



**Hydrawise Software**  
Page 94



**Rain-Clik® Sensor**  
Page 140



**ROAM Remote**  
Page 132  
**ROAM LR Remote**  
Page 133

# WAND FOR X2™

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

## KEY BENEFITS

- Simple Wi-Fi plug-in enables remote irrigation management with any X2 Controller
- WAND Technology provides easy online irrigation management with controller status and faulty wiring alerts
- Standard programming allows for 3 independent programs featuring 6 start times each and 24-hour maximum run times
- Rapid Programming™ Technology lets you send preprogrammed schedules to any X2 Controller in seconds, so you get jobs done quicker
- Predictive Watering® Technology provides precise weather adjustments for maximum water savings
- Compatibility with HomeSeer™ home automation technology enables simple control of the irrigation system
- Bluetooth Wi-Fi setup or WPS push-button connection makes it easy to connect to a wireless network
- WAND Module sold separately from X2 Controller

## OPERATING SPECIFICATIONS

- Flexible setup options: Bluetooth® Wi-Fi tether, Wi-Fi direct, or WPS push-button connection
- Bluetooth 5.0
- 2.4 GHz (only) Wi-Fi router compatible, 802.11 b/g/n 20 MHz
- Supported security protocols: WPA/WPA2 Personal (only), TLS
- Approvals: UL, cUL, FCC, CE, UKCA, RCM, ISED
- Warranty period: 2 years

### WAND MODULE

Model	Description
WAND	Bluetooth and Wi-Fi Module for X2 Controllers
X2	See page 96 for model chart

## WAND INSTALLATION



The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG Inc., and any use of such marks by Hunter Industries is under license. HomeSeer is a trademark of HomeSeer Technologies LLC.

Try Hydrawise Software today at [hydrawise.com](http://hydrawise.com).



**WAND Module**  
Height: ¾"  
Width: 2½"  
Depth: 2½"



**WAND Module installed in the X2 Controller**

Compatible with:



**X2 Controller**  
Page 96



**ROAM Remote**  
Page 132  
**ROAM LR Remote**  
Page 133



**Rain-Clik™ Sensor**  
Page 140



**EPA WaterSense® Approved**  
Recognized as a responsible water-saving tool by the U.S. Environmental Protection Agency

# PRO-HC

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

## KEY BENEFITS

- Number of stations:
  - 6, 12, or 24 (fixed models)
- Standard programming option allows for 6 independent irrigation programs and 6 start times per program
- 2 sensor inputs available for use with any Klik Sensor, HC Flow Meter, or U-Wave Ultrasonic Flow Sensor
- 1 P/MV output for pump start relay and master valve activation
- Wi-Fi enabled for quick connection to Hydrowise® Software
- 2¾" full-color touchscreen display for Wi-Fi setup, zone testing, and offline programming at the control panel
- Built-in milliamp sensor for wire fault detection and alerts

## OPERATING SPECIFICATIONS

- Transformer input: 120 VAC
- Transformer output (24 VAC): 1 A
- Controller maximum current draw: 0.8 A
- Station output (24 VAC): 0.56 A
- P/MV output (24 VAC): 0.28 A
- 2.4 GHz (only) Wi-Fi router compatible, 802.11 b/g/n 20 MHz
- Supported security protocols: WPA/WPA2 Personal (only), TLS
- Approvals: IP44 (outdoor), UL, cUL, FCC, CE, UKCA, RCM, ISED
- Warranty period: 2 years

## USER-INSTALLED OPTIONS

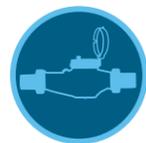
- Wireless HC Flow Meter option permits wireless flow monitoring for Hydrowise-enabled systems

Try Hydrowise Software today at [hydrowise.com](http://hydrowise.com).



**Pro-HC**  
(indoor/outdoor)  
Height: 9"  
Width: 10"  
Depth: 4"

Compatible with:



**HC Flow Meter**  
Page 144



**Rain-Klik Sensor**  
Page 140



**PXSUNC Accessory**  
Visit [fxl.com](http://fxl.com)



**EPA WaterSense® Approved**  
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PRO-HC	
Model	Description
PHC-600	Fixed 6-station, plastic outdoor wall mount
PHC-1200	Fixed 12-station, plastic outdoor wall mount
PHC-2400	Fixed 24-station, plastic outdoor wall mount

# HPC

This smart and flexible control solution combines the modularity of the popular Pro-C® Controller with the power of Hydrowise® Software.

## KEY BENEFITS

- Number of stations:
  - Conventional wiring from 4 to 23 stations
  - Hybrid EZ Decoder System option up to 32 total stations (28 stations maximum if two-wire only)
- Standard programming option allows for 6 independent irrigation programs and 6 start times per program
- 2 sensor inputs available for use with any Klik Sensor, HC Flow Meter, or U-Wave Ultrasonic Flow Sensor
- 1 P/MV output for pump start relay and master valve activation
- Wi-Fi enabled for quick connection to Hydrowise Software
- 2¾" full-color touchscreen display for Wi-Fi setup, zone testing, and offline programming at the control panel
- Built-in milliamp sensor for wire fault detection and alerts

## OPERATING SPECIFICATIONS

- Transformer input: 120 VAC
- Transformer output (24 VAC): 1 A
- Controller maximum current draw: 0.8 A
- Station output (24 VAC): 0.56 A
- P/MV output (24 VAC): 0.28 A
- 2.4 GHz (only) Wi-Fi router compatible, 802.11 b/g/n 20 MHz
- Supported security protocols: WPA/WPA2 Personal (only), TLS
- Approvals: IP44 (outdoor), UL, cUL, FCC, CE, UKCA, RCM, ISED
- Warranty period: 2 years

## USER-INSTALLED OPTIONS

- Wireless HC Flow Meter option permits wireless flow monitoring for Hydrowise-enabled systems

Try Hydrowise Software today at [hydrowise.com](http://hydrowise.com).



**HPC**  
(indoor/outdoor)  
Height: 9"  
Width: 10"  
Depth: 4½"



**HPC Face Panel**

Compatible with:



**HC Flow Meter**  
Page 144



**ROAM Remote**  
Page 132  
**ROAM LR Remote**  
Page 133



**EZ Decoder System**  
Page 126



**EPA WaterSense® Approved**  
Recognized as a responsible water-saving tool by the U.S. Environmental Protection Agency

HPC	
Model	Description
HPC-400	Modular 4-station base, plastic outdoor wall mount with plug
HPC-FP	Hydrowise retrofit face panel for Pro-C Controllers (March 2014 or newer models)

HPC SERIES STATION EXPANSION	
Model	Description
PCM-300	3-station plug-in module
PCM-900	9-station plug-in module
PCM-1600	16-station plug-in module
PC-DM	EZ Decoder output module

# HCC

Bring the power of Hydrowise® Software 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 pedestal)
  - With two-wire EZDS: Up to 54 (all enclosure options)
  - With Wireless Valve Link (WVL): Up to 54 (all enclosure options)
- Standard programming option allows for 6 independent irrigation programs and 6 start times per program
- Any 2 programs can operate simultaneously to improve irrigation efficiency
- 2 sensor inputs available for use with any Klik Sensor, HC Flow Meter, or U-Wave Ultrasonic Flow Sensor
- 1 P/MV output for pump start relay and master valve activation

## OPERATING SPECIFICATIONS

- Transformer input: 120/230 VAC
- Transformer output (24 VAC): 1.4 A
- Controller max current draw: 1.2 A
- Station output (24 VAC): 0.56 A
- P/MV output (24 VAC): 0.56 A
- 2.4 GHz (only) Wi-Fi router compatible, 802.11 b/g/n 20 MHz
- Run a maximum of 4 Hunter solenoids 1.04 A at once
- Supported security protocols: WPA/WPA2 Personal (only) TLS
- Approvals: Plastic Wall Mount IP55 (outdoor), Plastic Pedestal IP24 (outdoor), UL, cUL, FCC, CE, UKCA, RCM, ISED
- Warranty period: 2 years

## USER-INSTALLED OPTIONS

- Wireless HC Flow Meter option permits wireless flow monitoring for Hydrowise-enabled systems
- Compatible with ROAM and ROAM LR Remotes

HCC	
Model	Description
HCC-800-PL	8-station base model, plastic outdoor, wall mount
HCC-800-M	8-station base model, gray 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 Controllers
ICC-PED	Gray pedestal for metal wall mount cabinet
ICC-PED-SS	Stainless steel pedestal for stainless steel wall mount
ICC-PWB	Optional pedestal wiring board for metal pedestals
ANT-EXT-KIT	Universal 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)
EZDS	See model chart <a href="#">page 126</a>
WVL	See model chart <a href="#">page 128</a>

Try Hydrowise Software today at [hydrowise.com](http://hydrowise.com).



**Plastic**  
Height: 12"  
Width: 13¾"  
Depth: 5"

**Metal**  
(gray or stainless steel)  
Height: 16"  
Width: 13"  
Depth: 5"



**Metal Pedestal**  
(gray or stainless steel)  
Height: 36"  
Width: 11½"  
Depth: 5"



**Plastic Pedestal**  
Height: 39"  
Width: 24"  
Depth: 17"

Compatible with:



**HC Flow Meter**  
[Page 144](#)



**Wireless Valve Link**  
[Page 128](#)

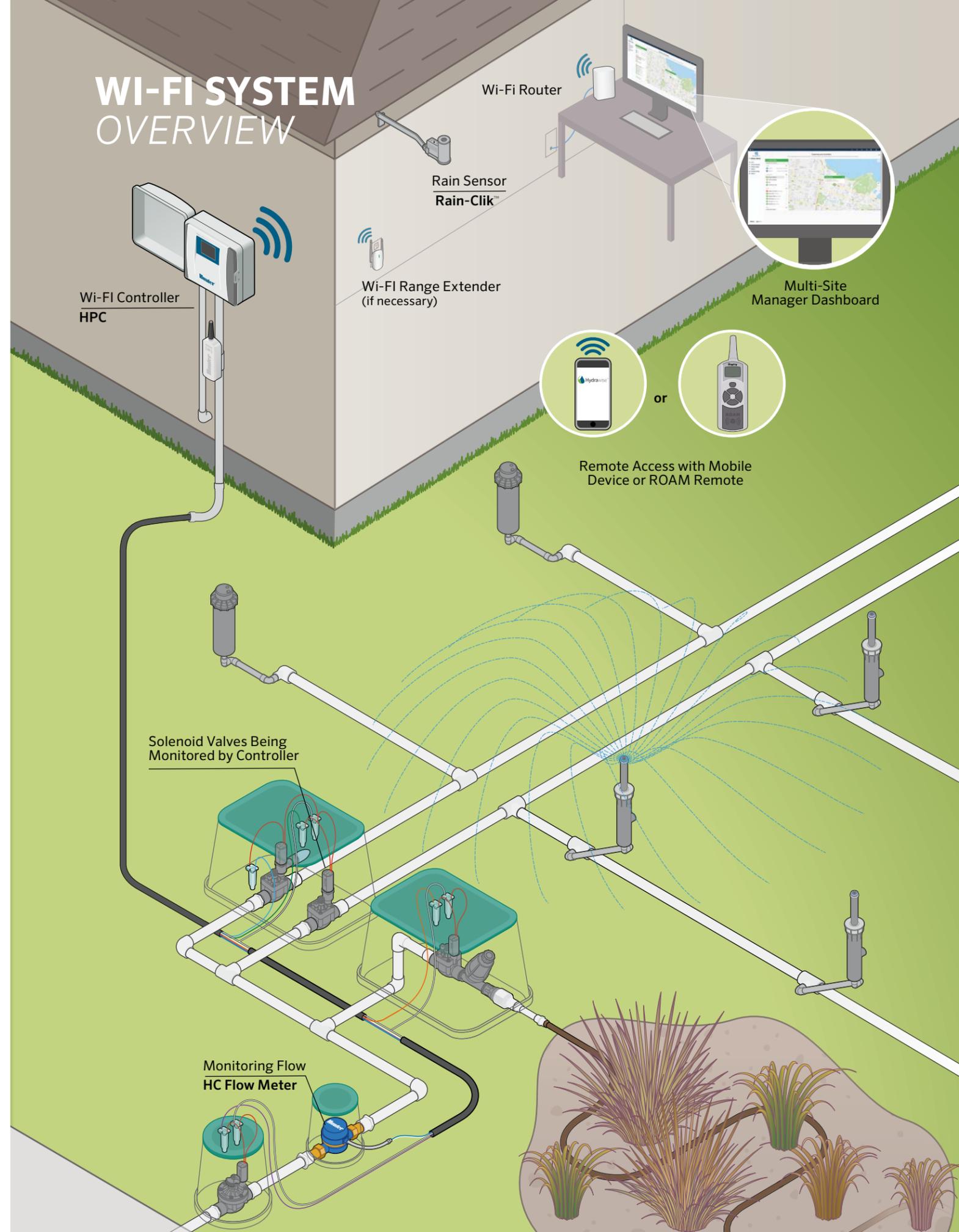


**EZ Decoder System**  
[Page 126](#)



**EPA WaterSense® Approved**  
Recognized as a responsible water-saving tool by the U.S. Environmental Protection Agency

# WI-FI SYSTEM OVERVIEW



Wi-Fi Controller  
HPC

Wi-Fi Router

Rain Sensor  
Rain-Klik™

Wi-Fi Range Extender  
(if necessary)

Multi-Site  
Manager Dashboard

Remote Access with Mobile  
Device or ROAM Remote

Solenoid Valves Being  
Monitored by Controller

Monitoring Flow  
HC Flow Meter



Manage large, complex systems from your fingertips with the cloud-based Centralus Irrigation Management Platform. Simple plug-in communication modules provide powerful internet connectivity and mobile control for Hunter SkyCommand Systems and commercial-grade ACC2, MCC, ICC2, and Pro-C Controllers.

**CENTRALUS CONTROLLER COMPARISON CHART**

CONTROLLER MODELS	MAXIMUM STATIONS	SENSOR INPUTS	TWO-WIRE	FLOW	REMOTE CONTROL	WEB ACCESS
ACC2	54, 225 two-wire	3 Klik, 1 Solar Sync®, 6 Flow	ICD, 225 stations	HFS, WFS, U-Wave Flow Sensor	ROAM, ROAM LR, Smartphone	Centralus: Wi-Fi, LAN, Cell
MCC	108	2 Flow, 1 Klik, 1 Custom (Klik, Flow, or Solar Sync)	EZDS 108 stations	HFS, WFS, U-Wave Flow Sensor	ROAM, ROAM LR, Smartphone	Centralus: Wi-Fi, LAN, Cell
ICC2	54	1 Klik or Solar Sync, 1 Flow	EZDS, 54 stations	HFS, WFS, U-Wave Flow Sensor	ROAM, ROAM LR, Smartphone	Centralus: Wi-Fi, LAN, Cell
Pro-C	32	1 Klik, 1 Solar Sync	EZDS, 28 stations	Flow-Klik	ROAM, ROAM LR, Smartphone	Centralus: Wi-Fi
SkyCommand	4 per controller, 400 per site	1 soil moisture per controller	N/A	HC Flow Meter	Smartphone	Centralus, Wi-Fi, LAN, Cell

# CENTRALUS™ CONTROLLERS

CENTRALUS CONTROLLERS

# CENTRALUS™ SOFTWARE

Add cloud-based control and monitoring for Hunter SkyCommand Systems and commercial-grade ACC2, MCC, ICC2, and Pro-C 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 (SkyCommand, ACC2, MCC, and ICC2)
- Alarm reporting and detailed irrigation history reports
- Responsive web design configures for your device, allowing the same controls from your smartphone, tablet, or desktop
- Operable in many international languages
- Wi-Fi, LAN (Ethernet), or Cell connectivity options (Pro-C is Wi-Fi only)
- Manage Solar Sync® Sensor adjustments and delay settings for greater water savings
- Professional crewmember administration and user-sharing
- Organize maintenance teams and their controllers into management groups



**Centralus Software**  
Enable SkyCommand Systems and Pro-C, ICC2, MCC, and ACC2 Controllers with advanced management technology. To learn more, visit [hunter.info/centralus](http://hunter.info/centralus).

## OPERATING SPECIFICATIONS

- Browser-based operation using Safari or Google® Chrome
- Secure internet connection for web-hosted application

## USER-INSTALLED OPTIONS

- ET-based Solar Sync Sensor (one per controller; not compatible with SkyCommand Systems)
- Flow sensors including the Flow-Sync® Sensor, Wireless Flow Sensor, U-Wave Ultrasonic Flow Sensor, and other approved equals
- Controllers are compatible with license-free ROAM/ROAM LR Remotes (not compatible with SkyCommand Systems)

## COMMUNICATION OPTIONS

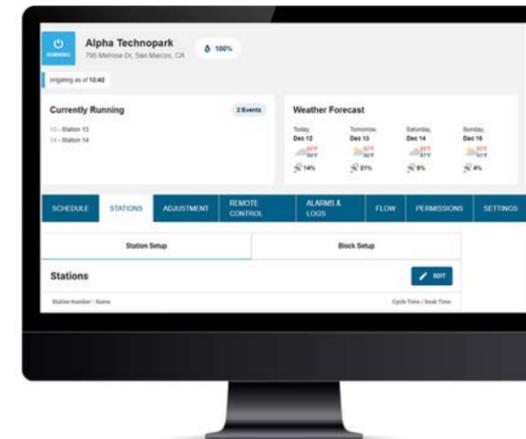
- Ethernet with RJ-45 connection (100 Mbps); low data requirements
- 2.4 GHz (only) Wi-Fi router compatible, 802.11 b/g/n
- Supported security protocols: WPA/WPA2 Personal (only), TLS
- Cellular connectivity with SkyCommand Systems and ACC2, MCC, and ICC2 Controllers

### COMMUNICATIONS

Model	Description
A2C-LAN	ACC2 Controller LAN (Ethernet) connection for ACC2, MCC, and SkyCommand UCH
A2C-LTEM	ACC2 Controller 4G Global connection (monthly service plan required) for ACC2, MCC, and SkyCommand UCH
A2C-WIFI	ACC2 Controller Wi-Fi connection for ACC2, MCC, and SkyCommand UCH
CELLKIT	ICC2 Controller cellular connection (service plan required)
LANKIT	ICC2 Controller LAN (Ethernet) connection
WIFIKIT	ICC2 Controller Wi-Fi connection
PC-WIFI	Pro-C Controller Wi-Fi connection

### COMMUNICATIONS ACCESSORIES

Model	Description
ANT-EXT-KIT	Universal Antenna Extension Kit



## Centralus Software

Online management, monitoring, and reporting for Hunter SkyCommand Systems and ACC2, MCC, ICC2, and Pro-C Controllers



Manage and monitor controllers from anywhere

## ICC2 CELLULAR CONNECTION MODULE



## 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 ACC2, MCC, ICC2, and Pro-C Controllers seamlessly into the world of next-generation irrigation control. From the intuitive Centralus dashboard, it's now easier than ever to add alarm monitoring, location information, remote operation, and scheduling to Hunter Controllers.

## Easy to Upgrade

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

## COMMUNICATION MODULES FOR ACC2 AND MCC CONTROLLERS AND SKYCOMMAND SYSTEMS



## PC-WIFI™ MODULE FOR PRO-C CONTROLLER CONNECTIVITY



## EPA WaterSense® Approved

Recognized as a responsible water-saving tool when used with a Solar Sync Sensor

# ACC2

The multi-flow monitoring and management capabilities of the ACC2 Controller, combined with the option to upgrade to Centralus cloud-based control, make it the best choice for complex projects.

## KEY BENEFITS

- Number of stations:
  - 12 to 225, for large projects
- Language-selectable, high-visibility display
- 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
- Add a Solar Sync® Sensor to save water based on local weather conditions
- Real-time flow monitoring detects and diagnoses leaks in up to 6 flow zones
- Flow management optimizes watering at safe velocities
- High-visibility, full-color 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
- Extreme service lightning protection
- Easy Retrieve® Memory 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 IP55 (outdoor), Plastic Pedestal IP24 (outdoor), UL, cUL, FCC, CE, UKCA, RCM, ISED
- Warranty period: 5 years

## USER-INSTALLED OPTIONS

- Centralus central control available with Wi-Fi, LAN (Ethernet), and cellular connection; **see page 104**
- SCADA/automation compatible with BACnet, Modbus, RESTful API, and other protocols via Hunter Field Servers and Hunter 360 Software; **see page 122**
- U-Wave Ultrasonic Flow Sensor for precise flow monitoring and management

View Centralus Software today, at [centralus.hunterindustries.com](http://centralus.hunterindustries.com).



**Metal Wall Mount**  
(gray or stainless steel)  
Height: 15¾"  
Width: 15"  
Depth: 6¾"

**Plastic Wall Mount**  
Height: 16¾"  
Width: 16½"  
Depth: 6½"



**Metal Pedestal**  
(gray or stainless steel)  
Height: 37"  
Width: 15½"  
Depth: 5"

**Plastic Pedestal**  
Height: 39½"  
Width: 23½"  
Depth: 17"

Compatible with:



**Solar Sync Sensor**  
Page 142



**Flow-Sync® Sensor**  
Page 148  
**Wireless Flow Sensor**  
Page 149



**ROAM Remote**  
Page 132  
**ROAM LR Remote**  
Page 133



**EPA WaterSense® Approved**  
Recognized as a responsible water-saving tool when used with a Solar Sync Sensor

## 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 10,000' (14 AWG wire)
  - Up to 15,000' (12 AWG wire)
- See complete ICD Decoder key benefits and specifications on **page 124**
- 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, gray 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
A2C-1200-SBKIT	ACC2 Conventional StrongBox Kit, for SB16SS stainless steel pedestal installations
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, gray 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-75D-SBKIT	ACC2 Decoder StrongBox Kit, for SB16SS stainless steel pedestal installations
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
A2C-LTEM	Cellular Communication Module (4G Cell) for ACC2 Controllers (monthly service plan required)
ACC-PED	Gray pedestal for wall mount
PED-SS	Stainless steel pedestal for wall mount

## ACC2 REVERSIBLE FACEPACK AND AUTOMATIC DIAGNOSTIC MODE



# MCC

The versatile MCC Controller features a menu-driven, multi-language interface enabling simultaneous command of conventional, two-wire EZ Decoder, and Wireless Valve Link systems — with advanced flow monitoring and optional Centralus™ control.

## KEY BENEFITS

- Number of stations:
  - 8 to 108 stations; supports conventional, two-wire EZ Decoder, and wireless systems
- Includes language-selectable, high-visibility display
- 1 Klik and 2 Flow Sensor inputs, plus 1 additional custom sensor input (Klik, Flow, or Solar Sync®)
- 3 P/MV outputs for pump start relay and master valve activations
- All modules backward compatible with ICC2 Controllers for quick updates to older systems
- 16 automatic programs (10 start times each) for precise plant management
- Block function to group stations and consolidate large systems
- Solar Sync input to maximize water savings
- Flow management optimizes watering at safe velocities while flow monitoring detects leaks in up to 3 flow zones
- User-managed password protection, with two levels of access

## OPERATING SPECIFICATIONS

- Transformer input: 120/230 VAC, 50/60 Hz
- 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 3: 800 mA
- Up to 8 simultaneous solenoids
- Approvals: Wall Mounts IP55 (outdoor), Plastic Pedestal IP24 (outdoor); UL, CE, cUL, RCM, FCC
- Warranty period: 5 years

## USER-INSTALLED OPTIONS

- Centralus central control available with Wi-Fi, LAN (Ethernet), and Cellular connections; **see page 104**
- SCADA/automation compatible with BACnet, Modbus, RESTful API, and other protocols via Hunter Field Servers; **see page 122**
- Compatible with ROAM and ROAM LR Remotes; **see page 132 and 133**
- Compatible with EZ-DM Decoder Output Module or Wireless Valve Output Module up to 108 stations
- U-Wave Flow Sensor delivers precise, ultrasonic flow monitoring and management

View Centralus Software today at [centralus.hunterindustries.com](http://centralus.hunterindustries.com).



**Metal Wall Mount**  
Height: 16<sup>7</sup>/<sub>16</sub>"  
Width: 13<sup>13</sup>/<sub>16</sub>"  
Depth: 6<sup>3</sup>/<sub>8</sub>"



**Plastic Wall Mount**  
Height: 17<sup>1</sup>/<sub>16</sub>"  
Width: 14<sup>7</sup>/<sub>16</sub>"  
Depth: 6<sup>3</sup>/<sub>8</sub>"



**Stainless Steel Wall Mount**  
Height: 16<sup>7</sup>/<sub>16</sub>"  
Width: 13<sup>13</sup>/<sub>16</sub>"  
Depth: 6<sup>3</sup>/<sub>8</sub>"



**Plastic Pedestal**  
Height: 39<sup>1</sup>/<sub>2</sub>"  
Width: 23<sup>1</sup>/<sub>2</sub>"  
Depth: 17"

Compatible with:



**Centralus™ Software**  
Page 104



**Solar Sync® Sensor**  
Page 142



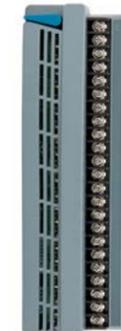
**Flow-Sync® Sensor**  
Page 148



**EPA WaterSense® Approved**  
Recognized as a responsible water-saving tool when used with a Solar Sync Sensor



**ICM-800**  
8-Station Conventional Output Module



**ICM-2200**  
22-Station Conventional Output Module



**EZ-DM**  
EZ Decoder Output Module for use with EZ Decoders



**Wireless Valve Output Module (WVOM)**  
Communicates with Wireless Valve Links to enable wireless control of valves

## MODELS CHART

Model	Description
MCC-800-P	MCC Controller, 8-station base model, plastic outdoor wall mount
MCC-800-M	MCC Controller, 8-station base model, grey metal outdoor wall mount
MCC-800-SS	MCC Controller, 8-station base model, stainless steel outdoor wall mount
MCC-800-PP	MCC Controller, 8-station base model, plastic pedestal
MCC-SBKIT	MCC Controller StrongBox Kit, for SB16SS stainless steel pedestal installations

## OPTIONS CHART

Model	Description
A2C-LEDKT	External Status Light Kit
ANT-EXT-KIT	Antenna Extension Kit for Wi-Fi and Cellular
ICM-800	8-station Output Module for Conventional Wiring
ICM-2200	22-station Output Module for Conventional Wiring
EZDM	EZ Decoder Output Module
WVOM	Wireless Valve Output Module
A2C-WIFI	Wi-Fi Communication Module
A2C-LAN	Ethernet Communication Module
A2C-LTEM	Cellular Communication Module (service plan required)
ICC-PED	Gray metal pedestal for use with matching HCC, ICC2, and MCC Controller enclosures
ICC-PED-SS	Stainless steel pedestal for use with matching HCC, ICC2, and MCC Controller enclosures

# ICC2

This flexible control system can run any combination of conventional, EZ Decoder two-wire, or Wireless Valve Link outputs with built-in flow monitoring and convenient, online control via Centralus™ Software.

## 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)
  - With Wireless Valve Link (WVL): Up to 54 (all enclosure options)
- 4 automatic irrigation programs with 8 start times per program
- Any 2 programs can operate simultaneously, providing more efficient watering
- 2 sensor inputs for dedicated flow sensor and weather sensor connections
- Built-in flow monitoring for smart water savings
- 1 P/MV output for pump start relay and master valve activation

## OPERATING SPECIFICATIONS

- Transformer input: 120/230 VAC
- Transformer output (24 VAC): 1.4 A
- Station and P/MV outputs (24 VAC): 0.56 A
- Approvals: Wall Mounts IP55 (outdoor), Plastic Pedestal IP24, UL, cUL, FCC, CE, UKCA, RCM, ISED
- Warranty period: 5 years

## USER-INSTALLED OPTIONS

- WIFIKIT, LANKIT, or CELLKIT communications for cloud-based Centralus control
- Compatible with Hunter Flow-Sync® Sensor and U-Wave Ultrasonic Flow Sensor for standalone flow monitoring connections
- SCADA/automation compatible with BACnet, Modbus, and other protocols via Hunter 360 Software
- Compatible with ROAM and ROAM LR Remotes

View Centralus Software today at [centralus.hunterindustries.com](http://centralus.hunterindustries.com).



**Plastic**  
Height: 12"  
Width: 13¾"  
Depth: 5"

**Metal**  
(gray or stainless steel)  
Height: 16"  
Width: 13"  
Depth: 5"



**Metal Pedestal**  
(gray or stainless steel)  
Height: 36"  
Width: 11½"  
Depth: 5"



**Plastic Pedestal**  
Height: 39"  
Width: 24"  
Depth: 17"

Compatible with:



**Solar Sync Sensor**  
Page 142



**Wireless Valve Link**  
Page 128



**EZ Decoder System**  
Page 126



**EPA WaterSense® Approved**  
Recognized as a responsible water-saving tool when used with a Solar Sync Sensor

# PRO-C®

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

## KEY BENEFITS

- Number of stations:
  - Conventional wiring from 4 to 23 stations
  - Hybrid EZ Decoder/conventional control up to 32 total stations (28 stations max if two-wire only)
- 3 automatic irrigation programs with 4 start times per program and 6-hour run times per station
- 2 sensor inputs available for use with Solar Sync® and Klik Sensors
- 1 P/MV output for pump start relay and master valve activation
- High-visibility, backlit display for simple programming in any light
- Optional Seconds Mode allows for station run times with seconds resolution from 1 second to 5 minutes
- QuickCheck™ Technology provides simple diagnostics of faulty field wiring
- Backward compatible with previous modular PC-400 models dated 2014 to 2023

## OPERATING SPECIFICATIONS

- Transformer input: 120 VAC
- Transformer output (24 VAC): 1 A
- Station output (24 VAC): 0.56 A
- P/MV output (24 VAC): 0.28 A
- Approvals: IP44 (outdoor), UL, cUL, FCC, CE, UKCA, RCM, ISED
- PC-WIFI Module:
  - 2.4 GHz (only) Wi-Fi router compatible, 802.11b/g/n
  - Supported security protocols: WPA/WPA2 Personal (only), TLS
- Warranty period: 2 years

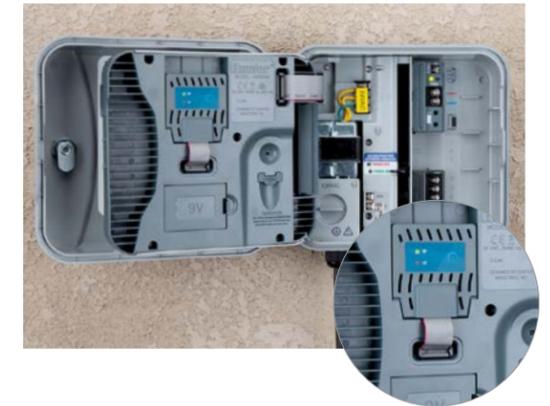
## USER-INSTALLED OPTIONS

- PC-WIFI communication module for cloud-based Centralus control
- Compatible with Hunter Flow-Klik® Sensor for catastrophic high-flow detection and automatic system shutdown
- Compatible with ROAM and ROAM LR Remotes



**Plastic Outdoor**  
Height: 9"  
Width: 10"  
Depth: 4½"

P2C-400 CONTROLLER WITH PC-WIFI MODULE CONNECTED



Compatible with:



**Solar Sync Sensor**  
Page 142



**Centralus™ Software**  
Page 104



**EZ Decoder System**  
Page 126

PRO-C	
Model	Description
P2C-400	4-station base, plastic wall mount cabinet with cable and plug

PC-SERIES STATION EXPANSION	
Model	Description
PCM-300	3-station plug-in module
PCM-900	9-station plug-in module
PCM-1600	16-station plug-in module
PC-DM	EZ Decoder Output Module
PC-WIFI	Plug-in Wi-Fi Communication Module for Centralus Software



**EPA WaterSense® Approved**  
Recognized as a responsible water-saving tool when used with a Solar Sync Sensor

# SKYCOMMAND™ WIRELESS CONTROL SYSTEM

Centrally control wide-area irrigation with web-based hubs connected via Cell, Wi-Fi, or LAN for seamless, wireless management.

## KEY BENEFITS

- Supports unlimited sites with up to 400 zones per site
- Multiple Repeaters extend the license-free range up to ~5 miles
- Built-in soil moisture monitoring prevents waste
- Optional flow sensing and reporting with high-flow shutdown for added protection
- Waterproof (IP68) controllers with program memory ensure reliable performance, reduce communication needs, and extend battery life
- Solar power options reduce battery usage and maintenance
- Cell, Wi-Fi, and LAN connections to hubs enable flexible mobile and network control
- Wireless LoRa® connectivity preserves existing infrastructure and protects components from lightning damage
- Mobile-friendly Centralus Software provides cloud-based control in multiple languages

## OPERATING SPECIFICATIONS

- Centralus Software operates in Chrome or Safari browsers
- Secure communications via MQTT broker on Amazon Web Services with secure Transport Layer Security (TLS)

## PRODUCT SPECIFICATIONS

- License-free LoRa® communications at 915 MHz for field connectivity
- UCH enclosure rated IP55 for reliable protection
- BOC Controllers rated IP68 with built-in soil moisture sensor input
- RPT rated IP55 for durable field performance
- SST rated IP55 for reliable handheld operation

## ELECTRICAL SPECIFICATIONS

- UCH primary power: 120/230 VAC, 50/60 Hz
- Max current draw:
  - 120 V, 0.25 A
  - 230 V, 0.15 A
- BOC power: 4 D-cell batteries or optional solar power (P/N BOC-SOL)
- Compatible with Hunter DC-Latching Solenoids (P/N 458200) up to 100'
- Repeater: Fully wireless with solar rechargeable battery

Compatible with:



**SC-PROBE**  
Soil Moisture Sensor  
Page 143



**Centralus Software**  
Page 104



**HC Flow Meter**  
Page 144

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### Centralus™ Software

Online management, monitoring, and reporting for Hunter SkyCommand Systems and ACC2, MCC, ICC2, and Pro-C® Controllers



### Wireless Solar Repeater (RPT)

Height: 13.4" (installed with antenna extended)  
Width: 6.8"  
Length: 7.8"



### Universal Communication Hub (UCH)

Height: 13.9"  
Width: 8.8"  
Depth: 2.9"



### Site Survey and Diagnostic Tool (SST)

Height: 1.2"  
Length: 8.5"  
Width: 4.2"



### BOC Controller (BOC-xxx)

Height: 8.2"  
Width: 7.4"  
Depth: 7.3"



### SkyCommand™ Wireless Control System

The SkyCommand Wireless Control System is a smart, citywide irrigation solution that uses license-free LoRa® radio and solar-powered repeaters. Its durable components wirelessly link unlimited sites to programmable field controllers via Cellular, Ethernet, or Wi-Fi, giving you reliable remote access from desktop or mobile — anytime, anywhere.

#### MODELS CHART

Model	Description
BOC-100	1-station wireless, battery-operated controller with soil moisture input
BOC-100-FL	1-station wireless, battery-operated controller with soil moisture and flow sensor inputs
BOC-200	2-station wireless, battery-operated controller with soil moisture input
BOC-400	4-station wireless, battery-operated controller with soil moisture input
UCH	Universal Communication Hub with Bluetooth interface
A2C-LORA	LoRa wireless output module
RPT	Solar-powered, wireless Repeater
A2C-WIFI	Wi-Fi Communication Module
A2C-LAN	LAN (Ethernet) Communication Module
A2C-LTEM	4G/5G Cellular Communication Module (monthly service plan required)
SST	Site Survey Tool, handheld wireless diagnostic device

#### OPTIONS CHART

Model	Description
ANT-EXT-KIT	Universal Antenna Extension Kit for Wi-Fi, cellular, and LoRa communication (9' cable and mounting hardware)
SC-PROBE	Soil moisture probe with 3' connecting cable
BOC-SOL	Solar panel with lithium battery source
HC-075-FLOW	HC Flow Meter with ¾" male NPT thread, U.S. gallons
HC-100-FLOW	HC Flow Meter with 1" male NPT thread, U.S. gallons
HC-150-FLOW	HC Flow Meter with 1½" male NPT thread, U.S. gallons
HC-200-FLOW	HC Flow Meter with 2" male NPT thread, U.S. gallons

# BATTERY-OPERATED CONTROLLERS



When locations are difficult to access, lack electrical power, or demand cost-prohibitive wire runs, battery-operated controllers can make irrigation effective and affordable. Unlike traditional irrigation systems, they save time and money because there's no need to run wire, obtain construction permits, or lease equipment to tunnel under concrete or other hardscape elements. Since these systems are less intrusive, they can also help you win bids where specifications are strict about AC power requirements.

## BATTERY-OPERATED CONTROLLER COMPARISON CHART

CONTROLLER MODELS	MAXIMUM STATIONS	SENSOR INPUTS	REMOTE CONTROL	SOLAR
BTT	2	N/A	BTT Bluetooth® App	N/A
NODE	6	1	N/A	SPNODE
NODE-BT	4	2	NODE-BT Bluetooth App	SPNODEBT
XC Hybrid	12	1	N/A	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 (fixed models)
- Battery-operated tap timer with Bluetooth® control
- 1 smartphone manages an unlimited number of controllers
- 1-second to 24-hour run time with multiple start times for maximum programming flexibility
- 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, ideal 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
- Alkaline batteries included for quicker installation

## OPERATING SPECIFICATIONS

- Two 1.5V AA alkaline batteries (included)
- Flow rate: 0.5 to 600 GPH
- Recommended pressure: 7 to 116 PSI
- See friction loss chart on **page 200**
- Bluetooth 5.0 BLE
- Approvals: Plastic IPX6 (outdoor), UL, cUL, FCC, CE, UKCA, RCM, ISED
- Warranty period: 2 years

## APP SPECIFICATIONS

- iOS® 9.0 or above, Android™ 4.4 or above
- Maximum communication distance: 32'
- See all app features at [hunter.info/BTT](http://hunter.info/BTT)



**BTT-100**  
Inlet diameter: 3/4"  
Outlet diameter: 3/4"  
Height: 5"  
Width: 5"  
Depth: 2 1/2"

**BTT-200**  
Inlet diameter: 3/4"  
Outlet diameter: 3/4"  
Height: 6 1/4"  
Width: 5 1/4"  
Depth: 3"



**BTT-LOC**  
(optional)  
Inlet diameter: 3/4"  
Outlet diameter: 16-18 mm dripline  
Height: 2 3/4"  
Width: 1 1/4"



**Pressure Regulator**  
(optional)  
Inlet diameter: 3/4"  
Outlet diameter: 3/4"  
Height: 3"  
Width: 1 1/2"

## BTT WITH HUNTER DRIPLINE (HDL) INSTALLATION



Compatible with:



**HDL Dripline**  
Page 162

BTT	
Model	Description
BTT-100	1-zone Bluetooth Tap Timer, 3/4" hose thread
BTT-200	2-zone Bluetooth Tap Timer, 3/4" hose thread

USER-INSTALLED OPTIONS	
Model	Description
BTT-LOC	BTT adapter for 16-18 mm dripline
PRLG203FH3MH	20 PSI pressure regulator, 3/4" hose thread
PRLG253FH3MH	25 PSI pressure regulator, 3/4" hose thread
PRLG303FH3MH	30 PSI pressure regulator, 3/4" hose thread
PRLG403FH3MH	40 PSI pressure regulator, 3/4" hose thread

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# NODE

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

## KEY BENEFITS

- Number of stations:
  - 1, 2, 4, or 6 (fixed models)
- Battery-operated controller for automatic irrigation
- 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
- 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 800 mAh solar panel with charging cell
- Operates Hunter DC-Latching Solenoids; **see page 86**
- 100' maximum wire runs, 18 AWG wire only
- Solar panel includes 40' of direct-burial wire
- Station output: 9-11 VDC
- P/MV output: 9-11 VDC (multi-station models)
- Sensor inputs: 1 (wired rain, freeze, or wind only)
- Approvals: IP68 (submersible), UL, cUL, FCC, CE, UKCA, RCM, ISED
- Warranty period: 2 years

NODE	
Model	Description
NODE-100	Single-station battery controller and DC-Latching Solenoid
NODE-100-LS	Single-station battery controller
NODE-100-VALVE	Single-station battery controller with PGV-101G valve and DC-Latching Solenoid (NPT threads)
NODE-200	2-station battery controller
NODE-400	4-station battery controller
NODE-600	6-station battery controller

USER-INSTALLED OPTIONS	
Model	Description
SPNODE	Solar Panel Kit for NODE controllers
458200	DC-Latching Solenoid (for all Hunter valves)



**NODE**  
Height: 2 1/2"  
Diameter: 3 1/2"



**SPNODE**  
Solar Panel Kit (optional)  
Height: 3 1/4"  
Length: 3"  
Width: 5/8"  
Controller to solar panel: 100' maximum  
18 AWG direct-burial wire

## NODE WITH PGV INSTALLATION



Compatible with:



**Mini-Clik® Sensor**  
Page 141



**Waterproof Wire Connector**  
Page 131

# 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 (fixed models)
- Bluetooth® battery-operated controller for automatic irrigation
- Active station LEDs and battery-life LED indicator for 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
- 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

## OPERATING SPECIFICATIONS

- One or two 9 V alkaline batteries
- Operates Hunter DC-Latching Solenoids; **see page 86**
- 100' maximum wire runs, 18 AWG wire only
- Station output: 9 to 11 VDC
- P/MV output: 9 to 11 VDC (multi-station models)
- Sensor inputs: 2 (wired soil plus wired rain, freeze, or wind only)
- Bluetooth 5.0 (BLE)
- Approvals: IP68 (submersible), UL, cUL, FCC, CE, UKCA, RCM, ISED
- Warranty period: 2 years

## APP SPECIFICATIONS

- iOS® 9.0 or above, Android™ 5.0 or above
- Maximum communication distance: 50'
- See all app features at [hunter.info/NodeBT](http://hunter.info/NodeBT)



**NODE-BT**  
Height: 3"  
Diameter: 3½"



**SC-PROBE**  
Soil Moisture Sensor (optional)  
Height: 3¼"  
Diameter: 1"



**SP-NODE-BT**  
NODE-BT Solar Panel  
Height: 1¾"  
Width: 3"  
Depth: 9½"

### NODE-BT WITH PGV INSTALLATION



Compatible with:



**Mini-Clik Sensor**  
Page 141



**Waterproof Wire Connector**  
Page 131

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-100-VALVE	Single-station Bluetooth battery controller with PGV-101G valve and DC-Latching Solenoid (NPT threads)
NODE-BT-200	2-station Bluetooth battery controller
NODE-BT-400	4-station Bluetooth battery controller

USER-INSTALLED OPTIONS	
Model	Description
SC-PROBE	Soil probe for moisture sensing
SP-NODE-BT	Solar Panel Kit for NODE-BT Controllers
458200	DC-Latching Solenoid (for all Hunter valves)

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# XC HYBRID

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

## KEY BENEFITS

- Number of stations:
  - 6 or 12 (fixed models)
- 3 power options: ambient-light-compatible solar panel, battery, or AC power
- Stainless steel enclosure protects against vandalism
- 3 programs with 4 start times each and up to 4-hour run times
- 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 1.5 V AA alkaline batteries
- Stainless steel model operated by six 1.5 V C alkaline batteries
- Stainless steel solar model operates 800 mAh solar panel with charging cell
- Solar panel includes 40' of direct-burial wire
- Controller to solar panel: 100' maximum 18 AWG direct-burial wire
- All models operate optional 120/24 VAC plug-in wall adapter (P/N 526500)
- Operates Hunter DC-Latching Solenoids; **see page 86**
- Station output: 9 to 11 VDC
- P/MV output: 9 to 11 VDC
- Sensor inputs: 1 (wired rain, freeze, or wind only)
- Approvals: Plastic IP24 (outdoor), Stainless Steel IP44 (outdoor), UL, cUL, FCC, CE, UKCA, RCM, ISED
- Warranty period: 2 years

## 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

## USER-INSTALLED OPTIONS

Model	Description
526500	120/24 VAC plug-in wall adapter
458200	DC-Latching Solenoid (for all Hunter Valves)



**Plastic**  
Height: 8½"  
Width: 7"  
Depth: 3¾"



**Stainless Steel**  
Height: 9¾"  
Width: 7¾"  
Depth: 4¼"



**Stainless Steel Solar**  
Height: 10¾"  
Width: 7¾"  
Depth: 4¼"



**SPXCH**  
Solar panel kit (optional)  
Height: 9"  
Length: 3"  
Width: 3"



**XCHSPB**  
Mounting bracket and hardware only (optional)



**XCHSPOLE**  
Pole-Mounting Kit (optional)  
Height: 4'

Compatible with:



**Mini-Clik Sensor**  
Page 141

MAXIMUM WIRE RUNS	
Wire Size	Max Distance
18 AWG	550'
16 AWG	870'
14 AWG	1,380'
12 AWG	2,200'

# WATER MANAGEMENT SOFTWARE



## HUNTER 360 SOFTWARE

Hunter 360 is a comprehensive, map-based irrigation platform for commanding Hunter ACC2, MCC, and ICC2 Controllers along with dedicated weather stations.

### KEY BENEFITS

- Number of stations:
  - Unlimited
  - Type: Conventional, two-wire, and wireless valve connections
- Provides wired and wireless LAN (Ethernet) connections with cellular option
- Real-time communication and current draw monitoring provide instant access to data
- Map-based status for controllers, stations, flow sensors, and weather stations makes it easy to locate system components
- Automation features, such as flow management, alarm handling, and adaptive watering schedules, contribute to increased operational efficiency
- Weather station and Solar Sync® Sensor compatibility enable ET-based irrigation with soil moisture option for maximum efficiency
- Dashboard with consolidated data provides quick access to system analytics
- Live alarm pop-up plus historical alarms, events, and trends provide immediate notification of system issues
- Wi-Fi, LAN (Ethernet), or cell connectivity ensures operation with any system type
- Excel reports for Flow Totals, Flow Rates, Controller Alarms, Current Draw, Seasonal Adjustment Values, and more provide insights into system operation
- Data encryption and detailed user access protect system from unauthorized use
- Unlimited number of controllers and weather sources enable system scaling
- Multiple languages and units of measure

### PRODUCT SPECIFICATIONS

- Software and serialized license provided on USB 2/3 drive
- Operates Hunter ACC2, MCC, and ICC2 Controllers

### ELECTRICAL SPECIFICATIONS

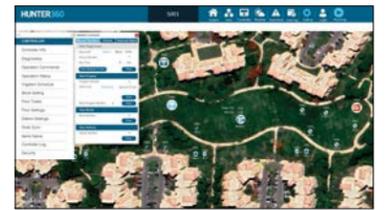
- Weather Station:
- Input 100–240 VAC
  - Output 15 V DC, 2.4 A max, 36 W

### APPROVALS

- Controllers and weather station: CE, UL



Hunter 360 Dashboard



Hunter 360 Operation Commands



Hunter 360 Scheduling



Hunter Weather Station  
WS-360-TCP

HUNTER 360	
Model	Description
H-360	Hunter 360 Software (on USB 2/3 flash drive) for irrigation management
H-360-ET	Hunter 360 Software (on USB 2/3 flash drive) for advanced ET irrigation management
WS-360-TCP	Weather station with Modbus TCP communication
WS-360-CELL	Weather station with cellular/cloud communication
WS-SM3	WS-360-CELL soil moisture array; includes 3 moisture sensors and a temperature probe
WS-SM1	Soil moisture sensor for TCP communication
WS-SM-TEMP	Soil temperature probe for TCP communication

# HUNTER FIELD SERVERS

These high-performance devices make it easy to communicate directly with Hunter ACC2 and ICC2 Controllers from centralized command centers.

## KEY BENEFITS

- Field server for BACnet, Modbus, RESTful API, and over 120 other automation protocols
- Up to 3,000 data points with complete documentation and demo software with Hunter license agreement
- Integrates controllers directly into SCADA, Smart City, and BMS applications
- Allows total access to all controller commands, reports, and features from the customer's integration software
- Does not require internet connection or other proprietary control software
- 2 x RJ-45 receptacles for system and controller connections
- 1 x RS-485/RS-232 and 1 x RS-485
- DIN rail mounting included
- Made in USA

## OPERATING SPECIFICATIONS

- Serial (galvanic isolation): 1 x RS-485/RS-232 and 1 x RS-485
- Baud: 9600, 19200, 38400, 57600, 76800, 115000
- Ethernet: 2 x 10/100BaseT, MDIX, DHCP
- Operating temperature: -4°F to 158°F (-20°C to 70°C)
- Relative humidity: 10% to 95% RH non-condensing



### Hunter Field Server

Height: 4"  
Width: 1 1/16"  
Depth: 2 7/16"



### Field Server Connections

#### HUNTER FIELD SERVER MODEL CHART

Model	Description
FS-3000	Field Server, 3,000 data points
FS-1000	Field Server, 1,000 data points



# CONTROLLER DECODERS & ACCESSORIES

# ICD

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

## KEY BENEFITS

- ICD Decoders are compatible with ACC2 Decoder Controllers and legacy ACC-99D Decoder Controllers
- 1-, 2-, 4-, and 6-station versions provide maximum flexibility
- Sensor decoders allow Flow and Klik 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
  - Use of ICD-HP Programmer allows for wireless decoder programming or reprogramming after installation to the two-wire path
- Integrated surge protection eliminates the need for extra surge protection devices
- Color-coded wiring connections simplify installation
- Industrial-grade, waterproof DBRY-6 Splice Connectors included for two-wire path splices

## OPERATING SPECIFICATIONS

- Maximum recommended distance, decoder to solenoid: 150'
- Maximum distance to decoder via two-wire path:
  - 14 AWG wire path: 10,000'
  - 12 AWG wire path: 15,000'
- Approvals: UL, cUL, FCC, CE, UKCA, RCM
- Decoder rating: IP68 (submersible)
- Warranty period: 5 years

## USER-INSTALLED OPTIONS

- Wireless handheld ICD-HP Programmer; [see page 125](#)
- DECSTAKE10 Universal Decoder Stake, 10-pack; [see page 130](#)



**ICD-100, 200, ICD-SEN**  
Height: 3½"  
Width: 1½"  
Depth: ¾"

**ICD-400, 600**  
Height: 3½"  
Width: 1¾"  
Depth: 1½"

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			
14 AWG Decoder Cable		12 AWG Long-Range, Heavy-Duty Decoder Cable	
ID1GRY	Gray jacket	ID2GRY	Gray 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
10,000' with ICD systems	15,000' with ICD systems

Compatible with:



**Waterproof Splice Kit**  
Page 131



**ACC2 Controller**  
Page 106

# ICD-HP PROGRAMMER

Gain wireless, handheld programming and diagnostic capabilities for Hunter ICD and legacy DUAL® Decoders.

## KEY BENEFITS

- Program or re-program decoder stations, whether new or installed\*
- Simplifies setup and diagnostics for sensor decoders
- Sensor test functions for Flow and Klik Sensors, plus built-in multimeter
- Communicates with decoder through plastic case: wireless electromagnetic induction saves waterproof connectors
- Compatible with Hunter ICD and legacy DUAL Decoders, as well as Pilot® Two-Way Modules
- 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 Programmer is not compatible with EZ Decoders

## ELECTRICAL SPECIFICATIONS

- Power input: 4 AA batteries, or standard USB connector (included)
- Communications: wireless induction, range 1"
- Fused test leads for unpowered decoder functions

## APPROVALS

- UL, cUL, FCC, CE, UKCA, RCM



**ICD-HP**  
Height: 8¼"  
Width: 3⅞"  
Depth: 2"

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



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

# EZ DECODER SYSTEM

Bring two-wire technology to more projects with the revolutionary, low-cost, and hassle-free EZ Decoder System for Pro-C®, HPC, ICC2, HCC, and MCC Controllers.

## KEY BENEFITS

- Number of stations:
  - Pro-C/HPC Controllers: Up to 28, plus master valve
  - ICC2/HCC Controllers: Up to 54, plus master valve
  - MCC Controller: Up to 108, plus 3 master valves
- No special wire or connectors required (waterproof connections are encouraged)
- No special grounding or surge arrestors required in-line to maximize time and money savings during installation
- Programmable decoders with no need to input individual serial numbers
- P/MV can activate via the two-wire path for distant installations
- Permits hybrid operations of side-by-side conventional and decoder stations for added flexibility
- EZ-1 and EZ-LR Decoders have built-in status LEDs for positive diagnostics

## OPERATING SPECIFICATIONS

- Electrical output on two-wire path: 24 VAC, 50/60 Hz
- Two-wire paths to the field:
  - EZ-DM: 2
  - PC-DM: 1
- Wire paths possible over 3,000' (EZ-1); double distances with EZ-LR Decoders (see Wiring Table below)
- Approvals: UL, cUL, FCC, CE, UKCA, RCM, ISED
- EZ-1 and EZ-LR Decoders are IP68 rated (submersible)
- Warranty period: 3 years

## USER-INSTALLED OPTIONS

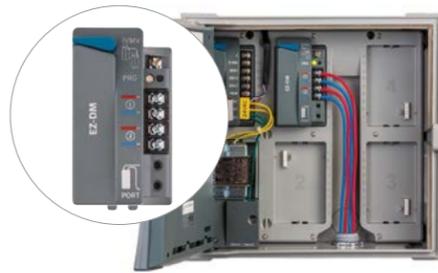
- Centralus™ Software with Pro-C, ICC2, and MCC Controllers
- Hydrawise® Software with HPC and HCC Controllers
- EZ-DT Diagnostic Tool for wireless diagnostics and troubleshooting
- DECSTAKE10 Universal Decoder Stake, 10-pack



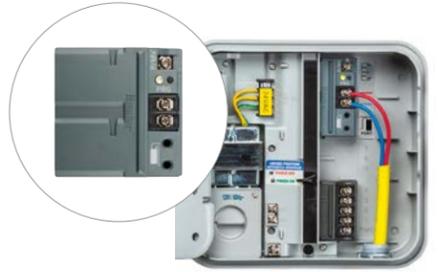
**Single-Station  
EZ-1 Decoder**  
Height: 2<sup>7</sup>/<sub>8</sub>"  
Width: 1<sup>5</sup>/<sub>8</sub>"  
Depth: 3<sup>4</sup>/<sub>8</sub>"



**Long-Range  
EZ-LR Decoder**  
Height: 3<sup>5</sup>/<sub>8</sub>"  
Width: 1<sup>5</sup>/<sub>8</sub>"  
Depth: 3<sup>4</sup>/<sub>8</sub>"



**EZ-DM Decoder Output Module for ICC2, HCC, and MCC Controllers**  
Height: 4<sup>1</sup>/<sub>2</sub>"  
Width: 2<sup>1</sup>/<sub>2</sub>"  
Depth: 1<sup>5</sup>/<sub>8</sub>"



**PC-DM Decoder Output Module for Pro-C and HPC Controllers**  
Height: 3"  
Width: 3"  
Depth: 1<sup>1</sup>/<sub>4</sub>"

Compatible with:



**HCC Controller**  
Page 100



**ICC2 Controller**  
Page 110



**Pro-C Controller**  
Page 111

WIRING TABLE		
American Wire Gauge	EZ-1 1 active solenoid	EZ-LR 1 active solenoid
18 AWG	947'	1,894'
16 AWG	1,506'	3,012'
14 AWG	2,395'	4,790'
12 AWG	3,808'	7,616'

**Note**  
Distances in the Wiring Table are calculated based on 60 Hz for American Wire Gauge with a wire temperature of 120°F and a 10% safety factor.

DECODER MODELS	
Model	Description
EZ-DM	Decoder output module for HCC, ICC2, and MCC Controllers
PC-DM	Decoder output module for HPC and Pro-C Controllers
EZ-1	Single-station EZ Decoder
EZ-LR	Single-station, long-range EZ Decoder
EZ-DT	EZ-DT Diagnostic Tool

# EZ-DT

Simplify maintenance of EZ Decoder Systems with the handheld, wireless EZ-DT Diagnostic Tool.

## KEY BENEFITS

- Wireless, handheld diagnostic tool for EZ Decoders
- Detect faults and perform electrical troubleshooting in the field without uninstalling decoders
- Quickly read decoder status, station address, current draw, and two-wire voltage to simplify maintenance
- Program decoder station address via wired connection to speed up installation and save time on-site
- Update controller facepack or decoder module firmware via ribbon cable connection for flexibility when updating systems
- Communicate in your preferred language using the multilingual user interface
- Work reliably and efficiently on the go with power supplied by 4 AAA batteries

## OPERATING SPECIFICATIONS

- Power input: 4 AAA batteries (included)
- Communications: Wireless induction, 1" range from decoder to EZ-DT Diagnostic Tool
- 1.8" full-color, backlit TFT display

## USER-INSTALLED OPTIONS

- Centralus™ Software with Pro-C®, ICC2, and MCC Controllers
- Hydrawise® Software with HPC and HCC Controllers
- DECSTAKE10 Universal Decoder Stake, 10-pack

## DECODER MODELS

Model	Description
EZ-DM	Decoder output module for HCC, ICC2, and MCC Controllers
PC-DM	Decoder output module for HPC and Pro-C Controllers
EZ-1	Single-station decoder with status LED
EZ-LR	Single-station, long-range decoder with LED
EZ-DT	EZ-DT Diagnostic Tool



**EZ-DT Diagnostic Tool**  
Height: 7<sup>3</sup>/<sub>4</sub>"  
Width: 2<sup>1</sup>/<sub>4</sub>"  
Depth: 7<sup>8</sup>/<sub>8</sub>"

EZ-DT DIAGNOSTIC TOOL



Compatible with:



**HCC Controller**  
Page 100



**ICC2 Controller**  
Page 110



**EZ Decoder System**  
Page 126

# WIRELESS VALVE LINK

Enable convenient wireless valve control for ICC2, HCC, and MCC Controllers with the highly flexible and easy-to-install Wireless Valve Link.

## KEY BENEFITS

- Works with Hunter ICC2, HCC, and MCC Controllers, compatible with Centralus™ and Hydrawise® Irrigation Management Platforms
- Add up to 54 valves plus P/MV (ICC2 and HCC) up to 2,000' line of sight\*
- Add up to 108 valves plus 3 P/MV connections with MCC Controller
- License-free LoRa® wireless connections direct to valve box — no copper field wiring required
- Wireless Solar Repeater (RPT) can extend or double ranges
- Seamless system expansion enables connection across hardscapes and other obstacles without wiring
- Combine with conventional ICM or EZDS Modules as needed
- Isolation from lightning or surge events in the field
- No field wires, wire breaks, or tracking
- No cutting into hardscape, plowing, boring, or lightning surge back to the controller

## OPERATING SPECIFICATIONS

- Low-profile, waterproof valve box lid mount for field durability
  - Requires 1½" diameter hole in valve box lid (hole saw supplied with WVOM)
- Two-way communications confirm field performance
- LoRa radio: 915 MHz for North America
- 1-, 2-, and 4-station configurations to optimize field installations
- Operates Hunter DC-Latching Solenoids
- Maximum distance from WVL to solenoid: 100' with 18 AWG wire
- One or two 9 VDC batteries per WVL
  - Replace batteries once per season or year
  - Solar recharging option with SP-WVL
- Built-in site survey and manual test functions
- Easy, free setup with iOS® 9.0 or above, Android™ 5.0 or above, and Bluetooth® apps
- Approvals:
  - WVOM: UL, cUL, FCC, CE, UKCA, RCM, ISED
  - WVL in-box control links: IP68 (submersible)
  - RPT Wireless Solar Repeater (universal mount included): IP55 (outdoor)
- Warranty period: 2 years

\*Wireless range is subject to terrain, foliage, buildings, and other site factors. Consult product documentation before installing.

Compatible with:



Hydrawise  
Software  
Page 94



Centralus  
Software  
Page 104



ROAM Remote  
Page 132  
ROAM LR Remote  
Page 133

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### Wireless Valve Output Module (WVOM)

Height: 4½"  
Width: 3¾"  
Length: 1½"



### Wireless Valve Link (WVL-XXX)

See model chart on next page.  
Diameter: 4¼"  
Height: 6½"



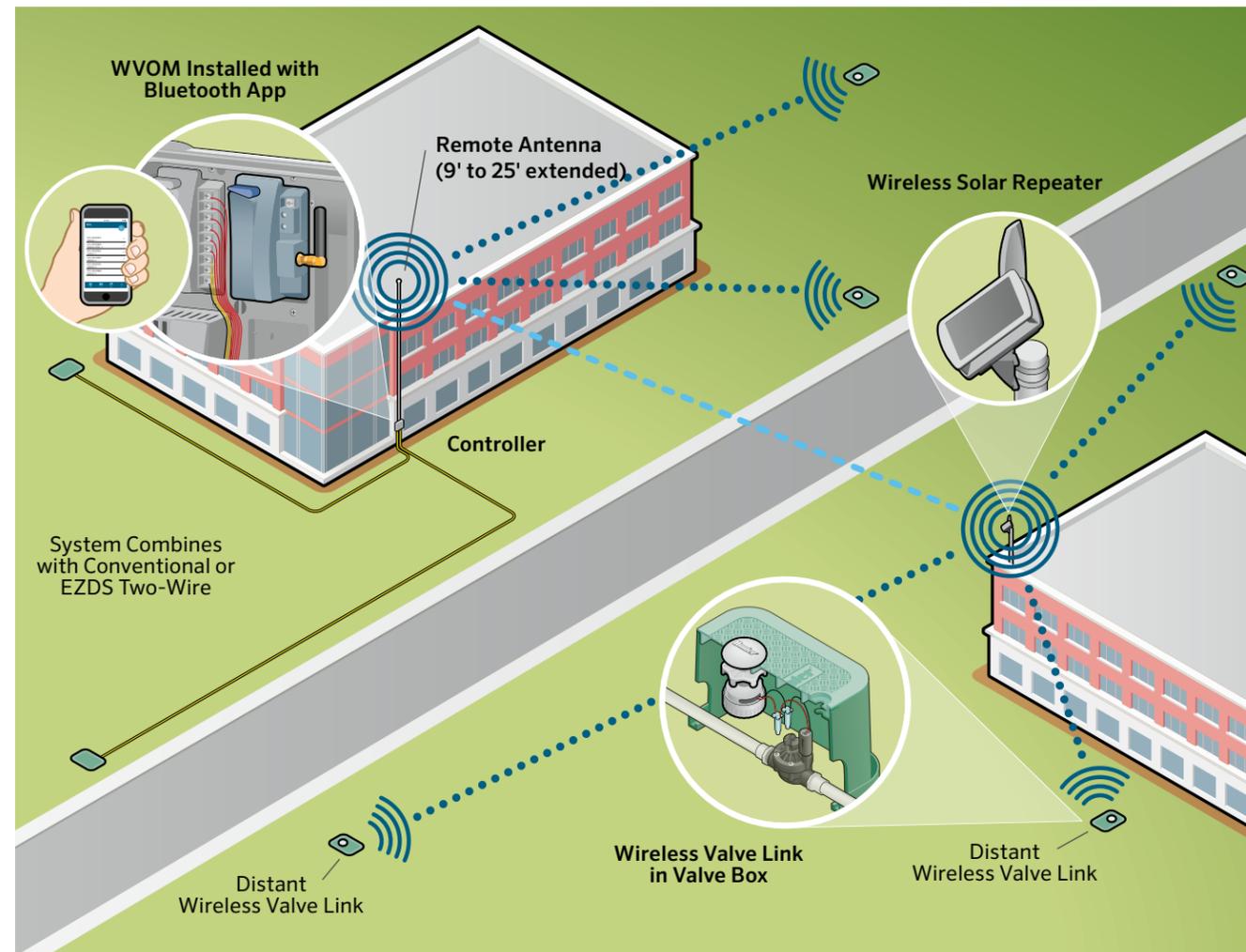
### Wireless Solar Repeater (RPT)

Height: 13¾" (installed with antenna extended)  
Width: 6¾"  
Length: 7¾"



### SP-WVL

Solar Panel  
Height: 1¾"  
Width: 3"  
Depth: 9½"



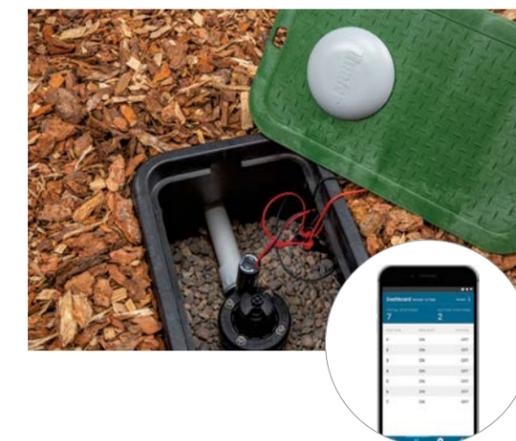
## WIRELESS VALVE LINK MODEL CHART

Model	Description
WVOM	Wireless Valve Output Module for HCC, ICC2, and MCC Controllers
WVL-100	Single-station Wireless Valve Link
WVL-200	2-station Wireless Valve Link
WVL-400	4-station Wireless Valve Link
RPT	Battery-operated Wireless Solar Repeater for WVL range extension (1 per system max)

## USER-INSTALLED OPTIONS

Model	Description
ANT-EXT-KIT	Universal Antenna Extension Kit
458200	Hunter DC-Latching Solenoids (for all Hunter valves)
SP-WVL	Solar Panel Kit for WVL Controllers
10061700SP	Above-ground wall or pole mount for WVLS

## WIRELESS VALVE LINK INSTALLED IN VALVE BOX



# UNIVERSAL DECODER STAKE

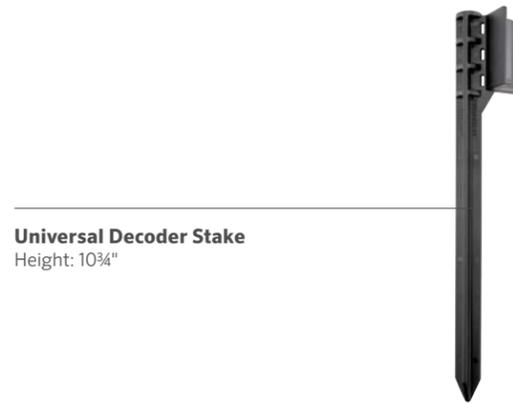
The Universal Decoder Stake raises the decoder off the ground to keep two-wire installations organized, clean, and easily accessible during routine maintenance.

## KEY BENEFITS

- Raises decoder off the ground, so contractors don't have to dig the device out of the mud
- Holds Hunter decoders in end-up position for convenient access and wireless programming without removal
- Works with all Hunter decoders and most other brands, so contractors only need to stock one item
- Zip ties conveniently included to secure the stake during installation
- Sturdy construction ensures the stake won't break or bend when hammered into the dirt
- Made primarily from recycled materials with minimal packaging to prevent waste and minimize carbon footprint

## OPERATING SPECIFICATIONS

- Fits all Hunter decoders and most other brands
- Zip ties included
- Made of recycled materials



**Universal Decoder Stake**  
Height: 10¾"

UNIVERSAL DECODER STAKE



## UNIVERSAL DECODER STAKE

Model	Description
DECSTAKE10	Universal Decoder Stake (10 per carton), zip ties included

# ANTENNA EXTENSION KITS

Use these flexible Antenna Extension Kits when buildings, terrain, or other obstructions prevent reliable wireless communications.

## KEY BENEFITS

- Universal Antenna Extension Kit option for Wi-Fi, cellular, and LoRa® radio communications (ANT-EXT-KIT)
  - Wi-Fi: HCC Controller, A2C-WIFI
  - Cell: A2C-LTEM
  - LoRa: WVOM
- Simplify Plastic Pedestal installations with a flexible pedestal lid mounting option (PED-LID-ANT-BRKT)



ANT-EXT-KIT

## ANTENNA EXTENSION OPTIONS

Model	Description
ANT-EXT-KIT	Universal Antenna Extension Kit for Wi-Fi, cellular, and LoRa communication hardware (9' cable and mounting hardware)
PED-LID-ANT-BRKT	Plastic Pedestal Antenna Mount

# WATERPROOF WIRE CONNECTOR

Use this approved waterproof connector for EZ Decoders and all above-grade solenoid and sensor wiring connections.

## KEY BENEFITS

- 100% silicone-based sealant protects against moisture and corrosion
- Designed as a single-use only connection
- UL Listed (UL486G) to 600 V for use in damp/wet locations or above-grade applications
- Easy to apply, pre-filled twist-on wire connectors
- Eliminates the need for heat-shrink or excessive taping
- Not for use in continual submersion applications; use DBRY-6 Splice Connectors
- Approvals: UL, cUL, FCC, CE, UKCA, RCM, RoHS, ISED



**Waterproof Wire Connector**

Height: 1½"  
Minimum wire: 3 #18 AWG  
Maximum wire: 2 #10 AWG with 1 #14 AWG

## WIRE CONNECTOR

Model	Description
WC100	Bulk 100 connectors in canister

WC100 WIRE CONNECTOR



# WATERPROOF SPLICE KIT

Use this approved splice kit for all direct-burial, two-wire ICD, and legacy DUAL™ Decoder wiring connections.

## KEY BENEFITS

- UL Listed (UL486G) to 600 V for use in damp/wet location or direct-burial applications
- Waterproof, corrosion-proof, UV-rated, and impact resistant
- Snap-fit lid provides strain relief and three wire exits
- Prefilled with silicone that never hardens
- Two-part system includes red/yellow winged wire connector and silicone-filled tube
- Compatible with EZ Decoder connections
- Approvals: UL, cUL, FCC, CE, UKCA, RCM, RoHS, ISED



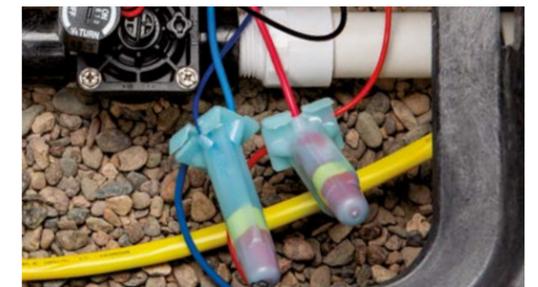
**Waterproof Splice Kit**

Height: 3¾"  
Minimum wire: 2-7 #18 AWG  
Maximum wire: 2-3 #10 AWG

## DBRY-6 SPLICE KIT

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)

DBRY-6 WATERPROOF SPLICE KIT



# ROAM REMOTE

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, MCC, ACC2, and legacy ACC and I-Core® Controllers for convenient remote operation
- 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: 1,000' from transmitter to receiver
- Transmitter power source: 4 AAA batteries (included)
- Receiver power source: 24 VAC, 0.010 A
- System operating frequency: 433 MHz
- SmartPort® Wiring Harness installation: maximum 50' from controller
- FCC, CE, and UKCA approved for use in the United States and internationally
- Warranty period: 2 years



### ROAM Transmitter and Receiver

Height: 7"  
Width: 2¼"  
Depth: 1¼"



### SmartPort Wiring Harness

Hunter remotes require the installation of a SmartPort Wiring Harness.



### Wall-Mount Bracket for SmartPort Wiring Harness

P/N 258200

ROAM	
Model	Description
ROAM-KIT	Transmitter, receiver, SmartPort Wiring Harness, and 4 AAA batteries
ROAM-TR	Transmitter unit and 4 AAA batteries included
ROAM-R	Receiver unit

## USER-INSTALLED OPTIONS

Model	Description
ROAM-WH	SmartPort Wiring Harness (length: 6')
ROAM-SCWH	Shielded SmartPort Wiring Harness (length: 25')
258200	Wall-mount bracket for SmartPort Wiring Harness

# ROAM LR REMOTE

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

## KEY BENEFITS

- Compatibility with Hunter X2™, Pro-C®, HPC, ICC2, HCC, MCC, ACC2, and legacy ACC and I-Core® Controllers enables remote management for projects of any size
- Manually start individual stations or programs for quick maintenance checks and troubleshooting
- 128 available programmable addresses prevent 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 with simple push-button operation and a battery-life indicator

## OPERATING SPECIFICATIONS

- Range: 2 miles line of sight from transmitter to receiver
- Transmitter power source: 4 AAA batteries (included)
- Receiver power source: 24 VAC, 0.010 A
- System operating frequency: 915 MHz LoRa Radio
- SmartPort® Wiring Harness installation: maximum 50' from controller
- FCC approved (not available in EU and some other countries; check local regulations)
- Approvals: IP55 (transmitter); IP55 when installed on controller (receiver)
- Warranty period: 3 years



### ROAM LR Receiver

Height: 8"  
Width: 2½"  
Depth: 1½"

### ROAM LR Transmitter

Height: 9¾"  
Width: 2¼"  
Depth: 1"



### SmartPort Wiring Harness

Hunter remotes require the installation of a SmartPort Wiring Harness



### Wall-Mount Bracket for SmartPort Wiring Harness

P/N 258200

ROAM LR	
Model	Description
ROAM-LR-KIT	Transmitter, receiver, SmartPort Wiring Harness, 4 AAA batteries, and plastic carrying case included
ROAM-LR-TR	Handheld transmitter and 4 AAA batteries included
ROAM-LR-R	Receiver unit (SmartPort Wiring Harness included)

## USER-INSTALLED OPTIONS

Model	Description
258200	Wall-mount bracket for SmartPort Wiring Harness
ROAM-WH	SmartPort Wiring Harness (length: 6')
ROAM-SCWH	Shielded SmartPort Wiring Harness (length: 25')

# PSR

This reliable and economical Pump Start Relay family is perfect for systems that require pump activation.

## KEY BENEFITS

- A 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, allows flexible installation options

## OPERATING SPECIFICATIONS

- Recommended installation: Minimum 15' from irrigation controller; see chart on page 215 for maximum distances
- Approvals: IP44 (outdoor), UL, cUL, FCC, CE, RCM, ISED
- Warranty period: 2 years



**Pump Start Relay**  
Height: 6½"  
Width: 7½"  
Depth: 4½"

PUMP START RELAY	
Model	Description
PSR-22	Double-pole/single-throw pump start relay for 120 VAC pumps up to 2 hp or 230 VAC pumps up to 3 hp
PSR-52	Double-pole/single-throw pump start relay for 120 VAC pumps up to 3 hp or 230 VAC pumps up to 7.5 hp
PSR-53	Triple-pole/single-throw pump start relay for 120 VAC pumps up to 3 hp, 230 VAC pumps up to 7.5 hp, or 230 VAC pumps up to 10 hp (3-phase)

PUMP START RELAY ELECTRICAL SPECIFICATIONS													
Model	Single-Phase		3-Phase**	Max. Full Load AMPS	Max. Resistive AMPS	Coil VA				Coil VA			
	HP at 120 VAC	HP at 230 VAC	HP at 230 VAC			INRUSH	AMPS	HOLDING	AMPS	50 Hz	60 Hz	50 Hz	60 Hz
PSR-22	2*	3*	N/A	30	40	33	30	1.38	1.25	8	6.5	0.33	0.27
PSR-52	3	7.5	N/A	40	50	65	60	2.71	2.50	7.5	5	0.31	0.21
PSR-53	3	7.5	10	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.

# PSR-B

For distant pump starts that require more power, choose the PSR-B.

## KEY BENEFITS

- Provides a solution for irrigation controller and 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 (outdoor), UL, cUL, FCC, CE, RCM, ISED
- Warranty period: 2 years



**PSR-B Pump Start Relay Booster**  
Height: 8¾"  
Width: 7"  
Depth: 3¾"

PUMP START RELAY BOOSTER	
Model	Description
PSR-B	Pump Start Relay Booster for increasing controller output power

# CONNECT YOUR WAY

Choose from a range of Wi-Fi, LAN (Ethernet), and cellular connection accessories to enable remote irrigation management on standalone controllers anytime, anywhere.

## HYDRAWISE® SOFTWARE

### X2 Controller with WAND Module Installed



**WAND**  
Wi-Fi accessory for X2 Controllers, managed by Hydrawise Software  
page 97

## CENTRALUS™ SOFTWARE

### PRO-C Controller with PC-WIFI Module Installed



**PC-WIFI**  
Wi-Fi accessory for Pro-C Controllers, managed by Centralus Software  
page 111

## CENTRALUS SOFTWARE

### ICC2 Controller with LANKIT Module Installed



**WIFIKIT**  
Wi-Fi accessory for ICC2 Controllers, managed by Centralus Software  
page 104



**LANKIT**  
Ethernet accessory for ICC2 Controllers, managed by Centralus or Hunter 360 Software  
page 104



**CELLKIT**  
Cellular accessory for ICC2 Controllers, managed by Centralus Software  
page 104

## CENTRALUS SOFTWARE

### ACC2, MCC, AND SKYCOMMAND™ UCH Controller with A2C-LTEM Module installed



**A2C-WIFI**  
Wi-Fi accessory for ACC2, MCC, and SkyCommand UCH, managed by Centralus Software  
page 107



**A2C-LAN**  
Ethernet accessory for ACC2, MCC, and SkyCommand UCH, managed by Centralus or Hunter 360 Software  
page 107



**A2C-LTEM**  
Cellular accessory for ACC2, MCC, and SkyCommand UCH, managed by Centralus Software  
page 107

# SENSORS



## SENSOR AND CONTROLLER COMPATIBILITY CHART

AC CONTROLLERS	SENSOR INPUTS	RAIN	SMART WEATHER ADJUST	FLOW MONITORING	HIGH-FLOW SHUTOFF
X-CORE® page 91	1	Mini-Clik®, Rain-Clik®	Solar Sync	N/A	Flow-Clik®
X2™ page 96	1	Mini-Clik, Rain-Clik	Hydrawise® Software (with WAND)	N/A	Flow-Clik
PRO-HC page 98	2	Mini-Clik, Rain-Clik	Hydrawise Software	HC Flow Meter, U-Wave™ Flow Sensor	HC Flow Meter, U-Wave Flow Sensor
HPC page 99	2	Mini-Clik, Rain-Clik	Hydrawise Software	HC Flow Meter, U-Wave Flow Sensor	HC Flow Meter, U-Wave Flow Sensor
HCC page 100	2	Mini-Clik, Rain-Clik	Hydrawise Software	HC Flow Meter, U-Wave Flow Sensor	HC Flow Meter, U-Wave Flow Sensor
ACC2 page 106	1 Solar Sync®, 3 Clik, 6 Flow	Mini-Clik, Rain-Clik	Solar Sync, Centralus™ Software	HFS, WFS, U-Wave Flow Sensor, Other (K-Factor)	Built-In, Real-Time Flow Monitoring and Management
MCC page 108	2 Flow, 1 Clik, 1 Custom (Clik, Flow, or Solar Sync)	Mini-Clik, Rain-Clik	Solar Sync, Centralus Software	HFS, WFS, U-Wave Flow Sensor, Other (K-Factor)	Built-In, Real-Time Flow Monitoring and Management
ICC2 page 110	2	Mini-Clik, Rain-Clik	Solar Sync, Centralus Software	HFS, WFS, U-Wave Flow Sensor, Other (K-Factor)	Built-In, Real-Time Flow Monitoring
PRO-C® page 111	2	Mini-Clik, Rain-Clik	Solar Sync, Centralus Software	N/A	Flow-Clik
BATTERY-OPERATED CONTROLLERS					
NODE page 117	1	Mini-Clik, Rain-Clik (wired)	N/A	N/A	N/A
NODE-BT page 118	2	Mini-Clik, Rain-Clik (wired)	N/A	N/A	N/A
XC HYBRID page 119	1	Mini-Clik, Rain-Clik (wired)	N/A	N/A	N/A

SOIL MOISTURE	FREEZE	WIND
Soil-Clik	Freeze-Clik, WR-Clik, WM-Clik, RFC	Wind-Clik, MWS
Soil-Clik	Freeze-Clik, WR-Clik, WM-Clik, RFC, Hydrawise Software	Wind-Clik, MWS, Hydrawise Software
Soil-Clik	Freeze-Clik, WR-Clik, WM-Clik, RFC, Hydrawise Software	Wind-Clik, MWS, Hydrawise Software
Soil-Clik	Freeze-Clik, WR-Clik, WM-Clik, RFC, Hydrawise Software	Wind-Clik, MWS, Hydrawise Software
Soil-Clik	Freeze-Clik, WR-Clik, WM-Clik, RFC, Hydrawise Software	Wind-Clik, MWS, Hydrawise Software
Soil-Clik	Freeze-Clik, WR-Clik, WM-Clik, RFC, Centralus Software	Wind-Clik, MWS
Soil-Clik	Freeze-Clik, WR-Clik, WM-Clik, RFC, Centralus Software	Wind-Clik, MWS
Soil-Clik	Freeze-Clik, WR-Clik, WM-Clik, RFC, Centralus Software	Wind-Clik, MWS
N/A	Freeze-Clik	N/A
SC-Probe	Freeze-Clik	N/A
N/A	Freeze-Clik	N/A



**Rain-Clik® Sensor**  
see page 140



**Mini-Clik® Sensor**  
see page 141



**Solar Sync® Sensor**  
see page 142



**Soil-Clik® Sensor**  
see page 143



**HC Flow Meter**  
Available wireless!  
see page 144



**U-Wave™ Ultrasonic  
Flow Sensor**  
see page 146



**Flow-Clik® Sensor**  
see page 147



**Flow-Sync® Sensor**  
see page 148



**Wireless Flow Sensor**  
see page 149



**Freeze-Clik® Sensor  
Mini Weather Station  
Wind-Clik® Sensor**

# RAIN-CLIK®

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

## KEY BENEFITS

- Quick Response Technology triggers instant rain shutoff
- Freeze-sensing wireless model halts system operation at 37°F
- Wireless Sensor Kit simplifies installation
- Maintenance-free design with integrated battery for wireless models
- Adjustable vent ring allows for shorter or longer reset period
- Includes gutter bracket and wall mount with wireless models
- Compatible with most normally open or normally closed irrigation controllers

## OPERATING SPECIFICATIONS

- Quick Response Technology:
  - Time to turn off irrigation system: approximately 2 to 5 minutes
  - Time to reset: 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 25' of 20 AWG sheathed, UL-approved wire
- Wireless model operating frequency: 433 MHz
- Wireless model range is 800' line of sight from sensor to receiver
- Multiple wireless receivers can be operated from a single wireless sensor
- Approvals: UL, cUL, FCC, CE, UKCA, RCM
- Warranty period: 5 years

## USER-INSTALLED OPTIONS

- Optional Gutter Mount for wired models (included with WR-CLIK)
- Vandal-resistant Wireless Sensor Guard for flat surface-mounting or pole-mounting (order sensor separately)
- Vandal-resistant Wireless Receiver Guard for pedestal mounting (order receiver separately)

RAIN-CLIK	
Model	Description
RAIN-CLIK	Wired Rain-Clik Sensor
RAIN-CLIK-NO	Wired Rain-Clik Sensor, normally open switch
RFC	Wired Rain/Freeze-Clik Sensor
WR-CLIK	Wireless Rain/Freeze-Clik Sensor, Receiver, and Gutter Mount
WS-GUARD	Vandal-resistant wireless sensor guard for surface- or pole-mounting
WR-GUARD	Vandal-resistant wireless receiver guard for pedestal mounting

Sensor: Rain, Freeze



**Wired Rain-Clik Sensor**  
(with mounting arm)  
Height: 2½"  
Length: 7"  
Width: 1"



**Sensor Gutter Mount**  
optional gutter mount  
Height: ½"  
Length: 3"  
Width: 1¼"



**Wireless Rain-Clik Sensor**  
(with mounting arm)  
Height: 3"  
Length: 8"  
Width: 1"



**Wireless Receiver**  
(with wall-mounting hardware)  
Height: 3¼"  
Length: 4"  
Width: 1½"



**Wireless Sensor Guard**  
(with mounting hardware)  
Height: 2¾"  
Length: 3¾"  
Width: 1¼"



**Wireless Receiver Guard**  
(with mounting hardware)  
Height: 5"  
Length: 4"  
Width: 1¼"

Compatible with:



Waterproof Wire Connector  
Page 131

# MINI-CLIK®

This sensor halts scheduled irrigation when it detects a preset level of rainfall to prevent water waste.

## KEY BENEFITS

- Shuts off irrigation automatically when the sensor detects rainfall from ⅛" to ¾"
- Debris-tolerant for reliable operation and no unnecessary shutdowns
- Wireless Sensor Kit simplifies installation
- Optional Quick Response® Technology triggers faster system shutdown for plant protection\*
- Built-in freeze sensing halts system operation at 37°F to protect plants and keep roads and walkways safe\*
- Maintenance-free design with integrated battery for wireless models
- Compatible with most normally open or normally closed irrigation controllers

## OPERATING SPECIFICATIONS

- Quick Response Technology\* (when enabled):
  - Time to turn off irrigation system: approximately 2 to 5 minutes
  - Time to reset: 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 25' of 20 AWG sheathed, UL-approved wire
- Wireless model operating frequency: 433 MHz
- Wireless model range is 800' line of sight from sensor to receiver
- Multiple wireless receivers can be operated from a single wireless sensor
- Approvals: UL, cUL, FCC, CE, UKCA, RCM
- Warranty period: 5 years

## USER-INSTALLED OPTIONS

- Optional Gutter Mount for wired models (included with WM-CLIK)
- Vandal-resistant Wireless Sensor Guard for flat surfaces or pole mounting (order sensor separately)
- Vandal-resistant Wireless Receiver Guard for pedestal mounting (order receiver separately)

\*Wireless Mini-Clik Sensor only

MINI-CLIK	
Model	Description
MINI-CLIK	Wired Mini-Clik Sensor
MINI-CLIK-NO	Wired Mini-Clik Sensor, normally open switch
MINI-CLIK-C	Wired Mini-Clik Sensor, conduit mount
SG-MC	Wired Mini-Clik Sensor in a stainless steel sensor enclosure
WM-CLIK	Wireless Mini-Clik Sensor, Receiver, and Gutter Mount
WS-GUARD	Vandal-resistant Wireless Sensor Guard for flat surface or pole mounting
WR-GUARD	Vandal-resistant Wireless Receiver Guard for pedestal mounting

Sensor: Rain, Freeze



**Wired Mini-Clik Sensor**  
(with mounting arm)  
Height: 2"  
Length: 6"  
Width: 1"



**Wired Mini-Clik Sensor**  
(with stainless steel enclosure)  
Height: 5½"  
Length: 3"  
Width: 4"



**Wireless Mini-Clik Sensor**  
(with mounting arm)  
Height: 3"  
Length: 8"  
Width: 1"



**Wireless Receiver**  
(with wall-mounting hardware)  
Height: 4"  
Length: 4"  
Width: 1½"



**Wireless Sensor Guard**  
(with mounting hardware)  
Height: 2¾"  
Length: 3¾"  
Width: 1¼"



**Wireless Receiver Guard**  
(with mounting hardware)  
Height: 5"  
Length: 4"  
Width: 1¼"

Compatible with:



Waterproof Wire Connector  
Page 131

# SOLAR SYNC®

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 run times based on weather conditions using on-site solar radiation and air temperature
- Quick Response® Technology triggers instant rain shutoff
- Freeze sensing halts system operation at 37°F
- Use with X-Core®, Pro-C®, ICC2, MCC, ACC2, and legacy ACC and I-Core® Controllers
- Manage remotely with Centralus™ Software for Pro-C, ICC2, MCC, and ACC2 installations

## OPERATING SPECIFICATIONS

- Solar Sync Technology:
  - Adjusts run times daily using the last 3 days of ET (evapotranspiration) data
  - See calibration table on [page 216](#)
- Quick Response Technology:
  - Time to turn off irrigation system: approximately 2 to 5 minutes
  - Time to reset: 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 25' of 20 AWG sheathed wire
- Wireless model operating frequency: 433 MHz
- Wireless model range is 800' line of sight from sensor to receiver
- Approvals: FCC, CE, UKCA, RCM
- Warranty period: 5 years

## USER-INSTALLED OPTIONS

- Vandal-resistant Wireless Sensor Guard for flat surface- or pole-mounting (order sensor separately)
- Vandal-resistant Wireless Receiver Guard for pedestal mounting (order receiver separately)

SOLAR SYNC	
Model	Description
SOLAR-SYNC-SEN	Wired Solar Sync Sensor and Gutter Mount
WSS-SEN	Wireless Solar Sync Sensor, Receiver, and Gutter Mount
WS-GUARD	Vandal-resistant Wireless Sensor Guard for flat surface- or pole-mounting
WR-GUARD	Vandal-resistant Wireless Receiver Guard for pedestal mounting

Sensor: **ET, Rain, Freeze**



**Wired Solar Sync Sensor**  
(with mounting arm)  
Height: 3"  
Length: 8½"  
Width: 1"



**Wireless Solar Sync Sensor**  
Height: 4½"  
Length: 8½"  
Width: 1"



**Wireless Solar Sync Receiver**  
(with wall-mounting kit)  
Height: 5½"  
Length: 1½"  
Width: 1½"



**Wireless Sensor Guard**  
(with mounting hardware)  
Height: 2¾"  
Length: 3¾"  
Width: 1¼"



**Wireless Receiver Guard**  
(with mounting hardware)  
Height: 5"  
Length: 4"  
Width: 1¼"

Compatible with:



Centralus Software  
Page 104



Waterproof Wire Connector  
Page 131



**EPA WaterSense® Approved**  
Recognized as a responsible water-saving tool by the U.S. Environmental Protection Agency

# SOIL-CLIK®

This sensor prevents water waste by measuring soil moisture and shutting off irrigation when a preset 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 sensor inputs, or use to interrupt common wires in virtually any 24 VAC irrigation system
- Use with Solar Sync® Sensor for maximum water savings; [see page 142](#)

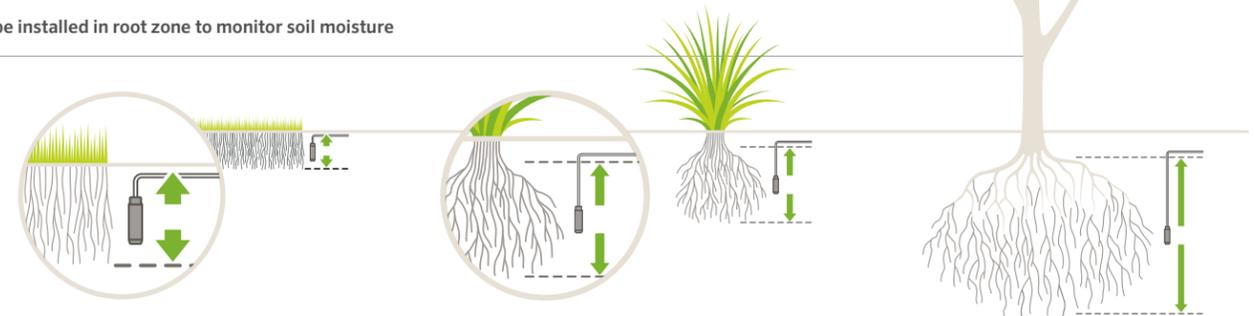
## OPERATING SPECIFICATIONS

- Switch rating (24 VAC): 5 A
- Input power (24 VAC): 100 mA
- Output power: Normally closed, dry-contact closure
- 6' maximum distance from Soil-Clik module to controller
- 1,000' maximum distance from Soil-Clik module to sensor probe for AC installations
- 100' maximum distance for NODE-BT installations
- Sensor probe includes 30" of direct-burial wire
- Approvals: UL, cUL, FCC, CE, UKCA, RCM
- Warranty period: 5 years

### SOIL-CLIK

Model	Description
SOIL-CLIK	Soil-Clik moisture sensor module and probe
SC-PROBE	Soil moisture probe sensor for NODE-BT (module is not used)

Probe installed in root zone to monitor soil moisture



In turf applications, the probe should be placed in the root zone, approximately 6" 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.

Sensor: **Soil Moisture**



**Soil-Clik Module**  
Height: 4½"  
Length: 3½"  
Width: 1¼"



**Soil-Clik Probe**  
Height: 3¼"  
Diameter: 1"

Compatible with:



Waterproof Wire Connector  
Page 131



NODE-BT Controller  
Page 118

# HC FLOW METER

Detect, monitor, and report critical flow zone data via wired or wireless connection with this robust and simple-to-install flow sensor.

## KEY BENEFITS

- Compatible with Hydrowise® enabled Pro-HC, HPC, and HCC Controllers
- Provides station-level flow rates and totals
- Sends automatic alerts in the event of high-flow, low-flow, or unscheduled flow conditions
- Flow reports within Hydrowise 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 winterization
- Analog dial on the meter displays daily flow totals and leak detector

## OPERATING SPECIFICATIONS

- Scaled pulse output is precalibrated from the factory based on the size of the meter
- When wired directly to the controller, the meter must be installed with shielded, minimum 18 AWG wire, up to 1,000' from the controller
- Accuracy: ± 2% of reading at recommended flow
- Warranty period: 2 years

## WIRELESS HC FLOW METER BENEFITS

- Add wireless communication to any HC Flow Meter (sensor sold separately)
- Send flow data wirelessly from the sensor to the controller, without the need to run wire or dig trenches

## WIRELESS HC FLOW METER OPERATING SPECIFICATIONS

- 500' range (line of sight) from transmitter to receiver
- Communication frequency: 900 MHz for use in North America
- Transmitter power supply: 3 AA batteries
- Receiver power supply: 24 VAC from host controller
- Warranty period: 2 years

Sensor: **Flow**



**HC-075-FLOW**  
(¾" male thread)  
Height: 3½"  
Length: 9½"  
Depth: 3½"

**HC-150-FLOW**  
(1½" male thread)  
Height: 6¼"  
Length: 16⅞"  
Depth: 4⅞"

**HC-100-FLOW**  
(1" male thread)  
Height: 3⅝"  
Length: 10¼"  
Depth: 3⅝"

**HC-200-FLOW**  
(2" male thread)  
Height: 6¼"  
Length: 17½"  
Depth: 4⅞"

## WIRELESS HC FLOW METER



## HC FLOW METER MODELS

Model	Description
W-HC-FLOW	Wireless HC Flow Meter Kit, includes transmitter and receiver (domestic 900 MHz)
HC-075-FLOW	HC Flow Meter with ¾" male thread, U.S. gal
HC-100-FLOW	HC Flow Meter with 1" male thread, U.S. gal
HC-150-FLOW	HC Flow Meter with 1½" male thread, U.S. gal
HC-200-FLOW	HC Flow Meter with 2" male thread, U.S. gal

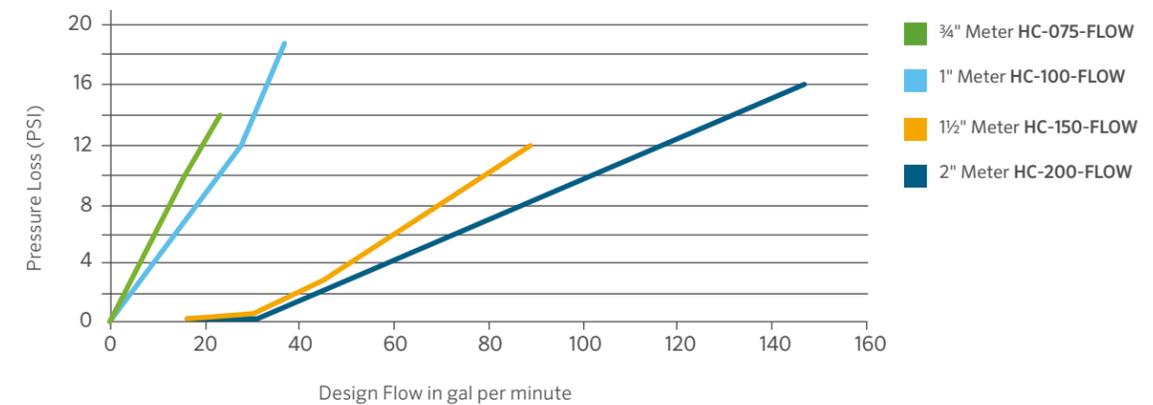
## REPLACEMENT GASKETS

Model	Description
10021300SP	Qty. 10, for HC-075-FLOW
10021400SP	Qty. 10, for HC-100-FLOW
10021500SP	Qty. 2, for HC-150-FLOW
10021600SP	Qty. 2, for HC-200-FLOW

## HC FLOW METER SPECIFICATIONS

	HC-075-FLOW (¾")	HC-100-FLOW (1")	HC-150-FLOW (1½")	HC-200-FLOW (2")
Minimum flow (GPM)	0.22	0.3	0.88	1.98
Maximum recommended flow (GPM)	15	30	66	105
Maximum flow (GPM)	21	34	88	132
Dial reading (U.S. gal)	1 pulse per 0.1 U.S. gal	1 pulse per 1 U.S. gal	1 pulse per 1 U.S. gal	1 pulse per 1 U.S. gal

## HC FLOW METER Pressure Loss Chart



# U-WAVE™

The precision-engineered U-Wave Ultrasonic Flow Sensor delivers real-time, highly accurate flow measurements across broad ranges of drip, spray, and rotor flow zones.

## KEY BENEFITS

- Monitor irrigation hydraulics to help detect issues early, optimize performance, and prevent water waste
- Ultrasonic technology delivers extremely precise flow detection across both high- and low-flow zones
- Solid-state design with no moving parts allows sensor to remain installed during winterization and maintenance
- Convenient LCD display shows real-time flow rates and tracks historical flow totals
- Simple push-button interface for easy sensor configuration and unit of measure selection
- Compatible with Hunter ICC2, MCC, ACC2, and Hydrowise-enabled Pro-HC, HPC, and HCC Controllers
- Preconfigured K-Factor output enables seamless setup with velocity/frequency-based sensor inputs for accurate flow rate and volume calculations
- Optional scaled-pulse output supports Hydrowise and other pulse-based systems
- Rugged sensor is fully waterproof and submersible for long-term durability in harsh environments

## OPERATING SPECIFICATIONS

- Flow range (1" pipe):
  - Min: 0.2 GPM
  - Max: 35 GPM
- Recommended pressure range: 0 to 250 PSI
- Pressure loss: < 1 PSI
- Sensor wiring: 2 direct-burial wires, 18 AWG or greater, up to 1,000' from the controller
- Accuracy: ± 2% of reading
- Sensor Power Supply: 9 to 35 VDC
- Warranty period: 2 years
- Approvals: Sensor is IP68 rated, submersible

## USER-INSTALLED OPTIONS

- ICD-SEN Sensor Decoder
- Waterproof connectors

U-WAVE ULTRASONIC FLOW SENSOR	
Model	Description
U-WAVE-100	Ultrasonic Flow Sensor, 1" (25 mm) female thread, U.S gallons or metric reading

Sensor: **Flow**



**U-WAVE-100**  
Height: 2"  
Length: 7½"  
Width: 3¾"

Compatible with:



**ACC2  
Controller**  
Page 106



**ICC2  
Controller**  
Page 110



**Hydrowise®  
Controllers**  
Page 92

# FLOW-CLIK®

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-color LED indicates system status and if flow is within limits

## OPERATING SPECIFICATIONS

- Recommended pressure range: 0 to 220 PSI
- Current draw (24 VAC): 0.025 A
- Switching current: 2 A maximum
- Sensor wiring: 2 x direct burial, 18 AWG or greater, color-coded or marked for polarity, up to 1,000' from the interface module
- Programmable start up delay: 0 to 300 seconds (allows for system hydraulics to stabilize 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 1" to 4" pipe diameters

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" Schedule 40 sensor (white) receptacle tee
FCT-150	1½" Schedule 40 sensor (white) receptacle tee
FCT-158	1½" Schedule 80 sensor (gray) receptacle tee
FCT-200	2" Schedule 40 sensor (white) receptacle tee
FCT-208	2" Schedule 80 sensor (gray) receptacle tee
FCT-300	3" Schedule 40 sensor (white) receptacle tee
FCT-308	3" Schedule 80 sensor (gray) receptacle tee
FCT-400	4" Schedule 40 sensor (white) receptacle tee

Sensor: **Flow**



**Flow-Clík Sensor and Module shown with required FCT fitting for pipe installation** (sold separately)

**Flow-Clík Module:**  
Height: 6"  
Width: 5¾"  
Depth: 2¼"

**Flow-Clík Sensor**  
Height: 3½"  
Diameter: 1½"

Compatible with:



**Waterproof  
Splice Kit**  
Page 131

FLOW RANGE		
Pipe Diameter	Operating Range (GPM)	
	Minimum	Suggested Maximum*
1"	2	17
1½"	5	35
2"	10	55
3"	28	120
4"	34	200

**Note:**

\* Good design practice dictates the maximum flow not to exceed 5/sec. Suggested maximum flow is based upon Class 200 IPS plastic pipe.

# FLOW-SYNC®

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 ACC2, MCC, ICC2, and legacy ACC and I-Core® Controllers, plus ICD-SEN Sensor Decoders
- Easy connection up to 1,000' from controller or sensor decoder
- Sensor is precalibrated for K-Factor and Offset based on pipe size, allowing for quick setup and programming within the controller

## OPERATING SPECIFICATIONS

- Recommended pressure range: 0 to 220 PSI
- Pressure loss: < 1 PSI
- Sensor wiring: 2 x direct burial, 18 AWG or greater, color-coded or marked for polarity, up to 1,000' from the controller
- Warranty period: 5 years

## USER-INSTALLED OPTIONS

- FCT tee fittings for pipe installation

FLOW-SYNC	
Model	Description
HFS	Hunter Flow-Sync Sensor for use with ACC2, MCC, ICC2, and legacy ACC and I-Core® Controllers

### REQUIRED USER-INSTALLED OPTION (SPECIFY SEPARATELY)

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

Sensor: **Flow**



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

Compatible with:



**ACC2  
Controller**  
Page 106



**ICD-SEN  
Decoder**  
Page 124



**ICC2  
Controller**  
Page 110

### FLOW RANGE

Pipe Diameter	Operating Range (GPM)	
	Minimum	Suggested Maximum*
1"	2	17
1½"	5	35
2"	10	55
3"	28	120
4"	34	200

#### Note:

\* Good design practice dictates the maximum flow not to exceed 5"/sec. Suggested maximum flow is based upon Class 200 IPS plastic pipe.

# WFS

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 labor
- 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 ACC2, MCC, ICC2, and legacy ACC and I-Core® Controllers
- Sensor is precalibrated for K-Factor and Offset based on pipe size, allowing for quick setup and programming within the controller
- Multi-color LED on the receiver indicates proper communication to the transmitter, as well as remaining battery life

## OPERATING SPECIFICATIONS

- Maximum distance sensor to receiver: 500'
- Recommended pressure range: 0 to 220 PSI
- Pressure loss: < 1 PSI
- Approvals: FCC and CE approved
- Warranty period: 5 years

## USER-INSTALLED OPTIONS

- FCT tee fittings for pipe installation

### WIRELESS FLOW SENSOR

Model	Description
WFS	Wireless Flow Sensor Kit - Domestic 900 MHz
WFS-T	Wireless Flow Sensor Kit Transmitter Only - Domestic 900 MHz
WFS-R	Wireless Flow Sensor Kit Receiver Only - Domestic 900 MHz
WFS-ALKBATT	Wireless Flow Sensor Alkaline Battery with Cage

### REQUIRED USER-INSTALLED OPTION (SPECIFY SEPARATELY)

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

Sensor: **Flow**



**WFS Transmitter**  
Height: 5½"  
Diameter: 4¼"

**WFS Sensor**  
Height: 3¾"  
Diameter: 2¼"

### WFS Receiver

Height: 5"  
Width: 3"  
Depth: 1½"

Compatible with:



**ACC2  
Controller**  
Page 106



**ICC2  
Controller**  
Page 110

### FLOW RANGE

Pipe Diameter	Operating Range (GPM)	
	Minimum	Suggested Maximum*
1"	2	17
1½"	5	35
2"	10	55
3"	28	120
4"	34	200

#### Note:

\* Good design practice dictates the maximum flow not to exceed 5"/sec. Suggested maximum flow is based upon Class 200 IPS plastic pipe.





# MICRO

## MICRO IRRIGATION SOLUTIONS

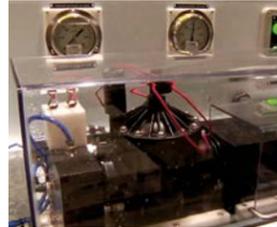
From ultra-durable Hunter Dripline to our innovative Root Zone Watering System, Hunter's micro irrigation solutions are designed to apply water efficiently and precisely where it's needed. Choose the combination of products best suited for your application and plant type using the chart below.

COMMON MICRO APPLICATIONS GUIDE		
APPLICATION	STANDARD DESIGN	ADVANCED DESIGN
TREES	 MLD, Emitters, Micro Sprays, HDL	HDL-COP, Eco-Wrap®, IH Risers, RZWS
MIXED PLANTINGS	 MLD, Micro Sprays, HDL, 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	IH Risers
DENSE PLANTING	 Micro Sprays, HDL	HDL-COP, Eco-Wrap, Eco-Mat
GREEN ROOFS	 Eco-Mat, Eco-Wrap	Eco-Mat, Eco-Wrap
POTTED PLANTS	 Single-Port Emitters, Micro Sprays	MLD
RECLAIMED	 MLD, Micro Sprays, Emitters	HDL-R, IH Risers, RZWS

# CONTROL ZONE KITS

## ADVANCED FEATURES

### TOTAL RELIABILITY



Every Hunter valve is water-tested to verify reliability, durability, and performance.

### DURABLE FILTER



All Hunter filters offer a stainless steel screen and low pressure loss. 1½" and 2" filter bodies offer sizes of 80, 120, and 150 mesh with a 120-mesh disc filter.

### ULTIMATE CONVENIENCE



Kits are preassembled to save time and labor in the field. With a highly compact design, they maximize space in the valve box.

### PRECISE REGULATION



Senninger® regulators are the most trusted regulators in the industry. Each regulator is water-tested before leaving the factory to ensure years of life in the field.

## COMPARISON CHART



TOP FEATURES	PCZ	ACZ	ICZ	IBZ
PREASSEMBLED FOR TIME SAVINGS	●	●	●	
ABOVE-GROUND INSTALLATION		●		
FILTER SENTRY® MECHANISM			●	●
ROBUST, STAINLESS STEEL SCREEN	●	●	●	●
TOP-RATED SENNINGER REGULATOR	●	●	●	●
VALVES 100% WATER-TESTED	●	●	●	●
REGULATORS 100% WATER-TESTED	●	●	●	●
LOW FRICTION LOSS	●	●	●	●
RECLAIMED COMPONENTS	●	●	●	●
CAPABILITY OF DISC FILTRATION			●	●
HIGHEST FLOW OPTION (100 GPM)			●	●
FLOW CONTROL	●	●	●	●
APPLICATION	Residential	Residential	Commercial	Commercial
WARRANTY	2 Years	2 Years	5 Years	5 Years

## PCZ

Make installations quick and easy using this robust, preassembled 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

### FACTORY-INSTALLED OPTIONS

- 25 or 40 PSI regulator

### USER-INSTALLED OPTIONS

- Reclaimed water ID handle for ACZ-075 and PCZ-101: P/N 269205

### PCZ-101

- 1" x ¾" inline valve
- Pressure regulation: 25 or 40 PSI
- Flow: 0.5 to 15 GPM (30 to 900 GPH)
- Operating pressure: 20 to 120 PSI
- Operating temperature: up to 120°F
- 150 mesh 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: 7"  
Width: 3"  
Length: 10"  
1" inlet x ¾" outlet

### DRIP CONTROL ZONE KITS

Model	Description
<b>PCZ-101-25</b>	1" PGV flow control valve with HFR-100-75 and 25 PSI regulator
<b>PCZ-101-40</b>	1" PGV flow control valve with HFR-100-75 and 40 PSI regulator

### PCZ AND ACZ KITS

System Flow	PCZ-101-25 (25 PSI outlet)	PCZ-101-40 (40 PSI outlet)	ACZ-25 (25 PSI outlet)	ACZ-40 (40 PSI outlet)
GPM	Inlet pressure required to achieve desired outlet pressure (PSI)			
0.5	34	41	25	41
1	34	42	26	43
5	34	45	28	47
10	37	52	30	52
15	41	59	32	55

40 PSI pressure regulator may not be required if the dynamic pressure of an irrigation system is below 60 PSI.

25 PSI pressure regulator may not be required if the dynamic pressure of an irrigation system is below 45 PSI.

## ACZ

This sturdy, preassembled kit includes filtration and pressure regulation for above-ground installations with no additional backflow prevention.

### ACZ-075

- ¾" x ¾" anti-siphon valve
- Pressure regulation: 25 or 40 PSI
- Flow: 0.5 to 15 GPM (30 to 900 GPH)
- Operating pressure: 20 to 120 PSI
- Operating temperature: up to 120°F
- 150 mesh stainless steel screen

### ACZ-101

- 1" x ¾" anti-siphon valve
- Pressure regulation: 25 or 40 PSI
- Flow: 0.5 to 15 GPM (30 to 900 GPH)
- Warranty period: 2 years
- Operating pressure: 20 to 120 PSI
- Operating temperature: up to 120°F
- 150 mesh stainless steel screen



**ACZ-075**  
Height: 11½"  
Width: 3"  
Length: 12"  
¾" inlet x ¾" outlet

**ACZ-101**  
Height: 11½"  
Width: 3"  
Length: 12"  
1" inlet x ¾" outlet

### DRIP CONTROL ZONE KITS

Model	Description
<b>ACZ-075-25</b>	¾" PGV-ASV valve with HFR-075 and 25 PSI regulator
<b>ACZ-075-40</b>	¾" PGV-ASV valve with HFR-075 and 40 PSI regulator
<b>ACZ-101-25</b>	1" PGV-ASV valve with HFR-100-075 and 25 PSI regulator
<b>ACZ-101-40</b>	1" PGV flow control valve with HFR-100-75 and 40 PSI regulator

# 1" ICZ

The most durable kit in the industry is offered in low-, medium-, and high-flow options for diverse system needs.

## KEY BENEFITS

- Highest-quality components
- Factory-assembled to save installation time
- Filter Sentry® Mechanism screen-cleaning system (on all models except ICZ-101-LF)
- Wide flow range to cover most micro irrigation applications
- Warranty period: 5 years

## FACTORY-INSTALLED OPTIONS

- 25 or 40 PSI regulator

## USER-INSTALLED OPTIONS

- Reclaimed water ID handle: P/N 561205

### ICZ-101

- Factory-installed Filter Sentry Mechanism
- Pressure regulation: 25 or 40 PSI
- Flow: 2 to 20 GPM (120 to 1,200 GPH)
- System operating pressure: Up to 120 PSI
- Operating temperature: Up to 120°F
- 150 mesh stainless steel screen
- 1" inlet and 1" outlet

### ICZ-101-LF

- Pressure regulation: 25 or 40 PSI
- Flow 0.5 to 15 GPM (30 to 900 GPH)
- Fits Multi-Purpose Box
- System operating pressure: Up to 120 PSI
- Operating temperature: Up to 120°F
- 150 mesh stainless steel screen
- 1" inlet and ¾" outlet

### ICZ-101-LF-R

- Pressure regulation: 25 or 40 PSI
- Flow 0.5 to 15 GPM (30 to 900 GPH)
- Fits Multi-Purpose Box
- System operating pressure: Up to 120 PSI
- Operating temperature: Up to 120°F
- 150 mesh (100 microns) stainless steel screen
- 1" inlet and ¾" outlet
- Reclaimed water ID tag, purple flow control knob, Filter Sentry Mechanism, and purple chlorine-resistant diaphragm

## SOLENOID OPERATING SPECIFICATIONS

- Heavy-duty solenoid: 24 VAC
  - 350 mA inrush current, 190 mA holding current, 60 cycles
  - 370 mA inrush current, 210 mA holding current, 50 cycles
- Warranty period: 5 years

ICZ-101 KITS		
GPM	Required Pressure for 25 PSI Outlet	Required Pressure for 40 PSI Outlet
2	35	52
5	35	52
7	36	54
10	40	58
15	46	66
20	60	82

ICZ-101 (LOW-FLOW) KITS		
GPM	Required Pressure for 25 PSI Outlet	Required Pressure for 40 PSI Outlet
0.5	35	41
1	35	43
5	36	47
10	37	52
15	40	55

40 PSI pressure regulator may not be required if the dynamic pressure of an irrigation system is below 60 PSI.

25 PSI pressure regulator may not be required if the dynamic pressure of an irrigation system is below 45 PSI.



**ICZ-101**  
Height: 6¾"  
Width: 4"  
Length: 14"  
1" inlet x 1" outlet



**ICZ-101-LF**  
Height: 7"  
Width: 4"  
Length: 10½"  
1" inlet x ¾" outlet



**ICZ-101-LF-R**  
Height: 7"  
Width: 4"  
Length: 10½"  
1" inlet x ¾" outlet

## DRIP CONTROL ZONE KITS - SPECIFICATION BUILDER: ORDER 1 + 2

1 Model	2 Options
<b>ICZ-101</b> = 1" ICV globe valve with Filter Sentry Mechanism and 1" HY-100 Filter and Regulator	<b>25</b> = 25 PSI regulator
<b>ICZ-101-LF</b> = 1" ICV globe valve with 1" HFR-100-075 Filter Regulator	<b>40</b> = 40 PSI regulator
<b>ICZ-101-LF-R</b> = 1" ICV reclaimed valve with Filter Sentry Mechanism and 1"x ¾" reclaimed Hunter Filter Regulator	

**Example:**  
**ICZ-101-40** = 1" ICV globe valve with Filter Sentry Mechanism and 1" HY-100 Filter Regulator, and 1" outlet 40 PSI regulator

# 1½" AND 2" ICZ

The toughest plastic valve available comes backed by glass-filled construction, a fabric-reinforced diaphragm, and a double-beaded diaphragm seal.

## KEY BENEFITS

- Highest-quality components set Hunter kits apart
- Highest flow options in the industry
- Factory-assembled to save installation time
- Filter Sentry® Mechanism screen-cleaning system

## USER-INSTALLED OPTIONS

- Reclaimed water ID handle: P/N 561205

### ICZ-151-XL

Operating Specifications

- Pressure regulation: 40 PSI
- Flow: 20 to 80 GPM
- Operating pressure: Up to 120 PSI
- Operating temperature: Up to 120°F
- Standard filter screen: 150 mesh; stainless steel
- Optional filter screens: 80 mesh; 120 mesh; stainless steel
- Disc filter available: 120 mesh

### ICZ-201-XL

- Pressure regulation: 40 PSI
- Flow: 20 to 100 GPM
- Operating pressure: Up to 120 PSI
- Operating temperature: Up to 120°F
- Standard filter screen: 150 mesh; stainless steel
- Optional filter screens: 80 mesh; 120 mesh; stainless steel
- Disc filter available: 120 mesh

## SOLENOID OPERATING SPECIFICATIONS

- Heavy-duty solenoid: 24 VAC
  - 350 mA inrush current, 190 mA holding current, 60 cycles
  - 370 mA inrush current, 210 mA holding current, 50 cycles
- Warranty period: 5 years
- Additional charts on [page 217](#)

## DRIP CONTROL ZONE KITS

Model	Description
ICZ-151-40-XL	1½" ICV globe valve with 1½" filter and 2" regulator
ICZ-201-40-XL	2" ICV globe valve with 2" filter and 2" regulator



**ICZ-151-XL**  
Height: 9"  
Width: 5½"  
Length: 22½"  
1½" inlet x 2" outlet



**ICZ-201-XL**  
Height: 12"  
Width: 7"  
Length: 26"  
2" inlet x 2" outlet

## ICZ-151 AND ICZ-201 KITS

Model	System Flow GPM	Required Pressure for 40 PSI Outlet
<b>ICZ-151-40-XL</b>	20	45
	30	50
	40	50
	50	50
	60	60
	80	65
<b>ICZ-201-40-XL</b>	20	45
	30	45
	40	45
	50	50
	60	50
	70	50
<b>ICZ-201-40-XL</b>	80	50
	90	55
	100	55

40 PSI pressure regulator may not be required if the dynamic pressure of an irrigation system is below 60 PSI.

# 1" IBZ

This heavy-duty kit includes a brass valve and is offered in low-, medium-, and high-flow options for diverse system needs.

## KEY BENEFITS

- Highest-quality components
- Ability to handle extremely low flows; suitable for drip irrigation
- Filter Sentry® Mechanism to keep the screen clear of debris
- Wide flow range to cover most micro irrigation applications
- Warranty period: 5 years

## FACTORY-INSTALLED OPTIONS

- 25 or 40 PSI regulator

### IBZ-101

- Factory-installed Filter Sentry Mechanism
- Pressure regulation: 25 or 40 PSI
- Flow: 2 to 20 GPM (120 to 1,200 GPH)
- System operating pressure: Up to 120 PSI
- Operating temperature: Up to 120°F
- 150 mesh stainless steel screen
- 1" inlet and 1" outlet

### IBZ-101-LF

- Factory-installed Filter Sentry Mechanism
- Pressure regulation: 25 or 40 PSI
- Flow 0.5 to 15 GPM (30 to 900 GPH)
- Fits Multi-Purpose Box
- System operating pressure: Up to 120 PSI
- Operating temperature: Up to 120°F
- 150 mesh stainless steel screen
- 1" inlet and ¾" outlet

## SOLENOID OPERATING SPECIFICATIONS

- Heavy-duty solenoid: 24 VAC
  - 350 mA inrush current, 190 mA holding current, 60 cycles
  - 370 mA inrush current, 210 mA holding current, 50 cycles
- Warranty period: 5 years



**IBZ-101**  
Height: 6¾"  
Width: 4"  
Length: 13¾"  
1" inlet x 1" outlet



**IBZ-101-LF**  
Height: 7"  
Width: 4"  
Length: 10¼"  
1" inlet x ¾" outlet

## BRASS VALVE DRIP CONTROL ZONE KITS - SPECIFICATION BUILDER: ORDER 1 + 2

1 Model	2 Options
<b>IBZ-101</b> = 1" IBV brass globe valve with Filter Sentry Mechanism and 1" HY100 Filter and Regulator	<b>25</b> = 25 PSI regulator
<b>IBZ-101-LF</b> = 1" IBV brass globe valve with Filter Sentry Mechanism and 1" HFR-100-075 Filter Regulator	<b>40</b> = 40 PSI regulator

**Example:**  
**IBZ-101-40** = 1" brass globe valve with Filter Sentry Mechanism and 1" HY100 filter and regulator, and 1" outlet 40 PSI regulator

**Note:** Assembled at site. Kit components ship loose to avoid transit damages.

# 1½" AND 2" IBZ

This kit offers a heavy-duty brass valve backed by glass-filled construction, a fabric-reinforced diaphragm, and a double-beaded diaphragm seal.

## KEY BENEFITS

- Highest-quality components set Hunter kits apart
- Highest flow options in the industry
- Filter Sentry® Mechanism screen-cleaning system

### IBZ-151-XL

- Pressure regulation: 40 PSI
- Flow: 20 to 80 GPM
- Operating pressure: up to 120 PSI
- Operating temperature: up to 120°F
- Standard filter screen: 150 mesh; stainless steel
- Optional filter screens: 80 mesh; 120 mesh; stainless steel
- Disc filter available: 120 mesh

### IBZ-201-XL

- Pressure regulation: 40 PSI
- Flow: 20 to 100 GPM
- Operating pressure: up to 120 PSI
- Operating temperature: up to 120°F
- Standard filter screen: 150 mesh; stainless steel
- Optional filter screens: 80 mesh; 120 mesh; stainless steel
- Disc filter available: 120 mesh

## SOLENOID OPERATING SPECIFICATIONS

- Heavy-duty solenoid: 24 VAC
  - 350 mA inrush current, 190 mA holding current, 60 cycles
  - 370 mA inrush current, 210 mA holding current, 50 cycles
- Warranty period: 5 years



**IBZ-151-XL**  
Height: 9"  
Width: 5½"  
Length: 22"  
1½" inlet x 2" outlet



**IBZ-201-XL**  
Height: 12"  
Width: 7"  
Length: 25¼"  
2" inlet x 2" outlet

## IBZ-151 AND IBZ-201 KITS

Model	System Flow GPM	Required Pressure for 40 PSI Outlet
<b>IBZ-151-40-XL</b>	20	45
	30	50
	40	50
	50	50
	60	60
	80	65
<b>IBZ-201-40-XL</b>	20	45
	30	45
	40	45
	50	50
	60	50
	100	55

40 PSI pressure regulator may not be required if the dynamic pressure of an irrigation system is below 60 PSI.

IBZ-101 KITS		
GPM	Required Pressure for 25 PSI Outlet	Required Pressure for 40 PSI Outlet
2	35	52
5	35	52
7	36	54
10	40	58
15	46	66
20	60	82

IBZ-101-LF (LOW-FLOW) KITS		
GPM	Required Pressure for 25 PSI Outlet	Required Pressure for 40 PSI Outlet
0.5	35	41
1	35	43
5	36	47
10	37	52
15	40	55

40 PSI pressure regulator may not be required if the dynamic pressure of an irrigation system is below 60 PSI.

25 PSI pressure regulator may not be required if the dynamic pressure of an irrigation system is below 45 PSI.

# FILTER REGULATORS

This all-in-one choice features a state-of-the-art Senninger regulator and a stainless steel filter screen.

## KEY BENEFITS

- HFR-075 (Hunter filter regulator)
  - Compact, all-in-one filter and regulator minimize 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
- Warranty period: 2 years



**HFR-075-25**  
**HFR-075-40**  
 Height: 7"  
 Width: 2¾"  
 Length: 6¼"  
 ¾" inlet x ¾" outlet



**HFR-100-075-25**  
**HFR-100-075-40**  
 Height: 7"  
 Width: 2¾"  
 Length: 6¼"  
 1" inlet x ¾"outlet



**HFR-100-075-25-R**  
**HFR-100-075-40-R**  
 Height: 7"  
 Width: 2¾"  
 Length: 6¼"  
 1" inlet x ¾"outlet

HUNTER FILTER REGULATORS	
Model	Description
HFR-075-25	¾" inlet x ¾" outlet, regulated at 25 PSI
HFR-075-40	¾" inlet x ¾" outlet, regulated at 40 PSI
HFR-100-075-25	1" inlet x ¾" outlet, regulated at 25 PSI
HFR-100-075-25-R	1" inlet x ¾" outlet, regulated at 25 PSI, reclaimed
HFR-100-075-40	1" inlet x ¾" outlet, regulated at 40 PSI
HFR-100-075-40-R	1" inlet x ¾" outlet, regulated at 40 PSI, reclaimed
133801	Reclaimed filter bonnet

HFR - FILTER REGULATOR KITS		
Model	System Flow GPM	Required Pressure for 25 PSI Outlet
HFR-075-25	0.5	30
	2	30
	5	31
	10	33
	15	37
HFR-100-075-25	0.5	30
	2	30
	5	31
	10	32
	15	35
Model	System Flow GPM	Required Pressure for 40 PSI Outlet
HFR-075-40	0.5	45
	2	45
	5	46
	10	48
	15	54
HFR-100-075-40	0.5	45
	2	45
	5	46
	10	47
	15	52

With standard 150 mesh (100 microns) filter screen

# FILTERS

For added durability, these simple yet rugged filters come standard with a stainless steel screen.

## ¾" AND 1" FILTER KEY BENEFITS

- Standard size of 150 mesh to collect debris and prevent system from clogging
- High-quality stainless steel screen
- Operating pressure: Up to 120 PSI

## 1½" AND 2" FILTER KEY BENEFITS

- Glass-filled polypropylene for added strength and durability
- Operating pressure: Up to 150 PSI
- Standard stainless steel screen: 150 mesh (100 microns)
- Large filtration screen provides longer life between cleanings
- Optional SS filter screens: 80 mesh (180 microns); 120 mesh (125 microns)
- Disc filter available: 120 mesh (125 microns)
- Warranty period: 2 years
- See page 197 for pressure loss charts

HUNTER Y-FILTERS AND SCREENS		
Size	Model	Description
¾" and 1"	HY-075	¾" inlet/outlet
	HY-100-075	1" inlet x ¾" outlet
	HY-100	1" inlet/outlet
	HY-100-R	1" inlet/outlet, with reclaimed bonnet
1½"	HY-151	1½" inlet/outlet
	HY-151-D	1½" disc filter with 120 mesh
	HY-151-SCREEN-150	150 mesh screen for 1½" filter, red
	HY-151-SCREEN-120	120 mesh screen for 1½" filter, blue
	HY-151-SCREEN-080	80 mesh screen for 1½" filter, black
	HY-151-DISC-120	120 mesh disc for 1½" filter, red
2"	HY-201	2" inlet/outlet
	HY-201-D	2" disc filter with 120 mesh
	HY-201-SCREEN-150	150 mesh screen for 2" filter, red
	HY-201-SCREEN-120	120 mesh screen for 2" filter, blue
	HY-201-SCREEN-080	80 mesh screen for 2" filter, black
	HY-201-DISC-120	120 mesh disc for 2" filter, red



**Red**  
150 mesh



**Blue**  
120 mesh



**Black**  
80 mesh



**Disc**  
120 mesh



**HY-075, HY-100, HY-100-075**  
 Height: 6"  
 Width: 3"  
 Length: 5"



**HY-100-R**  
 Height: 6"  
 Width: 3"  
 Length: 5"



**HY-151**  
 Height: 9"  
 Width: 5"  
 Length: 9"



**HY-201**  
 Height: 12"  
 Width: 6¾"  
 Length: 11½"

# SENNINGER® PRESSURE REGULATORS

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

## KEY BENEFITS

- Maintains 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 project design convenience
- Tamper-proof construction provides reliability and long life
- Very low hysteresis and friction loss help maintain accurate regulation
- No external metal parts for excellent corrosion resistance

## OPERATING SPECIFICATIONS

- PRL (¾"):
  - Flow range: 0.5 to 8.0 GPM
  - Maximum inlet pressure\*: 100 to 120 PSI
- PMR-MF (¾", 1"):
  - Flow range: 2 to 20 GPM
  - Maximum inlet pressure\*: 100 to 130 PSI
- PRLG (¾"):
  - Flow range: 0.5 to 7.0 GPM
  - Maximum inlet pressure\*: 100 to 120 PSI
- PRU:
  - Flow range: 20 to 100 GPM
  - Maximum inlet pressure\*: 120 PSI
- Warranty period: 2 years

\*Maximum recommended inlet pressure should not exceed 80 PSI above nominal model pressure

PRL (¾")			
Model	Pressure	Inlet	Outlet
PRL203F3F	20 PSI	¾"	¾"
PRL253F3F	25 PSI	¾"	¾"
PRL303F3F	30 PSI	¾"	¾"
PRL353F3F	35 PSI	¾"	¾"

PRLG (¾")			
Model	Pressure	Inlet	Outlet
PRLG253FH3MH	25 PSI	¾"	¾"

PRU40 (2")			
Model	Pressure	Inlet	Outlet
PRU-40	40 PSI	2"	2"

PMR-MF (¾")			
Model	Pressure	Inlet	Outlet
PMR20MF3F3FV	20 PSI	¾"	¾"
PMR25MF3F3FV	25 PSI	¾"	¾"
PMR30MF3F3FV	30 PSI	¾"	¾"
PMR40MF3F3FV	40 PSI	¾"	¾"
PMR50MF3F3FV	50 PSI	¾"	¾"

PMR-MF (1")			
Model	Pressure	Inlet	Outlet
PMR20MF4F4FV	20 PSI	1"	1"
PMR25MF4F4FV	25 PSI	1"	1"
PMR30MF4F4FV	30 PSI	1"	1"
PMR40MF4F4FV	40 PSI	1"	1"



**PRL Pressure Regulator  
Low-Flow**  
Width: 2"  
Length: 4½"  
Inlet/outlet: ¾"



**PRLG Pressure Regulator  
Landscape-Grade**  
Width: 1½"  
Length: 3"  
Inlet: ¾" FHT x Outlet: ¾" MHT



**PRU Pressure Regulator Ultra**  
Width: 4½"  
Length: 9"  
Inlet/outlet: 2"



**PMR-MF Pressure-Master Regulator  
Medium-Flow**  
Width: 2½"  
Length: 5½" (¾" model); 5¾" (1" model)  
Inlet/outlet: ¾" or 1"

The pressure regulator will maintain the predetermined operating pressure, provided that the inlet pressure is at least 5 PSI above the expected outlet pressure, but not exceeding the maximum operating pressure.

# DRIPLINE SYSTEMS

Ultra-durable Hunter Dripline (HDL) is easy to install and provides maximum longevity in the field. HDL works 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.

**A Multi-Purpose Box:**

- 10" x 7" opening
- Five color options for lids

**B Control Zone Kit:**

- Factory-assembled for quick and easy installation
- Low-, medium-, and high-flow kits

**C HDL:**

- All versions are pressure-compensating
- Colored stripes indicate flow
- Stretch-wrapped coils make installation simple and clean
- Four dripline options to choose from: HDL-CV, HDL-PC, HDL-R, HDL-COP

**D Fittings:**

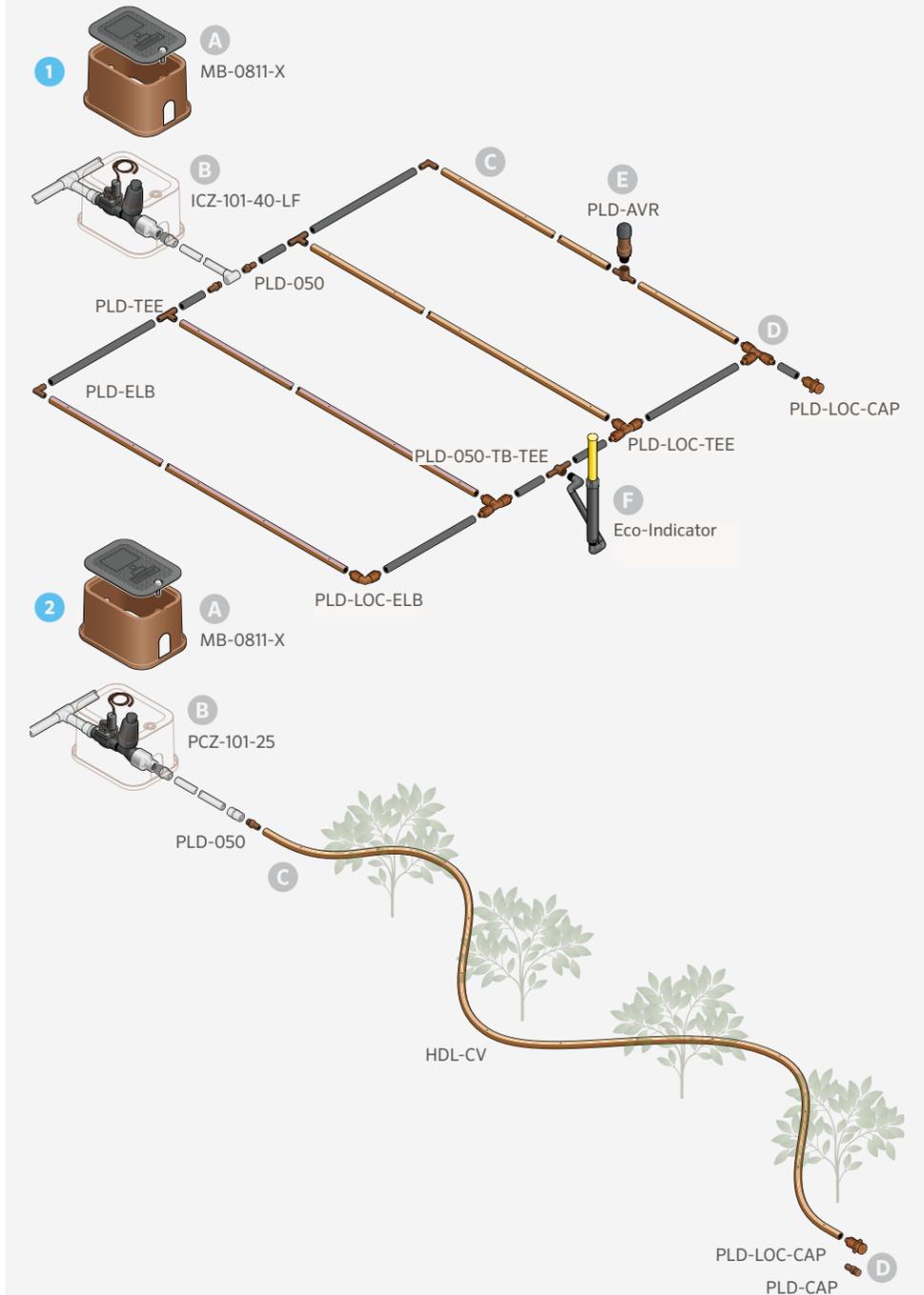
- Double-barb holds fittings tight
- LOC Fittings can be reused

**E Air/Vacuum Relief Valve:**

- Helps prevent water hammer and tubing collapse
- Use at high point(s) in zone

**F Eco-Indicator:**

- Pops up at 12 PSI 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 6' check height.

## KEY BENEFITS

- Pressure-compensating emitters for consistent flow and uniform coverage
- Non-draining check valve (CV) prevents low-point pooling and allows all emitters to open/close at the same time for greater system efficiency
- Check height of 6' minimizes system drainage and runoff
- Anti-siphon feature prevents debris from entering emitter at system shutdown
- Color-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: 0.4, 0.6, 0.9 GPH
- Available emitter spacing: 12", 18", 24"
- Tubing dimensions: 0.660" x 0.560" (outside/inside diameter)
- Wall thickness: 0.049"

## OPERATING SPECIFICATIONS

- Operating range: 15 to 60 PSI
- Minimum filtration: 120 mesh (125 microns)
- Warranty period: 5 years (plus 2 additional years for environmental stress cracking)

HDL-CV			
Model	Flow	Spacing	Length
HDL-04-12-250-CV	0.4 GPH	12"	250'
HDL-04-12-1K-CV			1,000'
HDL-04-18-250-CV		18"	250'
HDL-04-18-1K-CV	1,000'		
HDL-06-12-100-CV	0.6 GPH	12"	100'
HDL-06-12-250-CV			250'
HDL-06-12-500-CV			500'
HDL-06-12-1K-CV		18"	1,000'
HDL-06-18-250-CV			250'
HDL-06-18-1K-CV			1,000'
HDL-06-24-250-CV	24"	250'	
HDL-09-12-100-CV	0.9 GPH	12"	100'
HDL-09-12-250-CV			250'
HDL-09-12-500-CV			500'
HDL-09-12-1K-CV		18"	1,000'
HDL-09-18-250-CV			250'
HDL-09-18-1K-CV			1,000'
HDL-09-24-250-CV			24"



HDL-CV



Coil with Stretch Wrap



## HUNTER DRIPLINE COLOR CODE

- |                     |  |
|---------------------|--|
| <b>STRIPE COLOR</b> | <b>TUBING COLOR</b>  |
| ● 0.9 GPH - Black   | ● HDL-CV - Dark brown tubing, pressure-compensating with check valve |
| ○ 0.6 GPH - Gray    |  |
| ○ 0.4 GPH - Tan     |  |

See [page 196](#) for Maximum Run Length Chart.

Compatible with:



Soil-Clik® Sensor  
Page 143



Eco-Indicator  
Page 170



PLD Fittings  
Page 166

# HDL-PC AND HDL-R

Maximize 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
- Color-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: 0.6, 0.9 GPH
- Available emitter spacing: 12", 18"
- Tubing dimensions: 0.660" x 0.560" (outside/inside diameter)
- Wall thickness: 0.049"

## OPERATING SPECIFICATIONS

- Operating range: 10 to 60 PSI
- Minimum filtration: 120 mesh (125 microns)
- Warranty period: 5 years (plus 2 additional years for environmental stress cracking)

## HDL-PC

Model	Flow	Spacing	Length
HDL-06-12-250-PC	0.6 GPH	12"	250'
HDL-06-12-500-PC		500'	
HDL-06-18-250-PC		18"	250'
HDL-09-12-250-PC	0.9 GPH	12"	250'
HDL-09-12-500-PC			500'
HDL-09-18-250-PC		18"	250'

## HDL-R

Model	Flow	Spacing	Length
HDL-06-12-250-R	0.6 GPH	12"	250'
HDL-06-12-1K-R		1,000'	
HDL-06-18-250-R		18"	250'
HDL-06-18-1K-R			1,000'
HDL-09-12-250-R	0.9 GPH	12"	250'
HDL-09-12-1K-R			1,000'
HDL-09-18-250-R		18"	250'
HDL-09-18-1K-R			1,000'



HDL-PC



HDL-R (Reclaimed)



## HUNTER DRIPLINE COLOR CODE

- |                      |  |
|----------------------|--|
| <b>STRIPE COLOR</b>  | <b>TUBING COLOR</b>  |
| ● 0.9 GPH - Black    | ● HDL-PC - Light brown tubing pressure-compensating                        |
| ○ 0.6 GPH - Gray     | ● HDL-R - Light brown with purple stripe, pressure-compensating, reclaimed |
| ● Reclaimed - Purple |  |

See [page 196](#) for Maximum Run Length Charts.

Compatible with:



Soil-Clik® Sensor  
Page 143



Eco-Indicator  
Page 170



PLD Fittings  
Page 166

# HDL-BLNK

UV-resistant HDL Blank Tubing is a useful addition to any drip system.

## KEY BENEFITS

- UV resistance facilitates product longevity
- Stretch-wrapped coils stay intact and make installation quick and easy
- Accepts Hunter PLD-LOC and 17 mm barb fittings for ease of connection
- Earth-tone tubing prevents bright spots in the landscape
- Purple stripes for reclaimed applications

## PRODUCT SPECIFICATIONS

- Tubing dimensions: 0.660" x 0.560" (outside/inside diameter)
- Wall thickness: 0.049"

## OPERATING SPECIFICATIONS

- Operating range: Up to 60 PSI
- Warranty period: 5 years (plus 2 additional years for environmental stress cracking)



HDL-BLNK



HDL-BLNK-R

Compatible with:



Soil-Clik® Sensor  
Page 143



Eco-Indicator  
Page 170



PLD Fittings  
Page 166

HDL-BLNK			
Model	Flow	Spacing	Length
HDL-BLNK-100	Blank tubing		100'
HDL-BLNK-250			250'
HDL-BLNK-500			500'
HDL-BLNK-1K	Blank tubing (reclaimed)		1,000'
HDL-BLNK-500-R			500'

# HDL-COP

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

## KEY BENEFITS

- Emitters infused with copper oxide (Cu2O) provide triple protection against root intrusion
- Long-term, safe, and non-leaching solution
- Slow-draining check valve (CV) emitters prevent low-point pooling and boost system efficiency
- Pressure-compensating emitters provide consistent flow over the entire lateral length
- Anti-siphon feature prevents debris from entering emitters
- Color-coded stripes provide easy flow identification
- 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 keep debris and roots from entering the emitter

## PRODUCT SPECIFICATIONS

- Emitter spacing: 12", 18"
- Tubing dimensions: 0.660" x 0.560" (outside/inside diameter)
- Wall thickness: 0.049"
- Diaphragm: Silicone

## OPERATING SPECIFICATIONS

- Available flow rates: 0.6, 0.9 GPH
- Operating range: 15 to 60 PSI
- Recommended minimum filtration: 120 mesh
- Warranty period: 5 years (plus 2 additional years for environmental stress cracking)
- No warranty against root intrusion

HDL-COP			
Model	Flow	Spacing	Length
HDL-06-12-250-COP	0.6 GPH	12"	250'
HDL-06-12-1K-COP		1,000'	
HDL-06-18-250-COP	0.9 GPH	18"	250'
HDL-09-12-250-COP		12"	250'
HDL-09-12-1K-COP		1,000'	
HDL-09-18-250-COP		18"	250'

*Note: 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.*



HDL-COP



Coil with Stretch Wrap



## HUNTER DRIPLINE COLOR CODES

- |                     |  |
|---------------------|--|
| <b>STRIPE COLOR</b> | <b>TUBING COLOR</b>  |
| ○ 0.6 GPH - Gray    | ● HDL-COP - Pressure-compensating, earth-tone copper tubing with slow-draining check valve |
| ● 0.9 GPH - Black   |  |

See [page 196](#) for Maximum Run Length Charts.

Compatible with:



Soil-Clik® Sensor  
Page 143



Eco-Indicator  
Page 170



PLD Fittings  
Page 166

# PLD LOC FITTINGS (16-18 MM)

LOC Fittings are compatible with any nominal 1/2" tubing and dripline for quicker installs and easy 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 HDL, TWPE, or other 16/17/18 mm dripline or tubing

## OPERATING SPECIFICATIONS

- Operating pressure range: up to 145 PSI
- Warranty period: 2 years

### FITTINGS



**PLD-LOC-075**  
3/4" male pipe thread x LOC



**PLD-LOC-050**  
1/2" 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**  
3/4" female hose swivel x LOC



**PLD-LOC-TEE**  
Locking tee

# PLD BARB FITTINGS (17 MM)

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
- For installations with PLD-IAC/PLD-IAE grommets, use an 1/16" spade drill bit to cut into the PVC

## OPERATING SPECIFICATIONS

- Operating pressure range: up to 100 PSI
- Warranty period: 1 year

### FITTINGS



**PLD-050**  
1/2" MPT x 17 mm barb



**PLD-ELB**  
17 mm barb elbow



**PLD-075**  
3/4" MPT x 17 mm barb



**PLD-CPL**  
17 mm barb coupling



**PLD-CAP**  
17 mm barb x 1/2" MPT with cap



**PLD-075-TB-TEE**  
17 mm barb tee x 3/4" thread



**PLD-BV**  
17 mm barb Shut-off valve



**PLD-TEE**  
17 mm barb tee



**PLD-050-TB-TEE**  
1/2" 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**  
17 mm barb cross



**PLD-075-TB-ELB**  
3/4" FPT x 17 mm barb elbow

# 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, the Eco-Wrap® System, and the Eco-Mat® System.

**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.

**A** Entry Manifold:  
• PVC (for stability) or polyethylene  
• Assemble with either 17 mm or LOC Fittings

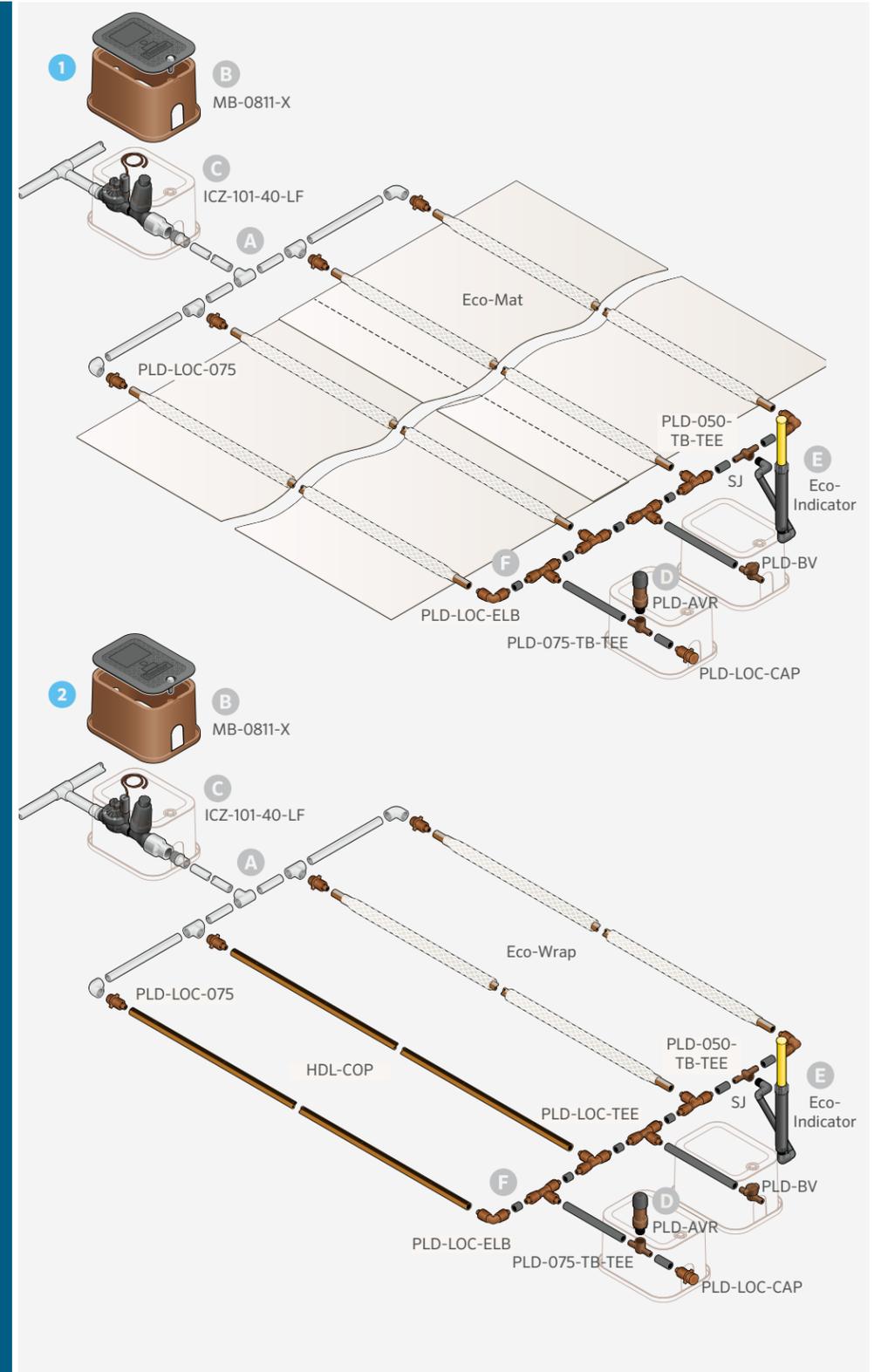
**B** Multi-Purpose Box:  
• 10" x 7" opening  
• Five color options for lids

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

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

**E** Eco-Indicator Tool:  
• Pops up at 12 PSI and shows system is running  
• Reveals when system pressure drops too low

**F** 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% to 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, maximizing efficiency
- Check height of 6' minimizes system drainage and runoff

## OPERATING SPECIFICATIONS

- Operating range: 15 to 50 PSI
- Minimum filtration: 120 mesh
- Compatible with LOC and 17 mm insert barb fittings
- Air relief recommended for sloping conditions greater than 6'
- Recommended installation depth: turf (4" to 6"); other (4" to 14")
- May use in conjunction with Eco-Wrap® System
- Warranty period: 5 years (plus 2 additional years for environmental stress cracking)

## PRODUCT SPECIFICATIONS

- Flow rate: 0.6 GPH; 0.83 in/hr
- Emitter spacing: 12"
- Lateral row spacing: 14"
- Product width: 32"
- Roll length: Mini roll = 100'; standard roll = 295'
- Tubing dimensions: 0.660" x 0.560" (outside/inside diameter)
- Water-holding capacity: 0.5 gallons
- Approximate coverage per roll: Mini roll = 250 ft<sup>2</sup>; Standard roll = 737 ft<sup>2</sup>
- Example calculation based on area 40' x 80':

$$\text{Roll Qty.} = \frac{\text{Irrigated landscape area}}{\text{Area of roll coverage}} = \frac{3,200 \text{ ft}^2}{737 \text{ ft}^2} = 4.34 \text{ (round up to 5 rolls)}$$



Eco-Mat

Eco-Mat Installed



Compatible with:

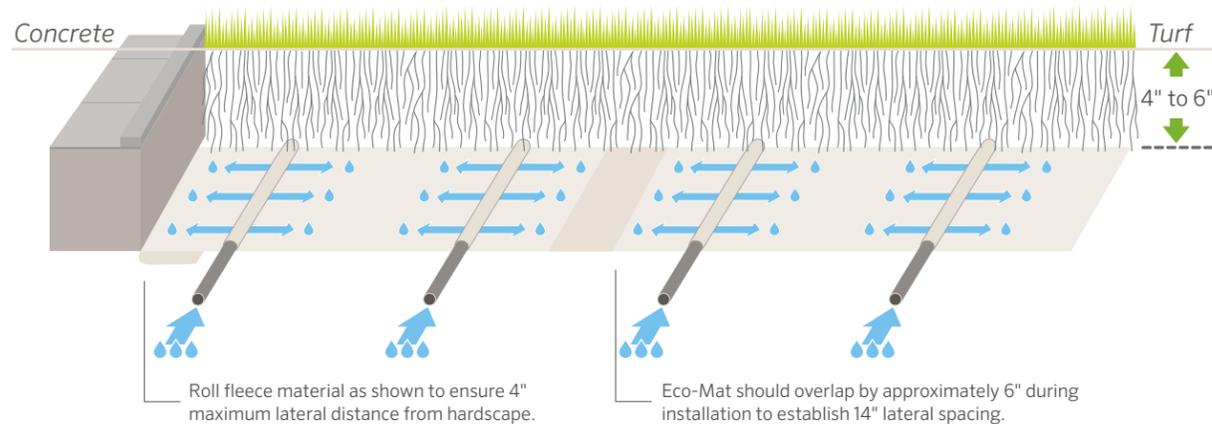


Soil-Clik® Sensor  
Page 143



Eco-Indicator  
Page 170

ECO-MAT			
Model	Pressure	Inlet	Outlet
ECO-MAT		Subsurface drip mat, 32" wide, 295' long, 17 mm dripline	
ECO-MAT-17-100		Subsurface drip mat, 32" wide, 100' long, 17 mm dripline	



# 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, maximizing efficiency
- Check height of 6' minimizes system drainage and runoff

## OPERATING SPECIFICATIONS

- Flow rate: 0.6 GPH
- Emitter spacing: 12"
- Tubing dimensions: 0.660" x 0.560" (outside/inside diameter)
- Roll length: 250'
- Accepts 17 mm barb or LOC Fittings
- Warranty period: 5 years (plus 2 additional years for environmental stress cracking)

## PRODUCT SPECIFICATIONS

- Operating range: 15 to 50 PSI
- Minimum filtration: 120 mesh
- Air relief recommended for sloping conditions greater than 6'
- Recommended installation depth: turf (4" to 6"); other (4" to 8")
- Compatible with Eco-Mat® System

ECO-WRAP	
Model	Description
ECO-WRAP-17	HDL-CV with subsurface fleece sleeve

MAXIMUM RUN LENGTH FOR ECO-MAT AND ECO-WRAP	
Pressure (PSI)	Length (ft)
15	171
20	239
25	280
30	314
40	363
50	404
60	438



Eco-Wrap

For maximum run lengths, reference the Maximum Run Length Chart on page 162. Use 0.6 GPH for flow and 12" emitter spacing.

Eco-Wrap Installed



Compatible with:



Soil-Clik® Sensor  
Page 143



Eco-Indicator  
Page 170

# ECO-INDICATOR

Confirm system operation and adequate pressure with this handy visual device.

## KEY BENEFITS

- Visible bright yellow or reclaimed purple riser stem and cap indicate when system is in operation
- Stem pops up when pressure exceeds the threshold and assists in confirming low pressures if not raised
- Connects via bottom or side inlet ports for easy installation; side inlet port is available on 12" version

## OPERATING SPECIFICATIONS

- ECO-ID:
  - Operating pressure: up to 70 PSI
  - Indication of system operation: above 12 PSI
  - Warranty period: 2 years
- ECO-ID-12, ECO-ID-12-R:
  - Operating pressure: up to 100 PSI
  - Indication of system operation: above 15 PSI
  - Warranty period: 5 years



**ECO-ID**  
 Retracted height: 9½"  
 Pop-up height: 6"  
 Exposed diameter: 1¼"  
 Inlet size: ½"

## USER-INSTALLED OPTIONS FOR 12" ECO-INDICATOR

- Drain check valve (up to 10' of elevation; P/N 437400SP)
- SJ Swing Joint: SJ-512 (½" threaded x 12" length)



[A] **ECO-ID-12**  
 Retracted height: 16½"  
 Pop-up height: 12"  
 Exposed diameter: 2¼"  
 Inlet size: ½"

Compatible with:



**Eco-Mat®  
System**  
Page 168



**Eco-Wrap®  
System**  
Page 169



**HDL Dripline**  
Page 162

Eco-Indicator Installed



# 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

- 0.700" x 0.600" (outside/inside diameter)

## OPERATING SPECIFICATIONS

- Operating pressure range: Up to 80 PSI
- Warranty period: 2 years



½" PE Tubing

### ½" PE TUBING - SPECIFICATION BUILDER: ORDER 1 + 2 + 3

1 Model	2 Tubing Diameter	3 Length
<b>TWPE</b> = Thick-walled polyethylene tubing	<b>700</b> = 0.700" outside diameter	<b>100</b> = 100' <b>250</b> = 250' <b>500</b> = 500'

Example:  
 TWPE-700-250 = ½" polyethylene tubing in a 250' roll

# MLD

Use this ¼" 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

- Colors: brown or black polyethylene
- Emitter spacing: 6" or 12"
- Coil size: 100'
- 0.250" x 0.175" (outside/inside diameter)
- Use with ¼" barb fittings

## OPERATING SPECIFICATIONS

- Pressure range: 10 to 40 PSI
- Minimum filtration: 150 mesh
- Maximum run lengths: 6" spacing = 15'; 12" spacing = 30'
- Warranty period: 2 years

### MLD - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Model	2 Spacing	3 Length	4 Options
<b>MLD-05</b>	<b>06</b> = 6" <b>12</b> = 12"	<b>100</b> = 100'	<b>BL</b> = Black <b>(blank)</b> = Brown

Example:  
 MLD-05-12-100 = 0.5 GPH mini landscape dripline with 12" spacing in a 100' roll, brown



MLD

MLD Installed



# DISTRIBUTION TUBING

Add stability and flexibility to any system when using Point-Source Emitters or Micro Sprays.

## KEY BENEFITS

- High-quality vinyl or polyethylene securely connects to acetal 1/4" 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: 100', 250', and 1,000'

## OPERATING SPECIFICATIONS

- Operating pressure range: Up to 60 PSI
- Warranty period: 2 years



1/4" Tubing

1/4" TUBING - SPECIFICATION BUILDER: ORDER 1 + 2 + 3		
1 Model	2 Tubing Diameter	3 Length
HQPE = Polyethylene tubing	250 = 0.250" outside diameter	100 = 100'
HQV = Vinyl tubing		250 = 250'
		1K = 1,000'

Example:  
HQPE-250-1K = 1/4" polyethylene tubing in a 1,000' roll

# 1/4" BARBED 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 Tubing

## OPERATING SPECIFICATIONS

- Pressure range: Up to 60 PSI
- Warranty period: 1 year



### 1/4" Barb Fittings:

Use with MLD or any vinyl or polyethylene 1/4" tubing, UV-stabilized materials, and durable single-barb connection

# RZWS

Deliver water across all levels of the root zone for high-efficiency subsurface irrigation of trees and shrubs.

## KEY BENEFITS

- Patented StrataRoot™ Baffle System diverts 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 1/2" PVC fitting
- Preassembled for fast installation

## OPERATING SPECIFICATIONS

- Bubbler flow rates: 0.25 or 0.50 GPM
- Recommended pressure range: 15 to 70 PSI
- Warranty period: 2 years

## FACTORY-INSTALLED OPTIONS

- Check valve (HCV)
- Locking reclaimed water purple cap

## USER-INSTALLED OPTIONS

- Fabric sleeve to prevent soil intrusion in sandy areas for 18" and 36" models (P/N RZWS-SLEEVE)
- Replacement cap for 18" and 36" models (P/N 913300SP)
- Locking reclaimed purple cap for 18" and 36" models (P/N 913301SP)
- Reclaimed water purple cap for 10" model (P/N RZWS10-RCC)



<b>RZWS-10</b> Tube diameter: 2" Cap diameter: 3" Length: 10"	<b>RZWS-18</b> Tube diameter: 3" Cap diameter: 4 3/4" Length: 18"	<b>RZWS-36</b> Tube diameter: 3" Cap diameter: 4 3/4" Length: 36"
--	--	--



Reclaimed models available  
(Add -R to model number)

## ROOT ZONE WATERING SYSTEM - SPECIFICATION BUILDER: Order 1 + 2 + 3

1 Model	2 Bubbler Flow Rate	3 Options
<b>RZWS-10</b> = 10" Root Zone Watering System	<b>25</b> = 0.25 GPM	<b>(blank)</b> = No option
<b>RZWS-18</b> = 18" Root Zone Watering System	<b>50</b> = 0.50 GPM	<b>CV</b> = Check valve
<b>RZWS-36</b> = 36" Root Zone Watering System	<b>(blank)</b> = No bubbler or swing joint	<b>R</b> = Reclaimed cap  <b>CV-R</b> = Check valve with reclaimed cap

Examples:  
RZWS-10-50-CV = 10" Root Zone Watering System at 0.50 GPM, with check valve  
RZWS-36-25-CV-R = 36" Root Zone Watering System at 0.25 GPM, with check valve and reclaimed cap

## ADDITIONAL OPTION (SPECIFY SEPARATELY)

**RZWS-SLEEVE** = Field-installed sleeve made from filter fabric



# 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
- Color-coded by flow for easy identification in the field
- Self-flushing diaphragm to prevent clogs
- Earth-tone colors blend in well with the surrounding environment
- Three inlet variations offer installation flexibility: ¼" barb, 10-32 thread, ½" FPT
- Coined edges for easy gripping
- Self-piercing barb for simple, no-tool installation

## OPERATING SPECIFICATIONS

- Recommended pressure range: 20 to 50 PSI
- Minimum filtration: 150 mesh
- Warranty period: 2 years

½" FEMALE THREAD (BROWN BASE) WITH CHECK VALVE SCREEN			
	Model	Inlet Type	Flow (GPH)
● Blue	HEB-05-CV	½" female thread	0.5
● Black	HEB-10-CV	½" female thread	1.0
● Red	HEB-20-CV	½" female thread	2.0
● Tan	HEB-40-CV	½" female thread	4.0
● Orange	HEB-60-CV	½" female thread	6.0

EMITTER MODEL CHART			
	Model	Inlet Type	Flow (GPH)
● Blue	HE-050-B	Self-piercing barb	0.5
● Black	HE-10-B	Self-piercing barb	1.0
● Red	HE-20-B	Self-piercing barb	2.0
● Tan	HE-40-B	Self-piercing barb	4.0
● Orange	HE-60-B	Self-piercing barb	6.0
● Blue	HE-050-T	10-32 thread	0.5
● Black	HE-10-T	10-32 thread	1.0
● Red	HE-20-T	10-32 thread	2.0
● Tan	HE-40-T	10-32 thread	4.0
● Orange	HE-60-T	10-32 thread	6.0
● Blue	HEB-05	½" female thread	0.5
● Black	HEB-10	½" female thread	1.0
● Red	HEB-20	½" female thread	2.0
● Tan	HEB-40	½" female thread	4.0
● Orange	HEB-60	½" female thread	6.0



**DIFFUSER CAP**  
(HE-DIFF)  
Use for flows higher than 2 GPH to diffuse the water and prevent erosion



**½" FEMALE THREAD**  
Brown base matches IH Risers and blends into the landscape



**SCREEN-CV**  
Filter screen with 12' check valve

### Inlet Options

① Self-piercing barb



② 10-32 thread



③ ½" female thread



# 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 the landscape
- Purple fittings available for reclaimed water applications
- Accepts any ½" FPT emitter
- Ideal for slope applications
- At-grade or below-grade installation
- Available in multiple lengths for easy assembly
- Available as components for custom lengths

## OPERATING SPECIFICATIONS

- Maximum flow: 7 GPM
- Maximum pressure: 60 PSI
- Warranty period: 2 years

### IH Risers - SPECIFICATION BUILDER: ORDER 1 + 2 + 3

1 Model	2 Riser Length	3 Fitting Options
<b>IH-RISER</b>	<b>06</b> = 6" riser <b>12</b> = 12" riser <b>18</b> = 18" riser <b>24</b> = 24" riser <b>36</b> = 36" riser	<b>(blank)</b> = Brown <b>R</b> = Reclaimed (purple fitting)

Example:  
IH-RISER-12 = 12" flexible PVC riser with preglued ½" fittings

### IH RISER COMPONENTS (SOLD SEPARATELY)

Model	Description
SCREEN-CV	Filter screen with 12' check valve
IH-FIT-3850	⅜" x ½" MPT IH fitting
IH-FIT-3850-R	⅜" x ½" MPT IH fitting (reclaimed)
IH-250	Flexible PVC irrigation hose (0.50" ID x 0.090" wall), 250'

## RECOMMENDED GLUES FOR FLEXIBLE PVC

- IPS® Weld-On®:
  - P-68™ primer (recommended for PVC fittings only)
  - P-70™ primer (may be, used but P-68 is suggested)
  - 795™ Flex PVC cement
- Christy's®:
  - Purple Primer® or Red Hot Clear Primer® (fittings only)
  - Flex Pro PVC pipe cement
  - Red Hot Blue Glue® (not specialized for flexible PVC)

IPS, Weld-On, P-68, P-70, and 795 are trademarks of IPS Corporation. Christy's, Purple Primer, Red Hot Clear Primer, and Red Hot Blue Glue are trademarks of T. Christy Enterprises.



IH RISERS



**SCREEN-CV**  
Filter screen with 12' check valve



**IH-FIT-3850, IH-FIT-3850-R**  
⅜" x ½" MPT IH fitting



**IH-250**  
Flexible PVC for creating headers or custom risers

Compatible with:



**Point-Source Emitters**  
Page 176



**Bubblers**  
Page 72



**Multi-Port Emitters**  
Page 178

# 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
- Color-coded by flow for easy identification
- Earth-tone colors blend in with surrounding landscape
- Swivel elbows assist in placing water directly to plant
- Multi-Port Manifold (MPM) provides unrestricted flow for each outlet

## PRODUCT SPECIFICATIONS

- Available in 1/2" FNPT
- Available flows: 0.5, 1.0, 2.0 GPH
- PVC cap plugs port when not being used

## OPERATING SPECIFICATIONS

- Pressure range: 10 to 50 PSI
- Minimum filtration: 150 mesh
- Warranty period: 2 years



**Multi-Port Emitter**



**Multi-Port Manifold (MPM-050)**

Unrestricted flow through outlets as indicated by gray color. Use with 1/4" distribution tubing and a barbed emitter at the end (available in 1/2" FPT). Allows water to be directed to as many as six different locations.

**Emitter Caps (MPE-CAPS)**

Plug unused 1/4" barbed emitter outlets. Use with Hunter Multi-Port Emitters.



**Hunter Emitter Multi-Tool (HEMT)**

Punches pilot holes and pellets, inserts and removes emitters, and cuts tubing.

### MULTI-PORT EMITTER MODEL CHART

	Model	Flow (GPH)
● Blue	MPE-05	0.5
● Black	MPE-10	1.0
● Red	MPE-20	2.0
● Gray	MPM-050	N/A

# 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 PSI	Flow GPH	Throw Diameter ft
	15	0-11	0-1.5
	20	0-12.5	0-1.9
	30	0-15.7	0-2.7

**Note:** Adjustable to maximum (approximately 20 clicks)

## HALO-SPRAY

- Adjustable umbrella of water
- Adjustable cap for flow and radius adjustment



### HALO-SPRAY PERFORMANCE DATA

	Pressure PSI	Flow GPH	Throw Diameter ft
	15	0-14	0-5.8
	20	0-16	0-7.7
	30	0-20	0-11.5

**Note:** Adjustable to maximum (approximately 14 clicks)

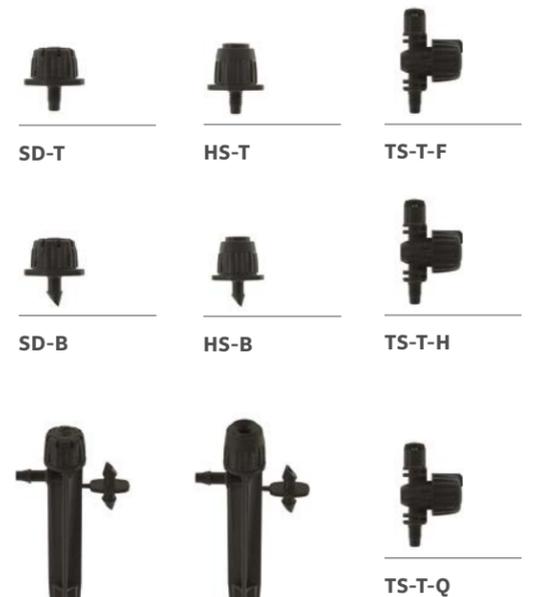
## TRIO-SPRAY

- Full-, half-, and quarter-circle configurations
- Adjustable cap for flow and radius adjustment



### TRIO-SPRAY PERFORMANCE DATA

	Pressure PSI	Flow GPH	Spray Pattern ft.	
			Diameter in Throw 360° x 18 Hole	Radius of Throw 180° 90°
	10	0-16.7	0-17	0-7 0-6
	15	0-20.3	0-19	0-8 0-7
	20	0-23.4	0-20	0-9 0-8
	25	0-26.1	0-22	0-10 0-9
	30	0-28.6	0-23	0-11 0-10



**SD-B-STK**  
Height: 6"

**HS-B-STK**  
Height: 6"

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® Sprinkler Bodies.



**Short-Radius Micro Spray Nozzles**  
Page 69

# RIGID RISERS

These risers maintain their stiffness even when used with Micro Sprays, making them a perfect choice for high-throw applications.

## KEY BENEFITS

- For rugged system designs
- Accepts 10-32 threaded components
- Perfect for annual flower beds and planters
- Inlet configurations: 1/2" FPT, 1/4" barb, or blank
- HDPE construction

### RIGID RISER MODEL CHART

Model	Description
RR12	12" Rigid Riser
RR12-T	12" Rigid Riser with 1/2" threaded base
RR12-B	12" Rigid Riser with 1/4" barb base

## OPERATING SPECIFICATIONS

- Warranty period: 1 year



**Rigid Riser**

Available in 12" inlet options

# MULTI-PURPOSE BOX

This sturdy box is just the right size to provide protection and easy access to essential irrigation components.

## KEY BENEFITS

- Small footprint in a sturdy, durable box
- Five color offerings blend in with any environment
- Overlapping lid prevents debris from entering box
- Knock-out bolt hole
- UV-protected, non-slip lid

## PRODUCT SPECIFICATIONS

- Fits small control zone kits and other assorted components
- Durable HDPE construction
- 3/8" bolt included with every box
- Warranty period: 2 years



### Multi-Purpose Box

Top  
Width: 7½"  
Length: 10½"

Bottom  
Width: 8½"  
Length: 11½"  
Height: 8"



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 80 PSI
- Warranty period: 2 years



**AVR-075**  
Height: 5"  
Width: 2"  
Inlet: 3/4" MPT



**PLD-AVR**  
Height: 1"  
Width: 3/4"  
Inlet: 1/2"

### 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 60 PSI
- Low-flow diaphragm side: 2 to 5 GPM
- High-flow diaphragm side: 5 to 12 GPM
- AFV-075: Auto flush at 5 PSI
- Warranty period: 1 Year



**AFV-B**  
Automatic Flush Valve with 17 mm barb connection



**AFV-T**  
Automatic Flush Valve with 1/2" MPT connection



**AFV-075**  
Automatic Flush Valve with 3/4" FNPT connection

### Automatic Flush Valve Installed





**RECLAIMED**

---

# EMBRACE THE POWER OF PURPLE

with our complete line of reclaimed water products

## ROTORS

				
<b>PGJ</b>	<b>PGP<sup>®</sup> ULTRA</b>	<b>I-20</b>	<b>I-25</b>	<b>I-40</b>
PGJ-00-R PGJ-04-R PGJ-06-R PGJ-12-R	PGP-00-CV-R PGP-00-CV-R-PRB PGP-04-CV-R PGP-04-CV-R-PRB PGP-06-CV-R PGP-12-CV-R	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-25-04-R I-25-04-SS-R I-25-06-R I-25-06-SS-R	I-40-04-SS-R I-40-04-SS-ON-R I-40-06-SS-R I-40-06-SS-ON-R

### Rotors Key

00 - Shrub  
04 - 4" pop-up  
06 - 6" pop-up

12 - 12" pop-up  
CV - Check valve  
SS - Stainless steel

ON - Opposing nozzles  
PRB - Pressure-regulated body

ARV - Adjustable arc  
3RV - Full-circle

## ROTORS

	
<b>I-80</b>	<b>I-90</b>
I-80-04-SS-R I-80-04-SS-ON-R	I-90-ARV I-90-3RV

## SPRINKLER BODIES

			
<b>PRO-SPRAY<sup>®</sup></b>		<b>PRO-SPRAY PRS30</b>	<b>PRO-SPRAY PRS40</b>
PROS-00-R PROS-04-CV-R PROS-06-CV-R PROS-12-CV-R PROS-RC-CAP-SP (snap-on) 458520SP = ID cap (threaded)		PROS-00-PRS30-R PROS-04-PRS30-CV-R PROS-06-PRS30-CV-R PROS-12-PRS30-CV-R PROS-04-PRS30-CV-F-R PROS-06-PRS30-CV-F-R PROS-12-PRS30-CV-F-R 458560 = ID cap	PROS-00-PRS40-R PROS-04-PRS40-CV-R PROS-06-PRS40-CV-R PROS-12-PRS40-CV-R PROS-04-PRS40-CV-F-R PROS-06-PRS40-CV-F-R PROS-12-PRS40-CV-F-R 458562 = ID cap

### Sprays Key

00 - Shrub  
04 - 4" pop-up

06 - 6" pop-up  
12 - 12" pop-up

CV - Check valve  
F - FloGuard™ Technology

## BUBBLERS



### BUBBLERS

PCB-25-R  
PCB-50-R  
PCB-10-R  
PCB-20-R

### Bubblers Key

25 - 0.25 GPM  
50 - 0.50 GPM  
10 - 1.00 GPM  
20 - 2.00 GPM

## VALVES



### ICV VALVE

ICV-101G-FS-R  
ICV-151G-FS-R  
ICV-201G-FS-R

561205 = ICV-101-201 series  
ID handle  
515005 = ICV-301 series  
ID handle



### IBV VALVE

IBV-101G-FS-R  
IBV-151G-FS-R  
IBV-201G-FS-R

### Valves Key

FS - Filter Sentry® Mechanism  
\* Note: IBV purple tags are user-installed options.



### QUICK COUPLERS

HQ-33-DLRC-R  
HQ-44-LRC-R  
HQ-44-LRC-AW-R  
HQ-5-LRC-R

### Quick Couplers Key

LRC - Locking rubber cover  
RC - Rubber cover  
AW - Acme key with anti-rotation wheels



### DRIP CONTROL ZONE KITS

ICZ-101-25-LF-R  
ICZ-101-40-LF-R  
HFR-100-075-25-R  
HFR-100-075-40-R

## MICRO



				
<b>IH RISERS</b>	<b>ROOT ZONE WATERING SYSTEM</b>	<b>HUNTER DRIPLINE</b>	<b>ECO-INDICATOR</b>	<b>MULTI-PURPOSE BOX</b>
IH-RISER-XX-R IH-FIT-3850-R	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 18" and 36") RZWS-10-RCC (purple cap for 10")	HDL-06-12-250-R HDL-06-12-1K-R HDL-06-18-250-R HDL-06-18-1K-R HDL-09-12-250-R HDL-09-12-1K-R HDL-09-18-250-R HDL-09-18-1K-R HDL-BLNK-500-R	ECO-ID-12-R
				MB-0811-R MB-LID-R (lid only)

### Micro Key

#### IH Risers

XX = Riser Length  
06 = 6"  
12 = 12"  
18 = 18"  
24 = 24"  
36 = 36"

#### RZWS

10 - 10" length 25 - 0.25 GPM  
18 - 18" length 50 - 0.50 GPM  
36 - 36" length CV - Check valve

#### HDL

BLNK - No emitter 12 - 12" spacing 250 - 250' length  
HDL-04 - 0.4 GPH 18 - 18" spacing 500 - 500' length  
HDL-06 - 0.6 GPH 24 - 24" spacing 1K - 1,000' length  
HDL-09 - 0.9 GPH

# TOOLS



## SPOTSHOT HOSE-END NOZZLE

### MODELS

- 3/4" hose thread inlet - P/N 160700SP
- 1" hose thread inlet - P/N 160705SP

### 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 - 35 GPM at 80 PSI\*

\* Not recommended for residential use with regulated, low-pressure, or low-flow conditions



**SpotShot Hose-End Nozzle**  
 3/4" P/N 160700SP  
 1" P/N 160705SP



**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 803700SP  
 5/16" Nut Driver used with I-80 Rotor short and mid-range nozzles



**Snap Ring Removal Tool**  
 P/N 251000SP  
 Use with I-80 Rotor

# RESOURCES

PLAN FASTER.  
SELL SMARTER.  
INSTALL EASIER.



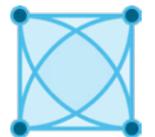
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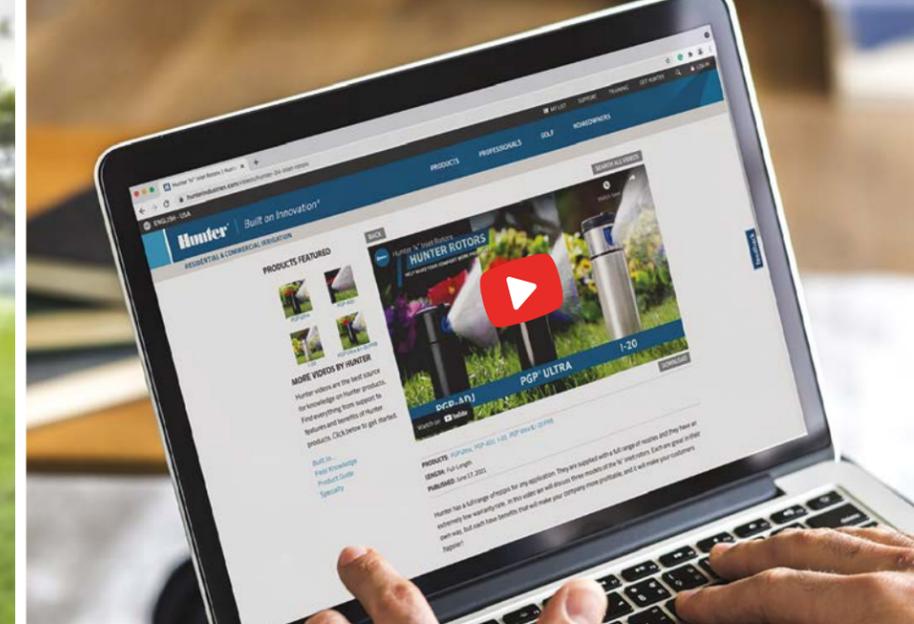
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Calculate the exact number of heads per zone using available flow rate and your sprinklers of choice.



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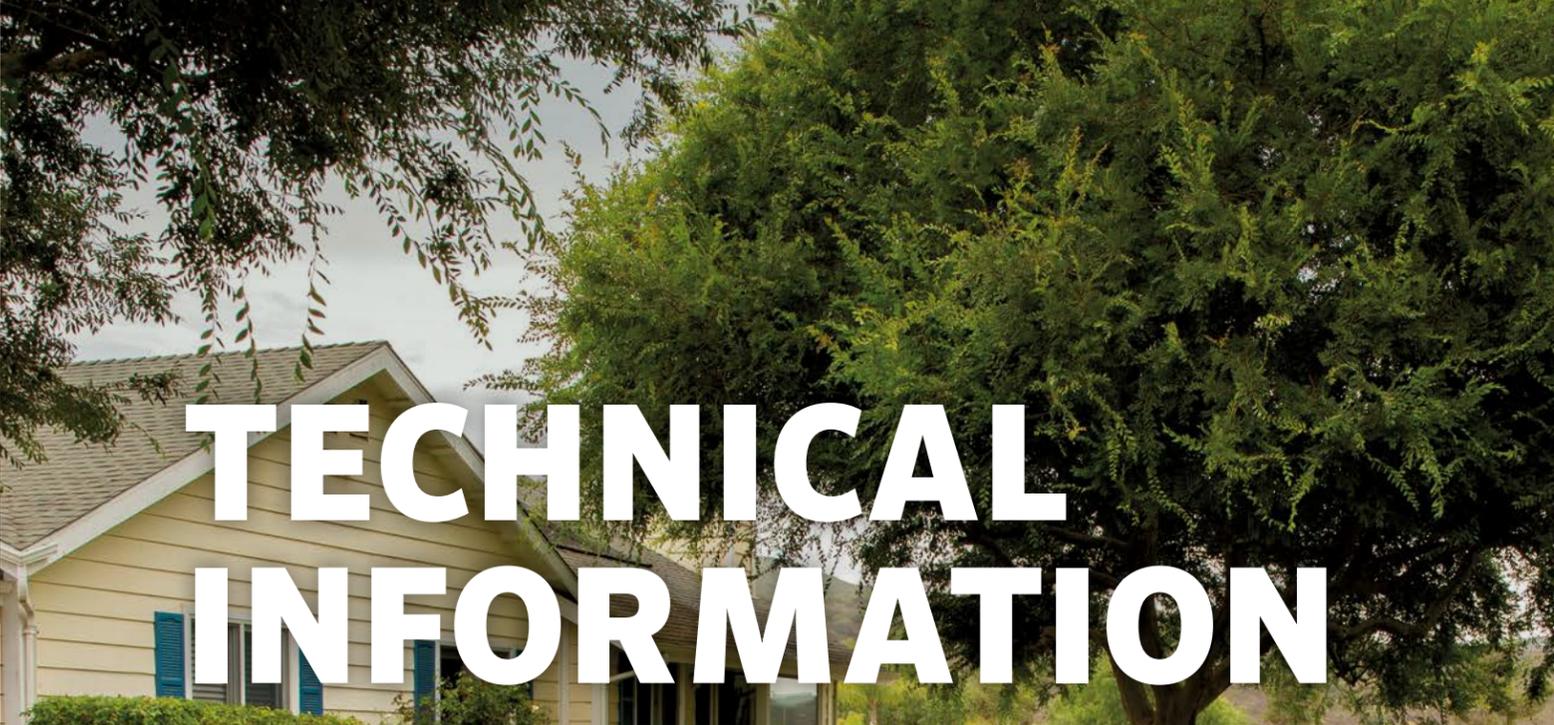
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#### Irrigation Installation Fundamentals

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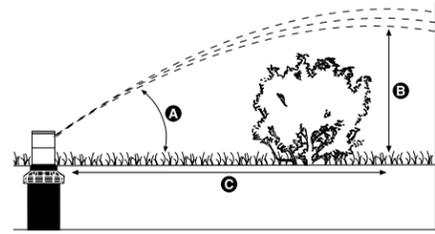
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- Electrical Troubleshooting Technician
- Hunter Product Specialist
- Hydrowise® Specialist
- Irrigation Designer
- Valve Technician
- X2 Controller Specialist
- Irrigation Installation Fundamentals
- Wireless Valve Link Certificate



# HEIGHT OF SPRAY

When designing and installing irrigation systems, it's important to know the trajectory and spray height of the water stream leaving the sprinkler nozzle.



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 (PSI)	Degrees of Trajectory	Max Height of Spray	Distance from Head to Maximum Height (ft)	
MP ROTATOR®	800SR	40	18	18"	Varies	
	815	40	15	12"	Varies	
	820	40	16	32"	Varies	
	1000	40	20	20"	Varies	
	2000	40	26	45"	Varies	
	3000	40	26	79"	Varies	
	3500	40	26	79"	Varies	
	Corner	40	14	14"	Varies	
	Side Strip	40	16	19"	Varies	
	Left Strip	40	16	18"	Varies	
	Right Strip	40	16	18"	Varies	
	PGJ / SRM	0.50	40	10	2'	4
0.75		40	10	2'	4	
1.0		40	10	2'	8	
1.5		40	10	3'	12	
2.0		40	15	5'	16	
2.5		40	15	5'	20	
3.0		40	15	5'	20	
4.0		40	15	5'	22	
PGP-ADJ RED NOZZLES	1	50	26	7"	22	
	2	50	26	7"	22	
	3	50	26	8"	23	
	4	50	26	8"	23	
	5	50	27	9"	26	
	6	50	27	10"	28	
	7	50	26	11"	30	
	8	50	26	11"	30	
	9	50	27	12"	32	
	10	60	25	13"	32	
	11	60	25	13"	38	
	12	60	25	13"	40	
PGP-ADJ LOW-ANGLE GRAY NOZZLES	4	50	15	5'	22	
	5	50	15	4'	22	
	6	50	14	4'	22	
	7	50	14	4'	22	
	8	50	14	5'	24	
	9	50	15	5'	26	
	10	60	15	6'	30	
	PGP-ADJ BLUE NOZZLES	1.5	45	25	8"	23
		2.0	45	25	8"	23
		2.5	45	25	9"	26
3.0		45	25	10"	28	
4.0		45	25	11"	30	
5.0		45	25	11"	30	
6.0		55	25	12"	32	
8.0		55	25	13"	32	
PGP® ULTRA/I-20 DARK BLUE NOZZLES	1.0	50	26	8"	23	
	1.5	50	26	8"	23	
	2.0	50	27	9"	26	
	3.0	50	27	10"	28	
	3.5	50	26	11"	30	
	4.0	50	26	11"	30	
	6.0	50	27	12"	32	
	8.0	60	25	13"	32	
PGP ULTRA/I-20 BLUE NOZZLES	1.5	45	25	8"	23	
	2.0	45	25	8"	23	
	2.5	45	25	9"	26	
	3.0	45	25	10"	28	
	4.0	45	25	11"	30	
	5.0	45	25	11"	30	
	6.0	55	25	12"	32	
	8.0	55	25	13"	32	

# HEIGHT OF SPRAY

HUNTER NOZZLE HEIGHT AND TRAJECTORY CHART					
Model	Nozzle No.	Pressure (PSI)	Degrees of Trajectory	Max Height of Spray	Distance from Head to Maximum Height (ft)
PGP® Ultra/I-20 Low-Angle Gray Nozzles	2.0LA	50	13	5	22
	2.5LA	50	13	4	22
	3.5LA	50	13	4	22
	4.5LA	50	13	4	22
PGP Ultra/I-20 Short-Radius Black Nozzles	0.5	50	15	5	8
	1.0	50	14	6	9
	2.0	50	3	1	6
PGP Ultra/I-20 Short-Radius Black Nozzles	0.75	50	22	7	13
	1.5	50	18	7	13
	3.0	50	8	1	6
PGP Ultra/I-20 MPR-25 Red Nozzles	Q - 90	45	22	3	15
	T - 120	45	21	4	14
	H - 180	45	24	4	14
	F - 360	45	22	4	10
PGP Ultra/I-20 MPR-30 Lt. Green Nozzles	Q - 90	45	28	5	18
	T - 120	45	14	3	17
	H - 180	45	16	4	16
	F - 360	45	18	2	13
PGP Ultra/I-20 MPR-35 Tan Nozzles	Q - 90	45	28	6	19
	T - 120	45	28	6	18
	H - 180	45	16	4	17
	F - 360	45	14	3	12
I-25	4	50	25	9	22
	7	50	25	10	28
	8	50	25	11	28
	10	60	25	12	30
	13	60	25	13	31
	15	60	25	12	31
	18	60	25	15	34
	20	70	25	15	35
	23	70	25	16	38
	25	70	25	16	38
28	70	25	17	40	
I-40 Adjustable	8	50	25	12	32
	10	60	25	14	32
	13	60	25	14	34
	15	60	25	15	42
	23	70	25	17	46
I-40-ON	25	70	25	17	48
	15	50	25	15	42
	18	60	25	16	43
	20	60	25	17	45
	23	60	25	17	46
	25	70	25	17	48
28	70	25	17	50	
HUNTER NOZZLE HEIGHT AND TRAJECTORY CHART					
Model	Nozzle No.	Pressure (PSI)	Degrees of Trajectory	Max Height of Spray	Distance from Head to Maximum Height (ft)
I-80 & I-90 ADV	23	80	22.5	14	37
	25	80	22.5	15	40
	33	80	22.5	15	42
	38	80	22.5	16	48
	43	80	22.5	16	48
	48	80	22.5	17	54
	53	80	22.5	17	56
	63	80	22.5	18	64
	73	80	22.5	19	68
I-80-ON & I-90 36V	23	80	22.5	7	34
	25	80	22.5	8	36
	33	80	22.5	8	38
	38	80	22.5	9	40
	43	80	22.5	9	41
	48	80	22.5	10	43
	53	80	22.5	11	45
	63	80	22.5	12	48
	73	80	22.5	13	52

## HDL MAXIMUM RUN LENGTHS

HDL-CV - 0.4 GPH			
Pressure (PSI)	Emitter Spacing (in.)		
	12	18	24
15	205	289	367
20	289	404	513
25	339	479	604
30	380	535	679
40	438	623	788
50	489	691	872
60	529	747	947

HDL-CV - 0.6 GPH			
Pressure (PSI)	Emitter Spacing (in.)		
	12	18	24
15	171	239	304
20	239	336	426
25	280	398	501
30	314	441	560
40	363	516	653
50	404	570	722
60	438	619	784

HDL-CV - 0.9 GPH			
Pressure (PSI)	Emitter Spacing (in.)		
	12	18	24
15	117	164	211
20	164	233	292
25	192	273	348
30	217	307	389
40	251	355	451
50	280	395	501
60	302	429	541

HDL-PC/R - 0.6 GPH			
Pressure (PSI)	Emitter Spacing (in.)		
	12	18	24
10	168	236	298
15	236	333	423
20	280	395	501
25	314	441	560
30	339	482	610
40	385	545	688
50	419	594	753
60	451	638	810

HDL-PC/R - 0.9 GPH			
Pressure (PSI)	Emitter Spacing (in.)		
	12	18	24
10	114	164	208
15	164	233	292
20	192	273	348
25	214	304	385
30	236	333	419
40	267	376	479
50	292	414	523
60	314	441	560

HDL-COP - 0.6 GPH		
Pressure (PSI)	Emitter Spacing (in.)	
	12	18
15	171	239
20	239	336
25	280	398
30	314	441
40	363	516
50	404	570
60	438	619

HDL-COP - 0.9 GPH		
Pressure (PSI)	Emitter Spacing (in.)	
	12	18
15	117	164
20	164	233
25	192	273
30	217	307
40	251	355
50	280	395
60	302	429

## MLD FLOW CHART

MLD FLOW CHART	
Required Dynamic Pressure (PSI)	Design Flow (GPH)
10	0.40
15	0.49
20	0.57
25	0.65
30	0.71
35	0.76
40	0.80
45	0.84

## PRESSURE LOSS CHARTS

BTT 1-ZONE Inlet Size 3/4", Flow Rate: 1 to 8 GPM	
GPM	Pressure Loss
1	4
2	5
3	6
4	8
5	11
6	15
7	20
8	26

BTT 2-ZONE Inlet Size 3/4", Flow Rate: 1 to 8 GPM	
GPM	Pressure Loss
1	2
2	3
3	5
4	7
5	10
6	14
7	18
8	24

Note: Maximum flow at 50 PSI

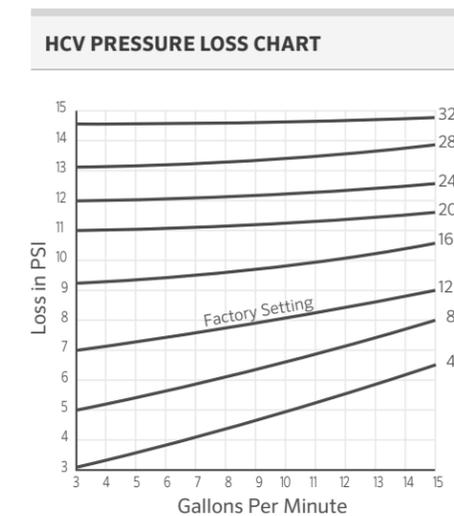
Note: Maximum flow at 50 PSI (1-zone activated)

For applications requiring higher efficiency and lower pressure loss, use Hunter valves and dripline products.

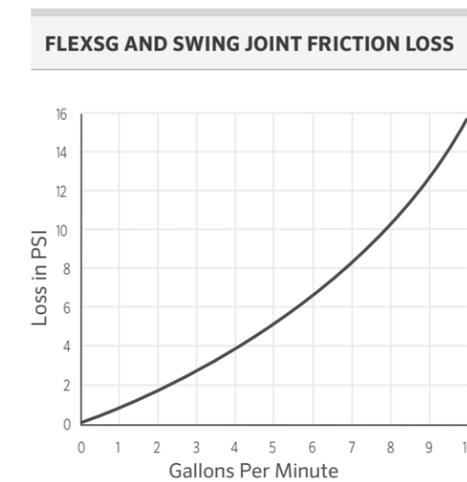
HY FILTER PRESSURE LOSS IN PSI (AT OPTIMAL FLOWS)						
Flow (GPM)	*HY-075 3/4"	*HY-100 1"	*HY-151 1 1/2"	**HY-151-D 1 1/2"	**HY-201 2"	**HY-201-D 2"
0.5	0	0				
2	0	0				
5	1	1				
7	2	2				
10	3	3				
15	6	6				
20	11	11	0	0	0	0
30			1	1	0	0
40			1	2	0	1
50			2	3	1	1
60			3	4	1	2
70			3	4	1	2
80			4	5	2	3
90					2	3
100					3	4

Notes: \*With standard 150 mesh screen \*\*With standard 120 mesh disc

## ACCESSORY PRESSURE LOSS CHARTS



For more information, see the Hunter Check Valve section on page 30



For more information, see the Spray Accessories section on page 62

## 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 one inch 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 one inch of water in one hour has a “precipitation rate” of one inch per hour (1 in/hr or 25 mm/hr). Similarly, the precipitation rate is the “speed” at which a sprinkler or an irrigation system applies water.

### MATCHED PRECIPITATION RATES

A zone or system in which all the heads have similar precipitation rates is said to have “matched precipitation rates.” Systems that have matched precipitation rates reduce wet and dry spots and minimize 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 m³/hr; 3.8 l/min)		180° Arc = 2 GPM (0.45 m³/hr; 7.6 l/min)		360° Arc = 4 GPM (0.91 m³/hr; 15.1 l/min)
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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 (■)	Any Arc and Any Spacing (■):
The precipitation rate should be calculated for each individual zone. If all sprinkler heads on the zone have the same spacing, flow rate, and arc of coverage, use one of the following formulas:	$\text{P.R. (in/hr)} = \frac{\text{Flow Rate (GPM) for any Arc} \times 34,650}{\text{Degrees of Arc} \times \text{Head Spacing (ft.)} \times \text{Row Spacing (ft.)}}$ $\text{P.R. (mm/hr)} = \frac{\text{Flow Rate (m}^3\text{/hr) for any Arc} \times 360,000}{\text{Degrees of Arc} \times \text{Head Spacing (m)} \times \text{Row Spacing (m)}}$ $\text{P.R. (mm/hr)} = \frac{\text{Flow Rate (l/min) for any Arc} \times 21,600}{\text{Degrees of Arc} \times \text{Head Spacing (m)} \times \text{Row Spacing (m)}}$
Sprinkler Spacing Method (▲)	Equilateral Triangular Spacing (▲):
The precipitation rate should be calculated for each individual zone. If all sprinkler heads on the zone have the same spacing, flow rate, and arc of coverage, use one of the following formulas:	$\text{P.R. (in/hr)} = \frac{\text{Flow Rate (GPM) for any Arc} \times 34,650}{\text{Degrees of Arc} \times (\text{Head Spacing})^2 \times 0.866}$ $\text{P.R. (mm/hr)} = \frac{\text{Flow Rate (m}^3\text{/hr) for any Arc} \times 360,000}{\text{Degrees of Arc} \times (\text{Head Spacing})^2 \times 0.866}$ $\text{P.R. (mm/hr)} = \frac{\text{Flow Rate (l/min) for any Arc} \times 21,600}{\text{Degrees of Arc} \times (\text{Head Spacing})^2 \times 0.866}$
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.	$\text{P.R. (in/hr)} = \frac{\text{Flow (GPM)} \times 96.25}{\text{Total Area (ft.)}}$ $\text{P.R. (mm/hr)} = \frac{\text{Flow (m}^3\text{/hr)} \times 1,000}{\text{Total Area (m}^2\text{)}}$ $\text{P.R. (mm/hr)} = \frac{\text{Flow (l/min)} \times 60}{\text{Total Area (m}^2\text{)}}$

## SLOPE EQUIVALENTS/IRRIGATION

### SLOPE IRRIGATION: Maximum precipitation rates for slopes in in/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	2.0	2.0	2.0	1.5	1.5	1.0	1.0	0.5
Coarse sandy soils over compact subsoils	1.75	1.5	1.25	1.0	1.0	0.75	0.75	0.4
Light sandy loams uniform	1.75	1.0	1.25	0.8	1.0	0.6	0.75	0.4
Light sandy loams over compact subsoils	1.25	0.75	1.0	0.5	0.75	0.4	0.5	0.3
Uniform silt loams	1.0	0.5	0.8	0.4	0.6	0.3	0.4	0.2
Silt loams over compact subsoil	0.6	0.3	0.5	0.25	0.4	0.15	0.3	0.1
Heavy clay or clay loam	0.2	0.15	0.15	0.10	0.12	0.08	0.1	0.06

#### 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.



# FRICITION LOSS CHARTS - TYPE L COPPER TUBING

ASTM B88 C = 140 • PSI loss per 100' of pipe																		
Nominal Size	½"		¾"		¾"		1"		1¼"		1½"		2"		2½"		3"	
Pipe ID	0.545		0.666		0.785		1.025		1.265		1.505		1.985		2.465		2.945	
Pipe OD	0.625		0.750		0.875		1.125		1.375		1.625		2.125		2.625		3.125	
Avg. Wall	0.040		0.042		0.045		0.050		0.055		0.060		0.070		0.080		0.090	
Flow (GPM)	Velocity FPS	PSI Loss																
1	1.37	0.93	0.92	0.35	0.66	0.16	0.39	0.04	0.25	0.02								
2	2.75	3.35	1.84	1.26	1.32	0.57	0.78	0.15	0.51	0.06								
3	4.12	7.09	2.76	2.67	1.99	1.20	1.17	0.33	0.76	0.12								
4	5.49	12.09	3.68	4.56	2.65	2.05	1.55	0.56	1.02	0.20								
5	6.87	18.27	4.60	6.89	3.31	3.09	1.94	0.85	1.27	0.30								
6	8.24	25.61	5.52	9.65	3.97	4.34	2.33	1.18	1.53	0.43	1.08	0.18						
7	9.62	34.07	6.44	12.84	4.63	5.77	2.72	1.58	1.78	0.57	1.26	0.24						
8	10.99	43.63	7.36	16.45	5.30	7.39	3.11	2.02	2.04	0.72	1.44	0.31						
9	12.36	54.26	8.28	20.45	5.96	9.19	3.50	2.51	2.29	0.90	1.62	0.39						
10	13.74	65.95	9.20	24.86	6.62	11.17	3.88	3.05	2.55	1.10	1.80	0.47						
12			11.04	34.85	7.95	15.66	4.66	4.28	3.06	1.54	2.16	0.66						
14			12.88	46.36	9.27	20.83	5.44	5.69	3.57	2.04	2.52	0.88						
16			14.72	59.37	10.59	26.68	6.21	7.28	4.08	2.62	2.88	1.12						
18			16.56	73.84	11.92	33.18	6.99	9.06	4.59	3.25	3.24	1.40						
20					13.24	40.33	7.77	11.01	5.10	3.96	3.60	1.70						
22					14.57	48.11	8.54	13.14	5.61	4.72	3.96	2.03	2.28	0.53	1.48	0.18	1.03	0.08
24					15.89	56.53	9.32	15.44	6.12	5.55	4.32	2.38	2.49	0.62	1.61	0.22	1.13	0.09
26							10.10	17.90	6.63	6.43	4.68	2.76	2.69	0.72	1.75	0.25	1.22	0.11
28							10.87	20.54	7.14	7.38	5.04	3.17	2.90	0.82	1.88	0.29	1.32	0.12
30							11.65	23.33	7.65	8.38	5.40	3.60	3.11	0.94	2.01	0.33	1.41	0.14
32							12.43	26.30	8.16	9.45	5.76	4.06	3.31	1.05	2.15	0.37	1.51	0.15
34							13.20	29.42	8.67	10.57	6.12	4.54	3.52	1.18	2.28	0.41	1.60	0.17
36							13.98	32.71	9.18	11.75	6.48	5.05	3.73	1.31	2.42	0.46	1.69	0.19
38							14.76	36.15	9.69	12.99	6.84	5.58	3.93	1.45	2.55	0.51	1.79	0.21
40							15.53	39.75	10.20	14.28	7.21	6.13	4.14	1.59	2.69	0.56	1.88	0.23
42							16.31	43.51	10.71	15.63	7.57	6.71	4.35	1.75	2.82	0.61	1.98	0.26
44									11.22	17.04	7.93	7.32	4.56	1.90	2.95	0.66	2.07	0.28
46									11.73	18.50	8.29	7.94	4.76	2.07	3.09	0.72	2.16	0.30
48									12.24	20.02	8.65	8.60	4.97	2.24	3.22	0.78	2.26	0.33
50									12.75	21.59	9.01	9.27	5.18	2.41	3.36	0.84	2.35	0.35
55									14.02	25.76	9.91	11.06	5.70	2.88	3.69	1.00	2.59	0.42
60									15.30	30.26	10.81	13.00	6.21	3.38	4.03	1.18	2.82	0.50
65									16.57	35.10	11.71	15.07	6.73	3.92	4.36	1.37	3.06	0.57
70									17.85	40.26	12.61	17.29	7.25	4.50	4.70	1.57	3.29	0.66
75									13.51	19.65	7.77	5.11	5.04	1.78	5.04	1.78	3.53	0.75
80									14.41	22.14	8.28	5.76	5.37	2.01	5.37	2.01	3.76	0.84
85									15.31	24.77	8.80	6.44	5.71	2.25	5.71	2.25	4.00	0.94
90									16.21	27.54	9.32	7.16	6.04	2.50	6.04	2.50	4.23	1.05
95									17.11	30.44	9.84	7.91	6.38	2.76	6.38	2.76	4.47	1.16
100									18.01	33.47	10.35	8.70	6.71	3.03	6.71	3.03	4.70	1.28
110									11.39	10.38	7.39	3.62	5.17	1.52				
120									12.43	12.20	8.06	4.25	5.65	1.79				
130									13.46	14.15	8.73	4.93	6.12	2.07				
140									14.50	16.23	9.40	5.66	6.59	2.38				
150									15.53	18.44	10.07	6.43	7.06	2.70				
160									16.57	20.78	10.74	7.24	7.53	3.05				
170									17.60	23.25	11.41	8.11	8.00	3.41				
180											12.09	9.01	8.47	3.79				
190											12.76	9.96	8.94	4.19				
200											13.43	10.95	9.41	4.61				
220											14.77	13.07	10.35	5.50				
240											16.12	15.35	11.29	6.46				
260											17.46	17.80	12.23	7.49				
280											18.80	20.42	13.17	8.59				
300													14.11	9.76				
320													15.05	11.00				
340													15.99	12.31				
360													16.94	13.69				
380													17.88	15.13				
400																		
420																		
440																		
460																		
480																		
500																		

Notes: Shaded areas represent velocities over 7 FPS. Use with caution when water hammer is a concern.

# FRICITION LOSS CHARTS - SCHEDULE 40 STEEL

ASTM B53 C = 100 • PSI loss per 100' of pipe																		
Nominal Size	½"		¾"		1"		1¼"		1½"		2"		2½"		3"		4"	
Pipe ID	0.622		0.824		1.049		1.38		1.610		2.067		2.469		3.068		4.026	
Pipe OD	0.842		1.050		1.315		1.660		1.900		2.375		2.875		3.500		4.500	
Avg. Wall	0.110		0.113		0.133		0.140		0.145		0.154		0.203		0.216		0.237	
Flow (GPM)	Velocity FPS	PSI Loss																
1	1.05	0.91	0.60	0.23	0.37	0.07	0.21	0.02	0.16	0.01								
2	2.11	3.28	1.20	0.84	0.74	0.26	0.43	0.07	0.31	0.03								
3	3.16	6.95	1.80	1.77	1.11	0.55	0.64	0.14	0.47	0.07								
4	4.22	11.85	2.40	3.02	1.48	0.93	0.86	0.25	0.63	0.12								
5	5.27	17.91	3.00	4.56	1.85	1.41	1.07	0.37	0.79	0.18								
6	6.33	25.10	3.61	6.39	2.22	1.97	1.29	0.52	0.94	0.25	0.57	0.07						
7	7.38	33.40	4.21	8.50	2.60	2.63	1.50	0.69	1.10	0.33	0.67	0.10						
8	8.44	42.77	4.81	10.88	2.97	3.36	1.71	0.89	1.26	0.42	0.76	0.12						
9	9.49	53.19	5.41	13.54	3.34	4.18	1.93	1.10	1.42	0.52	0.86	0.15						
10	10.55	64.65	6.01	16.45	3.71	5.08	2.14	1.34	1.57	0.63	0.95	0.19						
12	12.65	90.62	7.21	23.06	4.45	7.12	2.57	1.88	1.89	0.89	1.15	0.26	0.80	0.11				
14			8.41	30.68	5.19	9.48	3.00	2.50	2.20	1.18	1.34	0.35	0.94	0.15				
16			9.61	39.29	5.93	12.14	3.43	3.20	2.52	1.51	1.53	0.45	1.07	0.19				
18			10.82	48.87	6.67	15.10	3.86	3.97	2.83	1.88	1.72	0.56	1.20	0.23				
20			12.02	59.40	7.42	18.35	4.28	4.83	3.15	2.28	1.91	0.68	1.34	0.28				
22			13.22	70.87	8.16	21.89	4.71	5.76	3.46	2.72	2.10	0.81	1.47	0.34	0.95	0.12	0.55	0.03
24					8.90	25.72	5.14	6.77	3.78	3.20	2.29	0.95	1.61	0.40	1.04	0.14	0.60	0.04

# FRICITION LOSS CHARTS - CLASS 160 PVC IPS PLASTIC PIPE

ASTM D2241 (1120, 1220) SDR 26 C = 150 • PSI loss per 100' of pipe																		
Nominal Size	½"		¾"		1"		1¼"		1½"		2"		2½"		3"		4"	
Avg. ID	0.696		0.910		1.175		1.512		1.734		2.173		2.635		3.21		4.134	
Pipe OD	0.840		1.050		1.315		1.660		1.900		2.375		2.875		3.500		4.500	
Avg. Wall	0.072		0.070		0.070		0.074		0.083		0.101		0.120		0.145		0.183	
Min. Wall	0.062		0.060		0.060		0.064		0.073		0.091		0.110		0.135		0.173	
Flow (GPM)	Velocity FPS	PSI Loss																
1	0.84	0.25	0.49	0.07	0.30	0.02	0.18	0.01	0.14	0.00								
2	1.68	0.90	0.99	0.24	0.59	0.07	0.36	0.02	0.27	0.01	0.17	0.00						
3	2.53	1.90	1.48	0.52	0.89	0.15	0.54	0.04	0.41	0.02	0.26	0.01						
4	3.37	3.24	1.97	0.88	1.18	0.25	0.71	0.07	0.54	0.04	0.35	0.01	0.24	0.00				
5	4.21	4.89	2.46	1.33	1.48	0.38	0.89	0.11	0.68	0.06	0.43	0.02	0.29	0.01				
6	5.05	6.86	2.96	1.86	1.77	0.54	1.07	0.16	0.81	0.08	0.52	0.03	0.35	0.01	0.24	0.00		
7	5.90	9.12	3.45	2.47	2.07	0.71	1.25	0.21	0.95	0.11	0.60	0.04	0.41	0.01	0.28	0.01		
8	6.74	11.68	3.94	3.17	2.36	0.91	1.43	0.27	1.09	0.14	0.69	0.05	0.47	0.02	0.32	0.01		
9	7.58	14.53	4.43	3.94	2.66	1.14	1.61	0.33	1.22	0.17	0.78	0.06	0.53	0.02	0.36	0.01		
10	8.42	17.66	4.93	4.79	2.96	1.38	1.78	0.40	1.36	0.21	0.86	0.07	0.59	0.03	0.40	0.01		
12	10.11	24.75	5.91	6.71	3.55	1.94	2.14	0.57	1.63	0.29	1.04	0.10	0.71	0.04	0.48	0.01		
14	11.79	32.93	6.90	8.93	4.14	2.58	2.50	0.76	1.90	0.39	1.21	0.13	0.82	0.05	0.55	0.02		
16	13.48	42.16	7.88	11.44	4.73	3.30	2.86	0.97	2.17	0.50	1.38	0.17	0.94	0.06	0.63	0.02	0.38	0.01
18	15.16	52.44	8.87	14.23	5.32	4.10	3.21	1.20	2.44	0.62	1.56	0.21	1.06	0.08	0.71	0.03	0.43	0.01
20			9.85	17.29	5.91	4.99	3.57	1.46	2.71	0.75	1.73	0.25	1.18	0.10	0.79	0.04	0.48	0.01
22			10.84	20.63	6.50	5.95	3.93	1.74	2.99	0.90	1.90	0.30	1.29	0.12	0.87	0.04	0.53	0.01
24			11.82	24.24	7.09	6.99	4.28	2.05	3.26	1.05	2.07	0.35	1.41	0.14	0.95	0.05	0.57	0.02
26			12.81	28.11	7.68	8.11	4.64	2.38	3.53	1.22	2.25	0.41	1.53	0.16	1.03	0.06	0.62	0.02
28			13.80	32.25	8.27	9.30	5.00	2.73	3.80	1.40	2.42	0.47	1.65	0.18	1.11	0.07	0.67	0.02
30			14.78	36.64	8.87	10.57	5.35	3.10	4.07	1.59	2.59	0.53	1.76	0.21	1.19	0.08	0.72	0.02
32					9.46	11.91	5.71	3.49	4.34	1.79	2.76	0.60	1.88	0.23	1.27	0.09	0.76	0.03
34					10.05	13.32	6.07	3.91	4.61	2.01	2.94	0.67	2.00	0.26	1.35	0.10	0.81	0.03
36					10.64	14.81	6.42	4.34	4.88	2.23	3.11	0.74	2.12	0.29	1.43	0.11	0.86	0.03
38					11.23	16.37	6.78	4.80	5.16	2.46	3.28	0.82	2.23	0.32	1.50	0.12	0.91	0.04
40					11.82	18.00	7.14	5.28	5.43	2.71	3.46	0.90	2.35	0.35	1.58	0.14	0.95	0.04
42					12.41	19.70	7.50	5.78	5.70	2.97	3.63	0.99	2.47	0.39	1.66	0.15	1.00	0.04
44					13.00	21.47	7.85	6.30	5.97	3.23	3.80	1.08	2.59	0.42	1.74	0.16	1.05	0.05
46					13.59	23.32	8.21	6.84	6.24	3.51	3.97	1.17	2.70	0.46	1.82	0.18	1.10	0.05
48					14.18	25.23	8.57	7.40	6.51	3.80	4.15	1.27	2.82	0.50	1.90	0.19	1.15	0.06
50					14.78	27.21	8.92	7.98	6.78	4.10	4.32	1.37	2.94	0.53	1.98	0.20	1.19	0.06
55							9.82	9.52	7.46	4.89	4.75	1.63	3.23	0.64	2.18	0.24	1.31	0.07
60							10.71	11.18	8.14	5.74	5.18	1.91	3.53	0.75	2.38	0.29	1.43	0.08
65							11.60	12.97	8.82	6.66	5.62	2.22	3.82	0.87	2.57	0.33	1.55	0.10
70							12.49	14.88	9.50	7.64	6.05	2.55	4.11	1.00	2.77	0.38	1.67	0.11
75							13.38	16.90	10.18	8.68	6.48	2.89	4.41	1.13	2.97	0.43	1.79	0.13
80							14.28	19.05	10.86	9.78	6.91	3.26	4.70	1.28	3.17	0.49	1.91	0.14
85									11.53	10.94	7.34	3.65	4.99	1.43	3.37	0.55	2.03	0.16
90									12.21	12.16	7.78	4.06	5.29	1.59	3.56	0.61	2.15	0.18
95									12.89	13.45	8.21	4.48	5.58	1.76	3.76	0.67	2.27	0.20
100									13.57	14.79	8.64	4.93	5.88	1.93	3.96	0.74	2.39	0.22
110									14.93	17.64	9.50	5.88	6.46	2.30	4.36	0.88	2.63	0.26
120											10.37	6.91	7.05	2.71	4.75	1.04	2.86	0.30
130											11.23	8.02	7.64	3.14	5.15	1.20	3.10	0.35
140											12.10	9.20	8.23	3.60	5.54	1.38	3.34	0.40
150											12.96	10.45	8.81	4.09	5.94	1.57	3.58	0.46
160											13.82	11.77	9.40	4.61	6.34	1.76	3.82	0.52
170											14.69	13.17	9.99	5.16	6.73	1.97	4.06	0.58
180													10.58	5.73	7.13	2.19	4.30	0.64
190													11.16	6.34	7.52	2.42	4.54	0.71
200													11.75	6.97	7.92	2.67	4.77	0.78
220													12.93	8.31	8.71	3.18	5.25	0.93
240													14.10	9.77	9.50	3.74	5.73	1.09
260															10.29	4.33	6.21	1.27
280															11.09	4.97	6.68	1.45
300															11.88	5.65	7.16	1.65
320															12.67	6.37	7.64	1.86
340															13.46	7.12	8.12	2.08
360															14.25	7.92	8.59	2.31
380																	9.07	2.56
400																	9.55	2.81
420																	10.03	3.08
440																	10.50	3.35
460																	10.98	3.64
480																	11.46	3.94
500																	11.94	4.25

Notes: Shaded areas represent velocities over 5 FPS. Use with caution when water hammer is a concern.

# FRICITION LOSS CHARTS - CLASS 200 PVC IPS PLASTIC PIPE

ASTM D2241 (1120, 1220) SDR 21 C = 150 • PSI loss per 100' of pipe																					
Nominal Size	Class 315: ½"		¾"		1"		1¼"		1½"		2"		2½"		3"		4"		6"		
Avg. ID	0.696		0.910		1.169		1.482		1.700		2.129		2.581		3.146		4.046		5.955		
Pipe OD	0.840		1.050		1.315		1.660		1.900		2.375		2.875		3.500		4.500		6.625		
Avg. Wall	0.072		0.070		0.073		0.089		0.100		0.123		0.147		0.177		0.227		0.335		
Min. Wall	0.062		0.060		0.063		0.079		0.090		0.113		0.137		0.167		0.214		0.316		
Flow (GPM)	Velocity FPS	PSI Loss	Velocity FPS	PSI Loss	Velocity FPS	PSI Loss	Velocity FPS	PSI Loss	Velocity FPS	PSI Loss	Velocity FPS	PSI Loss	Velocity FPS	PSI Loss	Velocity FPS	PSI Loss	Velocity FPS	PSI Loss	Velocity FPS	PSI Loss	
1	0.84	0.25	0.49	0.07	0.30	0.02	0.19	0.01	0.14	0.00											
2	1.68	0.90	0.99	0.24	0.60	0.07	0.37	0.02	0.28	0.01	0.18	0.00									
3	2.53	1.90	1.48	0.52	0.90	0.15	0.56	0.05	0.42	0.02	0.27	0.01									
4	3.37	3.24	1.97	0.88	1.19	0.26	0.74	0.08	0.56	0.04	0.36	0.01	0.24	0.01							
5	4.21	4.89	2.46	1.33	1.49	0.39	0.93	0.12	0.71	0.06	0.45	0.02	0.31	0.01							
6	5.05	6.86	2.96	1.86	1.79	0.55	1.11	0.17	0.85	0.09	0.54	0.03	0.37	0.01	0.25	0.00					
7	5.90	9.12	3.45	2.47	2.09	0.73	1.30	0.23	0.99	0.12	0.63	0.04	0.43	0.02	0.29	0.01					
8	6.74	11.68	3.94	3.17	2.39	0.94	1.49	0.30	1.13	0.15	0.72	0.05	0.								

# FRICITION LOSS CHARTS - CLASS 315 PVC IPS PLASTIC PIPE

ASTM D2241 (1120, 1220) SDR 13.5 C = 150 • PSI loss per 100' of pipe																				
Nominal Size	½"		¾"		1"		1¼"		1½"		2"		2½"		3"		4"		6"	
Avg. ID	0.696	0.874	1.101	1.394	1.598	1.983	2.423	2.948	3.794	5.583										
Pipe OD	0.840	1.050	1.315	1.660	1.900	2.375	2.875	3.500	4.500	6.625										
Avg. Wall	0.072	0.088	0.107	0.133	0.151	0.196	0.226	0.274	0.353	0.521										
Min. Wall	0.062	0.078	0.097	0.123	0.141	0.176	0.213	0.259	0.333	0.491										
Flow (GPM)	Velocity FPS	PSI Loss																		
1	0.84	0.25	0.53	0.08	0.34	0.03	0.21	0.01	0.16	0.00										
2	1.68	0.90	1.07	0.30	0.67	0.10	0.42	0.03	0.32	0.02	0.21	0.01								
3	2.53	1.90	1.60	0.63	1.01	0.20	0.63	0.06	0.48	0.03	0.31	0.01								
4	3.37	3.24	2.14	1.07	1.35	0.35	0.84	0.11	0.64	0.06	0.42	0.02	0.28	0.01						
5	4.21	4.89	2.67	1.61	1.68	0.53	1.05	0.17	0.80	0.09	0.52	0.03	0.35	0.01						
6	5.05	6.86	3.20	2.26	2.02	0.74	1.26	0.23	0.96	0.12	0.62	0.04	0.42	0.02	0.28	0.01				
7	5.90	9.12	3.74	3.01	2.36	0.98	1.47	0.31	1.12	0.16	0.73	0.06	0.49	0.02	0.33	0.01				
8	6.74	11.68	4.27	3.86	2.69	1.25	1.68	0.40	1.28	0.20	0.83	0.07	0.56	0.03	0.38	0.01				
9	7.58	14.53	4.81	4.80	3.03	1.56	1.89	0.49	1.44	0.25	0.93	0.09	0.63	0.03	0.42	0.01				
10	8.42	17.66	5.34	5.83	3.37	1.90	2.10	0.60	1.60	0.31	1.04	0.11	0.69	0.04	0.47	0.02				
12	10.11	24.75	6.41	8.17	4.04	2.66	2.52	0.84	1.92	0.43	1.25	0.15	0.83	0.06	0.56	0.02				
14	11.79	32.93	7.48	10.87	4.71	3.53	2.94	1.12	2.24	0.58	1.45	0.20	0.97	0.08	0.66	0.03				
16	13.48	42.16	8.55	13.92	5.39	4.53	3.36	1.44	2.56	0.74	1.66	0.26	1.11	0.10	0.75	0.04	0.45	0.01		
18	15.16	52.44	9.61	17.32	6.06	5.63	3.78	1.79	2.88	0.92	1.87	0.32	1.25	0.12	0.85	0.05	0.51	0.01		
20			10.68	21.05	6.73	6.84	4.20	2.17	3.20	1.12	2.08	0.39	1.39	0.15	0.94	0.06	0.57	0.02		
22			11.75	25.11	7.40	8.16	4.62	2.59	3.52	1.33	2.28	0.47	1.53	0.18	1.03	0.07	0.62	0.02		
24			12.82	29.50	8.08	9.59	5.04	3.04	3.83	1.57	2.49	0.55	1.67	0.21	1.13	0.08	0.68	0.02		
26			13.89	34.21	8.75	11.12	5.46	3.53	4.15	1.82	2.70	0.64	1.81	0.24	1.22	0.09	0.74	0.03		
28			14.96	39.25	9.42	12.76	5.88	4.05	4.47	2.08	2.91	0.73	1.95	0.27	1.31	0.11	0.79	0.03		
30			16.02	44.60	10.10	14.50	6.30	4.60	4.79	2.37	3.11	0.83	2.08	0.31	1.41	0.12	0.85	0.04		
32					10.77	16.34	6.72	5.18	5.11	2.67	3.32	0.93	2.22	0.35	1.50	0.14	0.91	0.04	0.42	0.01
34					11.44	18.28	7.14	5.80	5.43	2.98	3.53	1.04	2.36	0.39	1.60	0.15	0.96	0.04	0.45	0.01
36					12.12	20.32	7.56	6.45	5.75	3.32	3.74	1.16	2.50	0.44	1.69	0.17	1.02	0.05	0.47	0.01
38					12.79	22.46	7.98	7.13	6.07	3.67	3.94	1.28	2.64	0.48	1.78	0.19	1.08	0.05	0.50	0.01
40					13.46	24.70	8.40	7.84	6.39	4.03	4.15	1.41	2.78	0.53	1.88	0.20	1.13	0.06	0.52	0.01
42					14.14	27.04	8.82	8.58	6.71	4.41	4.36	1.54	2.92	0.58	1.97	0.22	1.19	0.07	0.55	0.01
44					14.81	29.47	9.24	9.35	7.03	4.81	4.57	1.68	3.06	0.63	2.07	0.24	1.25	0.07	0.58	0.01
46					15.48	32.00	9.66	10.15	7.35	5.22	4.77	1.83	3.20	0.69	2.16	0.27	1.30	0.08	0.60	0.01
48					16.16	34.62	10.08	10.98	7.67	5.65	4.98	1.98	3.34	0.75	2.25	0.29	1.36	0.08	0.63	0.01
50					16.83	37.34	10.50	11.85	7.99	6.09	5.19	2.13	3.47	0.80	2.35	0.31	1.42	0.09	0.65	0.01
55					11.55	14.13	8.79	7.27	5.71	2.54	3.82	0.96	2.58	0.37	1.56	0.11	1.56	0.11	0.72	0.02
60					12.60	16.60	9.59	8.54	6.23	2.99	4.17	1.13	2.82	0.43	1.70	0.13	1.70	0.13	0.79	0.02
65					13.65	19.26	10.39	9.91	6.74	3.47	4.52	1.31	3.05	0.50	1.84	0.15	1.84	0.15	0.85	0.02
70					14.70	22.09	11.18	11.37	7.26	3.98	4.86	1.50	3.29	0.58	1.98	0.17	1.98	0.17	0.92	0.03
75					15.75	25.10	11.98	12.91	7.78	4.52	5.21	1.70	3.52	0.66	2.13	0.19	2.13	0.19	0.98	0.03
80					16.80	28.29	12.78	14.55	8.30	5.09	5.56	1.92	3.76	0.74	2.27	0.22	2.27	0.22	1.05	0.03
85							13.58	16.28	8.82	5.70	5.91	2.15	3.99	0.83	2.41	0.24	2.41	0.24	1.11	0.04
90							14.38	18.10	9.34	6.33	6.25	2.39	4.23	0.92	2.55	0.27	2.55	0.27	1.18	0.04
95							15.18	20.01	9.86	7.00	6.60	2.64	4.46	1.02	2.69	0.30	2.69	0.30	1.24	0.05
100							15.98	22.00	10.38	7.70	6.95	2.90	4.69	1.12	2.83	0.33	2.83	0.33	1.31	0.05
110							11.41	9.18	7.64	3.46	5.16	1.33	3.12	0.39	1.44	0.06				
120							12.45	10.79	8.34	4.07	5.63	1.57	3.40	0.46	1.57	0.07				
130							13.49	12.51	9.03	4.72	6.10	1.82	3.68	0.53	1.70	0.08				
140							14.53	14.35	9.73	5.41	6.57	2.08	3.97	0.61	1.83	0.09				
150							15.56	16.31	10.42	6.15	7.04	2.37	4.25	0.69	1.96	0.11				
160							16.60	18.38	11.12	6.93	7.51	2.67	4.54	0.78	2.09	0.12				
170									11.81	7.76	7.98	2.99	4.82	0.87	2.23	0.13				
180									12.51	8.62	8.45	3.32	5.10	0.97	2.36	0.15				
190									13.20	9.53	8.92	3.67	5.39	1.08	2.49	0.16				
200									13.90	10.48	9.39	4.03	5.67	1.18	2.62	0.18				
220									15.29	12.50	10.33	4.81	6.24	1.41	2.88	0.22				
240									16.68	14.69	11.27	5.66	6.80	1.66	3.14	0.25				
260											12.21	6.56	7.37	1.92	3.40	0.29				
280											13.15	7.52	7.94	2.20	3.67	0.34				
300											14.08	8.55	8.50	2.50	3.93	0.38				
320											15.02	9.64	9.07	2.82	4.19	0.43				
340											15.96	10.78	9.64	3.16	4.45	0.48				
360											10.20	3.51	4.71	0.54						
380											10.77	3.88	4.97	0.59						
400											11.34	4.27	5.24	0.65						
420											11.90	4.67	5.50	0.71						
440											12.47	5.09	5.76	0.78						
460											13.04	5.53	6.02	0.84						
480											13.61	5.98	6.28	0.91						
500											14.17	6.45	6.54	0.98						

Notes: Shaded areas represent velocities over 5 FPS. Use with caution when water hammer is a concern.

# FRICITION LOSS CHARTS - SCHEDULE 40 PVC IPS PLASTIC PIPE

ASTM D1785 (1120, 1220) C = 150 • PSI loss per 100' of pipe																				
Nominal Size	½"		¾"		1"		1¼"		1½"		2"		2½"		3"		4"		5"	
Avg. ID	0.602	0.804	1.029	1.360	1.590	2.047	2.445	3.042	3.998	6.031										
Pipe OD	0.840	1.050	1.315	1.660	1.900	2.375	2.875	3.500	4.500	6.625										
Avg. Wall	0.119	0.123	0.143	0.150	0.155	0.164	0.215	0.229	0.251	0.297										
Min. Wall	0.109	0.113	0.133	0.140	0.145	0.154	0.203	0.216	0.237	0.280										
Flow (GPM)	Velocity FPS	PSI Loss																		
1	1.13	0.50	0.63	0.12	0.39	0.04	0.22	0												

# FRICITION LOSS CHARTS - POLYETHYLENE PLASTIC PIPE ID CONTROLLED

PE 3408 ASTM D2239 C = 140 • PSI loss per 100' of pipe																		
Nominal Size Avg. ID	½" 0.622		¾" 0.824		1" 1.049		1¼" 1.380		1½" 1.610		2" 2.067		2½" 2.469		3" 3.068		4" 4.026	
	Velocity FPS	PSI Loss																
1	1.05	0.49	0.60	0.12	0.37	0.04	0.21	0.01	0.16	0.00								
2	2.11	1.76	1.20	0.45	0.74	0.14	0.43	0.04	0.31	0.02	0.19	0.01						
3	3.16	3.73	1.80	0.95	1.11	0.29	0.64	0.08	0.47	0.04	0.29	0.01						
4	4.22	6.35	2.40	1.62	1.48	0.50	0.86	0.13	0.63	0.06	0.38	0.02	0.27	0.01				
5	5.27	9.60	3.00	2.44	1.85	0.76	1.07	0.20	0.79	0.09	0.48	0.03	0.33	0.01				
6	6.33	13.46	3.61	3.43	2.22	1.06	1.29	0.28	0.94	0.13	0.57	0.04	0.40	0.02	0.26	0.01		
7	7.38	17.91	4.21	4.56	2.60	1.41	1.50	0.37	1.10	0.18	0.67	0.05	0.47	0.02	0.30	0.01		
8	8.44	22.93	4.81	5.84	2.97	1.80	1.71	0.47	1.26	0.22	0.76	0.07	0.54	0.03	0.35	0.01		
9	9.49	28.52	5.41	7.26	3.34	2.24	1.93	0.59	1.42	0.28	0.86	0.08	0.60	0.03	0.39	0.01		
10	10.55	34.67	6.01	8.82	3.71	2.73	2.14	0.72	1.57	0.34	0.95	0.10	0.67	0.04	0.43	0.01		
12			7.21	12.37	4.45	3.82	2.57	1.01	1.89	0.48	1.15	0.14	0.80	0.06	0.52	0.02		
14			8.41	16.45	5.19	5.08	3.00	1.34	2.20	0.63	1.34	0.19	0.94	0.08	0.61	0.03		
16			9.61	21.07	5.93	6.51	3.43	1.71	2.52	0.81	1.53	0.24	1.07	0.10	0.69	0.04	0.40	0.01
18			10.82	26.21	6.67	8.10	3.86	2.13	2.83	1.01	1.72	0.30	1.20	0.13	0.78	0.04	0.45	0.01
20			12.02	31.85	7.42	9.84	4.28	2.59	3.15	1.22	1.91	0.36	1.34	0.15	0.87	0.05	0.50	0.01
22					8.16	11.74	4.71	3.09	3.46	1.46	2.10	0.43	1.47	0.18	0.95	0.06	0.55	0.02
24					8.90	13.79	5.14	3.63	3.78	1.72	2.29	0.51	1.61	0.21	1.04	0.07	0.60	0.02
26					9.64	16.00	5.57	4.21	4.09	1.99	2.48	0.59	1.74	0.25	1.13	0.09	0.65	0.02
28					10.38	18.35	6.00	4.83	4.41	2.28	2.67	0.68	1.87	0.28	1.21	0.10	0.70	0.03
30					11.12	20.85	6.43	5.49	4.72	2.59	2.86	0.77	2.01	0.32	1.30	0.11	0.76	0.03
32					11.86	23.50	6.86	6.19	5.04	2.92	3.06	0.87	2.14	0.36	1.39	0.13	0.81	0.03
34					12.61	26.29	7.28	6.92	5.35	3.27	3.25	0.97	2.28	0.41	1.47	0.14	0.86	0.04
36							7.71	7.69	5.67	3.63	3.44	1.08	2.41	0.45	1.56	0.16	0.91	0.04
38							8.14	8.50	5.98	4.02	3.63	1.19	2.54	0.50	1.65	0.17	0.96	0.05
40							8.57	9.35	6.30	4.42	3.82	1.31	2.68	0.55	1.73	0.19	1.01	0.05
42							9.00	10.24	6.61	4.83	4.01	1.43	2.81	0.60	1.82	0.21	1.06	0.06
44							9.43	11.16	6.93	5.27	4.20	1.56	2.94	0.66	1.91	0.23	1.11	0.06
46							9.86	12.12	7.24	5.72	4.39	1.70	3.08	0.71	1.99	0.25	1.16	0.07
48							10.28	13.11	7.56	6.19	4.58	1.84	3.21	0.77	2.08	0.27	1.21	0.07
50							10.71	14.14	7.87	6.68	4.77	1.98	3.35	0.83	2.17	0.29	1.26	0.08
55							11.78	16.87	8.66	7.97	5.25	2.36	3.68	0.99	2.38	0.35	1.38	0.09
60							12.85	19.82	9.44	9.36	5.73	2.77	4.02	1.17	2.60	0.41	1.51	0.11
65									10.23	10.86	6.21	3.22	4.35	1.36	2.82	0.47	1.64	0.13
70									11.02	12.45	6.68	3.69	4.69	1.55	3.03	0.54	1.76	0.14
75									11.81	14.15	7.16	4.19	5.02	1.77	3.25	0.61	1.89	0.16
80									12.59	15.95	7.64	4.73	5.35	1.99	3.47	0.69	2.01	0.18
85									13.38	17.84	8.12	5.29	5.69	2.23	3.68	0.77	2.14	0.21
90											8.59	5.88	6.02	2.48	3.90	0.86	2.27	0.23
95											9.07	6.50	6.36	2.74	4.12	0.95	2.39	0.25
100											9.55	7.15	6.69	3.01	4.33	1.05	2.52	0.28
110											10.50	8.53	7.36	3.59	4.77	1.25	2.77	0.33
120											11.46	10.02	8.03	4.22	5.20	1.47	3.02	0.39
130											12.41	11.62	8.70	4.89	5.63	1.70	3.27	0.45
140											13.37	13.33	9.37	5.61	6.07	1.95	3.52	0.52
150											10.04	6.38	6.50	2.22	3.78	0.59	3.78	0.59
160											10.71	7.19	6.94	2.50	4.03	0.67	4.03	0.67
170											11.38	8.04	7.37	2.79	4.28	0.74	4.28	0.74
180											12.05	8.94	7.80	3.11	4.53	0.83	4.53	0.83
190											12.72	9.88	8.24	3.43	4.78	0.92	4.78	0.92
200											13.39	10.87	8.67	3.78	5.03	1.01	5.03	1.01
220											9.54	4.50	5.54	1.20	5.54	1.20	5.54	1.20
240											10.40	5.29	6.04	1.41	6.04	1.41	6.04	1.41
260											11.27	6.14	6.54	1.64	6.54	1.64	6.54	1.64
280											12.14	7.04	7.05	1.88	7.05	1.88	7.05	1.88
300											13.00	8.00	7.55	2.13	7.55	2.13	7.55	2.13
320											13.87	9.02	8.05	2.40	8.05	2.40	8.05	2.40
340													8.56	2.69	8.56	2.69	8.56	2.69
360													9.06	2.99	9.06	2.99	9.06	2.99
380													9.57	3.30	9.57	3.30	9.57	3.30
400													10.07	3.63	10.07	3.63	10.07	3.63
420													10.57	3.98	10.57	3.98	10.57	3.98
440													11.08	4.33	11.08	4.33	11.08	4.33
460													11.58	4.71	11.58	4.71	11.58	4.71
480													12.08	5.09	12.08	5.09	12.08	5.09
500													12.59	5.49	12.59	5.49	12.59	5.49

Notes: Shaded areas represent velocities over 5 FPS. Use with caution when water hammer is a concern.

# FRICITION LOSS CHARTS - POLYETHYLENE PIPE DR13.5

C = 140 • PRESSURE LOSS (BAR/100 METRES) • PSI loss per 100' of pipe																				
Flow (GPM)	0.75" CTS		0.75" IPS		1" CTS		1" IPS		1.5" CTS		1.5" IPS		2" CTS		2" IPS		3" IPS		4" IPS	
	Velocity FPS	PSI Loss																		
0.5	0.38	0.05	0.26	0.02	0.23	0.02	0.17	0.01	0.11	0.00	0.08	0.00								
1	0.75	0.19	0.52	0.08	0.45	0.06	0.33	0.03	0.22	0.01	0.16	0.00	0.13	0.00	0.10	0.00				
2	1.50	0.68	1.04	0.28	0.91	0.20	0.66	0.09	0.44	0.03	0.32	0.02	0.25	0.01	0.20	0.01				
3	2.25	1.43	1.56	0.59	1.36	0.42	1.00	0.20	0.65	0.07	0.48	0.03	0.38	0.02	0.31	0.01	0.14	0.00		
4	3.00	2.43	2.09	1.00	1.82	0.72	1.33	0.34	0.87	0.12	0.64	0.06	0.51	0.03	0.41	0.02	0.19	0.00		
5	3.75	3.68	2.61	1.51	2.27	1.08	1.66	0.51	1.09	0.18	0.80	0.08	0.64	0.05	0.51	0.03	0.23	0.00		
6	4.51	5.15	3.13	2.12	2.73	1.52	1.99	0.71	1.31	0.25	0.96	0.12	0.76	0.07	0.61	0.04	0.28	0.01		
7	5.26	6.85	3.65	2.82	3.18	2.02	2.33	0.94	1.52	0.34	1.11	0.16	0.89	0.09	0.71	0.05	0.33	0.01		
8	6.01	8.77	4.17	3.61	3.63	2.58	2.66	1.21	1.74	0.43	1.27	0.20	1.02	0.12	0.82	0.07	0.38	0.01		
9	6.76	10.91	4.69	4.49	4.09	3.21	2.99	1.50	1.96	0.54	1.43	0.25	1.15	0.15	0.92	0.08	0.42	0.01	0.26	0.00
10	7.51	13.26	5.21	5.46	4.54	3.90	3.32	1.83	2.18	0.65	1.59	0.30	1.27	0.18	1.02	0.10	0.47	0.02	0.28	0.00
11			5.74	6.51	5.00	4.66	3.66	2.18	2.39	0.78	1.75	0.36	1.40	0.21	1.12	0.12	0.52	0.02	0.31	0.01
12			6.26	7.65	5.45	5.47	3.99	2.56	2.61	0.91	1.91									



# FRICITION LOSS CHARTS - C900 DR 14 CLASS 200 (C.I.O.D.)

AWWA C900 ASTM D1784 C=150

C = 150 • PRESSURE LOSS										
Nominal Size	4"		6"		8"		10"		12"	
Avg. ID	4.072		5.854		7.680		9.418		11.200	
Pipe OD	4.800		6.900		9.050		11.100		13.200	
Avg. Wall	0.364		0.523		0.685		0.841		1.000	
Min. Wall	0.343		0.493		0.646		0.793		0.943	
Flow GPM	Velocity FPS	PSI loss								
25	0.62	0.02	0.30	0.00	0.17	0.00	0.11	0.00	0.08	0.00
50	1.23	0.06	0.60	0.01	0.35	0.00	0.23	0.00	0.16	0.00
75	1.85	0.14	0.89	0.02	0.52	0.01	0.34	0.00	0.24	0.00
100	2.46	0.23	1.19	0.04	0.69	0.01	0.46	0.00	0.33	0.00
125	3.08	0.35	1.49	0.06	0.86	0.02	0.57	0.01	0.41	0.00
150	3.69	0.49	1.79	0.08	1.04	0.02	0.69	0.01	0.49	0.00
175	4.31	0.65	2.08	0.11	1.21	0.03	0.80	0.01	0.57	0.00
200	4.92	0.84	2.38	0.14	1.38	0.04	0.92	0.01	0.65	0.01
225	5.54	1.04	2.68	0.18	1.56	0.05	1.03	0.02	0.73	0.01
250	6.15	1.27	2.98	0.22	1.73	0.06	1.15	0.02	0.81	0.01
275	6.77	1.51	3.27	0.26	1.90	0.07	1.26	0.03	0.89	0.01
300	7.38	1.78	3.57	0.30	2.08	0.08	1.38	0.03	0.98	0.01
325	8.00	2.06	3.87	0.35	2.25	0.09	1.49	0.03	1.06	0.01
350	8.61	2.36	4.17	0.40	2.42	0.11	1.61	0.04	1.14	0.02
375	9.23	2.68	4.46	0.46	2.59	0.12	1.72	0.05	1.22	0.02
400			4.76	0.52	2.77	0.14	1.84	0.05	1.30	0.02
450			5.36	0.64	3.11	0.17	2.07	0.06	1.46	0.03
500			5.95	0.78	3.46	0.21	2.30	0.08	1.63	0.03
550			6.55	0.93	3.80	0.25	2.53	0.09	1.79	0.04
600			7.14	1.10	4.15	0.29	2.76	0.11	1.95	0.05
700			8.33	1.46	4.84	0.39	3.22	0.14	2.28	0.06
800			9.52	1.87	5.53	0.50	3.68	0.18	2.60	0.08
900			10.72	2.32	6.23	0.62	4.14	0.23	2.93	0.10
1,000					6.92	0.75	4.60	0.28	3.25	0.12
1,100					7.61	0.90	5.06	0.33	3.58	0.14
1,200					8.30	1.06	5.52	0.39	3.90	0.17
1,300					8.99	1.22	5.98	0.45	4.23	0.20
1,400					9.68	1.40	6.44	0.52	4.55	0.22
1,500					10.38	1.60	6.90	0.59	4.88	0.25
1,600					11.07	1.80	7.36	0.67	5.20	0.29
1,700							7.82	0.75	5.53	0.32
1,800							8.28	0.83	5.85	0.36
1,900							8.74	0.92	6.18	0.39
2,000							9.20	1.01	6.51	0.43
2,100							9.66	1.10	6.83	0.47
2,200							10.12	1.20	7.16	0.52
2,300									7.48	0.56
2,400									7.81	0.61
2,500									8.13	0.66
2,600									8.46	0.70
2,700									8.78	0.76
2,800									9.11	0.81
2,900									9.43	0.86
3,000									9.76	0.92
3,100									10.08	0.98
3,200										
3,300										
3,400										
3,500										
3,600										

Notes: Shaded areas represent velocities over 5 FPS. Use with caution when water hammer is a concern.

# FRICITION LOSS CHARTS - C905 DR 25 165 PSI (C.I.O.D.)

AWWA C905 ASTM D1784 C=150

C = 150 • PRESSURE LOSS										
Nominal Size	14"		16"		18"		20"		24"	
Avg. ID	14.002		15.924		17.846		19.768		21.600	
Pipe OD	15.300		17.400		19.500		21.600		23.700	
Avg. Wall	0.649		0.738		0.827		0.916		1.005	
Min. Wall	0.612		0.696		0.780		0.864		0.948	
Flow GPM	Velocity FPS	PSI loss								
400	0.83	0.01	0.64	0.00	0.51	0.00	0.42	0.00	0.33	0.00
450	0.94	0.01	0.72	0.00	0.58	0.00	0.47	0.00	0.37	0.00
500	1.04	0.01	0.80	0.01	0.64	0.00	0.52	0.00	0.41	0.00
550	1.14	0.01	0.88	0.01	0.70	0.00	0.57	0.00	0.45	0.00
600	1.25	0.02	0.97	0.01	0.77	0.00	0.63	0.00	0.50	0.00
650	1.35	0.02	1.05	0.01	0.83	0.01	0.68	0.00	0.55	0.00
700	1.46	0.02	1.13	0.01	0.90	0.01	0.73	0.00	0.60	0.00
750	1.56	0.02	1.21	0.01	0.96	0.01	0.78	0.00	0.65	0.00
800	1.66	0.03	1.29	0.01	1.02	0.01	0.84	0.01	0.70	0.00
850	1.77	0.03	1.37	0.02	1.09	0.01	0.89	0.01	0.75	0.00
900	1.87	0.03	1.45	0.02	1.15	0.01	0.94	0.01	0.80	0.00
950	1.98	0.04	1.53	0.02	1.22	0.01	0.99	0.01	0.85	0.00
1,000	2.08	0.04	1.61	0.02	1.28	0.01	1.04	0.01	0.90	0.00
1,100	2.29	0.05	1.77	0.03	1.41	0.01	1.15	0.01	1.01	0.00
1,200	2.50	0.06	1.93	0.03	1.54	0.02	1.25	0.01	1.12	0.00
1,300	2.71	0.07	2.09	0.04	1.67	0.02	1.36	0.01	1.23	0.00
1,400	2.91	0.08	2.25	0.04	1.79	0.02	1.46	0.01	1.34	0.00
1,500	3.12	0.09	2.41	0.05	1.92	0.03	1.57	0.02	1.45	0.00
1,600	3.33	0.10	2.57	0.05	2.05	0.03	1.67	0.02	1.56	0.00
1,700	3.54	0.11	2.74	0.06	2.18	0.03	1.77	0.02	1.67	0.00
1,800	3.75	0.12	2.90	0.06	2.31	0.04	1.88	0.02	1.78	0.00
1,900	3.95	0.13	3.06	0.07	2.43	0.04	1.98	0.02	1.89	0.00
2,000	4.16	0.15	3.22	0.08	2.56	0.04	2.09	0.03	2.00	0.00
2,100	4.37	0.16	3.38	0.09	2.69	0.05	2.19	0.03	2.11	0.00
2,200	4.58	0.17	3.54	0.09	2.82	0.05	2.30	0.03	2.22	0.00
2,300	4.79	0.19	3.70	0.10	2.95	0.06	2.40	0.04	2.33	0.00
2,400	4.99	0.21	3.86	0.11	3.07	0.06	2.51	0.04	2.44	0.00
2,500	5.20	0.22	4.02	0.12	3.20	0.07	2.61	0.04	2.55	0.00
2,600	5.41	0.24	4.18	0.13	3.33	0.07	2.71	0.04	2.66	0.00
2,700	5.62	0.26	4.34	0.14	3.46	0.08	2.82	0.05	2.77	0.00
2,800	5.83	0.27	4.51	0.15	3.59	0.08	2.92	0.05	2.88	0.00
2,900	6.04	0.29	4.67	0.16	3.72	0.09	3.03	0.05	2.99	0.00
3,000	6.24	0.31	4.83	0.17	3.84	0.10	3.13	0.06	3.10	0.00
3,100	6.45	0.33	4.99	0.18	3.97	0.10	3.24	0.06	3.21	0.00
3,200	6.66	0.35	5.15	0.19	4.10	0.11	3.34	0.07	3.32	0.00
3,300	6.87	0.37	5.31	0.20	4.23	0.11	3.45	0.07	3.43	0.00
3,400	7.08	0.39	5.47	0.21	4.36	0.12	3.55	0.07	3.54	0.00
3,500	7.28	0.41	5.63	0.22	4.48	0.13	3.65	0.08	3.65	0.00
3,600	7.49	0.43	5.79	0.23	4.61	0.13	3.76	0.08	3.76	0.00
3,700	7.70	0.46	5.95	0.24	4.74	0.14	3.86	0.09	3.87	0.00
3,800			6.11	0.26	4.87	0.15	3.97	0.09	3.98	0.00
3,900			6.28	0.27	5.00	0.15	4.07	0.09	4.09	0.00
4,000			6.44	0.28	5.12	0.16	4.18	0.10	4.20	0.00
4,200			6.76	0.31	5.38	0.18	4.39	0.11	4.41	0.00
4,400			7.08	0.34	5.64	0.19	4.59	0.12	4.61	0.00
4,600			7.40	0.37	5.89	0.21	4.80	0.13	4.82	0.00
4,800			7.72	0.40	6.15	0.23	5.01	0.14	5.03	0.00
5,000					6.41	0.25	5.22	0.15	5.24	0.00
5,200					6.66	0.26	5.43	0.16	5.45	0.00
5,400					6.92	0.28	5.64	0.17	5.66	0.00
5,600					7.17	0.30	5.85	0.18	5.87	0.00
5,800					7.43	0.32	6.06	0.20	6.08	0.00
6,000					7.69	0.34	6.26	0.21	6.29	0.00
6,200					7.94	0.37	6.47	0.22	6.50	0.00
6,400							6.68	0.24	6.71	0.00
6,600							6.89	0.25	6.92	0.00
6,800							7.10	0.26	7.13	0.00
7,000							7.31	0.28	7.34	0.00
7,500							7.83	0.32	7.85	0.00
8,000										

Notes: Shaded areas represent velocities over 5 FPS. Use with caution when water hammer is a concern.

TECHNICAL INFORMATION

TECHNICAL INFORMATION

# FRICTION LOSS CHARTS

TABLE OF APPROXIMATE PRESSURE LOSSES FOR PIPE FITTINGS (LISTED IN EQUIVALENT FEET OF PIPE)											
Steel Fitting Type	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	4"	6"	8"
Coupling	0.6	0.8	1	1.2	1.5	2	2.5	3	4	6	8
Run of St. Tee	1	1	1.5	2	2	2.5	3	4	5	7	10
Tee, Side Outlet	3	4.5	5	7	9	11	13	16	20	31	42
Tee, Run Reduced ½"	1.5	2.5	3	4	5	6	7	8	12	16	20
Elbow, 90°	1.5	2.5	3	4	5	6	7	8	12	16	20
Elbow, 45°	0.75	1	1.3	1.7	2	2.5	3	3.5	5	7.5	10
Corporation Stop	9	9	9	9	9	9					
Curb Stop	6	6	7	7	8	8					

Plastic IPS or Copper Fitting Type	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	4"	6"	8"
Coupling	1.5	2.5	3.0	3.0	4.0	6.0	7.0	8.0	11.0	18.0	24.0
Run of St. Tee	2.5	3.0	4.0	5.0	6.0	8.0	9.0	11.0	15.0	21.0	28.0
Tee, Side Outlet	7.0	9.0	12.0	15.0	18.0	24.0	30.0	36.0	45.0	70.0	90.0
Tee, Run Reduced ½"	3.5	4.5	6.0	8.0	9.0	11.0	14.0	17.0	24.0	34.0	45.0
Elbow, 90°	3.5	4.5	6.0	8.0	9.0	11.0	14.0	17.0	24.0	34.0	45.0
Elbow, 34°	1.5	2.0	3.0	3.5	4.0	5.0	7.0	8.0	10.0	16.0	20.0

To use this chart, multiply the approximate "equivalent feet of pipe" value by the proper pipe pressure loss per 100 ft. rating, then divide by 100. The result is the fitting loss in PSI.

**Note:** It is recommended that the charts above only be used when the manufacturer's recommended pressure loss values are not available.

# WIRE DATA

STANDARD ANNEALED COPPER AT 68°F (20°C)						
American Wire Gauge	Common Metric Equivalent (mm <sup>2</sup> )	Diameter (mils)	Diameter (mm)	Cross-Sectional Area (mm <sup>2</sup> )	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						
Model	18 AWG	16 AWG	14 AWG	12 AWG	10 AWG	8 AWG
PSR-22	243 ft	386 ft	616 ft	976 ft	1551 ft	2463 ft
PSR-52	134 ft	214 ft	341 ft	540 ft	859 ft	1365 ft
PSR-53	134 ft	214 ft	341 ft	540 ft	859 ft	1365 ft

For more information, see the Pump Start Relay section on [page 134](#).

VALVE WIRE SIZING							
Ground Wire	Control Wire						
	18	16	14	12	10	8	6
18	850	1040	1210	1350	1460	1540	1590
16	1040	1340	1650	1920	2150	2330	2440
14	1210	1650	2150	2630	3080	3450	3700
12	1350	1920	2630	3390	4170	4880	5400
10	1460	2150	3080	4170	5400	6670	7690
8	1540	2330	3450	4880	6670	8700	10530
6	1590	2440	3700	5400	7690	10530	13330

**Notes:**

Maximum one-way distance in feet between controller and valve heavy-duty solenoid: 24 VAC, 350 mA inrush current, 190 mA holding current, 60 Hz; 370 mA inrush current, 210 mA holding current, 50 Hz.

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

## WIRE DATA

MAXIMUM NUMBER OF WIRES TO BE INSTALLED IN CONDUIT OR SLEEVING													
Wire Size (AWG)	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	5"	6"	Wire Size (AWG)
18	6	12	20	35	49	80	110	175					18
16	5	10	16	30	42	67	97	150					16
14	4	6	10	18	25	40	56	88	120	150			14
12	3	5	7	15	20	33	50	75	102	130	205		12
10	1	3	6	13	16	27	40	63	85	110	170		10
8	1	2	4	6	9	16	25	35	50	65	105	150	8
6	1	1	3	3	5	10	15	22	32	40	63	92	6
4		1	1	2	4	7	10	16	24	30	48	70	4
2		1	1	2	2	5	9	12	18	22	36	54	2
0			1	1	2	3	5	8	12	15	24	36	0
00			1	1	1	2	4	7	10	14	21	31	00
000				1	1	2	3	6	8	11	18	26	000
0000				1	1	1	2	5	7	10	15	22	0000

## SOLAR SYNC® CALIBRATION TABLE

Use this table to identify your region and select the closest region number based on average July ET or peak summer ET. For more information, visit [hunter.info/ReferenceMap](http://hunter.info/ReferenceMap) and [hunter.info/SeasonalAdjustment](http://hunter.info/SeasonalAdjustment).

CALIBRATION AND SETUP PERIOD			
Based on the ET of your region using the average July ET or peak summer ET. This is the preferred option when selecting your region.	Based on the temperature for your region using the average July or the driest month high temperature (not the highest temperature for July).	Based on the general description of your region.	Region
July* ET is 0.17" or less per day	Temperature for July* is 65° to 75°F	U.S. Northern States, Coastal Regions	1
July* ET is 0.18" to 0.23" per day	Temperature for July* is 75° to 85°F	Mountains, U.S. North Inland States	2
July* ET is 0.24" to 0.29" per day	Temperature for July* is 85° to 95°F	U.S. Southern States, Inland and High Deserts	3
July* ET is 0.30" or more per day	Temperature for July* is 95° to 105°F	Deserts	4

**Notes:** \*For Southern Hemisphere locations, use the month of January.

## ADDITIONAL DATA

SPRINKLER SYSTEM DESIGN CAPACITY								
Static Pressure	PSI	30	40	50	60	70	80	
Water Meter	Service Line	Max GPM						
½"	½"	2	4	5	6	7	7	
	¾"	4	6	8	8	10	12	
	1"	4	7	8	10	13	15	
¾"	¾"	4	6	8	9	10	12	
	1"	5	7	10	14	17	20	
	1¼"	5	12	17	20	22	22	
1"	¾"	4	7	8	9	12	12	
	1"	5	8	14	18	20	20	
	1¼"	5	14	24	26	30	34	
<b>Working Pressure</b>		PSI	25	30	35	45	50	55

**Notes:**

Service lines are based on 100' of thick-walled PVC. Deduct 2 GPM for copper pipe. Deduct 5 GPM for new, galvanized pipe.

## STATEMENT OF WARRANTY

### Hunter Residential and Commercial Irrigation Products

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

<b>ONE YEAR</b>	<b>ROTORS</b>	SRM	<b>MICRO</b>	Micro Sprays, PLD Fittings, Rigid Risers, Air/Vacuum Relief Valves
	<b>ROTORS</b>	PGP-ADJ, PGJ	<b>CONTROLLERS</b>	ACC (Legacy), BTT, FS-1000, FS-3000, I-Core/DUAL (Legacy), NODE, NODE-BT, Pro-C, PSR, ROAM, XC Hybrid, X-Core, Wireless Valve Link (all), SkyCommand (all), Hydrowise Controllers (HC, X2, WAND, PHC, HPC, HCC)
<b>TWO YEARS</b>	<b>SPRAY BODIES</b>	PS Ultra, SJ, FlexSG, HSBE, MP Rotator Stake Kit	<b>SENSORS</b>	HC Flow Meter (wired and wireless), U-Wave Flow Sensor
	<b>NOZZLES</b>	Spray Nozzles, PCN, PCB, AFB, MSBN	<b>MICRO</b>	ACZ, PCZ, RZWS, Point-Source Emitters, Tubing, Multi-Port Emitters, IH Risers, MLD, Eco-Indicator***, Multi-Purpose Box, Senninger Regulators, PLD-LOC Fittings
	<b>VALVES</b>	PGV, HCV, Accu Sync	<b>TOOLS</b>	SpotShot
	<b>CENTRAL****</b>	All central communication modules (cell, LAN, Wi-Fi and automation field servers)		
<b>THREE YEARS</b>	<b>CONTROLLERS</b>	ROAM XL, ROAM LR, EZ Decoder System, EZ-DT	<b>MP ROTATOR</b>	All Nozzles
	<b>ROTORS</b>	PGP Ultra, I-20, I-25, I-40, I-80, I-90	<b>CONTROLLERS</b>	ACC2, MCC, ICC2, ICD Decoders, ICD-HP Programmer
<b>FIVE YEARS</b>	<b>SPRAY BODIES</b>	Pro-Spray, Pro-Spray PRS30, Pro-Spray PRS40	<b>SENSORS</b>	Clik Sensors, Flow-Sync, MWS, Solar Sync, Wireless Flow Sensor
	<b>VALVES</b>	HQ, ICV, IBV	<b>MICRO</b>	ICZ, IBZ, HDL**, HDL-COP**, Eco-Mat, Eco-Wrap, Eco-Indicator***

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

Hunter will 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:

<b>ONE YEAR</b>	<b>GOLF CONTROLLERS</b>	Pilot Command Center Software, Pilot-FC, Pilot-FI, Pilot Hub
	<b>GOLF ROTORS</b>	TTS-800 Series, G-800 Series, G-900 Series, B-Series
<b>THREE YEARS</b>	<b>GOLF TWO-WAY MODULES</b>	Pilot 100, Pilot 200, Pilot 400, Pilot 600
	<b>GOLF ROTORS</b>	The golf rotor component warranty is extended to 5 years with a one-for-one purchase of an HSJ Swing Joint from an authorized Hunter Golf distributor.
<b>FIVE YEARS</b>	<b>SWING JOINTS</b>	HSJ-0, HSJ-1, HSJ-2, HSJ-3, HSJ-4, HSJ-5
	<b>ST ROTORS</b>	ST-90, STG-900, ST-1200, ST-1600, ST-1700
	<b>ST ACCESSORIES</b>	All models starting with “ST”
	<b>COMPUTER, PRINTERS &amp; ACCESSORIES, MAINTENANCE RADIO &amp; BATTERY</b>	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 valves, sprays, MP Rotator Nozzles, and rotor products to a period of one (1) year from the original date of manufacture. This agriculture limitation supersedes all other warranties expressed or implied.

\*\* Plus 2 additional years for environmental stress cracking. No warranty against root intrusion on HDL-COP. While the use of copper does not completely remove the chance of root intrusion, it has been shown to assist in its prevention when coupled with proper irrigation scheduling.

\*\*\* Eco-Indicator - 6" ECO-ID: 2-year warranty; 12" ECO-ID-12: 5-year warranty

\*\*\*\* Hunter’s cellular module warranty does not apply to the availability or compatibility of cellular data service, in any particular area. Availability of compatible data services should be determined prior to installation.

#### Statement of Warranty, Continued

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

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

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

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

If you have any questions concerning the warranty or its application, please contact [Hunter Technical Support](#).

#### ASAE CERTIFICATION STATEMENT

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



Helping our customers succeed is what drives us. While our passion for innovation and engineering is built into everything we do, it is our commitment to exceptional support that we hope will keep you in the Hunter family of customers for years to come.

Gregory R. Hunter, CEO of Hunter Industries

Denise Mullikin, President, Landscape Division

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