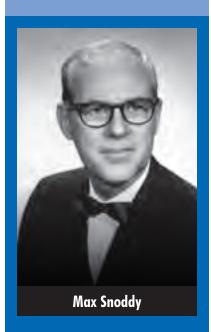




PRODUCT CATALOG



#### Founder's Statement

Our quality is integrity – of our people, of our design, and of our manufacturing.

#### Vision Statement

Weathermatic will be a global leader in providing smart water conserving products and solutions for the outdoors.

### Mission Statement

In pursuit of our Vision, we manufacture the highest quality, water efficient irrigation products with a passionate commitment to our dedicated family of customers.

#### **Values**

Integrity, Quality, Humility, Godly Character, Stewardship, Relationships.



### **X** Weathermatic<sub>®</sub> Quality

**Quality is why Weathermatic exists.** Max Snoddy started Weathermatic in 1945 because the products on the market did not meet his requirements. His founding statement made it clear: "Our quality is integrity, of our people, our design, and our manufacturing." We were a contractor at that time, so, not only did we build the product, we installed and serviced it. Almost 65 years later, contracting is still in our blood and keeps our commitment true to the quality standards Max set out for us.

Today, quality is our top priority and part of everything we do. Quality starts in our understanding of product application and translates into specifications meeting the highest standards in the industry. Early in the design process, we utilizing cutting edge computer simulation technology and fabricated prototype models. And before a product is ready for manufacturing or a product change is qualified, we complete a battery of extreme and destructive tests benchmarked against industry competitors including: environmental chambers with extreme temperatures and humidity; hydrostatic testing for maximum pressures; reclaimed and dirty water testing; duration testing for tens of thousands of cycles; and field testing in locations throughout the world. Quality in design is carried through on the production line. Before their release from our factory, we 100% water test every valve and rotor; every controller and weather station must pass a rigorous diagnostic check.

**Quality is made possible by the passion, experience, knowledge, and hard work of our people.** People like James Holley who leads our Product Research Center. James has worked with Weathermatic for 30 years following in the footsteps of his father who worked with us for 35 years before him. Ingrained for generations, **quality is in our culture**.

Our industry is entering a new era of Smart products designed to use water more efficiently and effectively. As we lead and continually introduce new products like our SmartInline drip tubing and breakthroughs in SmartLine control systems, we will remember at the core of any product technology must be first and foremost – quality. So we trust for decades to come, you will look to Weathermatic as:

"The Quality Leader in Smart Irrigation"

# Smart Solutions Professional®

### Why Weathermatic?

**Smart Products** supported by **Smart People** so you make **Smart Profits!** 

#### Smart Products

In the new world of irrigation, less is more. So you need more than a sprinkler system, you need a "Water Management System." Weathermatic delivers quality and reliability in breakthrough products like SmartLine – now featuring the SLW15 wireless weather station so installation is simple and predictable in new and retrofit applications. And as the industry drives toward low volume, our Salco line, proven over 40 years, now features SmartInline pressure compensating drip tubing to complement one of the most comprehensive low volume lines in the industry. Smart products are found throughout the Weathermatic line like Turbo series rotors that adjust without a key and come standard with water saving check valves and low angle nozzles on every head. The core of the product family for five decades running is the legendary Weathermatic valve – proven water savers as the industry's only complete line of 100% reverse-flow, normally closed valves. Put all these Smart Products together and build a complete Weathermatic Water Management System.

### Smart People

Weathermatic is made up of true industry experts who know their stuff – the product design, performance, and application. It's not by accident our sales and service team members average over 20 years in the industry. We work every day with our network of distributors in 60 countries worldwide to serve and support professional contractors, specifiers, municipalities, and institutions. Our people understand you need more than a product; you need solutions – Smart Solutions.

### Smart Profits

A convergence of trends combines: slowing construction; an emphasis on upgrading existing irrigation systems; and diversification from traditional product lines. So at just the right time, Weathermatic product solutions give professionals and their customers the opportunity to make Smart Profits. Whether you're upgrading a system with a SmartLine control system and Salco low volume or installing a complete "Water Management System," Weathermatic gives professionals differentiation from the competition and an edge, while delivering significant water and money savings to their customers – a true win-win. Smart profits make our industry professionals and their customers successful and sustainable in any economy.









### THE LX ELITE ELEVEN

Consider 11 Reasons why the LX Series is the Smart Solution!



#### **FUNCTIONAL FLUSH PLUG**

- Easy lift, flexible material allows you to guickly pop off flush plug without having to unscrew
- · Lift the turret for nozzling so you can save time (and your pinky!)

#### **SURE GRIP CAP**

- · Wet or muddy-hand friendly
- · Available non-potable cover fits snugly on cap for identifying reclaimed water

#### **SUPERIOR SEAL**

- 10-year rating; exceeds 11,000 cycles in sand burial tests
- One piece seal design prevents cap to body leaks
- Ultra-low flushing design enables pop-up & sealing at only 5 psi and allows more heads to be installed on a line
- Extra long wiper seal design provides extended life and positive retraction in the toughest conditions

#### **RUGGED RATCHET**

- · Beefy two-piece ratchet teeth provide just the right feel; not too light where the head could inadvertently move the arc, not too tight where you can't adjust under pressure
- Try one and compare!

#### **READY CHECK™ CHECK VALVE**

- · Prevent low head drainage by purchasing the affordable LX-CV models
- With the ability to hold back 9.5' of elevated water, the LX-CV brings the industry an economical way to conserve water lost to low head drainage
- Combine the LX-CV with the standard Ready Check™ check valve on the Weathermatic Turbo rotor line for a totally checked water conserving system

#### **SUPERIOR MATERIAL**

- · Weathermatic uses only 100% virgin material - no regrind
- For added strength: eight internal reinforcements and a ribbed body

PAGE 2

#### LX MPR NOZZLES



- Excellent edge-to-edge watering and performance
- Consistent patterns across each nozzle in the bag
- Color-coded identification in a resealable bag

#### LX ADJUSTABLE ARC NOZZLES

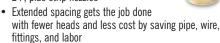


- reducing nozzle inventories
- Arcs are easily adjusted by hand using sure-grip ridges or by coin/screwdriver in slot
- Color-coded identification in a resealable bag

#### LX B SERIES BRASS NOZZLES

- The best performing spray nozzle in the business, period.
- · Wide nozzle spacing selection 3', 10', 12', 15', 18', 20' and 24', plus strip nozzles





#### **10** 5 YEAR WARRANTY

With millions of LX heads and nozzles installed worldwide, return rates are less than a fraction of 1%, even with a 5-year trade warranty

#### **11** LX VALUE

- · Considering all of these benefits, you will be amazed to buy the LX line of sprays and nozzles at an extremely competitive price
- Try the entire LX Series and experience the LX difference!



888-4 THE PRO **SPRAYS** 



# Professional Spray Sprinklers for commercial and residential turf and groundcover applications

LX MODE	LX MODEL SPECIFICATION									
STANDARD										
Model	Pop-up Height	METRIC								
LX3	3"	7,6 cm								
LX4	4"	10 cm								
LX6	6"	15 cm								
LX12	12"	30 cm								
LX4-CV	4"	10 cm								
LX6-CV	6"	15 cm								
LX12-CV	12"	30 cm								
LX-NP	Snap-on cov	/er								
LX-EXT	6" riser exte	nsion								

	DIMENSIONS 1/4" FEMALE THREADED INLETS STANDARD							
Model	Body Height	METRIC						
LX3	5 1/4"	13,3 cm						
LX4	6 1/4"	15,9 cm						
LX6	8 1/2"	21,6 cm						
LX12	15 1/4"	38,7 cm						
Exposed Cover	2 1/4"	5,7 cm						

PRE-INSTALLED MODELS FEATURING LX ADJUSTABLE ARC NOZZLES								
Model	Description							
LX4-8A	LX4 with 8' Adjustable Arc nozzle							
LX4-10A	LX4 with 10' Adjustable Arc nozzle							
LX4-12A	LX4 with 12' Adjustable Arc nozzle							
LX4-15A	LX4 with 15' Adjustable Arc nozzle							
LX4-17A	LX4 with 17' Adjustable Arc nozzle							



FACTORY INSTALLED LX CHECK VALVE



LX-NP NON-POTABLE COVER

#### LX SERIES

#### **OPERATING DATA**

- Pressure range: 15 70 psi (1,0 – 4,8 bars)
- Flow-by: Zero @ 5 psi (0,3 bars) or greater
- Factory installed check valve:
   9.5 ft/hd @ 18 psi (2.9 m/hd @ 1,2 bar).
   Specify: LX4-CV, LX6-CV or LX12-CV
- Compatible with all industry-standard female thread nozzles
- Ratchet nozzle alignment
- Side and bottom inlets on LX6 and LX12\*
- \* Side inlet installation on LX6 and LX12 is not recommended in freezing climates.

www.weathermatic.com



LX-EXT 6" RISER EXTENSION



#### LXS SHRUB ADAPTER



- ½" female inlet threads
- Durable plastic construction
- Threaded to accept MPR, Adjustable Arc, B Series, and all industry-standard female nozzles
- Accepts all LX nozzle protective screens (shipped with nozzle)



LX4

LX3

LX12

LX6

#### LX MPR NOZZLES

#### **FEATURES**

- · Color-coded nozzles for easy identification
- Reusable, dual-compartment resealable bags for organizing nozzles and screens
- Matched precipitation rates across sets and across patterns in each numbered series
- LX Series screens maintain precise radius adjustments (screen included with nozzle)
- · Stainless steel radius adjustment screw

#### **APPLICATIONS**

- For use with all LX Series sprayheads
- Fits all industry-standard sprayheads with male thread risers
- Fits LXS, No. 72 and No. 73 Shrub Adapters

#### **OPERATING DATA**

- Precipitation rate: 1.67 5.33" per hour (37 – 144 mm/h)
- Spacing: 5 15' (1,5 4,6 m)
- Pressure: 15 30 psi (1,0 2,1 bars)
- MPR performance was determined with nozzles mounted on 4" (10,2 cm) pop-ups. ASAE standard of .01" per hour was used to determine listed radius.

DOWNLOAD TECH SPECS AT:

www.weathermatic.com







Nozzle	Arc	Pressure psi	Radius ft	Flow gpm	Precip. in/hr⊠	Precip. in/hr▲
8F	360°	15 20 25 30	5 6 7 8	1.2 1.3 1.4 1.6	4.62 3.48 2.75 2.41	5.33 4.01 3.18 2.78
8H	180°	15 20 25 30	5 6 7 8	0.6 0.7 0.7 0.8	4.62 3.74 2.75 2.41	5.33 4.32 3.18 2.78
8T	120°	15 20 25 30	5 6 7 8	0.4 0.4 0.5 0.5	4.62 3.21 2.95 2.26	5.33 3.70 3.40 2.60
8Q	90°	15 20 25 30	5 6 7 8	0.3 0.3 0.4 0.4	4.62 3.21 3.14 2.41	5.33 3.70 3.63 2.78

#### 8 SERIES METRIC

5° SP	RAY T	RAJEC	TORY			
Nozzle	Arc	Pressure bar	Radius m	Flow m³/h	Precip. mm/hr⊠	Precip. mm/hr▲
8F	360°	1,0 1,4 1,7 2,1	1,5 1,8 2,1 2,4	0,27 0,30 0,32 0,36	120 93 73 63	139 107 84 72
8H	180°	1,0 1,4 1,7 2,1	1,5 1,8 2,1 2,4	0,14 0,16 0,16 0,18	124 99 73 63	144 114 84 72
8T	120°	1,0 1,4 1,7 2,1	1,5 1,8 2,1 2,4	0,09 0,09 0,11 0,11	120 83 75 57	139 96 86 66
8Q	90°	1,0 1,4 1,7 2,1	1,5 1,8 2,1 2,4	0,07 0,07 0,09 0,09	124 86 82 63	144 100 94 72

- Square spacing based on 50% of diameter
- ▲ Triangular spacing based on 50% of diameter

  Max radius reduction with adjustment screw is 25%



15° S	15° SPRAY TRAJECTORY									
Nozzle	Arc	Pressure psi	Radius ft	Flow gpm	Precip. in/hr⊠	Precip. in/hr▲				
10F	360°	15 20 25 30	7 8 9 10	1.2 1.3 1.4 1.6	2.36 1.96 1.66 1.54	2.72 2.26 1.92 1.78				
10H	180°	15 20 25 30	7 8 9 10	0.6 0.7 0.7 0.8	2.36 2.11 1.66 1.54	2.72 2.43 1.92 1.78				
10T	120°	15 20 25 30	7 8 9 10	0.4 0.4 0.5 0.5	2.36 1.80 1.78 1.44	2.72 2.08 2.06 1.67				
10Q	90°	15 20 25 30	7 8 9 10	0.3 0.3 0.4 0.4	2.36 1.80 1.90 1.54	2.72 2.08 2.20 1.78				

### **10 SERIES** METRIC 15° SPRAY TRAJECTORY

Nozzle	Arc	Pressure bar	Radius m	Flow m³/h	Precip. mm/hr⊠	Precip. mm/hr 🔺
10F	360°	1,0 1,4 1,7 2,1	2,1 2,4 2,7 3,0	0,27 0,30 0,32 0,36	61 52 44 40	71 60 51 46
10H	180°	1,0 1,4 1,7 2,1	2,1 2,4 2,7 3,0	0,14 0,16 0,16 0,18	63 56 44 40	73 64 51 46
10T	120°	1,0 1,4 1,7 2,1	2,1 2,4 2,7 3,0	0,09 0,09 0,11 0,11	61 47 45 37	71 54 52 42
10Q	90°	1,0 1,4 1,7 2,1	2,1 2,4 2,7 3,0	0,07 0,07 0,09 0,09	63 49 49 40	73 56 57 46

- **Square spacing based on 50% of diameter** ■
- ▲ Triangular spacing based on 50% of diameter
  Max radius reduction with adjustment screw is 25%



888-4 THE PRO



12	SER	IES				
30° S	PRAY	TRAJE	CTORY			
Nozzle	Arc	Pressure psi	Radius ft	Flow gpm	Precip. in/hr⊠	Precip. in/hr▲
12F	360°	15 20 25 30	9 10 11 12	1.8 2.1 2.4 2.6	2.14 2.02 1.91 1.74	2.47 2.33 2.20 2.01
12H	180°	15 20 25 30	9 10 11 12	0.9 1.0 1.2 1.3	2.14 1.93 1.91 1.74	2.47 2.22 2.20 2.01
12T	120°	15 20 25 30	9 10 11 12	0.6 0.7 0.8 0.9	2.14 2.02 1.91 1.80	2.47 2.33 2.20 2.08
12Q	90°	15 20 25 30	9 10 11 12	0.5 0.5 0.6 0.7	2.38 1.93 1.91 1.87	2.74 2.22 2.20 2.16
12TT	240°	15 20 25 30	9 10 11 12	1.1 1.3 1.5 1.6	1.93 1.85 1.73 1.59	2.46 2.00 1.65 1.39
12TQ	270°	15 20 25 30	9 10 11 12	1.3 1.5 1.7 1.8	2.07 1.96 1.83 1.63	2.46 2.00 1.65 1.39

30° S	PRAY	TRAJE	CTORY			
Nozzle	Arc	Pressure bar	Radius m	Flow m³/h	Precip. mm/hr⊠	Precip. mm/hr▲
12F	360°	1,0 1,4 1,7 2,1	2,7 3,0 3,3 3,7	0,41 0,48 0,55 0,59	56 53 51 43	65 62 58 50
12H	180°	1,0 1,4 1,7 2,1	2,7 3,0 3,3 3,7	0,20 0,23 0,27 0,30	55 51 50 44	63 59 57 51
12T	120°	1,0 1,4 1,7 2,1	2,7 3,0 3,3 3,7	0,14 0,16 0,18 0,20	58 53 50 44	67 62 57 51
12Q	90°	1,0 1,4 1,7 2,1	2,7 3,0 3,3 3,7	0,11 0,11 0,14 0,16	60 49 51 47	70 56 59 54
12TT	240°	1,0 1,4 1,7 2,1	2,7 3,0 3,3 3,7	0,25 0,29 0,33 0,37	51 48 45 41	65 53 43 35
12TQ	270°	1,0 1,4 1,7 2,1	2,7 3,0 3,3 3,7	0,30 0,35 0,40 0,42	55 52 49 41	65 53 43 35

12 SERIES METRIC

- Square spacing based on 50% of diameter
- ▲ Triangular spacing based on 50% of diameter

Max radius reduction with adjustment screw is 25%



15	SER	IES				
30° S	PRAY	TRAJE	CTORY			
Nozzle	Arc	Pressure psi	Radius ft	Flow gpm	Precip. in/hr⊠	Precip. in/hr▲
15F	360°	15 20 25 30	11 12 14 15	2.6 3.0 3.3 3.7	2.07 2.01 1.62 1.58	2.39 2.32 1.87 1.83
15H	180°	15 20 25 30	11 12 14 15	1.3 1.5 1.7 1.9	2.07 2.01 1.67 1.63	2.39 2.32 1.93 1.88
15T	120°	15 20 25 30	11 12 14 15	0.9 1.0 1.1 1.2	2.15 2.01 1.62 1.54	2.48 2.32 1.87 1.78
15Q	90°	15 20 25 30	11 12 14 15	0.7 0.8 0.8 0.9	2.23 2.14 1.57 1.54	2.57 2.47 1.81 1.78
15TT	240°	15 20 25 30	11 12 14 15	1.6 1.9 2.1 2.3	1.96 1.90 1.55 1.47	2.39 2.00 1.47 1.28
15TQ	270°	15 20 25 30	11 12 14 15	2.1 2.5 2.8 3.0	2.24 2.20 1.82 1.70	2.39 3.00 1.47 1.28

	15 SERIES METRIC 30° SPRAY TRAJECTORY											
Nozzle	Arc	Pressure bar	Radius m	Flow m³/h	Precip. mm/hr⊠	Precip. mm/hr▲						
15F	360°	1,0 1,4 1,7 2,1	3,4 3,7 4,3 4,6	0,59 0,68 0,75 0,84	51 50 41 40	59 57 47 46						
15H	180°	1,0 1,4 1,7 2,1	3,4 3,7 4,3 4,6	0,30 0,34 0,39 0,43	52 50 42 41	60 57 49 47						
15T	120°	1,0 1,4 1,7 2,1	3,7 3,7 4,3 4,6	0,20 0,23 0,25 0,27	52 50 41 38	60 58 47 44						
15Q	90°	1,0 1,4 1,7 2,1	3,4 3,7 4,3 4,6	0,16 0,18 0,18 0,20	55 53 39 38	64 61 45 44						
15TT	240°	1,0 1,4 1,7 2,1	3,4 3,7 4,3 4,6	0,38 0,44 0,48 0,53	49 48 39 38	60 58 48 46						
15TQ	270°	1,0 1,4 1,7 2,1	3,4 3,7 4,3 4,6	0,49 0,57 0,64 0,68	57 56 46 43	60 58 48 46						

- Square spacing based on 50% of diameter
- ▲ Triangular spacing based on 50% of diameter
- Max radius reduction with adjustment screw is 25%





U- SPRA	u ina					
Nozzle	Pressure	Radius	Flow	Pressure	Radius	Flow
Pattern	psi	ft (1)	gpm (2)	bar	m (1)	m³/h (2)
5FB	15	5	1.5	0	1,5	0,34
	20	5	1.5	1,4	1,5	0,34
	25	5	1.5	1,7	1,5	0,34
	30	5	1.5	2,1	1,5	0,34
5HB	15	5	1.0	1,0	1,5	0,23
	20	5	1.0	1,4	1,5	0,23
	25	5	1.0	1,7	1,5	0,23
	30	5	1.0	2,1	1,5	0,23
5QB	15	5	0.5	1,0	1,5	0,11
	20	5	0.5	1,4	1,5	0,11
	25	5	0.5	1,7	1,5	0,11
	30	5	0.5	2,1	1,5	0,11
5CST-B	15	5	0.5	1,0	1,5	0,11
	20	5	0.5	1,4	1,5	0,11
	25	5	0.5	1,7	1,5	0,11
	30	5	0.5	2,1	1,5	0,11

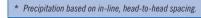
- (1) Adjusted radius at pressure shown
- (2) Flow with radius adjusted to 5 ft (1.5m)

#### 15/9 STRIP SERIES



30° SPR	AY TRAJEC	TORY		
Nozzle Pattern	Pressure psi	Width x Length (ft)	Flow gpm	Precip.* in/hr
15EST	15	4 x 13	0.5	1.85
	20	4 x 14	0.5	1.72
0	25	4 x 14	0.6	2.06
	30	4 x 15	0.6	1.93
15CST	15	4 x 26	0.9	1.67
	20	4 x 28	1.0	1.72
0	25	4 x 28	1.1	1.89
	30	4 x 30	1.2	1.93
15SST	15	4 x 26	0.9	1.67
	20	4 x 28	1.0	1.72
	25	4 x 28	1.1	1.89
	30	4 x 30	1.2	1.93
9SST	15	9 x 15	1.3	1.85
	20	9 x 16	1.5	2.01
0	25	9 x 18	1.6	1.90
	30	9 x 18	1.7	2.02
15/9	STRIP	SERIE	S METE	PIC .

	STRIP AY TRAJEC		ES METH	RIC
Nozzle	Pressure	Width x	Flow	Precip.*
Pattern	psi	Length (ft)	gpm	in/hr
15EST	1,0	1,2 x 4,0	0,11	46
	1,4	1.2 x 4,3	0,11	43
0	1,7	1,2 x 4,3	0,14	54
	2,1	1,2 x 4,6	0,14	51
15CST	1,0	1,2 x 7,9	0,20	42
	1,4	1,2 x 8,5	0,23	45
0	1,7	1,2 x 8,5	0,25	49
	2,1	1,2 x 9,1	0,27	50
15SST	1,0	1,2 x 7,9	0,20	42
	1,4	1,2 x 8,5	0,23	45
	1,7	1,2 x 8,5	0,25	49
	2,1	1,2 x 9,1	0,27	50
9SST	1,0	2,7 x 4,6	0,30	48
	1,4	2,7 x 4,9	0,34	51
•	1,7	2,7 x 5,5	0,36	49
	2,1	2,7 x 5,5	0,39	53





#### LX ADJUSTABLE ARC NOZZLES (AAN) U.S. Patent No. 6,769,633

Weathermatic's Adjustable Arc nozzle series (AAN) offers easy grip-and-turn adjustment, wet or dry. Exceptional uniform coverage. Flows increase or decrease proportionately with radius adjustment to maintain matched precipitation rates (MPR) between arcs within a radius.

#### **FEATURES**

- New! Insert a coin in adjustment slot to easily set arc range from  $0-360^{\circ}$
- Fits LX Series Sprinklers, LXS, 72 and 73 Shrub Adapters
- · Color-coded for easy identification
- · Stainless steel radius adjustment screw
- · Screens and adjustment coin included with nozzles
- Reusable, dual compartment resealable bags for organizing nozzles and strainers

#### **OPERATING DATA**

• Precipitation Rate: 1.18 - 5.74" per hour (30 – 146 mm per hour)



## LX ADJUSTABLE ARC NOZZLE SPECIFICATION

SIANDA	KD	
Model	Radius	in/hr
8A	8' - 9'	4.27 - 5.23
10A	10' - 11'	2.76 - 3.43
12A	12' - 13'	1.41 - 1.54
15A	15' - 16'	1.27 - 1.42
17A	16' - 17'	1.24 - 1.64

METRIC		
Model	Radius	mm/hr
8A	2,4 - 2,7 m	108,46 - 132,84
10A	3,0 - 3,4 m	70,1 - 87,12
12A	3,7 - 4,0 m	35,81 - 39,12
15A	4,6 - 4,9 m	32,26 - 36,07
17A	5,2 - 5,5 m	31,50 - 41,66

		Trajec	LE 8A tory: 0°	Trajec	LE 10A tory: 5°	Trajecto	NOZZLE 12A Trajectory: 15°		<b>E 15A</b> ory: 30°	NOZZL Trajecto	ory: 30°
Arc	Pressure	Radius	le: YELLOW Flow	Radius	ode: RED Flow	Color Cod Radius	Flow	Radius	de: GREY Flow	Color Co Radius	Flow
	psi	ft	gpm	ft	gpm	ft	gpm	ft	gpm	ft	gpm
45°	20 25	8 8	0.57 0.62	10 10	0.59 0.66	12 12	0.50 0.61	15 15	0.51 0.62	16 16	0.41 0.48
<b>&gt;</b>	30	8	0.62	10	0.00	12	0.61	15	0.02	16	0.46
o	35	9	0.72	11	0.80	13	0.71	16	0.76	17	0.57
	40	9	0.78	11	0.86	13	0.72	16	0.79	17	0.61
90°	20	8	0.82	10	0.93	12	0.75	15	0.82	16	0.84
	25	8	0.88	10	1.00	12	0.93	15	0.93	16	0.95
	30	8	0.97	10	1.11	12	1.00	15	1.04	16	1.03
	35 40	9 9	1.03 1.13	11 11	1.19 1.27	13 13	1.10 1.16	16 16	1.10 1.20	17 17	1.08 1.14
		-						*		=-	
120°	20	8	0.90	10	1.10	12	0.87	15	1.10	16	1.02
	25 30	8 8	1.15 1.25	10 10	1.31 1.41	12 12	1.04 1.13	15 15	1.21 1.33	16 16	1.09 1.19
	35	9	1.35	10	1.41	13	1.13	16	1.33	17	1.19
	40	9	1.41	11	1.60	13	1.32	16	1.50	17	1.34
180°	20	8	1.35	10	1.45	12	1.21	15	1.42	16	1.36
	25	8	1.47	10	1.61	12	1.28	15	1.65	16	1.53
	30	8	1.61	10	1.78	12	1.59	15	1.75	16	1.68
	35	9	1.74	11	1.87	13	1.73	16	1.89	16	1.82
	40	9	1.83	11	2.02	13	1.87	16	2.06	16	1.95
240°	20	8	1.73	10	1.90	12	1.46	15	1.55	16	1.62
	25 30	8 8	1.97 2.20	10 10	2.12 2.30	12 12	1.63 1.80	15 15	1.75 1.91	16 16	1.83 2.04
o l	35	9	2.20	10	2.52	13	1.00	15 16	2.04	16	2.04
	40	9	2.56	11	2.67	13	2.14	16	2.15	16	2.37
270°	20	8	1.87	10	2.00	12	1.54	15	2.02	16	1.96
	25	8	2.10	10	2.26	12	1.73	15	2.32	16	2.21
	30	8	2.26	10	2.47	12	1.93	15	2.51	16	2.47
	35 40	9 9	2.40 2.63	11	2.70 2.98	13 13	2.11 2.30	16 16	2.74 2.97	16 16	2.64 2.80
		-	**	11							
360°	20	8	2.21	10	2.31	12	1.67	15	2.38	16	2.53
	25 30	8 8	2.52 2.84	10 10	2.61 2.87	12 12	1.89 2.11	15 15	2.66 2.96	16 16	2.86 3.30
•	30 35	8	2.84	10 11	3.13	12	2.11	15 16	3.26	16 16	3.43
	40	9	3.20	11	3.37	13	2.44	16	3.46	16	3.83



888-4 THE PRO

**SPRAYS** 

# PRE-INSTALLED MODELS FEATURING LX ADJUSTABLE ARC NOZZLES Model Description LX4-8A LX4 with 8' adjustable arc nozzle LX4-10A LX4 with 10' adjustable arc nozzle LX4-12A LX4 with 12' adjustable arc nozzle LX4-15A LX4 with 15' adjustable arc nozzle LX4-17A LX4 with 17' adjustable arc nozzle





#### LX ADJUSTABLE ARC NOZZLES METRIC











		-		4				W.	W.			
		Trajec	LE 8A tory: 0° le: YELLOW	Trajec	NOZZLE 10A Trajectory: 5° Color Code: RED		LE 12A ory: 15° de: GREEN	Trajecto	LE 15A ory: 30° de: GREY	NOZZI Trajecto Color Co		
Arc	Pressure	Radius	Flow	Radius	Flow	Radius	Flow	Radius	Flow	Radius	Flow	
	bar	m	m³/h	m	m³/h	m	m³/h	m	m³/h	m	m³/h	
45°	1,38	2,4	0,13	3,0	0,13	3,7	0,11	4,6	0,12	4,9	0,09	
	1,72	2,4	0,14	3,0	0,15	3,7	0,14	4,6	0,14	4,9	0,11	
	2,07	2,4	0,15	3,0	0,17	3,7	0,15	4,6	0,16	4,9	0,12	
<i>8</i>	2,41 2,76	2,7 2,7 2,7	0,16 0,18	3,4 3,4	0,17 0,18 0,20	4,0 4,0	0,16 0,16	4,9 4,9	0,17 0,18	5,2 5,2	0,12 0,13 0,14	
90°	1,38	2,4	0,19	3,0	0,21	3,7	0,17	4,6	0,19	4,9	0,19	
	1,72	2,4	0,20	3,0	0,23	3,7	0,21	4,6	0,21	4,9	0,22	
	2,07	2,4	0,22	3,0	0,25	3,7	0,23	4,6	0,24	4,9	0,23	
	2,41	2,7	0,23	3,4	0,27	4,0	0,25	4,9	0,25	5,2	0,25	
	2,76	2,7	0,26	3,4	0,29	4,0	0,26	4,9	0,27	5,2	0,26	
120°	1,38	2,4	0,20	3,0	0,25	3,7	0,20	4,6	0,25	4,9	0,23	
	1,72	2,4	0,26	3,0	0,30	3,7	0,24	4,6	0,27	4,9	0,25	
	2,07	2,4	0,28	3,0	0,32	3,7	0,26	4,6	0,30	4,9	0,27	
	2,41	2,7	0,31	3,4	0,34	4,0	0,28	4,9	0,33	5,2	0,28	
	2,76	2,7	0,32	3,4	0,36	4,0	0,30	4,9	0,34	5,2	0,30	
180°	1,38	2,4	0,31	3,0	0,33	3,7	0,28	4,6	0,32	4,9	0,31	
	1,72	2,4	0,33	3,0	0,37	3,7	0,29	4,6	0,37	4,9	0,35	
	2,07	2,4	0,37	3,0	0,40	3,7	0,36	4,6	0,40	4,9	0,38	
	2,41	2,7	0,40	3,4	0,42	4,0	0,39	4,9	0,43	4,9	0,41	
	2,76	2,7	0,42	3,4	0,46	4,0	0,42	4,9	0,47	4,9	0,44	
240°	1,38	2,4	0,39	3,0	0,43	3,7	0,33	4,6	0,35	4,9	0,37	
	1,72	2,4	0,45	3,0	0,48	3,7	0,37	4,6	0,40	4,9	0,42	
	2,07	2,4	0,50	3,0	0,52	3,7	0,41	4,6	0,43	4,9	0,46	
	2,41	2,7	0,55	3,4	0,57	4,0	0,44	4,9	0,46	4,9	0,50	
	2,76	2,7	0,58	3,4	0,61	4,0	0,49	4,9	0,49	4,9	0,54	
270°	1,38	2,4	0,42	3,0	0,45	3,7	0,35	4,6	0,46	4,9	0,45	
	1,72	2,4	0,48	3,0	0,51	3,7	0,39	4,6	0,53	4,9	0,50	
	2,07	2,4	0,51	3,0	0,56	3,7	0,44	4,6	0,57	4,9	0,56	
	2,41	2,7	0,55	3,4	0,61	4,0	0,48	4,9	0,62	4,9	0,60	
	2,76	2,7	0,60	3,4	0,68	4,0	0,52	4,9	0,67	4,9	0,64	
360°	1,38	2,4	0,50	3,0	0,52	3,7	0,38	4,6	0,54	4,9	0,57	
	1,72	2,4	0,57	3,0	0,59	3,7	0,43	4,6	0,60	4,9	0,65	
	2,07	2,4	0,65	3,0	0,65	3,7	0,48	4,6	0,67	4,9	0,75	
	2,41	2,7	0,68	3,4	0,71	4,0	0,52	4,9	0,74	4,9	0,78	
	2,76	2,7	0,73	3,4	0,77	4,0	0,55	4,9	0,79	4,9	0,87	

#### B SERIES BRASS NOZZLES (FORMERLY 5500 SERIES)

#### **FEATURES**

Milled brass design provides best available uniform precipitation for water, material and labor savings in a professional design. Arcs and angles for any landscape requirement. Reinforced border spraying combines with an extremely flat slope of distribution to eliminate the requirement for "head-to-head" coverage. B Series nozzles provide a minimum of .25" per hour precipitation at one foot from listed radius.

- B Series nozzles fit LX sprayheads, LXS, 72 and 73 shrub adapters, as well as all industry standard male thread risers
- Low minimum operating pressure of 20 psi (1,4 bar)
- B3 nozzles are compatible with most micro-irrigation application rates





PART CIRCLE

**NOZZLE WITH SCREEN** 

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# TYPICAL PLASTIC NOZZLE UNIFORMITY

#### LOW ANGLE NOZZLES

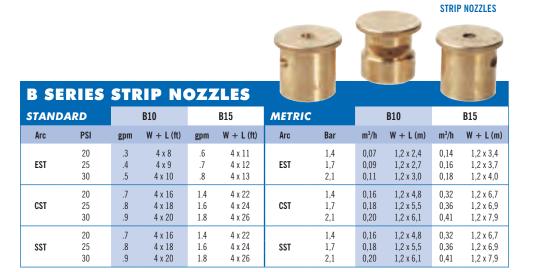
The B3 and B10 nozzles are available only in low angle. Models B12 through B20 in H, Q and 195° are available either in standard or low angle. The B24 is in standard angle only. For low angle selection, add an -LA suffix to the part number. For low angle models B12 through B20, derate maximum spacing by 15%.

											ra.	JEC	TO	RY	/	
	NDAR lax Spacin			ICH 33 5 Feet	В	PRI 10 Feet	В	12 Feet	В	15 Feet		18 Feet		20 Feet		24 Feet
Arc	Model	nsi Dsi	gpm	radius	gpm	radius	gpm	radius	gpm	radius	gpm	radius	gpm	radius	gpm	radius
360°	F	20 25 30	BP		Ph		1.7 1.9 2.1	9 9 11	2.4 2.7 3.0	11 12 12	3.4 3.8 4.2	12 13 13	4.2 4.8 5.3	13 14 15	6.2 6.8 7.5	16 17 18
180°	Н	20 25 30	0.3 0.3 0.3	5 6 7	0.6 0.7 0.7	8 8 9	1.0 1.1 1.2	9 9 11	1.4 1.6 1.8	11 12 12	2.0 2.3 2.5	12 13 13	2.4 2.7 2.9	13 14 15	3.3 3.5 4.0	16 17 18
90°	Q	20 25 30	0.3 0.3 0.3	5 6 7	0.3 0.4 0.4	8 8 9	0.5 0.6 0.7	9 9 11	0.7 0.8 0.9	11 12 12	1.0 1.1 1.2	12 13 13	1.2 1.4 1.5	13 14 15	1.8 1.9 2.1	16 17 18
120°	Т	20 25 30	0.3 0.3 0.3	5 6 7	0.4 0.5 0.6	8 8 9	0.7 0.7 0.8	9 9 11	1.0 1.1 1.2	11 12 12	1.3 1.4 1.6	12 13 13	1.6 1.8 2.0	13 14 15	2.2 2.4 2.7	16 17 18
240°	π	20 25 30			0.8 0.9 1.0	8 8 9	1.3 1.5 1.7	9 9 11	2.2 2.4 2.6	11 12 12	2.7 3.2 3.5	12 13 13	3.3 3.7 4.1	13 14 15	4.6 5.2 5.7	16 17 18
270°	TQ	20 25 30	0.3 0.3 0.3	5 6 7	0.9 1.0 1.1	8 8 9	1.4 1.6 1.8	9 9 11	2.4 2.6 2.9	11 12 12	3.1 3.5 3.8	12 13 13	3.8 4.3 4.7	13 14 15	5.2 5.5 6.1	16 17 18
105°	105	20 25 30							0.8 1.0 1.1	11 12 12	1.1 1.3 1.5	12 13 13	1.4 1.6 1.8	13 14 15		
135°	135	20 25 30	0.3 0.3 0.3	5 6 7	0.5 0.6 0.6	8 8 9	0.7 0.8 0.9	9 9 11	1.0 1.2 1.4	11 12 12	1.5 1.7 1.9	12 13 13	1.8 2.1 2.3	13 14 15	2.5 2.9 3.2	16 17 18
165°	165	20 25 30							1.3 1.5 1.7	11 12 12	1.8 1.9 2.3	12 13 13	2.3 2.6 2.9	13 14 15		
195°	195	20 25 30					1.0 1.1 1.3	9 9 11	1.5 1.7 1.9	11 12 12	2.2 2.5 2.8	12 13 13	2.8 3.2 3.5	13 14 15	3.9 4.4 4.9	16 17 18
225°	225	20 25 30			0.7 0.9 0.9	8 8 9	1.3 1.4 1.6	9 9 11	2.0 2.3 2.6	11 12 12	2.5 2.9 3.2	12 13 13	3.0 3.4 3.8	13 14 15	4.3 4.9 5.4	16 17 18



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**SPRAYS** 



MEI	RIC			AN TCH							TR	AJE	CTC	RY	/	
	Max Spacing		B3 B10				В	12 6 m	В	15 1 m		18 4 m		20 0 m		24 2 m
Arc	Model	Bar	m³/h	radius												
360°	F	1,4 1,7 2,1					0,39 0,43 0,48	2,7 2,7 2,7	0,55 0,61 0,68	3,3 3,6 3,6	0,77 0,86 0,95	3,6 3,9 3,9	0,95 1,09 1,20	3,9 4,2 4,5	1,34 1,41 1,59	4,8 5,1 5,4
180°	Н	1,4 1,7 2,1	0,07 0,07 0,07	1,5 1,8 2,1	0,14 0,16 0,16	2,4 2,4 2,7	0,23 0,25 0,27	2,7 2,7 3,3	0,32 0,36 0,41	3,3 3,6 3,6	0,45 0,52 0,57	3,6 3,9 3,9	0,55 0,61 0,66	3,9 4,2 4,5	0,75 0,79 0,91	4,8 5,1 5,4
90°	Q	1,4 1,7 2,1	0,07 0,07 0,07	1,5 1,8 2,1	0,07 0,09 0,09	2,4 2,4 2,7	0,11 0,14 0,16	2,7 2,7 3,3	0,16 0,18 0,20	3,3 3,6 3,6	0,23 0,25 0,27	3,6 3,9 3,9	0,27 0,32 0,34	3,9 4,2 4,5	0,41 0,43 0,48	4,8 5,1 5,4
120°	Ţ	1,4 1,7 2,1	0,07 0,07 0,07	1,5 1,8 2,1	0,09 0,11 0,14	2,4 2,4 2,7	0,16 0,16 0,18	2,7 2,7 3,3	0,23 0,25 0,27	3,3 3,6 3,6	0,30 0,32 0,36	3,6 3,9 3,9	0,36 0,41 0,45	3,9 4,2 4,5	0,50 0,55 0,61	4,8 5,1 5,4
240°	тт	1,4 1,7 2,1			0,18 0,20 0,23	2,4 2,4 2,7	0,30 0,34 0,39	2,7 2,7 3,3	0,50 0,55 0,59	3,3 3,6 3,6	0,61 0,73 0,79	3,6 3,9 3,9	0,75 0,84 0,93	3,9 4,2 4,5	1,04 1,18 1,29	4,8 5,1 5,4
270°	TQ	1,4 1,7 2,1			0,20 0,23 0,25	2,4 2,4 2,7	0,32 0,36 0,41	2,7 2,7 3,3	0,55 0,59 0,66	3,3 3,6 3,6	0,70 0,79 0,86	3,6 3,9 3,9	0,86 0,98 1,07	3,9 4,2 4,5	1,18 1,25 1,39	4,8 5,1 5,4
105°	105	1,4 1,7 2,1							0,18 0,23 0,25	3,3 3,6 3,6	0,25 0,30 0,34	3,6 3,9 3,9	0,32 0,36 0,41	3,9 4,2 4,5		
135°	135	1,4 1,7 2,1	0,07 0,07 0,07	1,5 1,8 2,1	0,11 0,14 0,14	2,4 2,4 2,7	0,16 0,18 0,20	2,7 2,7 3,3	0,25 0,27 0,32	3,3 3,6 3,6	0,34 0,39 0,43	3,6 3,9 3,9	0,41 0,48 0,52	3,9 4,2 4,5	0,57 0,66 0,73	4,8 5,1 5,4
165°	165	1,4 1,7 2,1							0,30 0,34 0,39	3,3 3,6 3,6	0,41 0,43 0,52	3,6 3,9 3,9	0,52 0,59 0,66	3,9 4,2 4,5		
195°	195	1,4 1,7 2,1					0,23 0,25 0,30	2,7 2,7 3,3	0,34 0,39 0,43	3,3 3,6 3,6	0,50 0,57 0,64	3,6 3,9 3,9	0,64 0,73 0,79	3,9 4,2 4,5	0,89 1,00 1,11	4,8 5,1 5,4
225°	225	1,4 1,7 2,1			0,16 0,20 0,20	2,4 2,4 2,7	0,30 0,32 0,36	2,7 2,7 3,3	0,45 0,52 0,59	3,3 3,6 3,6	0,57 0,66 0,73	3,6 3,9 3,9	0,68 0,77 0,86	3,9 4,2 4,5	0,98 1,11 1,23	4,8 5,1 5,4

### BRASS NOZZLE ADAPTERS

Convert B Series and LX MPR nozzles to shrub heads



NO. 72 ½" COPPER



NO. 73 ½" IPS

### B SERIES DESIGN NOTES

- Many designers derate recommended spacing for climate and wind. Listed radius is determined by ASAE industry standard measurement of .01" per hour.
- Precipitation: 1.2" per hour (25 mm per hour) for full circle / 20 psi (1,4 bar) at maximum triangular spacing
- B Series is identical to former 5500 Series. This is a name change for easier identification. Example: B15H = 5515-18





#### **100 SERIES SHRUB NOZZLES**

100 Series shrub nozzle performance is identical to B Series brass nozzles.

"Effective Radius" (see footnote 3) is provided to illustrate the excellent distribution profile of the nozzle series. Minor difference between "ER" and radius demonstrates the slope of distribution at the outer limits of coverage. This eliminates the requirement of "head-to-head" spacing.

Fits No. 92 and 93 shrub adapters.

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STANE	ARD	10°	L	w	AN	IGL	E S	<b>SPR</b>	AY	TR	AJ	<b>EC</b> 1	0	RY /	/ M	AT	CHI	ED	PR	ECI	PII	AT	10	N	
No	zzle	(va		Spacing application	on)			Spacing	g			Spacing				Spacing				Spacing 1)		:		Spacing 1)	ļ
Arc	psi	No.	gpm	radius (2)	ER (3)	No.	gpm	radius (2)	ER (3)	No.	gpm	radius (2)	ER (3)	No.	gpm	radius (2)	ER (3)	No.	gpm	radius (2)	ER (3)	No.	gpm	radius (2)	ER (3)
180°	20 25 30	100H	.3 .3 .3	5 6 7	4 5 5	110H	.6 .7 .7	8 8 9	7 7 8	112H	1.0 1.1 1.2	9 9 11	8 8 9	115H	1.4 1.6 1.8	11 12 12	10 10 11	118H	2.0 2.3 2.5	12 13 13	11 12 12	120H	2.4 2.7 2.9	13 14 15	12 13 14
90°	20 25 30	100Q	.3 .3 .3	5 6 7	4 5 5	110Q	.3 .4 .4	8 8 9	7 7 8	112Q	.5 .6 .7	9 9 11	8 8 9	115Q	.7 .8 .9	11 12 12	10 10 11	118Q	1.0 1.1 1.2	12 13 13	11 12 12	120Q	1.2 1.4 1.5	13 14 15	12 13 14
120°	20 25 30	100A	.3 .3 .3	5 6 7	4 5 5									115A	1.0 1.1 1.2	11 12 12	10 10 11					120A	1.6 1.8 2.0	13 14 15	12 13 14
240°	20 25 30	100E	.3 .3 .3	5 6 7	4 5 5	110E	.9 1.0 1.1	8 8 9	7 7 8	112E	1.4 1.6 1.8	9 9 11	8 8 9					118E	3.1 3.5 3.8	12 13 13	11 12 12	120E	3.8 4.3 4.7	13 14 15	12 13 14
METRI	c																								
No	zzle			m Spacin applicati		3		x Spacin (1)	ıg	3		x Spacin (1)	g	4	,	x Spacin (1)	g	5		x Spacing 1)	g	6		x Spacin 1)	g
Arc	bar	No.	m³/h	radius (2)	ER (3)	No.	m³/h	radius (2)	ER (3)	No.	m³/h	radius (2)	ER (3)	No.	m³/h	radius (2)	ER (3)	No.	m³/h	radius (2)	ER (3)	No.	m³/h	radius (2)	ER (3)
180°	1,4 1,7 2,1	100H	0,07 0,07 0,07	1,5 1,8 2,1	1,2 1,5 1,5	110H	0,14 0,16 0,16	2,4 2,4 2,7	2,1 2,1 2,4	112H	0,23 0,25 0,27	2,7 2,7 3,3	2,4 2,4 2,7	115H	0,32 0,36 0,41	3,3 3,6 3,6	3,0 3,0 3,3	118H	0,45 0,52 0,57	3,6 3,9 3,9	3,3 3,6 3,6	120H	0,55 0,61 0,66	3,9 4,2 4,5	3,6 3,9 4,2
90°	1,4 1,7 2,1	100Q	0,07 0,07 0,07	1,5 1,8 2,1	1,2 1,5 1,5	110Q	0,07 0,09 0,09	2,4 2,4 2,7	2,1 2,1 2,4	112Q	0,11 0,14 0,16	2,7 2,7 3,3	2,4 2,4 2,7	115Q	0,16 0,18 0,20	3,3 3,6 3,6	3,0 3,0 3,3	118Q	0,23 0,25 0,27	3,6 3,9 3,9	3,3 3,6 3,6	120Q	0,27 0,32 0,34	3,9 4,2 4,5	3,6 3,9 4,2
120°	1,4 1,7 2,1	100A	0,07 0,07 0,07	1,5 1,8 2,1	1,2 1,5 1,5									115A	0,23 0,25 0,27	3,3 3,6 3,6	3,0 3,0 3,3					120A	0,36 0,41 0,45	3,9 4,2 4,5	3,6 3,9 4,2
240°	1,4 1,7 2,1	100E	0,07 0,07 0,07	1,5 1,8 2,1	1,2 1,5 1,5	110E	0,20 0,23 0,25	2,4 2,4 2,7	2,1 2,1 2,4	112E	0,32 0,36 0,41	2,7 2,7 3,3	2,4 2,4 2,7					118E	0,70 0,79 0,86	3,6 3,9 3,9	3,3 3,6 3,6	120E	0,86 0,98 1,07	3,9 4,2 4,5	3,6 3,9 4,2

#### (1) Maximum triangular spacing. Climate, wind and nozzle performance should be considered for design spacing. Example: many designers derate spacing by using 90% of maximum for average site conditions.

- (3) ER "Effective Radius" indicates the most distant point at which .25" (6 mm) per hour precipitation will occur within the area of coverage.
- (2) Listed radius determined by ASAE industry standard measurement of .01" (0,3 mm) per hour. Nozzle mounted on 12" (30 cm) riser.
- For full circle shrub heads, specify B Series nozzles.
- Precipitation: 1.2" (31 mm) per hour for half circle / 20psi (1,4 bar) / maximum spacing.

#### **100 SERIES SHRUB ADAPTERS**



Adapts all 100 Series part circle shrub nozzles to 1/2" copper tube risers or 1/2" IPS risers.



#### NO. 92 NO. 93





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**SPRAYS** 

### NO. 106 PRESSURE COMPENSATING BUBBLER

#### NO. 106 SERIES

No. 106 provides a soft, bubbling action for deep soaking. Ideal for planter boxes, tree wells or similar areas when proper drainage is available.

#### **MODELS**

**106-50** .5 gpm **106-100** 1.0 gpm

#### **FEATURES**

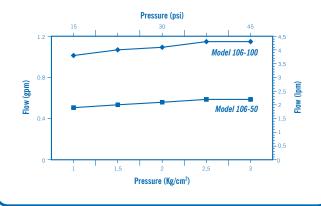
- Pressure compensating bubbler with trickle pattern
- · Inlet filter screen to prevent clogging
- Durable engineering-grade plastic construction
- Available in ½ gpm and 1 gpm discharge models
- · Application for tree wells and bed areas

#### CONSTRUCTION

Durable ABS plastic housing. Pressure compensating device is made of long life Buna-N rubber (1/2" IPS connection)

#### **OPERATING RANGE**

Flow: .5 - 1.0 gpm
 Spacing: 1 - 3'
 Pressure: 15 - 45 psi
 1,9 - 3,8 lpm
 0,3 - 0,9 m
 1,1 - 3,2 Kg/cm²



#### NO. 102 & 133 ADJUSTABLE BUBBLERS

#### NO. 102 & 133

No. 102 and 133 are the perfect choice for all applications where economy and/or higher flows are required. Ideal for planter boxes, tree wells or similar areas when proper drainage is available.

#### **MODELS**

102 Screwdriver adjustment
133 Knob adjustmen

adjustment Knob adjustment

102



133

#### **FEATURES**

- Umbrella pattern, full circle bubbler
- Durable engineering-grade plastic construction
- · Inlet filter screen to prevent clogging
- · Application for tree wells and bed areas

#### CONSTRUCTION

Durable ABS plastic housing with stainless steel adjustment screw ( $\frac{1}{2}$ " IPS connection)

#### **OPERATING RANGE**

• Flow: 1.1 - 2.3 gpm  $0.25 - 0.52 \text{ m}^3/\text{h}$ • Spacing:  $1 - 3^{\circ}$  0.3 - 0.9 m• Pressure: 10 - 60 psi 0.7 - 4.2 bar

NO. 10	2 & 133	PERFO	RMANC	E DATA						
Dro	ssure		Flo	o w						
Pie	ssure	Mi	n*	M	ах					
psi	kg/cm <sup>2</sup>	gpm	lpm	gpm	lpm					
20	1,4	1.3	4,9	3.0	11,4					
30	2,2	1.6	6,1	4.0	15,1					
45	3,2	2.0	7,6	4.5	17,0					
* Flow rate for	* Flow rate for factory adjusted setting.									

DOWNLOAD TECH SPECS AT:

#### NO. 105 BED SPRAY NOZZLE



- The No. 105 provides a fixed, horizontal (flat) spray
- · Full circle only
- This head is ideally suited for smaller, special treatment areas
- Fits No. 92 and 93 shrub adapters
- Note: diameter of coverage is based on head mounted 6" (15 cm) above grade.

STANI	DARD			
Nozzle	Type	psi	Dia. (ft.)	gpm
•	Full	10	11	0.9
•	Full	15	13	1.1
•	Full	18	14	1.2
METRI				
MEIK	C			
Nozzle	Туре	bar	Dia. (m)	m³/h
		<b>bar</b> 0,70	<b>Dia. (m)</b> 3,3	m³/h 0,20
Nozzle	Туре			





#### **SMART**PIPE<sup>™</sup> **SWING PIPE**

#### **FEATURES**

- · Manufactured from virgin linear low-density polyethylene material, made with FINGERPRINT™ resins from Dow Chemical Company
- Inside diameter: .49"
- 100' (30,0 m) stackable coils, marked in 12" increments

#### SPC-100 - HIGH-PRESSURE SWING PIPE

- · Engineered for high pressures, up to 150 psi
- · Quick and easy installation

#### **SPCX-100** – SUPER FLEX SWING PIPE

· Contractor-preferred maximum flexibility without kinking

· Textured surface is easy to grip even when wet

· Engineered for pressures up to 80 psi



#### **MODELS**

**SPC-100** High-Pressure Swing Pipe SPCX-100

Super Flex Swing Pipe

#### Fingerprint\*

#### SMARTPIPE™ SWING ASSEMBLIES

#### **FEATURES**

- Marlex<sup>™</sup> ells can be adjusted to virtually any configuration, leak free
- "3L" configuration has a Marlex $^{TM}$  ell on one end ideal for use with horizontally mounted tees
- "4L" configuration has Marlex™ ells on both ends for maximum versatility with vertically mounted tees
- · High pressure tested to over 100 PSI
- Made with FINGERPRINT™ Resins from Dow Chemical Company

MODELS	Length	Inlet/Outlet
SPSA-65050-3L	6"	1/2" X 1/2"
SPSA-65075-3L	6"	1/2" X 3/4"
SPSA-125050-3L	12"	1/2" X 1/2"
SPSA-125075-3L	12"	1/2" X 3/4"
SPSA-127575-3L	12"	3/4" x 3/4"
SPSA-65050-4L	6"	1/2" X 1/2"
SPSA-65075-4L	6"	1/2" X 3/4"
SPSA-125050-4L	12"	1/2" X 1/2"
SPSA-125075-4L	12"	1/2" X 3/4"
SPSA-127575-4L	12"	3/4" X 3/4"

Fingerprint<sup>®</sup>

Swing assemblies shown with optional LX Series Spray attached (sold separately)

#### **SMART**PIPE™ **FITTINGS**

#### **FEATURES**

- Easy twist-in insertion without use of glue or clamps
- Multiple barbs prevents barb blow-out
- Hard acetal thermoplastic for sharper barbs

#### **MODELS**

SASB-COUP 1/2" Barb x 1/2" Barb Coupling SASBA-050 ½" (15/21) M NPT x ½" Barb Adapter SASBA-075 3/4" (20/27) M NPT x 1/2" Barb Adapter SASB-ELBOW-050 ½" (15/21) M NPT x ½" Barb Elbow SASB-ELBOW-075 3/4" (20/27) M NPT x 1/2" Barb Elbow

SASB-TEE 1/2" Barb x 1/2" Barb Tee





SASB-COUP



SPSA-125050-31

DOWNLOAD TECH SPECS AT: www.weathermatic.com

SPSA-125075-4L

™ Trademark of the Dow Chemical Company



888-4 THE PRO

SPRINKLER ACCESSORIES

### TURBO TOP 10

Consider 10 Reasons why the Turbo is the Smart Solution!



### 1 DOUBLE-THICK RUBBER COVER

- The beefiest in the business to protect the head and the customer
- Visible "+" and "-" arrows guide arc adjustment
- Surrounded by a ribbed screw-on cover for a sure grip in wet conditions

#### 3 WIDEST RANGE RACK

- 14 nozzles in one tree,  $27 61^{\circ}$
- Includes 4 SmartAngle (low angle) and 2 Flow+ nozzles to provide 1" rotor range in a ¾" body
- Factory pre-installed nozzles available
- Sonic weld

### 5 PRESSURE-ACTIVATED WIPER SEAL

- Superior material and size provides extreme reliability in sandy conditions
- 10-year rated seal exceeds 6000 cycles of performance
- Pops up and seals below 20 psi

### **7** READY-CHECK™ CHECK VALVE

- There when you need it at no added cost
- Holds up to 12' of elevation to prevent low head drainage

#### FIVE YEAR WARRANTY "NO QUESTIONS ASKED"

- Return rate of less than 2%
- 20 years of proven performance



### **2** TOTALLY TOOL-LESS ARC ADJUSTMENT

- Arc adjustment ring has visible arc indicators for easiest "dry" adjustment – just grip the ring and dial it in!
- Wet set "point and shoot" adjustment without a tool is the fastest in the business. Just hold the ring and turn the top.
- Ratchets like a spray head to align arc. No channel locks required.
- Factory pre-set at 180°
- Vandal-resistant slip clutch and strong sonic weld prevent breakage as is common with other brands

### 4 HI TECH, SELF-CLEANING MICRO FILTER

 20 micron filter originally developed for the medical industry protects reversing mechanism from dirt and debris

### HEAVY-GAUGE SPRING FOR POSITIVE RETRACTION

• 20 lbs. of force vs. 10 lbs. for the competition

#### 100% WATER TESTED

 Verifies rotation, rotation speed and reversing action on every sprinkler

### 10 AMAZING VALUE FOR THE PRICE!

- Commercial sprinkler performance, strength and value for a residential price
- Try the entire Turbo Series and experience the Turbo difference!



#### T3 / T35 - TURBO ROTARY SPRINKLERS

#### Sports Field Rated

#### **FEATURES**

- 5 year warranty and 100% water tested
- Thick, vandal resistant rubber cover is standard; visible arrows indicate
   + or arc adjustment
- Radius adjustment screw decreases radius up to 25%
- "Punch-thru" cover to protect nozzle retaining screw from debris
- · Easy-grip threaded cover
- 14 field-changeable nozzles including SmartAngle (low angle) and Flow+ all on one tree
- Safety clutch for vandal protection; ratchets like a sprayhead
- Part circle models adjust from 40 360°: no tools required
- Expanded "arc dwell" on part circle models provides full coverage along borders
- Pressure activated wiper seal and strong stainless steel spring on pop-up models to ensure positive retraction
- · High-tech micro filter protects reversing mechanism
- Streamlined large flow tube to minimize pressure loss through sprinkler
- Impeller flow regulator automatically matches rotation to nozzle selection
- · Smooth impeller gear drive for highly uniform watering
- · Large area, basket type, removable strainer for debris protection
- Standard Ready Check™ check valve on T3 and T35 models is easily reversed in the field to a "check" position. Check valve holds back 12' (3,7 m/hd) of elevated water.

#### CONSTRUCTION

- · High-strength non-corrosive plastics and metals used throughout sprinkler
- Sealed, lubricant packed drive housing provides long life performance

#### **OPTIONS** (FACTORY INSTALLED)

- Non-potable cover (add "N" suffix)
- Vandal cover lock (add "XV" prefix)
- Check valve (add "CV" prefix)

#### **ACCESSORIES**

• T3ST Nozzle install collar

#### **MODEL SPECIFICATION**

**T3, T35** Pop-up adjustable arc **T3-36, T35-36** Pop-up full circle

T3S Pop-up full circle
Adjustable arc shrub model

T3SS Stainless steel pop-up adjustable arc

**T3-36SS** Stainless steel pop-up full circle

#### T3 DIMENSIONS

**Height (closed):** 7 5%" (19,4 cm) **Pop-up Height:** 4" (10,2 cm) **Inlet:** 34" IPS

illet: 74 IF3

#### **T35 DIMENSIONS**

Height (closed): 8 13/16" (22,4 cm)
Pop-up Height: 4" (10,2 cm)

Inlet: 1" IPS (specify ISO for international)

**Exposed Top Diameter:**  $1\frac{3}{4}$ " (4,4 cm)

T3S SHRUB DIMENSIONS

**Height:**  $8\frac{3}{16}$ " (20,8 cm) **Inlet:**  $\frac{3}{4}$ " IPS





#### T3 / T35 PERFORMANCE

	·									
	STAN	NDARD				METR	RIC			
Nozzle	Pressure psi	Radius ft.	Flow gpm	Precip.	Precip.	Pressure bar	Radius m	Flow m³/hr	Precip.	Precip.
STAN	IDARD .			TRAJEC		bui		/		,
1	30	28	0.7	0.17	0.20	2,1	8,5	0,16	4	5
	40	32	0.8	0.15	0.17	2,8	9,8	0,18	4	4
	50	33	0.9	0.16	0.18	3,4	10,1	0,20	4	5
	60	33	1.0	0.18	0.20	4,1	10,1	0,23	4	5
1.5	30	31	1.0	0.20	0.23	2,1	9,4	0,23	5	6
	40	35	1.4	0.19	0.22	2,8	10,7	0,27	5	6
	50	36	1.6	0.24	0.27	3,4	11,0	0,36	6	7
	60	36	1.8	0.27	0.31	4,1	11,0	0,41	7	8
2	30	28	1.2	0.29	0.34	2,1	8,5	0,27	7	9
	40	35	1.4	0.22	0.25	2,8	10,7	0,32	6	6
	50	35	1.9	0.30	0.34	3,4	10,7	0,43	8	9
	60	35	2.3	0.36	0.42	4,1	10,7	0,52	9	11
3	30	30	1.7	0.36	0.42	2,1	9,1	0,39	9	11
	40	38	2.0	0.27	0.31	2,8	11,6	0,45	7	8
	50	39	2.4	0.30	0.35	3,4	11,9	0,55	8	9
	60	41	2.8	0.32	0.37	4,1	12,6	0,64	8	9
3.5	40	41	3.5	0.40	0.46	2,8	12,5	0,79	10	12
	50	42	3.7	0.40	0.47	3,4	12,8	0,84	10	12
	60	43	4.3	0.45	0.52	4,1	13,1	0,98	11	13
4	40	44	4.0	0.40	0.46	2,8	13,4	0,91	10	12
	50	45	4.3	0.41	0.47	3,4	13,7	0,98	10	12
	60	46	5.0	0.45	0.53	4,1	14,0	1,14	11	13
6	40	45	5.5	0.52	0.60	2,8	13,7	1,25	13	15
	50	46	6.3	0.57	0.66	3,4	14,0	1,43	15	17
	60	47	6.9	0.60	0.69	4,1	14,3	1,57	15	18
8	40	45	6.3	0.60	0.69	2,8	13,7	1,43	15	18
	50	47	7.5	0.65	0.75	3,4	14,3	1,70	17	19
	60	51	8.1	0.60	0.69	4,1	15,5	1,84	15	18
Sma	rtAngle	13° LC	W A	NGLE TI	RAJECT	ORY				
2.0LA	30	29	1.6	0.37	0.42	2,1	8,8	0,36	9	11
	40	33	1.9	0.34	0.39	2,8	10,1	0,43	9	10
	50	34	2.1	0.35	0.40	3,4	10,4	0,48	9	10
2.5LA	30	31	2.1	0.42	0.49	2,1	9,4	0,48	11	12
	40	35	2.6	0.41	0.47	2,8	10,7	0,59	10	12
	50	36	2.9	0.43	0.50	3,4	11,0	0,66	11	13
3.5LA	30	31	2.7	0.54	0.62	2,1	9,4	0,61	14	16
	40	35	3.2	0.50	0.58	2,8	10,7	0,73	13	15
	50	37	3.5	0.49	0.57	3,4	11,3	0,79	13	14
4.5LA	30	33	3.0	0.53	0.61	2,1	10,1	0,68	13	16
	40	37	3.4	0.48	0.55	2,8	11,3	0,77	12	14
	50	37	4.1	0.58	0.67	3,4	11,3	0,93	15	17
FLOV	V+ NO			RAJECTO	ORY					
9	50	50	9.5	0.73	0.84	3,4	15,2	2,16	19	21
	60	54	10.8	0.71	0.82	4,1	16,5	2,45	18	21
	70	55	11.7	0.74	0.86	4,8	16,8	2,66	19	22
13	50	57	12.4	0.73	0.85	3,4	17,4	2,82	19	22
	60	59	13.8	0.76	0.88	4,1	18,0	3,13	19	22
	70	61	14.9	0.77	0.89	4,8	18,6	3,38	20	23
_			5001							

- Square spacing based on 50% of diameter
- ▲ Triangular spacing based on 50% of diameter

Note: All precipitation rates are calculated for 180° operation.

Divide by 2 for full circle precipitation rates

OPERATING RANGE					
	STANDARD	METRIC			
Precipitation Rate	Approx. 0.4 – 0.6" per hour @ 50 psi	10 – 15 mm per hour @ 3,5 bar			
Radius	23 – 61'	7,0 — 18,6 m			
Pressure	20 — 70 psi	1,4 – 4,8 bar			
Flow	0.5 — 14.9 gpm	0,11 - 3,39 m <sup>3</sup> /h			



888-4 THE PRO

**ROTORS** 

# Closed-case, gear-driven rotors rated for athletic fields, parks, and large turf areas

"POINT AND SHOOT"
ARC ADJUSTMENT
WITHOUT TOOLS







CT70

#### CT70 ROTARY SPRINKLER

#### **FEATURES**

- 5 year trade warranty and 100% water tested
- Thick, vandal resistant rubber cover is standard; visible arrows indicate + or - arc adjustment
- Radius adjustment screw decreases radius up to 25%
- "Punch-thru" cover to protect nozzle retaining screw from debris
- · Easy grip threaded cover
- 5 field changeable nozzles
- Safety clutch for vandal protection; ratchets like a sprayhead
- Part circle models adjust from  $40 360^{\circ}$ ; no tools required
- Expanded "arc dwell" on part circle models provides full coverage along borders
- Pressure activated wiper seal and strong stainless steel spring on pop-up models to ensure positive retraction
- · High-tech micro filter protects reversing mechanism
- · Streamlined large flow tube to minimize pressure loss through sprinkler
- Impeller flow regulator automatically matches flow to nozzle selection
- Smooth impeller gear drive for highly uniform watering
- Large area, basket type, removable strainer for debris protection
- Standard Ready Check™ check valve on CT70 and CT70-36 models is easily reversed in the field to a "check" position. Check valve holds back 15' (4.6 m/hd) of elevated water

#### CONSTRUCTION

- · High-strength non-corrosive plastics and metals used throughout sprinkler
- Sealed, lubricant packed drive housing provides long life performance

#### **OPTIONS** (FACTORY INSTALLED)

- Non-potable cover (add "N" suffix)
- · Vandal cover lock (add "XV" prefix)

#### **ACCESSORIES**

· T3ST Nozzle install collar

#### **MODEL SPECIFICATION**

CT70 Adjustable arc
CT70-36 Full circle

#### **DIMENSIONS**

**Height (closed):**  $8^{13}/_{16}$ " (22,4 cm) **Pop-up Height:** 4" (10,2 cm)

Inlet: 1" IPS (specify ISO for international)

Exposed Top Diameter: 13/4" (4,4 cm)

International threads: add ISO suffix

OPERATING RANGE					
	STANDARD	METRIC			
Precipitation Rate	Approx. $0.6-1.0$ " per hour @ 60 psi	15,8 – 27 mm per hour @ 4,2 bar			
Radius	49 – 74'	14,9 – 22,6 m			
Pressure	40 – 90 psi	2,8 - 6,2 bar			
Flow	8.1 – 28.0 gpm	1,84 - 6,36 m³/h			

<b>CT70</b>	PERF	ORM	ANCE			
	STANDA	NRD .		METRIC		
Nozzle	Pressure	Radius*	Flow	Pressure	Radius*	Flow
	psi	ft.	gpm	bar	m	m³/hr
71	40	49	8.1	2,8	14,9	1,84
	50	51	9.1	3,4	15,5	2,07
	60	53	10.0	4,2	16,2	2,27
	70	55	11.0	4,8	16,8	2,50
	80	56	11.8	5,5	17,0	2,68
72	50	54	10.7	3,4	16,5	2,43
	60	55	11.8	4,2	16,8	2,68
	70	57	12.6	4,8	17,4	2,86
	80	58	13.8	5,5	17,7	3,13
73	50	57	14.0	3,4	17,4	3,18
	60	58	15.3	4,2	17,7	3,48
	70	60	16.8	4,8	18,3	3,82
	80	61	17.8	5,5	18,6	4,04
74	60	59	16.6	4,2	18,0	3,77
	70	62	18.1	4,8	18,9	4,11
	80	63	19.2	5,5	19,2	4,36
	90	65	20.4	6,2	19,8	4,63
75	60	66	22.5	4,2	20,1	5,11
	70	67	24.7	4,8	20,4	5,61
	80	72	26.5	5,5	21,9	6,02
	90	74	28.0	6,2	22,6	6,36

Nozzle trajectory: 26°

\*Radius of coverage shown is for still air with no diffusion. Maximum radius reduction with diffuser screw is 25%.

Note: Performance data derived from tests that conform to ASAE Standard S398.1.

Uniform precipitation data developed with Hyperspace™ Software is available upon request.

Note: see page 65 for spacing and precipitation rate formulas.



### NITRO NINE

Consider 9 Compelling Reasons why the N-100 Series Nitro is the Smart Solution!

# **X** Weathermatic

#### **DURABLE MATERIAL**

- 100% virgin material gives the Nitro added strength over conventional PVC valves
- Hydrostatic tests prove Nitro resistance to cracking at over 700 psi

#### **EASY ACCESS COVER**

- · Combination hex, slot and Phillips retaining screws provide multiple access options and superior operation up to 150 psi
- Weathermatic installers will tell you they rarely need to open a Nitro valve

### UNMATCHED MANUAL BLEED

- · Send the Nitro into action by simply pulling the trigger
- · It's the easiest, driest internal manual bleed in the business that won't flood the valve box
- No twisting on a solenoid or bleed screw is required

### The Nitro puts the hammer to

water hammer by incorporating a cone-shaped diaphragm base

SHOCKING SHOCK CONE

The shock cone interrupts the water flow more gradually than other diaphragms to enable quick valve closure without the damaging effect of water hammer

#### CONNECTION CONFIGURATIONS

• Choose between 3 connection configurations: threaded, slip and male x barb

### PRESSURE ACTIVATED DIAPHRAGM

· Pressure activated diaphragm ensures reliable operation with no leakage at pressures up to 150 psi

#### **REVOLUTIONARY REVERSE FLOW DESIGN**

#### The Weathermatic hallmark reverse flow design with a 45-year track record brings you:

- Reverse flow design means the valve fails shut rather than open in the event of diaphragm failure, unlike conventional forward flow valves that fail open
- Balanced pressure on the diaphragm extends valve diaphragm life beyond forward flow valves
- Self-cleaning function is achieved as diaphragm actually flexes during operation to send dirt and debris down the line without the maintenance worry of filters and screens

#### 8 5 YEAR TRACK RECORD

The Nitro track record shows less than a fraction of 1% return rate over 5+ years of reliable performance

#### **AMAZING VALUE FOR THE PRICE!**

- Seasoned installers know that valves are the last place to cut expenses when just one call-back eliminates any cost savings on the job
- Plus, the Nitro makes it easy you can install the commercial quality of a Weathermatic valve at a residential valve price!



888-4 THE PRO **VALVES** 

#### N-100 SERIES - NITRO REMOTE CONTROL VALVE

#### **FEATURES**

- · 100% water tested
- 150 psi (10,3 bar) rating
- Unique "reverse flow" design permits equal pressure distribution on both sides of the diaphragm, regardless of line pressure, providing zero stress to prevent "stretching," a common cause of valve failure
- · Reverse flow design for water conservation in the event of failure
- Diaphragm's self cleaning ports constantly flex, inhibiting sand and silt from blocking valve action
- · Molded shock cone for smooth operation and reduction of water hammer
- Easy-to-use internal manual bleed lever; bleeds valve downstream; has positive stops for open and closed positions
- · Marine-grade S20P solenoid with stainless steel actuator
- Engineering grade PVC body and cover with combination hex, slot and Phillips retaining screws
- Non-rising flow control stem throttles valve from full open to closed position on flow control models

#### **ELECTRICAL**

 Wiring requires a single lead from the controller to each solenoid, plus a common neutral to all solenoids; type UF wire, U.L. listed, is recommended for all hookups

24VAC/60HZ	24VAC/50HZ
Inrush: 9.48 VA	Inrush: 10.66 VA
Holding: 5.11 VA	Holding: 5.97 VA

• Do not use nominal voltage ratings listed above for sizing of valve wire

#### **MODELS**

N-100-H 1" FIP\*

N-100F-H 1" FIP with flow control\*

N-100S-H 1" SLIPxSLIP

N-100SF-H 1" SLIPxSLIP with flow control

N-100MB-H 1" Male x Barb

N-100MBF-H 1" Male x Barb with flow control







#### N-100 SERIES VALVE PRESSURE LOSS

STANI	DARD	METR	IC
Flow gpm	<b>Loss</b> psi	Flow m³/hr	<b>Loss</b> bar
0-4	1.2 max	0-1,0	0,09 max
4	1.2	1,0	0,09
6	1.7	1,5	0,14
8	2.5	2,0	0,19
10	3.0	2,5	0,22
12	3.4	3,0	0,25
14	3.8	3,5	0,28
16	4.1	4,0	0,30
18	4.4	4,5	0,32
20	4.6	5,0	0,33
22	4.8	5,5	0,35
24	5.1	6,0	0,38
26	5.4	6,5	0,41
28	5.8	7,0	0,45
30	6.3	7,5	0,47
32	6.6	8,0	0,50
35	7.3	8,5	0,51







### SILVER BULLET SEVEN

\*Weathermatic

Consider 7 Compelling Reasons why the 12000 Series Silver Bullet is the Smart Solution!

#### SUPERIOR MATERIAL

- Glass-filled nylon construction gives the Silver Bullet added strength over conventional PVC valves
- Pick up a Silver Bullet in one hand and any other valve in the other to feel the difference

#### 2 BOLT-ON COVER

- Stainless steel bolts easily thread in and out of quality brass inserts
- Weathermatic installers will tell you they rarely need to open a Silver Bullet valve. If you do, it is easier to open and close than most valves using screws or jar tops that are susceptible to stripping, dirt, and grit.

### 3 UNMATCHED MANUAL BLEED

- Send the Silver Bullet into action by simply pulling the trigger
- It's the easiest, driest internal manual bleed in the business that won't flood the valve box
- No twisting on a solenoid or bleed screw is required

### 4 SHOCKING SHOCK CONE

- The Silver Bullet puts the hammer to water hammer by incorporating a cone-shaped diaphragm base
- The shock cone interrupts the water flow more gradually than other diaphragms to enable quick valve closure without the damaging effect of water hammer

#### 5 REVOLUTIONARY REVERSE FLOW DESIGN

### The Weathermatic hallmark reverse flow design with a 45-year track record brings you:

- Reverse flow design means the valve fails shut rather than open in the event of diaphragm failure, unlike conventional forward flow valves that fail open
- Balanced pressure on the diaphragm extends valve life over forward flow valves
- Self-cleaning function is achieved as diaphragm actually flexes during operation to send dirt and debris down the line without the maintenance worry of filters and screens

#### 15 YEAR TRACK RECORD

• The Silver Bullet track record shows less than a fraction of 1% return rate over 15+ years of reliable performance

#### **7** AMAZING VALUE FOR THE PRICE!

- Seasoned installers know that valves are the last place to cut expenses when just one call-back eliminates any cost savings on the job
- Plus, the Silver Bullet makes it easy you can install the commercial quality of a Weathermatic valve at a residential valve price!



888-4 THE PRO VALVES

#### 12000 SERIES - SILVER BULLET REMOTE CONTROL VALVE

#### **FEATURES**

- · 100% water tested
- 150 psi (10,3 bar) rating
- Unique "reverse flow" porting design permits equal pressure distribution on both sides of the diaphragm, regardless of line pressure providing zero stress to prevent "stretching," a common cause of valve failure
- · Reverse flow design for water conservation in the event of failure
- Diaphragm's self cleaning ports constantly flex, inhibiting sand and silt from blocking valve action
- · Molded shock cone for smooth operation and reduction of water hammer
- Easy-to-use internal manual bleed lever; bleeds valve downstream; has stops for open and closed positions
- · Marine-grade S20P solenoid with stainless steel actuator
- $\bullet~$  High-strength glass-filled nylon body and cover with  $^{1}\!/_{\!4}"$  stainless steel cover bolts and mating brass body inserts
- Non-rising flow control stem throttles valve from full open to closed position on flow control models

#### **ELECTRICAL**

 Wiring requires a single lead from the controller to each solenoid, plus a common neutral to all solenoids; type UF wire, U.L. listed, is recommended for all hookups

24VAC/60HZ	24VAC/50HZ
Inrush: 9.48 VA	Inrush: 10.66 VA
Holding: 5.11 VA	Holding: 5.97 VA

 Do not use nominal voltage ratings listed above for sizing of valve wire

#### MODELS

**12024E-10-H** 1" FIP\*

**12024EF-10-H** 1" FIP with flow control\* **12024EF-15-H** 1 ½" FIP with flow control\* **12024EF-20-H** 2" FIP with flow control\*

\* International: specify ISO





<b>STANDARD</b> (pressure loss PSI)					RIC (pressu	re loss Bar)	
Flow gpm	<b>12024E-10-H</b> 1"	<b>12024E-15-H</b>	<b>12024E-20-H</b> 2"	Flow m³/h	<b>12024E-10-H</b> 1"	<b>12024E-15-H</b> 1 ½"	<b>12024E-20-H</b> 2"
0-4	1.2 max			0-0,9	0,08		
6	1.7			1,0	0,12		
8	2.5			2,0	0,17		
10	3.0			2,5	0,21		
15	3.9			3,0	0,27		
20	4.6	1.3		5,0	0,32	0,09	
25	5.2	1.6		6,0	0,36	0,11	
30	6.3	1.9		7,0	0,43	0,13	
35	7.3	2.4		8,0	0,50	0,17	
40		3.0	2.3*	9,0		0,21	0,16*
45		3.8	2.4	10,0		0,26	0,17
50		4.6	2.6	11,0		0,32	0,18
55		5.6	2.7	12,0		0,39	0,19
60		6.7	2.9	14,0		0,46	0,20
70		9.5	3.3	16,0		0,66	0,23
80		13.0	3.4	18,0		0,90	0,23
90			4.2	20,0			0,29
100			5.2	22,0			0,36
110			6.7	24,0			0,46
120			7.7	26,0			0,53
130			8.8	30,0			0,61



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www.weathermatic.com



#### 21000 SERIES – BLACK BULLET REMOTE CONTROL VALVE

#### **FEATURES**

- 5 year trade warranty and 100% water tested
- 200 psi (13,8 bar) rating
- Unique "reverse flow" porting design permits equal pressure distribution on both sides of the diaphragm, regardless of line pressure providing zero stress to prevent "stretching," a common cause of valve failure
- · Reverse flow design for water conservation in the event of failure
- Diaphragm's self cleaning ports constantly flex, inhibiting sand and silt from blocking valve action
- · Brass shock cone for smooth operation and reduction of water hammer
- Easy-to-use internal manual bleed lever; bleeds valve downstream; has stops for open and closed positions
- · Marine-grade S20P solenoid with stainless steel actuator
- High-strength glass-filled body and cover with 1/4" stainless steel cover bolts and mating brass body inserts
- Brass non-rising flow control stem throttles valve from full open to closed position
- Excellent for low volume irrigation
- Contamination-resistant (CR)
- Chlorine- and chloramine-resistant EPDM diaphragm material

#### **OPTIONS** (FACTORY INSTALLED)

- XPR Pressure Regulator—the Weathermatic XPR pressure regulating module senses inlet pressure and maintains constant outlet pressure (see PRK-24 in valve accessory section for specifications)
- Non-potable alert flow handle may be substituted for the standard flow handle. Add -NP suffix.

#### **ELECTRICAL**

 Wiring requires a single lead from the controller to each solenoid, plus a common neutral to all solenoids; type UF wire, U.L. listed, is recommended for all hookups

24VAC/60HZ	24VAC/50HZ
Inrush: 9.48 VA	Inrush: 10.66 VA
Holding: 5.11 VA	Holding: 5.97 VA

• Do not use nominal voltage ratings listed above for sizing of valve wire

INSTALLATION	MODELS	
• Teflon tape is recommended	21024E-10-H	1" FIP*
• 1" FIP can be bushed to 3/4"	21024E-15-H	1 ½" FIP*
• $1\frac{1}{2}$ " FIP can be bushed to $1\frac{1}{4}$ "	21024E-20-H	2" FIP*

\* International: specify ISO



<b>STANDARD</b> (pressure loss PSI)					METRIC (pressure loss Bar)			
Flow gpm	<b>21024E-10-H</b> 1"	<b>21024E-15-H</b> 1 ½"	<b>21024E-20-H</b> 2"	Flow m³/h	<b>21024E-10-H</b> 1"	<b>21024E-15-H</b> 1 ½"	<b>21024E-20-H</b> 2"	
0-4	1.2 max			0-0,9	0,08 max			
6	1.4			1,0	0,10			
8	1.6			2,0	0,12			
10	1.7*			2,5	0,13*			
15	2.0			3,0	0,14			
20	2.3	1.3*		5,0	0,18	0,10*		
25	3.0	1.6		6,0	0,24	0,12		
30	4.3	1.9		7,0	0,32	0,14		
35	6.0	2.4		8,0	0,43	0,17		
40	7.7	3.0	2.3*	9,0	0,54	0,21	0,16*	
45	9.5	3.8	2.4	10,0	0,64	0,26	0,17	
50	11.5	4.6	2.6	11,0	0,77	0,31	0,17	
55		5.6	2.7	12,0		0,37	0,18	
60		6.7	2.9	14,0		0,51	0,20	
70		9.5	3.3	16,0		0,68	0,23	
80		13.0	3.4	18,0		0,90	0,23	
90			4.2	20,0			0,29	
100			5.2	22,0			0,34	
110			6.7	24,0			0,42	
120			7.7	26,0			0,50	
130			8.8	30,0			0,62	

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888-4 THE PRO

VALVES

#### 11000FCR SERIES - BLACK MAX REMOTE CONTROL VALVE

#### **FEATURES**

- 10 year warranty and 100% water tested
- 225 psi (15,5 bar) rating
- S24B high-efficiency solenoid for positive opening at high pressures; includes stainless steel actuator and brass threads for long life
- Unique "reverse flow" porting design permits equal pressure distribution on both sides of the diaphragm, regardless of line pressure providing zero stress to prevent "stretching," a common cause of valve failure
- · Reverse flow design for water conservation in the event of failure
- Diaphragm's self cleaning ports constantly flex, inhibiting sand and silt from blocking valve action
- · Brass shock cone for smooth operation and reduction of water hammer
- Easy-to-use internal manual bleed lever; bleeds valve downstream; has stops for open and closed positions
- High-strength glass-filled body and cover with ½" stainless steel cover bolts and mating brass body inserts
- Brass non-rising flow control stem throttles valve from full open to closed position
- Excellent for low volume irrigation
- · Contamination-resistant (CR)
- Chlorine- and chloramine-resistant EPDM diaphragm material

#### **OPTIONS** (FACTORY INSTALLED)

- XPR Pressure Regulator—the Weathermatic XPR pressure regulating module senses inlet pressure and maintains constant outlet pressure (see PRK-24 in valve accessory section for specifications)
- Non-potable alert flow handle may be substituted for the standard flow handle. Add -NP suffix.

#### **ELECTRICAL**

 Wiring requires a single lead from the controller to each solenoid, plus a common neutral to all solenoids; type UF wire, U.L. listed, is recommended for all hookups

24VAC/60HZ	24VAC/50HZ
Inrush: 9.86 VA	Inrush: 10.7 VA
Holding: 5.69 VA	Holding: 7.5 VA

• Do not use nominal voltage ratings listed above for sizing of valve wires

#### INSTALLATION

#### • Teflon tape is recommended 11024FCR-10 1" FIP\* • 1" FIP can be bushed to 3/4" 11024FCR-15 1 1/2" FIP\* • 1 1/2" FIP can be bushed to 1 1/4" 11024FCR-20 2" FIP\*

\* International: specify ISO

**MODELS** 



11000FCR WITH XPR OPTION

<b>STANDARD</b> (pressure loss PSI)					METRIC (pressure loss Bar)			
Flow gpm	<b>11024FCR-10</b> 1"	11024FCR-15 1 ½"	<b>11024FCR-20</b> 2"	Flow m³/h	<b>11024FCR-10</b> 1"	<b>11024FCR-15</b> 1 ½"	<b>11024FCR-20</b> 2"	
0-4	1.2 max			0-0,9	0,08 max			
6	1.4			1,0	0,10			
8	1.6			2,0	0,12			
10	1.7*			2,5	0,13*			
15	2.0			3,0	0,14			
20	2.3	1.3*		5,0	0,18	0,10*		
25	3.0	1.6		6,0	0,24	0,12		
30	4.3	1.9		7,0	0,32	0,14		
35	6.0	2.4		8,0	0,43	0,17		
40	7.7	3.0	2.3*	9,0	0,54	0,21	0,16*	
45	9.5	3.8	2.4	10,0	0,64	0,26	0,17	
50	11.5	4.6	2.6	11,0	0,77	0,31	0,17	
55		5.6	2.7	12,0		0,37	0,18	
60		6.7	2.9	14,0		0,51	0,20	
70		9.5	3.3	16,0		0,68	0,23	
80		13.0	3.4	18,0		0,90	0,23	
90			4.2	20,0			0,29	
100			5.2	22,0			0,34	
110			6.7	24,0			0,42	
120			7.7	26,0			0,50	
130			8.8	30,0			0,62	

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### 8200CR SERIES - BRONZE BULLET REMOTE CONTROL VALVE

#### **FEATURES**

- 10 year trade warranty and 100% water tested
- 225 psi (15,5 bar) rating
- S24B high-efficiency solenoid for positive opening at high pressures; includes stainless steel actuator and brass threads for long life
- Bronze body and cover with stainless steel cover bolts
- Bronze material with 82% copper content has superior corrosion resistance versus brass material
- Unique "reverse flow" porting design permits equal pressure distribution on both sides of the diaphragm, regardless of line pressure providing zero stress to

prevent "stretching," a common cause of valve failure



- · Reverse flow design for water conservation in the event of failure
- Diaphragm's self cleaning ports constantly flex, inhibiting sand and silt from blocking valve action
- Brass shock cone for smooth operation and reduction of water hammer
- Easy-to-use internal manual bleed lever; bleeds valve downstream; has stops for open and closed positions
- Brass flow control stem (stainless steel stem on 2 ½" and 3" models) throttles valve from full open to closed position
- Excellent for low volume irrigation
- Contamination-resistant (CR)
- Chlorine- and chloramine-resistant EPDM diaphragm material

#### **OPTIONS** (FACTORY INSTALLED)

- XPR Pressure Regulator the Weathermatic XPR pressure regulating module senses inlet pressure and maintains constant outlet pressure (see PRK-24 in valve accessory section for specifications)
- Non-potable alert flow handle may be substituted for the standard flow handle. Add -NP suffix.

#### **ELECTRICAL**

 Wiring requires a single lead from the controller to each solenoid, plus a common neutral to all solenoids; type UF wire, U.L. listed, is recommended for all hookups

24VAC/60HZ	24VAC/50HZ
Inrush: 9.86 VA	Inrush: 10.7 VA
Holding: 5.69 VA	Holding: 7.5 VA

• Do not use nominal voltage ratings listed above for sizing of valve wire

#### **INSTALLATION**

• Teflon tape is recommended

• International: specify ISO

#### **8200CR SERIES VALVE**

STANDARD (pressure loss PSI)							
Flow gpm	<b>8200CR-10</b> 1"	<b>8200CR-10</b> 1 ½"	<b>8200CR-10</b> 1 ½"	<b>8200CR-10</b> 2"	<b>8200CR-10</b> 2 ½"	<b>8200CR-10</b> 3"	
0 - 10	1.5 max						
12	1.8*						
16	2.4	1.9*					
20	3.1	2.3	1.4 *				
25	4.0	3.0	1.7				
30	4.9	3.5	2.1				
35	5.9	4.1	2.5				
40	7.2	4.7	2.9	1.1 *			
45		5.5	3.3	1.3			
50		6.3	3.7	1.5			
55			4.2	1.8			
60			4.8	2.0	1.0 *	0.5 *	
70			6.2	2.6	1.4	0.7	
80			7.9	3.4	1.8	0.9	
90			10.1	4.3	2.1	1.1	
100				5.3	2.6	1.3	
120				8.0	3.6	1.8	
140				12.0	4.8	2.4	
160				18.2	6.1	3.1	
180					7.5	3.8	
200					9.1	4.6	
250					14.0	7.1	
300					19.6	10.1	
350						13.8	
400						19.3	

METRI	C (	pressure i	loss E	3ar)
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Flow m³/h	<b>8200CR-10</b> 1"	<b>8200CR-10</b> 1 ½"	<b>8200CR-10</b> 1 ½"	<b>8200CR-10</b> 2"	<b>8200CR-10</b> 2 ½"	<b>8200CR-10</b> 3"
0 – 2,3	0,10 max					
3,0	0,14*					
4,0	0,19	0,15*				
5,0	0,25	0,19	0,11 *			
6,0	0,30	0,22	0,13			
7,0	0,35	0,26	0,15			
8,0	0,42	0,30	0,17			
9,0	0,50	0,33	0,20	0,08 *		
10,0		0,37	0,23	0,08		
11,0		0,43	0,25	0,10		
12,0			0,28	0,12		
14,0			0,35	0,15	0,08 *	0,04 *
16,0			0,43	0,19	0,10	0,05
18,0			0,54	0,24	0,12	0,06
20,0			0,68	0,29	0,15	0,08
24,0				0,42	0,20	0,10
28,0				0,61	0,27	0,13
32,0				0,84	0,34	0,17
36,0				1,23	0,42	0,21
40,0					0,51	0,27
50,0			_		0,77	0,40
60,0		DAD TECH SI			1,09	0,56
70,0	www.	weatherma	tic.com		1,45	0,76
80,0						1,00
90,0						1,34

\* Minimum recommended flow for valves with XPR option or PRK-24 accessory.



888-4 THE PRO

**VALVES** 

#### QUICK COUPLING VALVES



- Weathermatic quick coupling valves provide convenient manual connection for swivel hose ells and above-ground impact sprinklers
- All quick coupling valves have a thermoplastic locking cover. Choice of easy to locate yellow cover or purple non-potable water identification cover. Industrial grade red brass valve body.
- · Keys for locking cover are ordered separately
- 3/4" Quick Coupler Valves feature two-piece bodies. 1" and 1 1/2" Quick Coupler Valves have one-piece bodies.

#### **PRESSURE LOSS VALUES**

<b>STANDARD</b> (pressure loss PSI)			<b>METRIC</b> (pressure loss Bar)				
gpm	<b>QV75L</b> 3/4"	<b>QV100L</b> 1"	<b>QV151L</b> 1 ½"	m³/h	<b>QV75L</b> <sup>3</sup> / <sub>4</sub> "	<b>QV100L</b> 1"	<b>QV151L</b> 1 ½"
10	1.5			2,27	0,11		
15	3.1			3,41	0,22		
20	5.3	1.1		4,54	0,37	0,08	
25	8.5	2.2		5,68	0,60	0,16	
30		3.6		6,81		0,25	
35		5.7		7,95		0,40	
40		8.0	1.0	9,09		0,56	0,07
50			1.7	11,36			0,12
60			2.6	13,63			0,18
70			3.6	15,90			0,25
85			5.6	19,31		•	0,39
100			8.8	22,71			0,62

#### COUPLERS



- Stainless steel handle is included with each coupler
- Coupler has industrial grade red brass body
- $\frac{3}{4}$ " and 1" are single lug; 1  $\frac{1}{2}$ " is double lug

#### **RLK-2 KEY FOR QCV COVER**



Fits all QV series valves.

#### **QUICK COUPLER MODELS**

Specify	Inlet Size	Cover Color	Fits Coupler	Coupler Outlet Size
QV75L	3/4"	Yellow w/Lock	CH75	3/4" MIPS x 1/2" FIPS
QV75L-NP		Purple NP w/Lock	CH75	3/4" MIPS x 1/2" FIPS
QV100L	1"	Yellow w/Lock	CH100	1" MIPS x 3/4" FIPS
QV100L-NP		Purple NP w/Lock	CH100	1" MIPS x 3/4" FIPS
QV151L	1 1/2"	Yellow w/Lock	CH151	1 ½" MIPS x 1 ¼" FIPS
QV151L-NP		Purple NP w/Lock	CH151	1 1/2" MIPS x 1 1/4" FIPS

- International threads available on 1" and 1  $^{1}\!/\!_{2}$  valves. Add -ISO suffix to part number
- 3/4" valve thread is the same as ISO
- · Couplers are available with NPT threads only
- $\bullet$  Non-potable and 1 ½" models are special-order items

#### **SWIVEL HOSE ELLS**



Ideal companion to Weathermatic CH Series Couplers

	***************************************	01. 001.00 00up.010.	
	Specify Model	Fits Coupler	Hose Thread Size
	10SHL	CH75 Series	3/4" Male Hose Thread
m.	11SHL	CH100 Series	3/4" Male Hose Thread
	12SHL	CH100 Series	1" Male Hose Thread

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### PRG-24 PRESSURE HOSE GAUGE ASSEMBLY



- Monitors valve outlet pressure
- Quick connect hose fitting for Schrader valve on Weathermatic PRK-24 (XPR) regulators
- Gauge provides accurate reading of outlet pressure on 0 – 160 psi scale or secondary 0 – 1100 KPA unit scale; 36" (91 cm) long highpressure hose permits easy reading of gauge

#### NO. 910 AUTOMATIC DRAIN VALVE



- Small, compact, spring-loaded valve designed especially to drain sprinkler systems
- Fine screen on intake and drain ends prevents clogging from either direction
- Has a 5 oz. bronze spring that opens valve against a 6' head (1,8 m/hd) of water, insuring drainage in all sections of the system
- Drain will close tight on three pounds line pressure
- Not recommended for pipe lines under continuous pressure. ½" male IPS connection.

#### PRK-24 (XPR) PRESSURE REGULATOR



The PRK-24 (XPR\*) may be used with any of the following valves:

8200CR Series 11000CR Series 21000 Series

\* XPR indicates factory-installed

- The Weathermatic PRK-24 (XPR) pressure regulating module senses inlet pressure and maintains constant outlet pressure regardless of inlet pressure variation
- Maximum inlet pressure: 150 psi (10,3 bar)
- Minimum flow (see valve tables)
- · Maximum flow (see valve tables)
- Minimum pressure differential between inlet and outlet: 10 psi (0,7 bar)
- Regulated pressure range at outlet:  $15-110~{\rm psi}~(\pm 5~{\rm psi})$   $1,0-7,6~{\rm bar}~(\pm 0,35~{\rm bar})$
- · Manual flow and bleed control
- Regulates pressure when valve is operated electrically or manually
- Downstream connection for accurate pressure sensing
- Schrader valve for connecting pressure gauge

### PRE-FILLED VALVE WIRING CONNECTORS

- · Eliminates sealant mess
- · Quick, easy and waterproof
- WC-14 accommodates 10, 12 or 14 gauge wire sizes.
- WC-18 accommodates 16, 18 or 22 gauge wire sizes.





#### NO. 906 & 906L VALVE CAPS



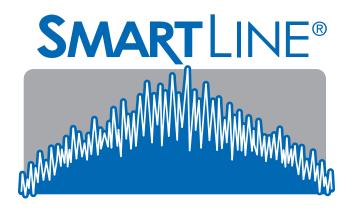
- Provides access to manual valves
- · Brass hinged cover
- Molded high-impact plastic body allows welding to 2" PVC pipe
- 906L has locking cover.
   Key (RLK-1) may be ordered separately.

#### NO. 907 & 907B VALVE KEYS

- Valve Key conveniently operates manual type valve or automatic valves with "cross-handle" flow adjustment
- No. 907 is 33" (83,9 cm); 907B is 60" (152 cm)



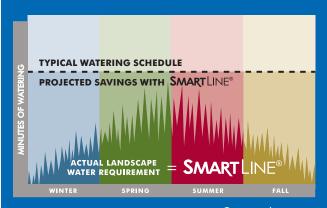
888-4 THE PRO VALVES



Automated, on-site water management provided by the industry's leading controller technology...now within reach of everyone.

#### What SMARTLINE® Does:

SmartLine adjusts watering schedules to match the landscape's varying need for water through the different seasons of the year, unlike a typical watering schedule that never changes.



Benefits of Water Management with SMARTLINE®

#### How SMARTLINE® Works:

SmartLine takes weather readings, like temperature and rainfall, every 8 seconds to develop the optimum watering schedule for the plants and turf. By making 365 annual adjustments,



**Irrigation Adjustments** 

rather than 0-12 adjustments, SmartLine reduces water usage by 20-50%, improves plant health and beauty, eliminates runoff, and puts an end to water worries. Learn more about SmartLine at **www.SMARTLINE.com**.



### **SMART CONTROLS**

### THE SMARTLINE® ELEVEN

**SL800** Consider 11 Reasons why a SmartLine Controller is the Smart Solution!



#### **MODULAR**

4-zone base model expandable to 8 zones using slide-in SLM2 2-zone modules



### MANUAL TEST SETTINGS IN SECONDS

Complete a walk-thru in a fraction of the normal time by running a manual test from 10 sec. - 10 min. in 10 sec. increments



#### **WEATHER BASED WATERING WITH OPTIONAL ON-SITE WEATHER STATION**

SmartLine controllers are really two controllers in one; operate in Standard mode or switch to Auto Adjust mode by simply adding any SLW Series On-Site Weather Station for weather based watering schedules and rain/freeze sensing



(US Patent No. 6,314,340)

SLW10/SLW15

# **SMART**LINE®

#### **REAL TIME CLOCK/CALENDAR** & NON-VOLATILE **PROGRAM MEMORY**

NO BATTERY REQUIRED! On-board memory chip retains time, date and program information even during a power outage

#### **OMIT TIMES/DAYS/DATES**

Automatically comply with local water restrictions; eliminate irrigated water lost to evaporation in the heat of the day: stop irrigation on lawn maintenance days: never water on the date of an annual event (ex: July 4th)

### SEASONAL % ADJUST BY MONTH

A monthly watering budget % can be set up by program to automatically adjust zone run times for seasonal changes

#### **RUNOFF ELIMINATOR**

Eliminate runoff by setting the maximum allowable run time and minimum soak time by program

### MASTER VALVE / PUMP SETTINGS

Achieve hydraulic control with settings for zone-to-zone delays, master valve timing, and master valve On/Off by zone

### BACKTRACK STORED PROGRAM™ FEATURE

Allows contractor to easily store a default program and retrieve the saved program in the event a customer improperly reprograms the SL800

### ON-BOARD MULTI-METER



Displays the electrical current reading of each zone for quick troubleshooting and a proactive approach to maintenance

### BUILT-IN VALVE LOCATOR



Locate hidden valves by simply listening for the audible chatter of the solenoid created by a unique electrical frequency

(US Patent No. 7,406,363)

#### **SL800** The Most Feature Rich, Economical Controller – EVER!



SMART CONTROLS

#### SMARTLINE® CONTROLLER - SL800

#### **MODEL DESCRIPTIONS**

\$L800 4-zone base model, expandable to 8 zones
\$LM12 2-zone module for use in the \$L800

#### **FEATURES**

- 4-zone base model, expandable to 8 zones using slide-in SLM2 2-zone hot-swappable modules (Indoor rated)
- · External transformer with plug and play barrel connector
- Skip circuit and slow blow fuse protection with green/red LED status indicator
- · Large LCD display
- 2 run modes: Standard mode runs user input zone run times; Auto Adjust mode requires SLW Series On-Site Weather Station to calculate weather based run times that override user input zone run times
- Rain/Freeze sensor bypass/active button located on face panel displays sensor status with tri-color LEDs (red indicates sensor is prohibiting irrigation; orange indicates an extended rain delay after weather station rain sensor permits irrigation; green indicates normal operation)
- 4 programs: A, B, C; program D can operate concurrently
- 8 start times per program
- Nonvolatile memory and real time clock/calendar circuit to retain programs as well as correct date and time — with no battery required
- Zone run times settable from 1 min. to 9 hrs. 55 min. with operation countdown displayed in hours, minutes, and seconds (zone run times overridden by weather based calculated values in Auto Adjust mode)
- · Watering day selections of custom days of the week, odd/even, or interval days
- Omit settings: omit time of day window, omit day(s) of week, and omit up to 7 calendar dates
- Seasonal % adjust by program, by month for simple year round water budgeting (monthly percentages overridden in Auto Adjust mode)

#### **ADVANCED FUNCTIONS**

- Fault review displays all faults, including open and shorted zones
- Diagnostic test function using on-board multi-meter displays transformer voltage; milliamp measurement for each zone
- Built-in valve locator function for locating hidden valves by simply listening for the audible chatter of the solenoid created by a unique electrical frequency (U.S. Patent No. 7,406,363)
- Review menu displays accumulated ET deficits by zone (in inches) and corresponding zone run times for the next available watering day
- Review menu displays maximum run time and minimum soak time used during Auto Adjust mode
- Review menu displays temperature readings (daily high/low) for previous 5 days
- Review menu accumulates total run times by zone from the last reset date
- · Review menu provides the ability to clear deficits for all zones
- Rain delay of 1 7 days may be selected (to pause and automatically resume operation)
- SLW weather station extended rain delay programmable from  $0-99~\mathrm{hours}$
- Run/Soak cycles allow setting of maximum run time and minimum soak time by program for use in Standard mode only
- Zone-to-zone delay programmable for 1 min. 3 hrs. to accommodate slow closing valves and recharging of water supply
- Master valve timing sequence with zone valve programmable by "On Delay" (1 sec. - 1 min.; 2 sec. default) and "Off Delay" (1 sec. - 3 min.; 5 sec. default) to allow for line fill and slow closing valves



U.S. Patent Nos. 6.314.340 and 7.406.363

The Most
Feature-Rich,
Economical
Controller EVER!



**SLM2 MODULE** 

SL800 CONTROLLER

- Master valve/pump start operation assignable On/Off by zone
- · Clear program function to selectively delete an individual program
- Clear All function to delete all programs
- Backtrack Stored Program™ feature allows contractor to easily store a default program and retrieve the saved program in the event a customer improperly reprograms the SL800

#### **AUTO ADJUST FEATURES**

- ZIP Code input (5 digit) or Latitude input (±60° from EQUATOR) establish location of site for solar radiation calculation
- Sprinkler type input allows selection for zone sprinkler type (SPRAY, ROTOR, DRIP, BUBBLER) with preset precipitation rate or specific input of the zone precipitation rate (.2 – 3.0" per hour)
- Plant type input allows selection for zone plant type (COOL TURF, WARM TURF, SHRUBS, ANNUALS, TREES, NATIVE) with preset crop factors or specific input of the zone crop factor (10 – 300%)
- Soil type input allows selection for the soil type (CLAY, SAND, LOAM) and slope (0 – 25°) for the purpose of automatically calculating a run/soak period to virtually eliminate run off
- More/Less is settable by zone (-50% to +25%) for the purpose of fine tuning Auto Adjust run times to accommodate factors like shade, wind, and sprinkler inefficiencies

#### MANUAL OPERATION

- Manual test runs each zone with zone run times from  $10\ \mathrm{sec.}-10\ \mathrm{min.}$
- Manual zone operation of a single zone (1 min. to 9 hrs. 55 min.)
- Push button manual start of a program from control panel

#### **OPTIONS**

- SLM2 2-Zone Module
- SLW Series On-Site Weather Stations (see page 34-35)
- SLRC and Sidekick Remote Controls (see page 33)
- Rain Brain Universal Sensors (see page 35)

#### **ELECTRICAL FOR SL800**

Input: 120VAC/60Hz @ 250mA for 3 valves
Output: 28VAC, 720mA maximum

Fuse: 1.0A, slow blow

#### **EXPORT**

E-SL800 (EU Plug) 230VAC/50Hz E-SL800A (Australia plug) 230VAC/50Hz



#### **DIMENSIONS**

7" W x 7 ¾" H x 1 ¾" D 17,8 cm x 19,7 cm x 4,4 cm





### THE SMARTLINE® ELEVEN

SL1600 Consider 11 Reasons why a SmartLine Controller is the Smart Solution!



#### **1** MODULAR

Provide expandability for every job and evolving landscapes with the SL1600 4-zone base model — expandable to 16 zones using slide-in SLM4 modules. For larger jobs, choose models SL1620 or SL1624, with permanently-mounted modules. Push-in wiring makes installation quick and easy!



THE IRRIGATION ASSOCIATION
INTERNATIONAL
IRRIGATION SHOW

2004
Winner

EXHIBITOR
NEW PRODUCT CONTEST
TURF / LANDSCAPE

PACKLIT LCD / REAL TIME
CLOCK / CALENDAR &
NON-VOLATILE PROGRAM
MEMORY

No flashlight required in dark basements and garages. No battery required! On board memory chip retains time, date and program information even during a power outage

### 2 MANUAL TEST SETTINGS IN SECONDS

Complete a walk-thru in a fraction of the normal time by running a manual test from 10 sec. — 10 min. in 10 sec. increments



## WEATHER BASED WATERING WITH OPTIONAL ON-SITE WEATHER STATION

SmartLine controllers are really two controllers in one; operate in Standard mode or switch to Auto Adjust mode by simply adding any SLW Series On-Site Weather Station for weather based watering schedules and rain/freeze sensing.

SLW15 WIRELESS ON-SITE WEATHER STATION

(US Patent No. 6,314,340)



SL1600 SERIES

INDUSTRY

#### 10 OMIT TIMES/DAYS/DATES

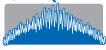
Automatically comply with local water restrictions; eliminate irrigated water lost to evaporation in the heat of the day; stop irrigation on lawn maintenance days; never water on the date of an annual event (ex: July 4th)

### SEASONAL % ADJUST BY MONTH

A monthly watering budget % can be set up by program to automatically adjust zone run times for seasonal changes

DOWNLOAD TECH SPECS AT:

### **SMART**LINE®



#### 7 RUNOFF ELIMINATOR

Eliminate run off by setting the maximum allowable run time and minimum soak time by program

### **8** BACKTRACK STORED PROGRAM™ FEATURE

Allows contractor to easily store a default program and retrieve the saved program in the event a customer improperly reprograms the SL1600

### 4 BUILT-IN VALVE LOCATOR

Locate hidden valves by simply listening for the audible chatter of the solenoid created by a unique electrical frequency

(US Patent No. 7,406,363)

#### ON-BOARD MULTI-METER

Displays the electrical current reading of each zone for quick troubleshooting and a proactive approach to maintenance

### MASTER VALVE / PUMP SETTINGS

Achieve hydraulic control with settings for zone-to-zone delays, master valve timing, and master valve On/Off by zone



888-4 THE PRO

INDUSTRY

**SMART CONTROLS** 

#### SMARTLINE® CONTROLLER - SL1600

#### MODEL DESCRIPTIONS

SI 1600 4-zone base model, expandable to 16 zones SL1620 20-zone model, permanently-mounted modules SL1624 24-zone model, permanently-mounted modules 4-zone module for SL1600 SLM4

#### **FEATURES**

- 4-zone base model, expandable to 16 zones using slide-in SLM4 4-zone hot-swappable modules (Indoor/outdoor rated)
- Internal 120VAC/230VAC transformer with plug and play pre-installed 6<sup>th</sup> line cord (removable for conduit-wired installations)
- Large backlit LCD display
- 2 run modes: Standard mode runs user input zone run times; Auto Adjust mode requires SLW Series On-Site Weather Station to calculate weather based run times that override user input zone run times
- Rain/Freeze sensor bypass/active button located on face panel displays sensor status with tri-color LEDs (red indicates sensor is prohibiting irrigation; orange indicates an extended rain delay after weather station rain sensor permits irrigation; green indicates normal operation)
- 4 programs: A, B, C; program D can operate concurrently
- 8 start times per program
- Nonvolatile memory and real time clock/calendar circuit to retain programs as well as correct date and time — with no battery required
- Zone run times settable from 1 min. to 9 hrs. 55 min. with operation countdown displayed in hours, minutes, and seconds (zone run times overridden by weather based calculated values in Auto Adjust mode)
- · Watering day selections of custom days of the week, odd/even, or interval days
- Omit settings: omit time of day window, omit day(s) of week, and omit up to 7 calendar dates
- Seasonal % adjust by program, by month for simple year round water budgeting (monthly percentages overridden in Auto Adjust mode)

#### **ADVANCED FUNCTIONS**

- Fault review displays all faults, including open and shorted zones
- Diagnostic test function using on-board multi-meter displays transformer voltage; milliamp measurement for each zone
- Built-in valve locator function for locating hidden valves by simply listening for the audible chatter of the solenoid created by a unique electrical frequency (U.S. Patent No. 7,406,363)
- Review menu displays accumulated ET deficits by zone (in inches) and corresponding zone run times for the next available watering day
- Review menu displays maximum run time and minimum soak time used during Auto Adjust mode
- Review menu displays temperature readings (daily high/low) for previous 5 days
- Review menu accumulates total run times by zone from the last reset date
- · Review menu provides the ability to clear deficits for all zones
- Rain delay of 1-7 days may be selected (to pause and automatically resume operation)
- SLW weather station extended rain delay programmable from 0-99 hours
- Run/Soak cycles allow setting of maximum run time and minimum soak time by program for use in Standard mode only
- Zone-to-zone delay programmable for 1 min. 3 hrs. to accommodate slow closing valves and recharging of water supply



**SLM4 MODULE** 

- Master valve timing sequence with zone valve programmable by "On Delay" (1 sec. -1 min.; 2 sec. default) and "Off Delay" (1 sec. -3 min.; 5 sec. default) to allow for line fill and slow closing valves
- Master valve/pump start operation assignable On/Off by zone
- Clear program function to selectively delete an individual program
- · Clear All function to delete all programs
- Backtrack Stored Program<sup>™</sup> feature allows contractor to easily store a default program and retrieve the saved program in the event a customer improperly reprograms the SL1600

#### **AUTO ADJUST FEATURES**

- ZIP Code input (5 digit) or Latitude input ( $\pm 60^{\circ}$  from EQUATOR) establish location of site for solar radiation calculation
- Sprinkler type input allows selection for zone sprinkler type (SPRAY, ROTOR, DRIP, BUBBLER) with preset precipitation rate or specific input of the zone precipitation rate (.2 - 3.0" per hour)
- Plant type input allows selection for zone plant type (COOL TURF, WARM) TURF, SHRUBS, ANNUALS, TREES, NATIVE) with preset crop factors or specific input of the zone crop factor (10 - 300%)
- Soil type input allows selection for the soil type (CLAY, SAND, LOAM) and slope  $(0-25^{\circ})$  for the purpose of automatically calculating a run/soak period to virtually eliminate run off
- More/Less is settable by zone (-50% to +25%) for the purpose of fine tuning Auto Adjust run times to accommodate factors like shade, wind, and sprinkler inefficiencies

#### MANUAL OPERATION

- Manual test runs each zone with zone run times from 10 sec. 10 min.
- Manual zone operation of a single zone (1 min. to 9 hrs. 55 min.)
- Push button manual start of a program from control panel

#### **OPTIONS**

- SLM4 4-Zone Module · Pedestal (see page 33)
- SLW Series On-Site Weather Stations (see page 34-35)
- SLRC and Sidekick Remote Controls (see page 33)
- Rain Brain Universal Sensors (see page 35)

#### **ELECTRICAL FOR SL1600**

Input: 120VAC/60Hz @ 400mA for 3 valves Output: 28VAC, 1.0A maximum

Fuse: 1.0A. slow blow

#### **EXPORT**

E-SL1600 (EU Plug) 230VAC/50Hz E-SL1600A (Australia plug) 230VAC/50Hz



9 1/8" W x 10 1/2" H x 4" D

23,2 cm x 25,7 cm x 10,2 cm



#### SMARTLINE® CONTROLLER - SL4800

U.S. Patent Numbers 6,314,340 and 7,406,363

#### **MODEL DESCRIPTIONS**

SL4800 12-zone base model, expandable to 48 zones SLM12 12-zone module for SL4800

#### **FEATURES**

- 12-zone base model, expandable to 48 zones using SLM12 hot-swappable modules (Indoor/Outdoor rated)
- Internal transformer with commercial terminal block, On/Off power switch and LED status indicator
- Large backlit LCD display
- 2 run modes: Standard mode runs user input zone run times; Auto Adjust mode requires SLW Series On-Site Weather Station to calculate weather based run times
- Rain/Freeze sensor bypass/active button displays sensor status with tricolor LEDs (red indicates sensor is prohibiting irrigation; orange indicates an extended rain delay; green indicates normal operation)
- 4 programs: A, B, C; program D can operate concurrently
- · 8 start times per program
- Nonvolatile memory and real time clock/calendar to retain programs and current date and time — no battery required
- Zone run times from 1 min. to 9 hrs. 55 min. with operation countdown displayed in hours, minutes, and seconds
- Watering day selections of custom days of the week, odd/even, or interval days (1 – 30 days)
- Omit settings: omit time of day window, omit day(s) of week, and omit up to 7 calendar dates
- Monthly % adjust by program, for simple year round water budgeting

#### **ADVANCED FUNCTIONS**

- Fault review displays all faults, including open and shorted zones
- On-board multi-meter displays transformer voltage; milliamp measurement for each zone
- Built-in valve locator chatters the solenoids (U.S. Patent No. 7,406,363)
- · Review menu displays ET deficits by zone, and corresponding zone run times
- · Review menu displays maximum run time and minimum soak times
- Review menu displays temperature readings (daily high/low) for previous 5 days
- · Review menu accumulates total run times by zone
- ullet Programmable rain delay of 1-7 days
- SLW Weather Station extended rain delay programmable from 0-99 hours
- Run/Soak cycles allow setting of maximum run time and minimum soak time by program for use in Standard mode only
- Programmable zone-to-zone delay 1 min. 3 hrs.
- Programmable master valve timing sequence with "On Delay" (1 sec. -1 min.; 2 sec. default) and "Off Delay" (1 sec. -3 min.; 5 sec. default) to allow for line fill and slow-closing valves
- Master valve/pump start operation assignable On/Off by zone
- · Clear program function to selectively delete an individual program
- Clear all function to delete all programs
- Backtrack stored program feature allows contractor to easily store a default program and retrieve the saved program in the event a customer improperly reprograms the SL4800



SLM12 MODULE

#### **AUTO ADJUST FEATURES**

- ZIP Code input (5 digit) or Latitude input (±60° from EQUATOR) establish location of site for solar radiation calculation
- Sprinkler type input allows selection for zone sprinkler type (SPRAY, ROTOR, DRIP, BUBBLER) with preset precipitation rate or specific input of the zone precipitation rate (.2 – 3.0" per hour)
- Plant type input allows selection for zone plant type (COOL TURF, WARM TURF, SHRUBS, ANNUALS, TREES, NATIVE) with preset crop factors or specific input of the zone crop factor (10 – 300%)
- Soil type input allows selection for the soil type (CLAY, SAND, LOAM) and slope (0 – 25°) for the purpose of automatically calculating a run/soak period to virtually eliminate run off
- More/Less is settable by zone (-50% to +25%) for the purpose of fine tuning Auto Adjust run times to accommodate factors like shade, wind, and sprinkler inefficiencies

#### **MANUAL OPERATION**

- Manual test runs each zone with zone run times from 10 sec. up to 10 min.
- Manual zone operation of a single zone (1 min. to 9 hrs. 55 min.)
- Push button manual start of a program from control panel

#### **OPTIONS**

• SLM12 12-zone Module

www.weathermatic.com

- SLW Series On-Site Weather Stations (see page 34-35)
- SLRC and Sidekick Remote Controls (see page 33)
- Rain Brain Universal Sensors (see page 35)
- Pedestal (see page 33)

#### **ELECTRICAL FOR SL4800**

Input: 120VAC/60Hz @ 400mA for 5 valves

Output: 28VAC, 1.2A maximum Fuse: 1.5A, slow blow



#### **DIMENSIONS**

E-SL4800 230VAC/50Hz 15" W x 16 ½" H x 5 7/46" D 38.1 cm x 41.9 cm x 13.8 cm



888-4 THE PRO

**SMART CONTROLS** 

SLDEC4 VALVE DECODER



**SLM48DM 2-WIRE DECODER MODULE** 

### SMARTWIRE™ SLM48DM - DECODER MODULE FOR 2-WIRE SYSTEMS

SmartWire™ is the industry's first control system to truly be a Smart controller and a 2-wire controller. SmartWire delivers all the water savings advantages of weather based watering in combination with the cost savings for a 2-wire system. SmartWire is the industry's first economical 2-wire system at less than half the price of competing products, and is cost effective for commercial jobs sized 18 zones or larger. SmartWire provides a reduction in material (copper wire) and labor costs; simplicity of wiring, programming and troubleshooting; and ease of system expansion when adding zones.

#### **HOW IT WORKS**

A SmartWire SLDEC valve decoder is wired to each valve. Each decoder has a programmable address (typically the zone number), which identifies it to the SmartWire SLM48DM 2-wire decoder module installed in a SmartLine® SL1600 controller. The SLM48DM 2-wire decoder module broadcasts a command to activate a certain address or zone. All decoders on a 2-wire path "decode" the message, but only the appropriate decoder responds and turns the attached valve on or off. The decoder reports back to the decoder module with a status message of positive operation or an error code.

#### **FEATURES**

- Converts the SmartLine® SL1600 Controller to a 2-wire system for a maximum of 48 zones plus master valve
- Hot-swappable installation
- Connections for up to 3 different 2-wire paths for maximum installation flexibility
- Programs and operates SmartWire<sup>™</sup> SLDEC Series decoders
- LED display and status lights for programming, operation status, and troubleshooting with error codes

#### SMARTWIRE" SLDEC -Valve decoders

#### **FEATURES**

- Decodes signals from SLM48DM to open and close valves
- Input voltage 24 28VAC from 2-wire path
- · Shock resistant
- · Surge protection



- Freeze/heat resistant (-20° to 60°C)
- 14 gauge PVC-coated connecting wires
- Sealed electrical components for protection from water and dirt
- Operates valves to a maximum of 100' (30m) from decoder
- Diagnoses and reports failed solenoids to the SLM48DM
- Auto shutdown if communication with SLM48DM is lost

#### SMARTWIRE™ DECODER OPTIONS

SLDEC1 for 1-valve operation
SLDEC2 for 2-valve operation
SLDEC4 for 4-valve operation



INDUSTRY

The normal 1-year SmartWire warranty is extended to 3 years including full lightning coverage on systems using SLWIRE and SLGDT lightning arrestors with proper grounding. All warranties are void on systems not using SLGDT lightning arrestors with proper grounding.

#### SMARTWIRE™ SLGDT - LIGHTNING ARRESTOR FOR 2-WIRE SYSTEMS



 Provides maximum lightning protection for 2-wire paths. Recommended for use on all SmartWire™ systems

#### SMARTWIRE™ SLWIRE

• 2-conductor, jacketed, UL/UF approved for direct burial

Sunlight resistant

**SLWIRE142-1000** 14 gauge, 1000' **SLWIRE142-2500** 14 gauge, 2500' **SLWIRE122-1000** 12 gauge, 1000'

www.weathermatic.com

#### SLCAM - CLAMP-ON AMP METER

• Ideal for convenient and fast troubleshooting on 2-wire paths



### **SMART CONTROLS**



### **ALTERNATIVE IRRIGATIO**

#### Water, Power, and Wire Savings

The SmartLine Solar irrigation control system features the industry's first hybrid solar to AC power supply, allowing the SmartLine weather based irrigation control system to operate in locations with no power. SmartLine Solar uses proven SmartLine controllers and industry standard 24VAC valves for greatly enhanced operational life, reduced equipment cost, and improved performance and reliability. For the first time ever, water conserving

ET technology is available and

affordable for every type of application without power: street medians, new construction sites, golf courses, nurseries, farms and other remote sites. By combining water savings and power savings with available SmartWire 2-Wire technology, SmartLine Solar equals: Less Water. Less Wire. Less Power. Less Money. Because in the new world of irrigation: "Less is More!"



#### **MODEL DESCRIPTIONS**

SLSOLAR12 SLSOLAR24

SmartLine Solar System - 12 zones SmartLine Solar System - 24 zones **SLSOLARSMARTWIRE48** SmartLine Solar 2-Wire System - 48 zones

#### Cost and **Time Savings**

The equipment cost for SmartLine Solar is substantially lower in many cases than the cost of dropping a new power feed, which can run over \$15,000 on a landscape median and create major project delays. Plus, SmartLine Solar has no recurring fees, as required with a power meter, and off-site ET systems so it saves up to \$100 per month. By combining initial installation savings with no recurring

> fees and no delays, SmartLine Solar delivers an excellent return on investment and on-time job completion.

#### SMARTLINE® Solar

#### **FEATURES**

- Converts SmartLine to a totally "portable" water management system by using proven solar technology
- SmartLine is a SWAT tested ET system: Smart Irrigation, Smart Power
- Green power source using 100% renewable energy
- · Easy installation for both Conventional and 2-Wire systems
- SmartLine Solar uses industry standard 24VAC valves, which outperform debris-prone latching solenoids required with battery operated systems
- Patented: System Diagnostics included Volt meter, Amp meter and Valve Locator
- · LCD display indicates battery and solar power condition
- Dual deep cycle batteries provide up to 7 days of operation with no solar charge
- State of the art Solar Charge Technology (SCT) prolongs battery life and protects batteries from over charge and assures a full charge
- Using standard AC power components makes for easy conversion from solar to grid power and allows early stage construction of landscape in new construction projects

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**SMART CONTROLS** 

#### SMARTLINE® SLRC WIRELESS HANDHELD REMOTE CONTROL

#### **FEATURES**

- Handheld remote control for wireless zone operation of any SmartLine® SL800, SL1600 Series or SL4800 controller — requires controller firmware version 1.08 or later and SLHUB-RF wireless receiver hub (included in remote kit)
- Operates on a bi-directional, spread spectrum 2.4 GHz frequency for superior range and reliability
- 600' line of sight operation
- LCD provides zone number, RF signal indication, and an hourglass icon for zone run time
- · Ergonomic, moisture resistant housing
- Permits zone selection and individual zone On/Off control
- Optional contractor SmartLink™ for external SLHUB-RF receiver connection on outside of building using the SLRC-ADAPTER
- Optional protective belt clip for convenient access to the SLRC remote

#### **ELECTRICAL**

**MODELS** 

2 AAA batteries included



**SLRC-KIT** Includes SLRC handheld remote

and SLHUB-RF wireless receiver hub

**SLRC-HH** Handheld remote only

SLRC-CLIP Protective belt clip for carrying the SLRC remote

SLHUB-RF Wireless receiver hub for communication with the handheld remote (also used for communication with the

SLW15 wireless weather station)

SLRC-LINK SmartLink includes 25' telephone line and outdoor connec-

tion port for use with the SLRC-ADAPTER and SLHUB-RF

SLRC-ADAPTER Adapter cradle to connect the SLHUB-RF wireless receiver

hub to the SLRC-LINK outdoor connection port

#### SMARTLINE® SIDEKICK

The SideKick receiver is the ideal addition to your SmartLine® controller. Easy installation and simple operation make it the professional contractors' ultimate labor saving solution for wireless controller operation. The receiver allows the operator to access controller operation at any time without having to approach the controller. The SideKick receiver for SmartLine is designed to be operated by the SideKick remote control transmitter. The SideKick transmitter is a completely portable professional grade wireless transmitter. Backed by a 3-year limited warranty, TRC Irrigation Remotes products have been providing irrigation professionals with years of trouble-free service.

#### **FEATURES**

- Ultra-simple plug and play installation just connect the receiver to SmartLine by plugging into the standard phone jack already included on all SmartLine controllers
- Remote system access simply run the standard phone line from SmartLine to any exterior wall for remote access
- Multi-mile range proprietary PDTFM transmission capable of 5 mile range (2 mile average range based on local condition and antenna selection/location)
- Automatic safety shutdown automatically turns off stations after 20 minutes
- No station limit SideKick will operate as many zones as programmed in SmartLine
- Illuminated green power on LED indicator
- · Three year warranty
- Available exclusively through authorized TRC distributors.
   Contact TRC at 1-800-275-8558 or www.irrigationremotes.com.



### SLPED SMARTLINE® CONTROLLER PEDESTAL

- Economy pedestal for SL1600 Series and SL4800 controllers
- Stainless steel construction with brushed finish
- · Pedestal mount model
- Cam style keylock
- · Weather-resistant
- Specify SLPED-1600 for the SL1600 series SLPED-4800 for the SL4800
- Dimensions 10 ½" W x 25" H x 3 ½" D (26,67 cm x 63,50 cm x 8,89 cm)

### SLPED-ENC SMARTLINE® PEDESTAL ENCLOSURE

- Fits all SL1600 Series and SL4800 controllers
- 16 gauge stainless steel construction with brushed finish
- · Pedestal mount model
- Filtered louvers for ventilation
- · Cam style keylock
- Weather-resistant
- NEMA TYPE 3R rated with SmartLine controller installed
- Specify SLPED-ENC
- Dimensions 17 ½" W x 34 ¼" H x 12 ½" D (44,45 cm x 87,00 cm x 31,75 cm)

### SLWMSS SMARTLINE® WALL MOUNT ENCLOSURE

- Wall mount enclosure for SL1600 Series and SL4800 controllers
- Stainless steel construction with brushed finish
- · Cam style keylock
- Weather-resistant
- Specify:

**SLWMSS-1600** for the SL1600 series

**SLWMSS-4800** for the SL4800

 Dimensions 19 ½" W x 19 ½" H x 9" D (49,53 cm x 49,53 cm x 22,86 cm)







### **SMART CONTROLS**





### **SLW15 WIRELESS ON-SITE WEATHER STATION**

5 Reasons why the SLW15 is the Smart Solution!

INDUSTRY

#### ■ TRULY WIRELESS FOR SPEED

Finally, a wireless device without wires! No time is wasted mounting and installing complex wiring for an external receiver. SLW15 offers a plug-



n-play wireless receiver hub (SLHUB-RF) that mounts directly into the controller in an instant. It's truly wireless — making it the fastest to install wireless product on the market!

### TWO-WAY COMMUNICATION FOR RELIABILITY





True two-way communication delivers the ultimate in wireless performance and reliability. SLW15 weather station and its controller-mounted communication hub are able to talk back and forth so they know if a message is not received

and continue communication until a message is confirmed, even during a power outage. You can also confirm communication from the SLW15 during installation right at the weather station, without having to return to the controller (blinking green LED when in range). Plus, SmartLine controller diagnostics alert you if there is ever an issue. True two-way communication delivers reliability and ultra-quick installation!

### 3 10-YEAR BATTERY LIFE FOR PERFORMANCE

SLW15 is built to last. SLW15 uses 2 AA lithium batteries with a 15-year shelf life to ensure 10-years of reliable operation without ever changing



the battery. The elimination of a single service call alone justifies the upgrade from a wireless sensor with poor battery life to the SLW15 weather station.

#### **5** PRE-PAIRED FOR SECURITY PROTECTION



SLW15 weather station and communication hub are paired, or synched, together in a one-to-one relationship at the factory using a proprietary "1 in a billion" frequency selector. Pre-pairing at the factory saves time during installation, and it ensures reliable SLW15 operation without interference from other wireless devices, including other SLW15s,

WiFi networks, and cell phones.

#### 4 ET "EVERY TIME" RANGE FOR FLEXIBILITY INDUSTRY

SLW15 consistently delivers smart evapotranspiration watering schedules where wiring is impractical and satellites/cell towers cannot reliably reach. With a range of 600 feet line of site, SLW15 is the ultimate tool for retrofitting any of the 30 million+ existing irrigated properties wanting to: save 20 – 50% in water usage, grow healthier plants, virtually eliminate run off, and put an end to watering worries.







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SMART CONTROLS

## SMARTLINE® SLW SERIES ON-SITE WEATHER STATIONS U.S. Patent Nos. 6,314,340

#### **MODEL DESCRIPTIONS**

SLW10 On-Site Weather Station
SLW15 Wireless On-Site Weather Station
SLW20 Commercial On-Site Weather Station

#### **FEATURES**

- Microprocessor records and processes weather data for use in establishing Auto Adjust run times on any SmartLine<sup>®</sup> controller
- Rain shut-off settable from  $\frac{1}{8} 1$ " (3 25mm)
- Extended rain delay adds time to rain events before deficits begin to accumulate
- Rain events decrement current deficits in the SmartLine® controller
- Freeze shut-off activated at 37°F (3.0°C)
- Protective white solar shields allow normal air flow while protecting sensor from direct sunlight for accurate temperature readings and eliminating the need for regular cleaning and maintenance of the weather station
- Unit can be mounted in sunlight or shade and in close proximity to the roofline
- Maximum run distance for shielded cable wired units is 3000' (914m)
- Maximum wireless distance from controller to weather station is 600' (182m). SLHUB-RF wireless hub included with SLW15. SmartLine<sup>®</sup> controller firmware version 1.08 or later required.
- On-board diagnostics indicate battery and communication status
- Remote battery strength measurement from the SmartLine® controller

 SLW10 / SLW15: 5" (12.7cm) adjustable arm plastic bracket for gutter thumb-screw or wall mount; SLW20: Heavy-duty coated steel mounting bracket

 SLW15: Operates on a bi-directional, spread spectrum 2.4 GHz frequency for superior range and reliability

#### **OPTIONS**

**SLC100** 100' shielded cable extension kit with waterproof connector

**SLC1000** 1000' shielded cable with 10 waterproof connectors

#### **ELECTRICAL SPECIFICATIONS**

- · 9V alkaline battery
- 2 AA lithium batteries in SLW15

#### **DIMENSIONS**

SLW10 / SLW15:

 $5 \frac{3}{4}$ " H x  $3 \frac{3}{4}$ " D (14.6cm x 9.5cm) 5" (12.7cm) angled mounting bracket

#### SLW20

9 ½" H x 6" D (24cm x 15.3cm) 17" (43cm) angled mounting bracket



## RainBrain™

### **UNIVERSAL SENSORS**

#### **MODEL DESCRIPTIONS**

**420GLS** Rain sensor **420LS** Rain/freeze sensor

#### **420GLS**

- Adjustable to the most popular rainfall settings: 1/8", 1/4", 1/2" and 3/4"
- Tough UV-stabilized plastic housing, never yellows, lasts for years
- No-rust extruded aluminum bracket – mounts anywhere
- · UL-listed watertight switch provides years of reliable service
- · Works with virtually all 24 VAC controllers

#### 420LS

- Extra-long 7" aluminum bracket
- · Factory-set freeze thermostat
- · Sturdy all-weather construction
- · Adjustable sensitivity to rainfall
- · Each unit factory tested
- · Replaceable absorptive disks
- · Works with virtually all 24 VAC controllers
- Meets all sensor ordinance requirements



Sensible sensors.

DOWNLOAD TECH SPECS AT







## WETWARE™ FOR WINDOWS

...Simply Powerful Software for the Professional Irrigation Manager

Keeping it simple is the design cornerstone of Wetware™. Based on a graphical user interface, Wetware™ is logically designed to be user-friendly and easy to learn. Water managers can immediately be effective, without the need to attend costly training classes or software engineering school.

#### **FEATURES**

- Graphical maps and icons lay it all before you for visualizing and understanding remote operations
- Uniquely provides choices for command and control of both the VAC and SL model controls
- Remote diagnostics to identify and isolate electrical hydraulic and programming problems for immediate feedback about conditions in the field
- Global or selective commands for complete override control of selected controllers, sites or systems
- Scheduled updates and commands for unattended management allow maximum time efficiency
- Commands can be sent directly from a map to the selected control for precise, rapid response
- Distress calls automatically notify Wetware  $^{\scriptscriptstyle\mathsf{TM}}$  of problems encountered in the field
- Flexible communication choices include radio, telephone modem, cellular, ethernet, hardwire and more
- Multi-mode communications allow for mixing communications options to bring costs down
- Flow monitoring provides complete hydraulic control and immediate shutdown for problems
- Copy and Paste features provide the quickest way to get your program changes to the field
- Itemized reports provide the ability to archive data and schedule work orders for your crew
- Software designed to be compatible with all Windows-based operating systems, including 95, 98, ME, 2000, NT, XP and XP Professional



SPECIFY VWET-W
Wetware™ for Windows.

## CENTRAL COMMUNICATION OPTIONS SPECIFY

Digital wireless radio modem	VRFS-D-B
Trunked radio modem for third-party repeater systems	VRFS-K-B
Analog telephone modem for PC	VTEL-B
Ethernet modem	VLAN-B
Two wire communications path	VHDW
16-channel twisted pair converter hub	VHUB
Base station antenna	155-305
Weather station	STE-D9



DOWNLOAD TECH SPECS AT: www.weathermatic.com



#### SL CONTROLLER - SYSTEM LINK

#### **FEATURES**

- Four program master controller or independent station programming with flow sensing capability for complete water management
- Operates as a stand-alone controller or links to a personal computer utilizing Weathermatic's Wetware™ for Windows
- Flow monitoring provides regulation and shutdown for out-of-tolerance flows
- · Heavy duty input and output surge protection
- · Four start times and four soak cycles per program
- Selectable stacking or concurrent operation for each program
- Pump Start or Master Valve assignable per station
- Versatile watering schedules: daily, select days (14-day calendar), odd or even days, specified dates for injection of fertilizer, or interval 1 — 365 days
- $1 \min. -24 \text{ hr. station timing}$
- Seasonal timing adjustment by program 5-300%
- Global delay between station starts, adjustable for 1 min. 1 hr.
- · Safety delay for master valve/pump shutdown
- · Sensor to detect "short" or "open" circuits
- Rain sensor switch input
- · Daily "no water" window
- · Special Events to omit watering by calendar date
- Manual program or station start
- Manual test program, 1-10 minutes
- Security code, two levels
- Self diagnostics
- · Automatic daylight savings time and leap year adjustment
- Non-volatile memory and real-time clock retain all programming and keep date and time during power loss
- · Easy-to-read backlit LCD for clear viewing

#### INTERNATIONAL FEATURES

- Software switch for 12 or 24-hour clock and American or International dates
- Flow display in gallons or m<sup>3</sup>/hr

#### HOUSING

- Urethane-coated heavy gauge steel with keylock
- · Wall or pedestal mount with rainproof seal
- · Heavy-duty terminal strips and large work area

#### **OPTIONS**

- · Pedestal: Specify MRMP
- Field communication package may be hardwire, simplex radio, trunking radio, telelphone modem or ethernet modem

#### **ELECTRICAL REQUIREMENTS**

Output: 26VAC, 2.0A inrush and 1.25A holding; operates up to five Weathermatic valves simultaneously

UL & CSA Approved

#### **12 TO 42 STATION MODELS**

120VAC/60HZ

SL12 12 Stations

SL18 18 Stations

SL24 24 Stations

SL30 30 Stations SL36 36 Stations

SL42 42 Stations

#### **EXPORT MODEL**

230VAC/50HZ

E-SLXX

#### **DIMENSIONS**

11" W x 17" H x 8 ½" D (28 cm x 43.2 cm x 21.6 cm)



## **MRMP PEDESTAL**



- For SL System Link Series
- Construction: heavy-gauge welded steel
- Finish: corrosion-resistant polyester
  coating
- Functional design: low-profile height blends with landscape aesthetics, permits installation or maintenance technician to work sitting down; functional design makes wiring easy in a space 10" W x 24" H x 7" D (25 cm x 61 cm x 18 cm)
- Vandal-resistant 7" (17,8 cm) wide front access panel is locked in place by the controller housing door
- Pedestal fastens to four bolts (not included); housing attachments are included
- · Order pedestal separately
- Specify MRMP



#### VAC - VALCON ADVANCED CONTROLLER

#### **FEATURES**

- Stand-alone or satellite control without modification or replacement of the panel
- Flow, rain, wind and moisture sensor capabilities
- · Compatible with all industry flow sensors
- Modular expansion up to 48 zones without modification or replacement of the panel
- 10 independent programs and 10 Soak Cycle starts per program
- Flexible station timing from 1 min. 18 hrs.
- Flexible schedules for every day, odd or even days, select days, or skip days
- Water budgeting from 1 − 300%
- Walk-through program for all stations, select stations or by program
- Rain Days inhibit operation for 1-90 days
- · Automatically learns normal flows by station
- Station shuts down if flows exceed normal; system shuts down if two consecutive stations exceed limits for stuck valves or broken mains
- Accumulates total flows to date, by station, controller and site
- · Access code protection
- Special Events feature inhibits valve operation in advance; up to 10 events per year
- Non-volatile memory and real time clock keep correct time and programs during power loss
- Electrical diagnostics monitors circuit breaker and records shorted stations
- · Automatic daylight savings time change
- Station outputs can be used to control irrigation, pumps, lighting, fountains, gates, etc.

#### 12 TO 48 STATION MODELS

120VAC/60HZ

VAC-12-WM

VAC-18-WM

VAC-24-WM

VAC-30-WM

VAC-36-WM

VAC-48-WM

#### **EXPORT MODEL**

230VAC/50HZ

E-VAC-XX-WM

#### **DIMENSIONS**

17" W x 21" H x 7" D

(43,2 cm x 53,3 cm x 17,8 cm)



#### HOUSING

Heavy-duty gauge steel with corrosion-resistant coating and removable access panel

#### **ELECTRICAL SPECIFICATIONS**

Input: 120VAC/60 Hz @ 1.0A for 5 valves
Input Voltage: 100VAC minimum; 140VAC maximum

**Output:** 28VAC, 2.5A (60/70 VA)

## VACP PEDESTAL

- For VAC Controllers
- Heavy gauge steel with corrosion resistant polyester coating; large access door for wiring
- Hardware included
- Dimensions: 16" W x 20" H x 6" D (40,6 cm x 50,8 cm x 15,2 cm)
- . Specify VACP



#### CONTROL OPTIONS SPECIFY

Pump relay output module	VPSM
Flow sensing relay output module	VPSM-F
12-station module upgrade kit	VOPM
Interface for rain, wind, moisture inputs	VSIM
20" coated steel locking pedestal	VACP





888-4 THE PRO

**SMART CONTROLS** 

VALCON

## STE-DS PROFESSIONAL WEATHER STATION

The STE-DS is specifically designed to operate with Wetware™. The system provides graphical data for wind, temperature, humidity and ET to enable the irrigation manager to make intelligent water management decisions.



#### **FEATURES**

- · Wetware software link
- · Sensor mounting arm
- · Rain collector shelf
- · System shelter
- · Solar radiation sensor
- Temperature/humidity sensor
- ET link and data logger
- · Industrial-grade anemometer
- Grounding kit

## **VTEL PHONE MODEMS**



Analog telephone modem for data communications. Dedicated phone line required.

#### **SPECIFY**

For base station	VTEL-B
For VAC Controller	VTEL-C
For SL Controller	VTEL-C-SL

## **VRAS ANTENNA**



Vandal-resistant antenna mounts on VAC or SL controller housing. Hardware included. Use with simplex or trunking radios.

## **FS220B FLOW SENSOR**



- · Bronze housing
- Insertion type spinning impeller
- Maximum line pressure: 400 psi (27,6 bar)
- Operates in a flow range of 1 fps (0,3 mps) to 30 fps (9,1 mps)
- Includes 2" NPT adapter for use with weld-on fitting or pipe saddle on pipes 3" and above

## VHDW HARDWIRE SIGNAL CONVERTER



Two wire communication path to connect up to 32 controllers to the PC or another communication device (phone modem or radio).

## VRFS SIMPLEX RADIOS

Digital wireless radio modem for point-to-point communication within a 2.5 mile radius. 450-470 MHz frequency range.



#### **SPECIFY**

For base station	VRFS-D-B
For VAC Controller	VRFS-D
For SL Controller	VRFS-D-SL

## **VLAN ETHERNET MODEMS**

Ethernet modem for data communications over 10/100 mbs networks

#### **SPECIFY**

For base station	VLAN-B
For VAC Controller	VLAN-C
For SL Controller	VLAN-C-SL

## **VRFS TRUNKING RADIOS**

Trunked radio modem for third party repeater systems. Distance is dependent on infrastructure. 450 - 470 MHz frequency range.

#### **SPECIFY**



For base station	VRFS-K-B
For VAC Controller	VRFS-K
For SL Controller	VRFS-K-SL

## VRSP-S SURGE ARRESTOR

Provides surge protection for VRAS antennas. Use with SL or VAC.

## 155-305 BASE ANTENNA

Simplex base antenna for use with VRFS-D-B radio. 3dB fiberglass for use with  $450-470\,\mathrm{MHz}$  frequency range.







- SMARTINLINE™ Drip Tubing
- Pressure Compensating Emitters
- Micro Mate™ Sprays and Bubblers
- Stakes
- Risers
- Filters
- Smart Control Zones
- Pressure Regulators
- Fittings
- Tubing
- Low Volume Accessories



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## SMARTINLINE™ PRESSURE COMPENSATING DRIP TUBING

#### **FEATURES**

- Pressure compensating for uniform, even watering over a range of 15-60 psi operating pressures
- · Wide flow path and circular pool for extended life in subsurface applications
- Tubing material: highest quality, UV stabilized linear low-density polyethylene from Dow Chemical

Fingerprint<sup>®</sup>

- · Continuous self-flushing emitter design
- Two emitter inlet filters to resist internal clogging
- Dual emitter outlets double resistance to clogging and provide a redundant flow path
- Inline spacing of 12", 18" or 24"
- Three coil lengths: 100', 500' or 1000'

1- year warranty

- Meets or exceeds ISO standard 9261
- · Non-potable model may be specified by adding -NP suffix.



Drippe	ripper Spacing (in) 12"		18"		24"			
Dripper Flow Rate (gph)		0.6	0.6 0.9 0.6 0.9		0.6	0.9		
			MA	MUMIX	LATERA	L DISTA	NCE (F	EET)
	ar.	15	233	175	322	247	405	308
	pressure <sub>psi</sub>	25	312	238	438	335	553	423
17 mm		35	365	279	514	394	649	497
	Inlet	45	407	311	574	439	725	555

Drippe	er Spacing (m) 0,31		0,46		0,61			
Dripper Flow Rate (lph)		2,3	3,4	1 2,3 3,4		2,3	3,4	
			MAXI	MUM L	ATERAL	DISTAN	ICE (ME	TERS)
	ıre	103	71,0	53,3	98,1	75,3	123,4	93,9
	pressure <sub>psi</sub>	172	95,1	72,5	133,5	102,1	168,6	128,9
17 mm	et pr	241	111,3	85,0	156,7	120,1	197,8	151,5
	Inlet	310	124,1	94,8	175,0	133,8	221,0	169,2

## SMARTINLINE™ PRESSURE COMPENSATING EMITTER

## **OPERATING RANGE**

• Flow rates: 0.6 or 0.9 gph

• Pressure compensating: range 10-50 psi

Zone filtration: 120 mesh

		STANDARD			METRIC		
	Model	Flow gph	Spacing in	Coil Length ft	Flow lph	Spacing m	Coil Length m
	SLV-SIL17-6-12-1000			1000'			304,8
	SLV-SIL17-6-12-500	0.6	12"	500'	2,3	0,31	152,4
	SLV-SIL17-6-12-100			100'			30,5
	SLV-SIL17-6-18-1000			1000'			304,8
	SLV-SIL17-6-18-500	0.6	18"	500'	2,3	0,46	152,4
	SLV-SIL17-6-18-100			100'			30,5
	SLV-SIL17-6-24-1000			1000'			304,8
	SLV-SIL17-6-24-500	0.6	24"	500'	2,3	0,61	152,4
	SLV-SIL17-6-24-100			100'			30,5
11	SLV-SIL17-9-12-1000			1000'			304,8
	SLV-SIL17-9-12-500	0.9	12"	500'	3,4	0,31	152,4
	SLV-SIL17-9-12-100			100'			30,5
	SLV-SIL17-9-18-1000			1000'			304,8
	SLV-SIL17-9-18-500	0.9	18"	500'	3,4	0,46	152,4
	SLV-SIL17-9-18-100			100'			30,5
	SLV-SIL17-9-24-1000			1000'			304,8
	SLV-SIL17-9-24-500	0.9	24"	500'	3,4	0,61	152,4
	SLV-SIL17-9-24-100			100'			30,5

## 17MM POLYETHYLENE DISTRIBUTION TUBING

#### **FEATURES**

- Standardizes fitting and tubing inventories and simplifies installation
- · Attractive brown color blends with the landscape
- Compatible with SmartInline 17 mm barbed insert fittings

Model	Coil Length (feet)
SLV-PE-17MM-100	100'
SLV-PE-17MM-500	500'
SLV-PE-17MM-1000	1,000'



## 17MM FITTINGS

#### **FEATURES**

- Easy insertion without use of glue or clamps
- Multiple barbs prevents blow-outs
- Hard thermoplastic material for sharper barbs
- Maximum 50 psi (3,4 bar) operation pressure
- Compatible with all 17 mm brands

Model





SLV-IMAD-050-17MM SLV-IMAD-075-17MM

SLV-ITEE-17MM



SLV-IELBOW-17MM

Description





SLV-ICOUP-17MM
 17 mm Coupling

 SLV-IELBOW-17MM
 17 mm Elbow

 SLV-ITEE-17MM
 17 mm Tee

 SLV-IMAD-050-17MM
 17 mm ½" MIPT Adapter

 SLV-IMAD-075-17MM
 17 mm ¾" MIPT Adapter

## THE PRO-SPEC FIVE

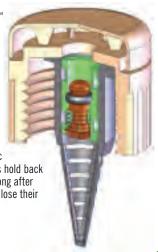
Consider 5 Reasons why the Pro-Spec Family of Emitters is a Smart Solution!



## **1** TRUCHECK™ TECHNOLOGY

Salco Trucheck™
technology
ensures your
emitters will
operate at the
highest level
of performance
and efficiency.
The only emitter
with a positive
internal check
spring, Pro-Spec
PST-CV emitters hold back
9.25' (2,77 m) long after
the competitors lose their

checking power.



## 2 EASY INSTALLATION OPTIONS

- $\frac{1}{2}$ " FIPT threads
- $\frac{1}{4}$ " x  $\frac{1}{4}$ " barbs
- Single or multi-outlet
- · Check or non-check models

## **3** WIDEST OPERATING RANGE

PC Flow: .05, 1, 2 or 4 gph
Pressure Range: 5 – 65 psi
Zone Filtration: 100 – 150 Mesh

## **4** ZERO FLUSH PERFORMANCE

- · Minimizes water waste
- Highly efficient hydraulic design
- Run more emitters on a single line

## 5 COLOR CONFIGURATIONS

- Color coded and labeled for GPH or camouflaged to blend with the landscape
- · Easily identify emitters on the job or in the box







888-4 THE PRO

## **PRO-SPEC EMITTERS**

#### **FEATURES**

- Fully pressure-compensating zero flush design delivers uniform flow throughout a wide pressure range (5-65 psi), regardless of elevation changes and pressure inconsistencies
- Optional Trucheck<sup>™</sup> models (PST-CV) include positive internal check spring to hold back 9.25' (2,77 m) of elevated water
- $\frac{1}{2}$ " FIPT (PST) or  $\frac{1}{4}$ " barbed base (PS) configuration to handle every design situation
- Available in color-coded flow rates of 0.5, 1, 2 and 4 gph, or camouflage colors of desert, granite or mulch
- · Flow rate and flow direction are clearly molded into diffuser cap
- · Manufactured from UV-inhibited engineering grade plastics - rugged design ensures maximum life span
- Barbed emitters are compatible with PVC or polyethylene tubing. ½" FIPT are compatible with all standard 1/2" MIPT fittings.

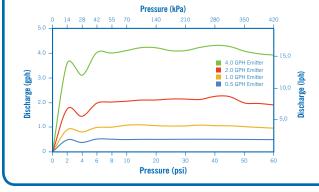


## **OPERATING RANGE**

PC Flow:  $0.5-4\ \text{gph}$ Pressure: 5 - 65 psi Filtration: 100-150 mesh



## PRO-SPEC PERFORMANCE - ZERO FLUSH







	P3	EMITTERS (BA	AKBED)			
PRO-SPEC	SPECIFIC!	ATIONS	(Single O	utlet)		
Model						
Without Trucheck	With Trucheck	Flow Rate	Color	Inlet		
SLV-PS-05		½ gph	Brown	Barbed		
SLV-PS-1		1 gph	Black	Barbed		
SLV-PS-2		2 gph	Green	Barbed		
SLV-PS-4		4 gph	Red	Barbed		
SLV-PST-05	SLV-PST-CV-05	½ gph	Brown	½" FIPT		
SLV-PST-1	SLV-PST-CV-1	1 gph	Black	½" FIPT		
SLV-PST-2	SLV-PST-CV-2	2 gph	Green	½" FIPT		
SLV-PST-4	SLV-PST-CV-4	4 gph	Red	½" FIPT		
SLV-PSG-05		½ gph	Granite Camo	Barbed		
SLV-PSG-1		1 gph	Granite Camo	Barbed		
SLV-PSG-2		2 gph	Granite Camo	Barbed		
SLV-PSG-4		4 gph	Granite Camo	Barbed		
SLV-PSTG-05	SLV-PSTG-CV-05	½ gph	Granite Camo	½" FIPT		
SLV-PSTG-1	SLV-PSTG-CV-1	1 gph	Granite Camo	½" FIPT		
SLV-PSTG-2	SLV-PSTG-CV-2	2 gph	Granite Camo	½" FIPT		
SLV-PSTG-4	SLV-PSTG-CV-4	4 gph	Granite Camo	½" FIPT		
SLV-PSD-05		½ gph	Desert Camo	Barbed		
SLV-PSD-1		1 gph	Desert Camo	Barbed		
SLV-PSD-2		2 gph	Desert Camo	Barbed		
SLV-PSD-4		4 gph	Desert Camo	Barbed		
SLV-PSTD-05	SLV-PSTD-CV-05	½ gph	Desert Camo	½" FIPT		
SLV-PSTD-1	SLV-PSTD-CV-1	1 gph	Desert Camo	½" FIPT		
SLV-PSTD-2	SLV-PSTD-CV-2	2 gph	Desert Camo	½" FIPT		
SLV-PSTD-4	SLV-PSTD-CV-4	4 gph	Desert Camo	½" FIPT		
SLV-PSM-05		½ gph	Mulch Camo	Barbed		
SLV-PSM-1		1 gph	Mulch Camo	Barbed		
SLV-PSM-2		2 gph	Mulch Camo	Barbed		
SLV-PSM-4		4 gph	Mulch Camo	Barbed		
SLV-PSTM-05	SLV-PSTM-CV-05	½ gph	Mulch Camo	½" FIPT		
SLV-PSTM-1	SLV-PSTM-CV-1	1 gph	Mulch Camo	½" FIPT		
SLV-PSTM-2	SLV-PSTM-CV-2	2 gph	Mulch Camo	½" FIPT		
SLV-PSTM-4	SLV-PSTM-CV-4	4 gph	Mulch Camo	½" FIPT		
SLV-PSR-05		½ gph	Non-Potable Purpl	e Barbed		
SLV-PSR-1		1 gph	Non-Potable Purpl	e Barbed		
SLV-PSR-2		2 gph	Non-Potable Purpl	e Barbed		
SLV-PSR-4		4 gph	Non-Potable Purpl	e Barbed		
SLV-PSTR-05	SLV-PSTR-CV-05	½ gph	Non-Potable Purpl	e ½" FIPT		
SLV-PSTR-1	SLV-PSTR-CV-1	1 gph	Non-Potable Purpl	e ½" FIPT		
SLV-PSTR-2	SLV-PSTR-CV-2	2 gph	Non-Potable Purpl	e ½" FIPT		
SLV-PSTR-4	SLV-PSTR-CV-4	4 gph	Non-Potable Purpl	e ½" FIPT		

PRO-SPEC SPECIFICATIONS (Multi Outlet)						
Model	Flow Rate	Color	Inlet			
SLV-PS6-05	½ gph per outlet	Brown	Barbed			
SLV-PS6-1	1 gph per outlet	Gray	Barbed			
SLV-PS6-2	2 gph per outlet	Dk. Green	Barbed			
SLV-PS6-4	4 gph per outlet	Red	Barbed			
SLV-PS6T-05	½ gph per outlet	Brown	½" FIPT			
SLV-PS6T-1	1 gph per outlet	Gray	½" FIPT			
SLV-PS6T-2	2 gph per outlet	Dk. Green	½" FIPT			
SI V-PS6T-4	4 only ner outlet	Red	1/9" FIPT			



## **D2 EMITTERS** D2 SERIES PASSES 2X THE AMOUNT OF DIRT COMPARED WITH TRADITIONAL EMITTERS!

#### **ALL MODELS FEATURE**

- Ideal for reclaimed and well water applications
- Fully pressure compensating design delivers uniform flow throughout a wide pressure range, (5-45 psi; .33 bars - 3 bars) regardless of elevation changes and pressure inconsistencies
- Available in flow rates of 0.5, 1, & 2 gph
- · Flow rates and flush options are color coded
- Rugged design. Each emitter is manufactured from UV-inhibited engineering grade plastics to ensure maximum life span
- Barbed emitters are compatible with PVC or polyethylene tubing. ½" FIPT models are compatible with all standard ½" MIPT fittings.

#### SINGLE OUTLET FEATURES

- ½" FIPT or barbed base configuration to handle every design situation\*
- · Available in self-cleaning or zero-flush configurations

#### **MULTI-OUTLET FEATURES**

- ½" FIPT or barbed base and 6 barbed outlets to handle every design situation
- Unused outlets must be capped using outlet caps (part #PC6-C)

#### **OPERATING RANGE**

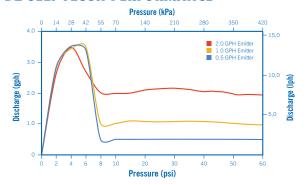
**PC Flow:** 0.5 - 2 gph [Single Outlet]

0.5 - 2 pph x 6 [Multi-Outlet]

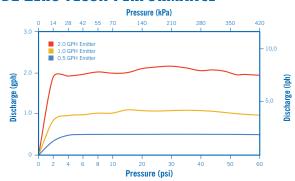
**Pressure:** 5-45 psi **Filtration:** 80-150 Mesh

\*Designer Note: On self-flushing models, it is required to designate 3.5 gph for each emitter, regardless of the flow rate, to compensate for the hydraulic needs of the flushing action on turn-on and turn-off.

#### **D2 SELF FLUSH PERFORMANCE**



#### **D2 ZERO FLUSH PERFORMANCE**





SINGLE OUTLET MODEL SPECIFICATIONS										
		Mo	del							
Туре	Self Cleaning	Color Code	Zero Flush	Color Code	Flow Rate	Inlet	Outlet			
	SLV-PCRT-05	Tan	SLV-PCRTZ-05	Brown	½ GPH	½" FIPT	1/8" Barbed			
Threaded	SLV-PCRT-1	Black	SLV-PCRTZ-1	Gray	1 GPH	½" FIPT	1/8" Barbed			
	SLV-PCRT-2	Lt. Green	SLV-PCRTZ-2	Dk. Green	2 GPH	1/2" FIPT	1/8" Barbed			
	SLV-PCR-05	Tan	SLV-PCRZ-05	Brown	½ GPH	1/4" Barbed	1/8" Barbed			
Barbed	SLV-PCR-1	Black	SLV-PCRZ-1	Gray	1 GPH	1/4" Barbed	1/8" Barbed			
	SLV-PCR-2	Lt. Green	SLV-PCRZ-2	Dk. Green	2 GPH	1/4" Barbed	1/8" Barbed			
Mr	SLV-PCC-05	Tan	SLV-PCCZ-05	Brown	½ GPH	1/4" Barbed	Diffused			
Micro Bubblers	SLV-PCC-1	Black	SLV-PCCZ-1	Gray	1 GPH	1/4" Barbed	Diffused			
סוטוטוטו 3	SLV-PCC-2	Lt. Green	SLV-PCCZ-2	Dk. Green	2 GPH	1/4" Barbed	Diffused			

### **MULTI-OUTLET MODEL SPECIFICATIONS**

	Model				
Туре	Self Cleaning	Color Code	Flow Rate	Inlet	Outlet
	SLV-PC6T-05	Tan	½ GPH	½" FIPT	1/4" Barbed
Threaded	SLV-PC6T-1	Black	1 GPH	1/2" FIPT	1/4" Barbed
	SLV-PC6T-2	Lt. Green	2 GPH	1/2" FIPT	1/4" Barbed
	SLV-PC6-05	Tan	½ GPH	1/4" Barbed	1/4" Barbed
Barbed	SLV-PC6-1	Black	1 GPH	1/4" Barbed	1/4" Barbed
	SLV-PC6-2	Lt. Green	2 GPH	1/4" Barbed	1/4" Barbed
Note: for zero flu	sh models, see the	Pro-Spec line	on page 43.		







PC6T (THREADED)



888-4 THE PRO

## SHRUBBLER® 360° & 180° ADJUSTABLE FLOW

The original patented Shrubbler® with flow adjustment. When the cap is rotated, flow and radius adjust from a gentle stream pattern, to drip and finally to shut off.

#### Patented

#### **FEATURES**

- Simple finger-tip cap control for flow adjustment
- · Spike for positioning; side entry connection and break-off barb adapter
- Tapered press-fit design suits Micro Mate tapered fittings for fast, efficient installation

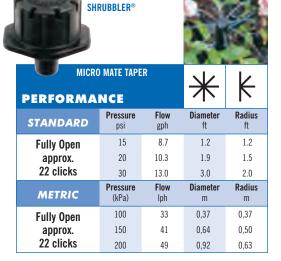
#### **APPLICATIONS**

Suitable for pots, tubs, planter boxes, landscaped gardens and nurseries. Under roses, direct watering avoids wetting of foliage. Ideal for hanging baskets. Elevate with Asta® Stakes and risers.

#### **MODEL SPECIFICATION**

 SLV-31435
 360° Micro Mate Taper
 SLV-31415-1032
 360° Micro Mate Thread 10-32 UNF

 SLV-31235
 180° Micro Mate Taper
 SLV-31215-1032
 180° Micro Mate Thread 10-32 UNF





MINI BUBBLER®



MICRO MATE TAPER

#### DEDECRIMANICE

PERFORMA	NCE		
STANDARD	Pressure psi	<b>Flow</b> gph	<b>Diameter</b> ft
Fully Open	15	8.7	1.2
approx.	20	10.3	1.9
22 clicks	30	13.0	3.0
METRIC	Pressure (kPa)	<b>Flow</b> lph	<b>Diameter</b> m
Fully Open	100	100	0,20
approx.	150	119	0,33
22 clicks	200	130	0,51

## MINI BUBBLER® 360° ADJUSTABLE FLOW

Produces a gentle umbrella pattern for rapid watering near the root zone. Flow to individual plants can be adjusted or shut off.

#### **FEATURES**

- Simple finger-tip cap control for flow adjustment
- · Spike for positioning; side entry connection and break-off barb adapter
- · Barb for direct attachment to feeder and supply lines
- Tapered press-fit design suits Micro Mate tapered fittings for fast, efficient installation

#### **APPLICATIONS**

Suitable for pots, tubs, planter boxes, landscaped gardens and nurseries. Under roses direct watering avoids wetting of foliage. Ideal for street trees and palms.

#### **MODEL SPECIFICATION**

SLV-31735 360° Micro Mate Taper SLV-31715-1032 360° Micro Mate Thread 10-32 UNF

## SPECTRUM 360™ JET

An adjustable full circle vortex spray jet with fine water droplets. Reduce diameter by simply rotating the cap.

#### **FEATURES**

- · Simple finger-tip cap control for flow adjustment
- · Fully open produces high volume flow and a large diameter spray
- · Spike for positioning; side entry connection and break-off barb adapter
- Tapered press-fit design suits Micro Mate tapered fittings for fast, efficient installation

#### **APPLICATIONS**

Suitable for pots, tubs, ground cover, landscaped gardens and nurseries. Waters large garden areas when used with Asta® Stakes and risers.

#### **MODEL SPECIFICATION**

SLV-32035 Micro Mate Taper SLV-32015-1032 Micro Mate Thread 10-32 UNF



SPECTRUM 360™ JET



MICRO MATE TAPER

## PERFORMANCE

22 clicks

STANDARD	Pressure psi	Flow gph	<b>Diameter</b> ft
Fully Open	15	17.3	9.4
approx.	20	19.8	11.2
22 clicks	30	24.3	13.3
METRIC	Pressure (kPa)	<b>Flow</b> lph	<b>Diameter</b> m
Fully Open	100	64	2,8
approx.	150	78	3,6



4.0

#### VARI-JETS™

Valve adjusts radius of throw and reduces flow.

#### **FEATURES**

- Choice of spray patterns
- Threaded for installation on Rigid Risers
- · Tapered press-fit design suits Micro Mate tapered fittings for fast, efficient installation
- UV stabilized materials for long life

#### **APPLICATIONS**

Home gardens and landscaping. Vari-Mist™ is ideal for adjusting overhead watering of plants in hanging baskets.

#### MODEL SPECIFICATION

SLV-13175	360° x 18 Micro Mate Taper	SLV-13145-1032	$360^{\circ}$ x 18 Micro Mate Thread 10-32 UNF
SLV-13165	180° Micro Mate Taper	SLV-13125-1032	180° Micro Mate Thread 10-32 UNF
SLV-13155	90° Micro Mate Taper	SLV-13115-1032	90° Micro Mate Thread 10-32 UNF





MICRO MATE TAPER

## PERFORMANCE -**STANDARD**

			360° x 18	Mist	180°	90°
*Minimum Openin	0.02"	0.05"	0.06"	0.06"		
Base & Orifice Size	Pressure psi	Flow gph	Diameter of Throw ft		Radius of Throw ft	
	10	0 - 16.7	0 - 18.4		0 - 6.7	0 - 6.4
Ctandand Dasa	15	0 – 21.0	0 – 22.6		0 - 8.1	0 - 8.1
Standard Base Max 0.06"	20	0 – 24.5	0 – 25.7		0 - 9.5	0 - 9.4
Wax 0.00	25	0 – 28.0	0 – 26.7		0 - 10.1	0 - 9.8
	30	0 - 31.0	0 - 26.3		0 - 10.6	0 - 10.1
	10	0 – 4.0		0 - 3.0		
Mist Dave	15	0 - 5.0		0 - 2.6		
Mist Base Max 0.014"	20	0 - 5.9		0 - 2.9		
IVIAN U.U14	25	0 - 6.6		0 - 2.8		
	30	0 – 7.4		0 - 2.6		

## PERFORMANCE -

METRIC						
			360° x 18	Mist	180°	90°
*Minimum Openin	ıg Size		0,5 mm	1,2 mm	1,5 mm	1,5 mm
Base & Orifice Size	Pressure (kPa)	<b>Flow</b> Iph	<b>Diameter</b> r	<b>of Throw</b> n	Radius of Throw m	
	50	0 - 53	0 – 4,9		0 - 1,9	0 - 1,5
01 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	100	0 – 78	0 – 6,8		0 - 2,4	0 - 2,4
Standard Base	150	0 – 98	0 – 8,2		0 - 3,0	0 - 2,9
Max 1,5 mm	200	0 – 115	0 – 8,2		0 - 3,2	0 - 3,1
	250	0 - 130	0 – 7,2		0 - 3,4	0 - 3,3
	50	0 – 12		0 – 1,0		
M. I D	100	0 – 18		0 - 0.8		
Mist Base	150	0 – 23		0 - 0.9		
Max 0,36 mm	200	0 – 27		0 - 0.8		
	250	0 – 31		8,0-0		

<sup>\*</sup> Minimum opening size for Base and Cap given to assist filtration selection.

## ROTOR SPRAY™ MINI SPRINKLERS

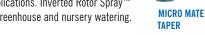
Durable and reliable with excellent distribution uniformity. Vari-Rotor Spray™ can be adjusted to reduce volume of flow and radius of throw.

#### **FEATURES**

- "C" frame design for strength and distribution uniformity
- Full flow spinner suspended between two bearings
- Inverted model incorporates special khaki colored spinner with dust cover to protect bearing
- Tapered press-fit design suits Micro Mate tapered fittings for fast, efficient installation
- UV stabilized materials for long life

#### **APPLICATIONS**

Suitable for landscape areas, home gardens, nurseries and horticultural applications. Inverted Rotor Spray™ ideal for over-head greenhouse and nursery watering.



## **MODEL SPECIFICATION**

ROTOR SPRAY™ MICRO MATE TAPER

**SLV-20715** Blue SLV-20735 Green

#### **PERFORMANCE - STANDARD**



**ROTOR SPRAY™** 

			Tested 0.65 ft.	above ground
Base & Orifice Size	Pressure psi	<b>Flow</b> gph	<b>Diameter</b> ft	Stream Height in
Blue	15	9.8	17	11
1.7	20	11.7	17	12
0.04"	25	13.0	17	13
	15	16.8	19	14
Green	20	19.5	21	16
0.05"	25	22.0	21	21
	30	24.0	23	24

#### PERFORMANCE - METRIC



			Tested 0.2 m	above ground
Base & Orifice Size	Pressure	Flow	Diameter	Stream Height
Dase & Utilice Size	kPa	lph	m	m
Blue	100	38	5,2	0,3
	125	42	5,4	0,4
1,0 mm	150	46	5,4	0,5
Green	100	61	6,0	0,4
1 11	150	76	6,9	0,5
1,3 mm	200	88	7,2	0,5



**ASSEMBLIES** 

**FEATURES** 

identification

Two-piece jets with precise watering

patterns. Winged base for easy hand

performance at low pressure (15 psi).

• Winged "Quick" thread 0.16" for risers

Micro Mate tapered fittings for fast,

• Eight optional spray patterns

· No separate tools required

· Color coded bases for flow

 Standard 10-32 UNF for PVC · Tapered press-fit design suits

efficient installation **APPLICATIONS** Suitable for landscape areas. home gardens, nurseries and horticultural applications. The Mist Jet is ideal for greenhouse misting

and hanging baskets.

Strip Spray ideal for narrow garden beds.

Use stakes and risers

to elevate spray jets.

Use Sprays with

Asta® Stakes for

installation. Tapered base achieves easy installation and maintenance. Effective

## CAPS AND BASES

A large combination of flow rates and spray patterns is achievable when the range of caps and bases is assembled into two piece jets.

#### **FEATURES**

- · Caps in eight spray patterns
- · Jet assemblies made to order
- · Color coded bases to identify flow rate
- Caps and bases can be ordered separately

#### **APPLICATIONS**

Wide range includes flower and vegetable gardens, landscaped gardens, horticultural and viticultural crops.



## **CAPS & SPRAY PATTERNS**



















**18 HOLE** 













**STRIP** (2 X 20°)

## PERFORMANCE -

















## **SPECIFICATION BLACK SPRAY CAPS**

SLV-10845	$360^{\circ}x18$ hole
SLV-10855	$360^{\circ}x15$ hole
SLV-10865	$360^{\circ}x12$ hole
SLV-10875	$300^{\circ}x10$ hole
SLV-10835	270° (3 x 90°)
SLV-10825	$180^{\circ}$ fan
SLV-10815	90° fan
SLV-10885	40° (2 x 20°)

#### **TAPERED** JET BASES

SLV-10615 Blue SLV-10635 Green

#### **THREADED** 10-32 UNF JET BASES

SLV-10935-1032 Blue SLV-10955-1032 Green

#### STANDARD 360° x 18 360° x 15 360° x 10 20° x 2 180° \*Minimum Opening Size 0.02" 0.03" 0.03" 0.05" 0.06" 0.06" 0.02 0.05" Pressure Flow Base & Radius **Orifice Size** gph 10 7.0 13.4 10.5 11.2 10.9 12.5 11.5 5.2 5.2 15 8.9 15.8 12.6 14.6 16.3 13.3 15.9 6.7 6.0 Blue 20 10.5 7.7 18.2 14.8 16.4 21.4 10.6 17.7 6.4 0.04" 25 12.0 19.6 17.5 17.6 25.3 11.1 19.0 8.5 6.6 30 13.3 20.4 20.9 23.0 28.6 10.6 19.0 9.2 7.0 10 11.5 174 15.8 13.0 128 11 0 15.5 5.8 5.7 15 14.5 21.1 19.1 16.7 18.8 11.5 19.3 7.4 6.6 Green 20 17.2 22.5 20.0 19.1 22.5 12.0 22.4 8.4 7.2 0.05" 25 19.5 23.3 22.1 20.3 25.4 12.1 25.4 9.1 7.8 23.8 23.5 26.4 30 21.5 26.1 PERFORMANCE - METRIC 360° x 18 360° x 15 360° x 12 360° x 10 270° x 3 20° x 2 90° 180°

	*Minimum Opening Size			0,5 mm	0,6 mm	0,7 mm	1,3 mm	1,4 mm	1,5 mm	1,5 mm	1,5 mm
Base & Pressure Flow Orifice Size kPa lph					n <b>eter</b> m				<b>dius</b> n		
		50	22	3,6	2,6	2,8	2,4	3,2	2,6	1,2	1,5
	Blue	100	33	4,9	3,8	4,4	4,8	4,2	4,8	2,0	1,8
	1,0 mm	150	42	5,8	4,8	5,2	7,0	3,2	5,6	2,4	2,0
	1,0 111111	200	49	6,2	6,2	6,8	8,6	3,2	5,8	2,8	2,1
		250	56	6,4	7,0	8,4	9,0	3,4	5,8	2,8	2,3
		50	36	4,7	4,2	3,2	3,0	3,5	3,8	1,4	1,5
	Green	100	54	6,4	5,8	5,0	5,6	3,5	5,8	2,2	2,0
		150	68	7,0	6,2	6,0	7,2	3,7	7,2	2,6	2,3
	1,3 mm	200	80	7,2	7,8	7,0	8,0	3,7	8,4	2,0	2,5
		250	91	7,6	8,8	8,4	8,4	3,8	9,6	3,1	2,7

<sup>\*</sup> Minimum opening size for Base and Cap given to assist filtration selection. Red colored figures indicate a change of performance from spray to mist.



180° FAN

90° FAN

	OTOR R			Tested 0.65 ft. above ground		
		Pressure	Flow	Diameter	Stream Height	Deflector Diameter
Ba	se & Orifice Size	psi	gph	ft	in	ft
		15	20.0	26.0	1.8	
	Green	20	23.5	30.0	1.8	9.2
	0.055"	25	26.5	30.0	1.8	0.2
		30	29.2	30.0	2.1	
		15	26.5	30.0	2.2	
	Blue	20	31.0	34.0	2.4	9.2
	0.07"	25	35.0	34.0	2.5	3.2
		30	38.5	34.0	2.6	
		15	32.5	34.0	2.4	
	Gray	20	38.5	34.0	2.6	9.2
	0.075"	25	44.0	34.0	2.7	3.2
		30	49.0	34.0	2.8	
		15	40.0	30.0	2.1	
	Yellow	20	47.0	34.0	2.5	9.8
	0.08"	25	53.0	38.0	2.8	3.0
		30	58.5	38.0	3.1	
		15	44.0	34.0	2.3	
	Olive	20	51.0	34.0	2.6	9.8
	0.085"	25	58.0	38.0	2.8	3.0
		30	63.5	38.0	2.9	
		15	52.5	34.0	2.2	
	Red	20	61.0	38.0	2.7	10.5
	0.095"	25	69.0	42.0	3.1	10.5
		30	76.0	42.0	3.4	
		15	63.5	38.0	2.2	
	Orange	20	75.0	38.0	2.5	10.5
	0.10"	25	85.0	38.0	2.8	10.5
		30	94.5	40.0	3.0	
		15	70.5	38.0	2.6	
	Purple	20	83.0	42.0	2.9	13.1
	0.11"	25	94.5	42.0	3.2	13.1
		30	105.0	42.0	3.5	

R	ROTOR R	RAIN™		Tested 0.2 m		
F	PERFOR!	MANC	E - MEI	RIC		above ground
		Pressure	Flow	Diameter	Stream Height	Deflector Diameter
Ba	se & Orifice Size	kPa	lph	m	m	m
		100	77	7,8	0,54	
	Green	150	94	8,7	0,54	2,8
	1,5 mm	200	110	9,1	0,64	2,0
		250	120	8,5	0,66	
		100	100	8,6	0,66	
	Blue	150	125	9,3	0,74	2,8
	1,7 mm	200	145	9,6	0,77	2,0
		250	163	9,3	0,88	
		100	125	8,9	0,72	
	Gray	150	153	10,2	0,80	2,8
	1,9 mm	200	178	9,8	0,84	2,0
		250	200	10,0	0,91	
		100	147	10,0	0,62	
	Yellow	150	183	11,0	0,80	3,0
	2,0 mm	200	214	11,2	0,94	3,0
		250	240	11,0	0,99	
		100	168	10,7	0,68	
	Olive	150	205	11,6	0,82	3,0
	2,1 mm	200	235	11,8	0,88	3,0
		250	265	11,4	0,91	
		100	195	11,0	0,64	
	Red	150	240	12,5	0,89	3,2
	2,4 mm	200	280	12,5	0,99	3,2
		250	315	12,1	1,05	
		100	245	10,9	0,65	
	Orange	150	300	11,9	0,79	3,2
	2,6 mm	200	350	12,1	0,91	3,2
		250	395	12,0	0,96	
		100	265	11,2	0,79	
	Purple	150	330	12,8	0,92	4,0
	2,8 mm	200	385	13,0	1,06	4,0
		250	430	12,4	1,12	

## ROTOR RAIN™ MINI SPRINKLERS

Low trajectory with large droplets. Robust, reliable and accurate.

#### **FEATURES**

- "C" frame design for maximum distribution uniformity
- Full flow spinner suspended between two bearings for reliable performance
- Color coded nozzles for flow rate identification
- Break-off spray deflector for close-in watering of immature trees

#### **APPLICATIONS**

Vine crops and bananas, tree crops such as citrus and apples.

#### **MODEL SPECIFICATION**

#### ROTOR RAIN™ 1/2" THREAD

 SLV-20535
 Green

 SLV-20515
 Blue

 SLV-20545
 Gray

 SLV-20595
 Yellow

 SLV-20585
 Olive

 SLV-20555
 Red

 SLV-20575
 Orange

 SLV-20565
 Purple



#### ROTOR RAIN™ THREAD 10-32 UNF

**SLV-20035-1032** Green **SLV-20015-1032** Blue





888-4 THE PRO

## MICRO FITTINGS AND ADAPTERS

Essential components in low pressure micro irrigation systems. Used in conjunction with standard low pressure tubing. Salco fittings are practical and durable.

#### **FEATURES**

- Micro fittings single barb connection
- UV stabilized materials for long life

#### **APPLICATIONS**

Home gardens, landscaping, greenhouses and hanging baskets.



ADAPTER MICRO x ½" FNPT THREAD

#### **MODEL SPECIFICATION**

#### **ADAPTERS & JOINERS**

SLV-41015	Adapter 10-32 thread ½" FNPT
SLV-40915	Adapter 10-32 UNF thread x thread
SLV-40925	Adapter 0.16" "Quick" thread x thread
SLV-40945	Adapter 0.16" barb x thread 10-32 UNF
SLV-40995	Adapter 0.18" barb x thread 10-32 UNF

**SLV-40145** Joiner 0.16" barb **SLV-40195** Joiner 0.18" barb

**SLV-40935** Joiner/Adapter 0.16" barb x barb

#### **ELBOWS, TEES & CROSSES**

SLV-40245	Elbow 0.16" barb
SLV-40295	Elbow 0.18" barb
SLV-40345	Tee 0.16" barb
SLV-40395	Tee 0.18" barb
SLV-40445	Cross 0.16" barb
SLV-40495	Cross 0.18" barb



RATCHET CLAMP

#### RATCHET CLAMPS

SLV-44305	Ratchet Clamp #15
SLV-44335	Ratchet Clamp #18
SLV-44285	Ratchet Clamp #23
SLV-44325	Ratchet Clamp #28









## MICRO MATE™ TAPERED FITTINGS

Micro Mate<sup>™</sup> tapered fittings provide a simple and effective solution to installing micro irrigation systems.

#### **FEATURES**

- Press fit taper connection for fast, easy installation
- Suitable for the following items with the Micro Mate Taper: Shrubbler<sup>®</sup>, Mini Bubbler, Spectrum 360<sup>™</sup>, Micro Spray Jets, Vari-Jets<sup>™</sup>, Rotor Spray<sup>™</sup>, Vari Rotor Spray<sup>™</sup> and Inverted Rotor Spray<sup>™</sup>
- Adapter Barb x Micro Mate Taper (F) suits the range of Asta® Stakes to provide stability and optional height installations.
- UV stabilized materials for long life

#### **APPLICATIONS**

Commercial, horticultural, landscape, nursery and greenhouse low pressure (15 psi) irrigation systems. Ease of installation for professional contractor and home gardener.



ADAPTER Barb X Taper (M)



**JOINER** 

ADAPTER

#### **MODEL SPECIFICATION**

#### MICRO MATE™ TAPERED FITTINGS

SLV-40175 Joiner 0.18" barb x barb (taper series)
SLV-40365 Tee with Micro Mate taper (F)

SLV-40975 Adapter 0.18" barb x Micro Mate taper (M)
SLV-40985 Adapter 0.18" barb x Micro Mate taper (F)

SLV-41405 Rod Stake Adapter™ Micro Mate taper (F) x side entry
SLV-41415 Rod Stake Adapter™ Micro Mate taper (F) x bottom entry

**SLV-43635** Rod Stake 0.24" x 11.81" (taper series) **SLV-41045** Adapter  $\frac{1}{2}$ " (F) x Micro Mate taper (F)



BARB X TAPER (F)

TEE TAPER (F)

#### MICRO MATE™ THREADED FITTING

**SLV-41015-1032** Adapter ½" (F) x Micro Mate thread 10-32 UNF





ROD STAKE ADAPTER™ HORIZONTAL ENTRY



ROD STAKE Adapter™ Vertical entry

ROD STAKE



888-4 THE PRO



RIGID RISER WITH ½" MNPT ADAPTER

RIGID RISER Plain

## RIGID RISERS

Rigid Risers are used throughout a micro irrigation system in conjunction with micro emitters and fittings.

#### **FEATURES**

- Rigid Risers are available in 4 lengths
- Rigid Risers in plain, barbed, threaded and ½" MNPT configuration
- UV stabilized materials for long life

#### **APPLICATIONS**

Rigid Risers accept all "Quick" thread and 10-32 UNF products (i.e. drippers, sprays and sprinklers).

#### **MODEL SPECIFICATION**

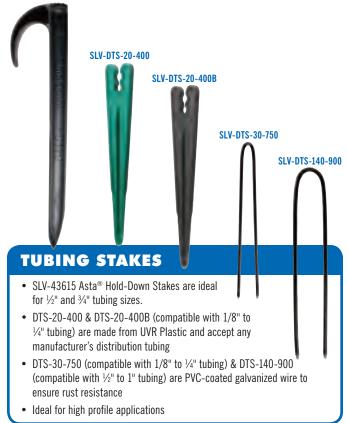
 SLV-50115
 Riser 6" Plain

 SLV-50125
 Riser 8" Plain

 SLV-50135
 Riser 12" Plain

 SLV-50145
 Riser 18" Plain

SLV-43615 ASTA® HOLD-DOWN STAKE









## **IH-Series Risers**

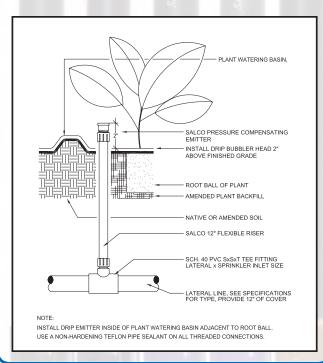
## **IH-SERIES RISERS**

#### **FEATURES**

- Pre-assembled with two 1/2" MIPT UVR male adapters
- Color options
- Accepts any 1/2" FIPT emitter
- · Cost less preassembled than purchased separately in parts
- · Ideal for slope applications
- Pre-assembly reduces installation cost by up to 50%
- On grade or below grade installation
- · Custom lengths available
- · Also available pre-assembled with PST emitters

#### **OPERATING RANGE**

Max Flow: 7 gpm Max Pressure: 60 psi



## RISER ASSEMBLIES

PRE-ASSEMBLED WITH SALCO PST EMITTERS

Model	Adapter Coro
SLV-PVC-y-ACLxx	Black
SLV-PVC-y-M-ACLxx	Mulch
SLV-PVC-y-D-ACLxx	Desert
SLV-PVC-y-G-ACLxx	Grey Granite
SLV-PVC-y-R-ACLxx	Reclaimed

y = Emitter flow rate ("050" =  $\frac{1}{2}$ gph, "1" = 1 gph, "2" = 2 gph, and "4" = 4 gph

xx = Length of riser ("12" or "18" or "24") in inches

## NO EMITTER

## RISER ASSEMBLIES

PRE-ASSEMBLED RISERS WITH 2 MALE ADAPTERS

Model	Adapter Color
SLV-PVC-ACLxx	Black
SLV-PVC-M-ACLxx	Mulch
SLV-PVC-D-ACLxx	Desert
SLV-PVC-G-ACLxx	Grey Granite
SLV-PVC-R-ACLxx	Reclaimed

xx = Length of riser ("12" or "18" or "24") in inches





888-4 THE PRO

## **SNAP-ON FILTERS AND ACCESSORIES**

Filters trap particles to reduce clogging of emitters. Install downstream from a tap or valve. Snap-on filter will adapt polyethylene pipe direct to standard tap adapters.

#### **FEATURES**

- · Single barb inlet and outlet
- · 80 mesh screen filter
- · Easily taken apart for cleaning
- · Effective compact filter with minimal flow loss

#### **APPLICATIONS**

For low pressure (up to 70 psi) micro irrigation systems.

#### **MODEL SPECIFICATION**

 SLV-44355
 In-Line Filters ½"

 SLV-44365
 In-Line Filters 5/8"

 SLV-44405
 Snap-On Filters ½"

 SLV-44415
 Snap-On Filters 5/8"



SNAP-ON TAP ADAPTER



SNAP-ON CONNECTOR THREAD 3/4"



SNAP-ON CONNECTOR BARB

#### MODEL SPECIFICATION

#### SNAP-ON TAP ADAPTERS

**SLV-45765** Snap-On tap adapter 3/4" FNHT

#### SNAP-ON TAP CONNECTORS

 SLV-45465
 Snap-On connector ½"

 SLV-45475
 Snap-On connector ½"

 SLV-44465
 Snap-On connector ¾"

#### SNAP-ON TAP JOINERS

SLV-45455 Snap-On Joiner 1/2"

#### SNAP-ON HOSE KIT

**SLV-52505** ½" Snap-On hose kit **SLV-52515** 5%" Snap-On hose kit

#### **COMPRESSION FITTINGS**

SLV-51185 ½" compression tee
SLV-51195 ½" compression elbow
SLV-51215 ½" compression end cap
SLV-51525 ¾" compression tee
SLV-51535 ½" compression elbow
SLV-51515 5%" compression end cap



SNAP-ON JOINER





IN-LINE FILTER SCREEN DETAIL



SNAP-ON FILTER

#### **EZ-KLEEN FILTER**

The EZ Kleen provides the watering system designer or installer with a low cost filter that has both automatic and manual self-cleaning capabilities. The EZ Kleen filter self-cleans by use of a spring loaded flush valve that remains open in flush mode while the system charges, closed when a certain pressure has been reached, and re-opens during system depressurization at the end of the cycle. The EZ Kleen may also be manually cleaned, as necessary, by pressing the brightly colored button at the tip of the flush valve. This button also serves as an indication that the



#### **FEATURES**

- · Automatic and manual flushing
- Easy to use 3/4" hose thread tee design
- · Highly visible, color-coded flow indicator
- Durable ¾" hose swivel inlet
- Large 3.7 in<sup>2</sup> screen area
- · Available with an optional pressure gauge

#### **OPERATING RANGE**

Max Flow: 20 GPM Max Pressure: 80 PSI

Filtration: 50 Mesh (others available)

Dimensions: 4.125" L, 2.125" W

High Flow (red button): Valve Seats 5.75 psi @ 1.5 GPM Low Flow (blue button): Valve Seats 3.5 psi @ 1.25 GPM

#### **MODELS**

SLV-JTR-1L Self Cleaning Riser Filter, Low Flow Self Cleaning Riser Filter, High Flow

## **VALVES**

Flow control valves for low pressure irrigation.

#### **FEATURES**

- Simple on-off operation and straight through flow.
- Operating pressure range up to 45 psi at temperature to 100°F.

#### **APPLICATIONS**

Used for secondary zone water diversion and flow control. Always install as an inline valve with tubes connected to both inlet and outlet.

#### MODEL SPECIFICATION

VARI-FLOW™ VALVES

**SLV-42155** Barb x Barb 0.18"

#### GREEN BACK® VALVES

 SLV-45505
 Green Back® Valve ½"

 SLV-45515
 Green Back® Valve ½"

 SLV-45535
 Green Back® Valve ¾"

 SLV-45545
 Green Back® Valve 1"



VARI-FLOW™ BARB X BARB



**GREEN BACK® VALVE** 





888-4 THE PRO

## **WYE FILTERS**

#### **FEATURES**

- · Manufactured from ABS
- 150 mesh stainless steel screen
- · Non-migrating seals eliminate water blow-by

#### **OPERATING RANGE**

Flow: Max of 20 GPM Pressure: 0 - 150 PSI

Filtration: 150 Mesh (others available)



#### **MODEL SPECIFICATION**

#### **BLACK BODY**

SLV-HYS-075 3/4" Standard model
SLV-HYSF-075 3/4" With manual flush valve
SLV-HYSG-075 3/4" With pressure gauge

SLV-HYSFG-075 3/4" With flush valve and pressure gauge SLV-HYSFGM-075 3/4" With flush valve and pressure gauge

SLV-HYS-100 1" Standard model
SLV-HYSF-100 1" With manual flush valve
SLV-HYSG-100 1" With pressure gauge

SLV-HYSFG-100 1" With flush valve and pressure gauge SLV-HYSFGM-100 1" With flush valve and pressure gauge

#### CLEAR BODY

SLV-DYS-075 3/4" Standard model
SLV-DYSF-075 3/4" With manual flush valve
SLV-DYSG-075 3/4" With pressure gauge

**SLV-DYSFG-075** 3/4" With flush valve and pressure gauge

SLV-DYS-100 1" Standard model
SLV-DYSF-100 1" With manual flush valve

SLV-DYSG-100 1" With pressure gauge

**SLV-DYSFG-100** 1" With flush valve and pressure gauge

## SPINTECH® FILTERS

Spintech® Filters force water through a directional flow tube that disperses it across the entire surface area of the stainless steel screen. The unique directional flow tube does not restrict flow or create pressure loss. The Spintech® line of Y-Filters comes standard with a manual ball valve, but are available with an automatic self-cleaning flush valve. The self-cleaning version will flush the screen area at the pressurization and depressurization of each cycle.

#### **FEATURES**

• The only vortex cleaning filter that does not restrict flow

• Manufactured from engineering grade ABS



#### MODEL SPECIFICATION

#### SPINTECH® BLACK BODY

**SLV-SPB-075** 3/4" Manual flush

SLV-SPBG-075 3/4" Manual flush, stainless gauge

SLV-SPBF-075 3/4" Auto-cleaning

**SLV-SPBFG-075** 3/4" Auto-cleaning, stainless gauge

SLV-SPB-100 1" Manual flush

**SLV-SPBG-100** 1" Manual flush, stainless gauge

SLV-SPBF-100 1" Auto-cleaning

SLV-SPBFG-100 1" Auto-cleaning, stainless gauge

#### SPINTECH® CLEAR BODY

SLV-SPC-075 3/4" Manual flush

**SLV-SPCG-075** 3/4" Manual flush, stainless gauge

**SLV-SPCF-075** 3/4" Auto-cleaning

**SLV-SPCFG-075** 3/4" Auto-cleaning, stainless gauge

SLV-SPC-100 1" Manual flush

**SLV-SPCG-100** 1" Manual flush, stainless gauge

SLV-SPCF-100 1" Auto-cleaning

SLV-SPCFG-100 1" Auto-cleaning, stainless gauge

#### **FILTERS**

 SLV-44355
 In-Line filter ½" (tube .520 ID)

 SLV-44365
 In-Line filter ½" (tube .570 - .620 ID)

 SLV-44405
 Snap-On filter ½" (tube .520 ID)

 SLV-44415
 Snap-On filter ½" (tube .570 - .620 ID)



## **SMART CONTROL ZONES**

#### **MODELS**

SCZ-N-100F-H Nitro Control Zone (1' FIP with flow control,

1" x 3/4" Wye filter & 25 psi reg)

SCZ-12024EF-10-H Silver Bullet Control Zone (1' FIP with flow control,

1" x 3/4" Wye filter & 25 psi reg)

#### **FEATURES**

- · Saves time with pre-assembled valve, filter and pressure regulator
- · Ultra low flow capability of reverse flow valve
- Ideal for residential and commercial low flow applications
- ullet Wye filter flushes away from the valve box with threaded 34" hose outlet
- High-strength nylon or PVC valve body options

#### **OPERATING RANGE**

Pressure rating: 150 psi Flow range: 0-20 gpm Filtration: 150 mesh









## **NO-VALVE CONTROL ZONES**

#### **MODELS**

SLV-YSR-075 3/4" Pre-assembled HYS with regulator SLV-YSR-100 1" Pre-assembled HYS with regulator



## FEATURES

- Pre-assembled with one (1) HYS Y-Filter and one (1) SLV-SR-40-20 Pressure Regulator
- Comes with one (1) 1/2" and one (1) 3/4" Poly Hose Adapter

## **PRESSURE REGULATORS**

#### **MODELS**





888-4 THE PRO

## **PVC MALE ADAPTER**

- Made of high impact PVC to endure the harshest conditions
- Solvent welds using standard methods
- Available in black, reclaimed purple and desert camo (except adapter)
- Perfect for use with Salco's PST, PCCT, and PCRT series emitters
- Compatible with any 1/2" female threaded component



SLV-436-073B	½" MIPT x ½" Irrigation Size 3/8" IPS (Black)
SLV-436-073D	$\frac{1}{2}$ " MIPT x $\frac{1}{2}$ " Irrigation Size 3/8" IPS (Desert Camo)
SLV-436-073R	$^{1}\!/_{2}$ " MIPT x $^{1}\!/_{2}$ " Irrigation Size 3/8" IPS (Reclaimed Purple)
SLV-436-073M	$\frac{1}{2}$ " MIPT x $\frac{1}{2}$ " Irrigation Size 3/8" IPS (Mulch Camo)
SLV-436-073G	$\frac{1}{2}$ " MIPT x $\frac{1}{2}$ " Irrigation Size 3/8" IPS (Granite Camo)
SLV-436-005B	½" MIPT x ½" IPS (Black)
SLV-436-005D	½" MIPT x ½" IPS (Desert Camo)

## 6-OUTLET DRIP MANIFOLD

- Outlet flow can be varied with an emitter at the end of distribution tubing
- Available in 1/2" FIPT or barbed inlet
- Allows water to be directed to as many as six different locations
- Outlets can be opened/closed as necessary using part SLV-PC6-C
- Unrestricted flow through outlets indicated by blue color

#### **MODELS**

**SLV-DMT-6** (Threaded) **SLV-DM-6** (Barbed)

## PVC IRRIGATION HOSE ADAPTER



- Made of high impact PVC to endure the harshest conditions
- Solvent welds using standard methods
- · For use with Salco PVC flex hose

#### **MODELS**

SLV-IHA-050 PVC Irrigation Hose Adapter, converts ½" IPS to 3/8"



**SLV-436-005R** ½" MIPT x ½" IPS (Reclaimed Purple) **SLV-436-005M** ½" MIPT x ½" IPS (Mulch Camo)

**SLV-436-005G** ½" MIPT x ½" IPS (Granite Camo)

## **COMPRESSION FITTINGS**

		Part Numbers							
Configuration	<b>600 - Green</b> (0.610" - 0.630" OD)	<b>700 - Black</b> (0.680" - 0.704" 0D)	<b>710 - Blue</b> (0.704" - 0.710" OD)	<b>900 - Gray</b> (0.820" - 0.940" OD)					
Compression Fitting Coupler	SLV-CCOUP-600	SLV-CCOUP-700	SLV-CCOUP-710	SLV-CCOUP-900					
Compression Fitting Elbow	SLV-CELBOW-600	SLV-CELBOW-700	SLV-CELBOW-710	SLV-CELBOW-900					
Compression Fitting 3/4" FHT Swivel Tee	SLV-CSTEE-600	SLV-CSTEE-700	SLV-CSTEE-710	SLV-CSTEE-900					
3/4" FHT Swivel Elbows w/ Washer	SLV-CSELBOWW-600	SLV-CSELBOWW-700	SLV-CSELBOWW-710	SLV-CSELBOWW-900					
Compression Fitting Tee	SLV-CTEE-600	SLV-CTEE-700	SLV-CTEE-710	SLV-CTEE-900					
Compression Fitting 3/4" FHT Swivel Adapter	SLV-CSAD-600	SLV-CSAD-700	SLV-CSAD-710	SLV-CSAD-900					
Compression Fitting ½" MIPT Adapter	SLV-CMAD-600	SLV-CMAD-700	SLV-CMAD-710	SLV-CMAD-900					
Compression Fitting ½" Slip Adapter (Solvent Weldable)	SLV-CSOLAD-600	SLV-CSOLAD-700	SLV-CSOLAD-710	SLV-CSOLAD-900					
Compression Fitting End Plug	SLV-CPLUG-600	SLV-CPLUG-700	SLV-CPLUG-710	SLV-CPLUG-900					
Compression Fitting PVC Glue-In Adapter	SLV-CFADS-600	SLV-CFADS-700	SLV-CFADS-710	SLV-CFADS-900					
End Closure Figure-8 Fitting for 500 – 710 tubing	SLV-FIG8	SLV-FIG8	SLV-FIG8	SLV-FIG8					



DISTRIBUTIO	N TUBING	
Model	Description	Quantity
POLYETHYLENE MICRO		gerprint 🔊
SLV-PE-125-063-3500	0.125" x 0.063"	3,500' coil ESINS
SLV-PE-128-076-3500	0.128" x 0.076"	3,500' coil
SLV-PE-176-105-2000	0.176" x 0.105"	2,000' coil
SLV-PE-187-125-100	0.187" x 0.125"	100' coil
SLV-PE-187-125-1000	0.187" x 0.125"	1,000' coil
SLV-PE-188-128-3000	0.188" x 0.128"	3,000' coil
SLV-PE-220-160-100	0.220" x 0.160"	100' coil
SLV-PE-220-160-1000	0.220" x 0.160"	1,000' coil
SLV-PE-220-160-2500	0.220" x 0.160"	2,500' coil
SLV-PE-225-155-2500	0.225" x 0.155"	2,500' coil
SLV-PE-250-125-2000	0.250" x 0.125"	2,000' coil
SLV-PE-250-170-100	0.250" x 0.170"	100' coil
SLV-PE-250-170-1000	0.250" x 0.170"	1,000' coil
SLV-PE-250-170-2000	0.250" x 0.170"	2,000' coil
SLV-PE-272-188-1500	0.272" x 0.188"	1,500' coil
SLV-PE-275-210-1500	0.275" x 0.210"	1,500' coil
SLV-PE-307-250-1000	0.307" x 0.250"	1,000' coil
SLV-PE-350-250-500	0.350" x 0.250"	500' coil
SLV-PE-350-250-1000	0.350" x 0.250"	1,000' coil
SLV-PE-375-250-750	0.375" x 0.250"	750' coil
SLV-PE-455-375-1000	0.455" x 0.375"	1,000' coil
SLV-PE-455-375-CL24	0.455" x 0.375" x 24"	24" cut
VINYL MICRO TUBING		
SLV-PVC-187-125-100	0.187" x 0.125"	100' coil
SLV-PVC-187-125-2000	0.187" x 0.125"	2,000' coil
SLV-PVC-220-160-100	0.220" x 0.160"	100' coil
SLV-PVC-220-160-1000	0.220" x 0.160"	1,000' coil
SLV-PVC-220-160-2500	0.220" x 0.160"	2,500' coil
SLV-PVC-250-170-100	0.250" x 0.170"	100' coil
SLV-PVC-250-170-1000	0.250" x 0.170"	1,000' coil
SLV-PVC-250-170-2000	0.250" x 0.170"	2,000' coil

SUPPLY TUBIN	VG	
Model	Description	Quantity
SUPRA FLEX™ POLY SUP	PLY TUBING Finger	print 🧥
SLV-PE-620-520-100	.620" x .520"	100' coil
SLV-PE-620-520-500	.620" x .520"	500' coil
SLV-PE-620-520-1000	.620" x .520"	1,000' coil
SLV-PE-700-600-100	.700" x .600"	100' coil
SLV-PE-700-600-500	.700" x .600"	500' coil
SLV-PE-700-600-1000	.700" x .600"	1,000' coil
SLV-PE-700-600-CL24	.700" x .600"	24" cut length
SLV-PE-710-620-100	.710" x .620"	100' coil
SLV-PE-710-620-500	.710" x .620"	500' coil
SLV-PE-710-620-1000	.710" x .620"	1,000' coil
SLV-PE-940-820-100	.940" x .820"	100' coil
SLV-PE-940-820-500	.940" x .820"	500' coil
SLV-PE-940-820-1000	.940" x .820"	1,000' coil
SLV-PE-1174-1050-250	1.174" x 1.050"	250' coil
SLV-PE-1200-1060-250	1.200" x 1.060"	250' coil
A/R FLEX PVC TUBING		
SLV-PVC-AR-050-500	1/2" Irrigation Size Hose (3/8" IPS)	500' Coil
SLV-PVC-AR-IPS-050-200	½" IPS	200' Coil
SLV-PVC-AR-IPS-075-200	3/4" IPS	200' Coil
SLV-PVC-AR-IPS-100-100	1" IPS	100' Coil
A/R4 FLEX PVC TUBING	- FOR USE WITH RECYCLED WA	TER SYSTEMS
SLV-PVC-AR4-050 -500	1/2" Irrigation Size Hose (3/8" IPS)	500' Coil
SLV-PVC-AR4-IPS-050-200	½" IPS	200' Coil
SLV-PVC-AR4-IPS-075-200	3/4" IPS	200' Coil
SLV-PVC-AR4-IPS-100-100	1" IPS	100' Coil

## More Sizes Available Upon Request

Model	Description	Quantity	Model	Description	Quantity
FLEXIBLE IPS HOSE			NON-ALGAECIDE FLEXIE	BLE IPS HOSE	
SLV-PVC-IPS-050-100	1/2" IPS	100' coil	SLV-PVC-NA-IPS-050-CL24	1/2" IPS	24" cut lengt
SLV-PVC-IPS-050-200	1/2" IPS	200' coil	SLV-PVC-NA-IPS-050-CL30	1/2" IPS	30" cut lengt
SLV-PVC-IPS-075-100	3/4" IPS	100' coil	SLV-PVC-NA-IPS-050-CL36	1/2" IPS	36" cut lengt
SLV-PVC-IPS-075-200	3/4" IPS	200' coil	SLV-PVC-NA-IPS-050-CL48	1/2" IPS	48" cut lengt
SLV-PVC-IPS-100-100	1" IPS	100' coil	SLV-PVC-NA-IPS-050-CL60	1/2" IPS	60" cut lengt
			SLV-PVC-NA-IPS-075-CL24	3/4" IPS	24" cut lengt
	The state of		SLV-PVC-NA-IPS-075-CL30	3/4" IPS	30" cut lengt
			SLV-PVC-NA-IPS-075-CL36	3/4" IPS	24" cut lengt
	Million I	E 3 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	SLV-PVC-NA-IPS-075-CL42	3/4" IPS	42" cut lengt
		The same of	SLV-PVC-NA-IPS-075-CL48	3/4" IPS	48" cut lengt
			SLV-PVC-NA-IPS-075-CL60	3/4" IPS	60" cut lengt
			SLV-PVC-NA-IPS-100-CL36	1" IPS	36" cut lengt
			SLV-PVC-NA-IPS-100-CL60	1" IPS	60" cut lengt



 $^{\scriptscriptstyle\mathsf{TM}}\mathsf{Trademark}$  of the Dow Chemical Company

## **BUG CAPS**

- · Prevents insect intrusion
- · An added defense against foreign particles
- Available for tubing with ODs of 0.187", 0.220"-0.270" and 0.300"

#### **MODELS**

**SLV-EOCV-125** Bug cap for 0.187" OD tubing & 1/8" barbs

SLV-EOCV-220 Bug cap for 0.220" - 0.270" OD tubing &  $\frac{1}{4}"$  barbs

SLV-EOCV-300 Bug cap for 0.300" OD tubing

## **EMITTER OUTLET CAPS**

- Plugs unused ½" barbed emitter outlets
- For use with PC6, PC6T, PC6Z, PC6TZ, DM6 and DM6T

#### **MODELS**

SLV-PC6-C **Emitter Outlet Cap** 



## **AUTOMATIC FLUSH VALVE**

#### **FEATURES**

- · Automatic and manual flushing
- Easy to use 3/4" hose thread with drip-tight washer
- · Highly visible color coded flow indicator
- Unique two-piece button allows manual flushing in hot temperatures

#### MODELS

SLV-AFV-075L Automatic flush valve, low flow SLV-AFV-075H Automatic flush valve, high flow

## **EMITTER INSERTION TOOL**

Simplifies emitter insertion into polyethylene and IPS hose

#### **MODELS**

SLV-IT-100 **Emitter insertion tool** 



## **GOOF PLUGS**

- Plugs misplaced or unneeded punctures in supply tubing
- Two sided, plugs 0.187" (1/8") and 0.250" (1/4") size holes

#### **MODELS**

SLV-42325 Rack of 10 Goof Plugs SLV-GFP Bag of 100 Goof Plugs



## **EMITTER ACCESS SLEEVE**

#### **FEATURES**

- · Provides convenient access to subsurface emitters while protecting against vandalism
- · Slotted body facilitates installation of distribution tubing
- Rugged, UV-resistant thermoplastic construction
- 12" tall. 4.75" wide

#### **MODELS**

SLV-DAS-8 Emitter access sleeve (black) SLV-DAS-8R Emitter access sleeve (reclaimed purple)

## **PUNCH TOOLS**

- The toughest, most rugged punch tool on the market
- · Made from stainless steel to ensure durability and longevity
- Will punch any hose from 3/8" to 1"
- · Replacable and adjustable punch tip



SLV-HPT-05 (REPLACEMENT TIP)

#### **OTHER PUNCHES:**







## **DIRECT CONNECT EMITTERS**

#### **FEATURES**

- Unique patent pending design significantly reduces labor
- · Streamlines installation of emitters
- Engineered plastic ensures performance even in the roughest conditions
- · Root zone will always receive optimal irrigation due to revolutionary product design
- · Placement of direct connect will remain permanent vs. shifting seen with other products
- Compatible with any ½" barbed emitter
- Dimensions: 10" W x 10" L x 4" H

#### **OPERATING RANGE**

Max Pressure: 80 PSI Max Flow: 15 GPH

#### MODELS

SLV-DCB-05 Direct-Connect Manifold with two (2) PS-05's SLV-DCB-1 Direct-Connect Manifold with two (2) PS-1's SLV-DCB-2 Direct-Connect Manifold with two (2) PS-2's SLV-DCBNE-007 Direct-Connect Manifold with no emitters



## REFERENCE

## **PVC SCHEDULE 40 IPS PLASTIC PIPE**

C = 150

Loss per 100' of pipe (psi/100')

Size	1/2		3/2		1		1 3		1 1		2		2 ½		3'		4'		6'	
0.D.	0.84	10	1.0	50	1.3	15	1.6		1.9	00	2.3	75	2.8		3.5	00	4.5	00	6.6	25
I.D.	0.62		0.8		1.0		1.3	80	1.6		2.0	67	2.4		3.0		4.0		6.0	
Wall Dim.	0.10	)9	0.1		0.133		0.1		0.1		0.1		0.2	03	0.2	16	0.2	37	0.280	
Flow	Velocity		Velocity		Velocity		Velocity		Velocity		Velocity		Velocity		Velocity		Velocity		Velocity	psi
gpm 1	fps 1.06	0.503	<b>fps</b> 0.60	0.123	<b>fps</b> 0.37	0.037	<b>fps</b> 0.21	0.001	<b>fps</b> 0.16	0.004	<b>fps</b> 0.01	0.001	<b>fps</b> 0.07	0.001	<b>fps</b> 0.04	0.000	<b>fps</b> 0.03	0.000	<b>fps</b> 0.01	0.000
2	2.11	1.815	1.20	0.444	0.74	0.134	0.42	0.034	0.31	0.016	0.19	0.005	0.13	0.002	0.09	0.001	0.05	0.000	0.02	0.000
3	3.16	3.842	1.80	0.940	1.11	0.283	0.64	0.073	0.47	0.034	0.28	0.001	0.20	0.004	0.13	0.001	0.08	0.000	0.03	0.000
4	4.22	6.542	2.40	1.601	1.48	0.482	0.85	0.124	0.62	0.058	0.38	0.017	0.26	0.007	0.17	0.002	0.10	0.001	0.04	0.000
5 6	5.27 6.33	9.885 13.850	3.00 3.60	2.419 3.389	1.85 2.22	0.728 1.020	1.07 1.28	0.187 0.263	0.78 0.94	0.088 0.123	0.47 0.57	0.026 0.036	0.33	0.011	0.21 0.26	0.004	0.13 0.15	0.000	0.06	0.000
7	7.38	18.421	4.20	4.508	2.59	1.357	1.49	0.349	1.10	0.163	0.66	0.048	0.46	0.020	0.30	0.007	0.18	0.002	0.08	0.000
8	8.44	23.582	4.80	5.771	2.96	1.738	1.71	0.447	1.25	0.209	0.76	0.061	0.53	0.026	0.34	0.009	0.20	0.002	0.09	0.000
9	9.49	29.324	5.40	7.176 8.720	3.33	2.161	1.92	0.556	1.41	0.260	0.85	0.076 0.092	0.60	0.032	0.39	0.011	0.23	0.003	0.10	0.000
10 11			6.00	10.402	3.70 4.07	2.625 3.132	2.14	0.676 0.806	1.57 1.73	0.315 0.376	0.95 1.05	0.092	0.66 0.73	0.039	0.43 0.47	0.013 0.016	0.25	0.004	0.11 0.12	0.001
12			7.21	12.218	4.44	3.679	2.57	0.947	1.88	0.442	1.14	0.129	0.80	0.055	0.52	0.019	0.30	0.005	0.13	0.001
14			8.41	16.251	5.19	4.893	2.99	1.259	2.20	0.588	1.33	0.172	0.93	0.073	0.60	0.025	0.35	0.007	0.16	0.001
16 18			9.61	20.804 25.869	5.93 6.67	6.264 7.789	3.42 3.85	1.612 2.004	2.51 2.83	0.753 0.936	1.52 1.71	0.220	1.07 1.20	0.093	0.69 0.78	0.032	0.40	0.009	0.18	0.001
20			12.01	31.437	7.41	9.465	4.28	2.436	3.14	1.137	1.71	0.274	1.33	0.110	0.76	0.040	0.45	0.011	0.20	0.001
22					8.15	11.290	4.71	2.905	3.46	1.357	2.10	0.397	1.47	0.167	0.95	0.057	0.55	0.015	0.24	0.002
24					8.89	13.262	5.14	3.413	3.77	1.593	2.29	0.467	1.60	0.197	1.04	0.067	0.60	0.018	0.27	0.002
26 28					9.64	15.378 17.638	5.57 5.99	3.957 4.539	4.09 4.40	1.848 2.119	2.48 2.67	0.541 0.621	1.74 1.87	0.228	1.12 1.21	0.078 0.090	0.65 0.70	0.021	0.29 0.31	0.003
30					11.12	20.039	6.42	5.157	4.72	2.408	2.86	0.705	2.00	0.297	1.30	0.102	0.75	0.027	0.33	0.004
35					12.97	26.652	7.49	6.859	5.50	3.202	3.34	0.938	2.34	0.395	1.51	0.136	0.88	0.036	0.38	0.005
40 45							8.56	8.780 10.918	6.29	4.010	3.81	1.201	2.67	0.506	1.73	0.174	1.00	0.046	0.44	0.006
50							9.64	13.268	7.08 7.87	5.098 6.195	4.29 4.77	1.493 1.815	3.01 3.34	0.629	1.95 2.16	0.216 0.262	1.13 1.25	0.058	0.49 1.55	0.008
55							11.78	15.826	8.65	7.390	5.25	2.164	3.68	0.912	2.38	0.313	1.38	0.083	0.61	0.011
60							12.85	18.590	9.44	8.680	5.72	2.543	4.01	1.071	2.60	0.367	1.51	0.098	0.66	0.013
65 70									10.23	10.066 11.545	6.20 6.68	2.948 3.382	4.35 4.68	1.242 1.425	2.81 3.03	0.426 0.489	1.63 1.76	0.114	0.72 0.77	0.015
75									11.80	13.117	7.16	3.842	5.01	1.619	3.25	0.555	1.88	0.148	0.83	0.020
80									12.59	14.780	7.63	4.329	5.35	1.824	3.46	0.626	2.01	0.167	0.88	0.023
85 90											8.11	4.843 5.383	5.68	2.041	3.68	0.700	2.13	0.187	0.94	0.025
95											8.59 9.07	5.949	6.02 6.35	2.268 2.507	3.90 4.11	0.778 0.860	2.26	0.208	0.99 1.05	0.028
100											9.54	6.542	6.69	2.757	4.33	0.945	2.51	0.252	1.10	0.034
110											10.50	7.803	7.36	3.288	4.76	1.127	2.76	0.301	1.22	0.041
120 130											11.45 12.41	9.166 10.629	8.03 8.70	3.863 4.479	5.20 5.63	1.324 1.536	3.02 3.27	0.353	1.33 1.44	0.048
140											12.41	10.023	9.37	5.137	6.06	1.761	3.52	0.410	1.55	0.064
150													10.03	5.837	6.50	2.001	3.77	0.534	1.66	0.072
160													10.70	6.577	6.93	2.255		0.602	1.77	0.081
170 180													11.37 12.04	7.357 8.178	7.36 7.80	2.523 2.804	4.27 4.53	0.673 0.748	1.88 1.99	0.091
190													12.71	9.038	8.23	3.099		0.827	2.10	0.112
200															8.66				2.21	0.123
225 250															9.75 10.83		5.66 6.29	1.131	2.49 2.77	0.153
275															11.92	6.142		1.639	3.05	0.180
300															13.00	7.214	7.55	1.926	3.32	0.260
325																	8.18	2.233	3.60	0.302
350 375																	8.81 9.43	2.561 2.910	3.88 4.15	0.346
400																	10.06	3.279		0.443
425																	10.69	3.668	4.71	0.496
450																	11.32	4.077	4.99	0.551
475 500																	11.95 12.58	4.506 4.954	5.26 5.54	0.609
550																	12.00	1.004	6.10	0.799
600																			6.65	0.938



## REFERENCE

## **PVC CLASS 200 IPS PLASTIC PIPE**

SDR21C = 150

Loss per 100' of pipe (psi/100')

Size	1/2	u (1)	3/4	"	1	ı	1 ½	<b>4</b> "	1 1	/2"	2'		2 ½	2"	3'		4'		6"	
0.D.	0.8		1.0		1.315 1.660			1.900		2.3		2.8		3.5		4.500		6.625		
I.D.	0.7	16	0.9	30	1.1	89	1.50	02	1.7	20	2.1	49	2.6		3.10	66	4.0	72	5.99	93
Wall Dim.	0.0		0.0		0.0		0.0		0.0		0.1		0.1		0.167		0.2		0.3	16
Flow	Velocity fps	psi loss	Velocity fps	psi loss	Velocity fps	psi loss	Velocity fps	psi loss	Velocity fps	psi loss										
gpm	0.80	0.248	0.47	0.067	0.29	0.020	0.18	0.006	0.14	0.003	0.09	0.001	0.06	0.000	0.04	0.000	0.02	0.000	0.01	0.000
2	1.59	0.896	0.94	0.243	0.58	0.072	0.36	0.023	0.28	0.012	0.18	0.004	0.12	0.002	0.08	0.001	0.05	0.000	0.02	0.000
3	2.39	1.896	1.42	0.514	0.87	0.152	0.54	0.048	0.41	0.025	0.27	0.008	0.18	0.003	0.12	0.001	0.07	0.000	0.03	0.000
4 5	3.19 3.98	3.229 4.879	1.89 2.36	0.876 1.323	1.16 1.44	0.259	0.72 0.91	0.082	0.55 0.69	0.042	0.35 0.44	0.014	0.24	0.005	0.16 0.20	0.002	0.01 0.12	0.001	0.05 0.06	0.000
6	4.78	6.837	2.83	1.854	1.73	0.548	1.09	0.173	0.83	0.089	0.53	0.030	0.36	0.012	0.24	0.004	0.12	0.001	0.07	0.000
7	5.58	9.093	3.31	2.466	2.02	0.729	1.27	0.230	0.97	0.118	0.62	0.039	0.42	0.015	0.29	0.006	0.17	0.002	0.08	0.000
8	6.37	11.641	3.78	3.157	2.31	0.933	1.45	0.294	1.10	0.151	0.71	0.051	0.48	0.020	0.33	0.008	0.20	0.002	0.09	0.000
10	7.17 7.97	14.475 17.590	4.25 4.72	3.926 4.771	2.60 2.89	1.160 1.410	1.63 1.81	0.366	1.24 1.38	0.188 0.228	0.88	0.063	0.54 0.60	0.025	0.37 0.41	0.009	0.22	0.003	0.10	0.000
11	8.77	20.981	5.20	5.690	3.18	1.682	1.99	0.530	1.52	0.272	0.97	0.091	0.66	0.036	0.45	0.014	0.27	0.004	0.13	0.001
12	9.56	24.646	5.67	6.684	3.47	1.975	2.17	0.623	1.66	0.320	1.06	0.107	0.72	0.042	0.49	0.016	0.30	0.005	0.14	0.001
14 16	11.16 12.75	32.779 41.964	6.61 7.56	8.890 11.381	4.05 4.62	2.627 3.363	2.54 2.90	0.828	1.93 2.21	0.425 0.545	1.24 1.42	0.142 0.182	0.85 0.97	0.056	0.57 0.65	0.021	0.34	0.006	0.16 0.18	0.000
18	14.34	52.181	8.50	14.152	5.20	4.182	3.26	1.318	2.49	0.677	1.59	0.227	1.09	0.089	0.73	0.034	0.44	0.001	0.20	0.002
20	15.94	63.411	9.45	17.198	5.78	5.082	3.62	1.602	2.76	0.823	1.77	0.275	1.21	0.108	0.82	0.041	0.49	0.012	0.23	0.002
22 24			10.39 11.34	20.514 24.097	6.36	6.062 7.121	3.98 4.35	1.911 2.244	3.04 3.31	0.982 1.153	1.95 2.12	0.328	1.33 1.45	0.129	0.90	0.049	0.54 0.59	0.014	0.25 0.27	0.002
26			12.28	27.943	7.51	8.258	4.33	2.602	3.59	1.133	2.12	0.447	1.45	0.151	0.98 1.06	0.058	0.59	0.017	0.27	0.003
28			13.22	32.049	8.09	9.471	5.07	2.820	3.87	1.534	2.48	0.513	1.69	0.201	1.14	0.076	0.69	0.023	0.32	0.003
30			14.17	36.412	8.67	10.761	5.43	3.200	4.14	1.742	2.65	0.583	1.81	0.228	1.22	0.087	0.74	0.026	0.34	0.004
35 40			16.53	48.428	10.11 11.56	14.311 18.322	6.34 7.24	4.260 5.450	4.83 5.52	2.317 2.967	3.01 3.54	0.775	2.11 2.42	0.304	1.43 1.63	0.116	0.86	0.034	0.40 0.45	0.005
45					13.00	22.783	8.15	6.780	6.21	3.689	3.98	1.234	2.72	0.483	1.83	0.148	1.11	0.054	0.43	0.007
50					14.45	27.686	9.05	8.240	6.90	4.483	4.42	1.500	3.02	0.587	2.04	0.224	1.23	0.066	0.57	0.010
55					15.89	33.024	9.96	9.830	7.59	5.347	4.86	1.789	3.32	0.701	2.24	0.267	1.35	0.079	0.63	0.012
60 65							10.86 11.77	11.550 13.400	8.28 8.98	6.281 7.283	5.31 5.75	2.102	3.62 3.92	0.823	2.45 2.65	0.313	1.48 1.60	0.092	0.68 0.74	0.014
70							12.68	15.370	9.67	8.354	6.19	2.795	4.23	1.094	2.85	0.417	1.72	0.123	0.80	0.019
75							13.58	17.470	10.36	9.491	6.63	3.176	4.53	1.243	3.06	0.473	1.85	0.140	0.85	0.021
80 85							14.49 15.39	19.680 22.020	11.05 11.74	10.694 11.964	7.08 7.52	3.578 4.003	4.83 5.13	1.401	3.26 3.46	0.533	1.97 2.09	0.157 0.176	0.91 0.97	0.024
90							13.33	22.020	12.43	13.298	7.96	4.450	5.43	1.742	3.40	0.663	2.22	0.176	1.02	0.027
95									13.12	14.697	8.40	4.918	5.74	1.926	3.87	0.733	2.34	0.216	1.08	0.033
100									13.81	16.160	8.85	5.407	6.04	2.117	4.08	0.806	2.46	0.238	1.14	0.036
110 120									15.19	19.276	9.73 10.61	6.450 7.576	6.64 7.25	2.525	4.48 4.89	0.961	2.71 2.96	0.284	1.25 1.36	0.043
130											11.50	8.785	7.85	3.440	5.30	1.310	3.20	0.386	1.48	0.059
140											12.38	10.076	8.45	3.946	5.71	1.502	3.45	0.443	1.59	0.068
150 160											13.27	11.448 12.900	9.06	4.483	6.11	1.707	3.70	0.503	1.71	0.077
170											14.15 15.04	14.431	9.66 10.27	5.051 5.651	6.52 6.93	1.923 2.151	3.94 4.19	0.567	1.82 1.93	0.086
180													10.87	6.281	7.34	2.391	4.43	0.705	2.05	0.107
190													11.47	6.942	7.74	2.643	4.68	0.779	2.16	0.119
200 225													12.08	7.633 9.491	8.15 9.17	2.906 3.613			2.27 2.56	0.131 0.162
250														11.533	10.19		6.16		2.84	0.102
275															11.21	5.238	6.77	1.545	3.13	0.235
300															12.23	6.152			3.41	0.277
325 350															13.25 14.26	7.134 8.183		2.104	3.70 3.98	0.321
375															15.28	9.297	9.24	2.742	4.27	0.418
400																	9.85	3.090	4.55	0.471
425 450																	10.47 11.09	3.456 3.842	4.83 5.12	0.527
450																	11.09		5.40	0.586
500																	12.32		5.69	0.712
550																	13.55		6.26	0.849
600																	14./8	6.542	6.82	0.997

(1) SDR 13.5 pipe for 1/2". SDR21 not standard.



## REFERENCE

## POLYETHYLENE (PE) SDR PRESSURE RATED TUBE

C = 140

Loss per 100' of pipe (psi/100')

Size I.D.	½' 0.62		<sup>3</sup> ⁄ <sub>4</sub> " 0.82		1" 1.04		1 ½ 1.38		1 ½ 1.61		2" 2.06		2 ½ 2.46		3" 3.068		4" 4.020	6
Flow gpm	Velocity fps	psi Ioss	Velocity fps	psi loss	Velocity fps	psi Ioss	Velocity fps	psi Ioss	Velocity fps	psi Ioss	Velocity fps	psi loss	Velocity fps	psi loss	Velocity fps	psi loss	Velocity fps	psi loss
1	1.06	0.488	0.60	0.124	0.37	0.038	0.21	0.010	0.16	0.005	0.01	0.001	0.07	0.001	0.04	0.000	0.03	0.000
2	2.11	1.759	1.20	0.448	0.74	0.138	0.43	0.036	0.32	0.017	0.19	0.003	0.13	0.002	0.09	0.001	0.05	0.000
3	3.17	3.723	1.80	0.948	1.11	0.293	0.64	0.077	0.47	0.036	0.29	0.007	0.20	0.005	0.13	0.002	0.08	0.000
4 5	4.22 5.28	6.340 9.580	2.41 3.01	1.614 2.438	1.48 1.86	0.499 0.753	0.86 1.07	0.131	0.63 0.79	0.062	0.38	0.012 0.018	0.27	0.008 0.012	0.17 0.22	0.003	0.10 0.13	0.001
6	6.34	13.422	3.61	3.417	2.23	1.055	1.07	0.138	0.79	0.034	0.46	0.018	0.40	0.012	0.22	0.004	0.15	0.001
7	7.39	17.852	4.21	4.544	2.60	1.404	1.50	0.369	1.10	0.175	0.67	0.034	0.47	0.022	0.30	0.008	0.18	0.002
8	8.45	22.854	4.81	5.817	2.97	1.797	1.72	0.473	1.26	0.223	0.76	0.043	0.54	0.028	0.35	0.001	0.20	0.003
9	9.50	28.418	5.41	7.234	3.34	2.235	1.93	0.588	1.42	0.278	0.86	0.053	0.60	0.035	0.39	0.012	0.23	0.003
10 11	10.56 11.61	34.534 41.193	6.02	8.790 10.485	3.71 4.08	2.716 3.239	2.15 2.36	0.715 0.853	1.58 1.73	0.338	0.96 1.05	0.065 0.077	0.67 0.74	0.042 0.050	0.43	0.015 0.017	0.25 0.28	0.004
12	12.67	48.388	7.22	12.317	4.45	3.805	2.57	1.001	1.89	0.403	1.15	0.077	0.80	0.059	0.52	0.017	0.30	0.005
14	14.78	64.355	8.42	16.381	5.20	5.061	3.00	1.332	2.21	0.629	1.34	0.121	0.94	0.079	0.61	0.027	0.35	0.007
16	16.89	82.389	9.63	20.972	5.94	6.479	3.43	1.705	2.52	0.805	1.53	0.155	1.07	0.101	0.69	0.035	0.40	0.009
18	19.01	102.448	10.83	26.078	6.68	8.056	3.86	2.120	2.84	1.001	1.72	0.193	1.21	0.126	0.78	0.043	0.45	0.012
20 22	21.12	124.496	12.03 13.24	31.690 37.800	7.42 8.17	9.790 11.677	4.29 4.72	2.577 3.074	3.15 3.47	1.217 1.452	1.91 2.10	0.234 0.279	1.34 1.47	0.153 0.182	0.87 0.95	0.053	0.50 0.55	0.014
24			14.44	44.402	8.91	13.717	5.15	3.610	3.78	1.705	2.10	0.328	1.61	0.182	1.04	0.003	0.60	0.017
26			15.64	51.489	9.65	15.906	5.58	4.187	4.01	1.977	2.49	0.380	1.74	0.248	1.13	0.086	0.66	0.023
28			16.85	59.055	10.39	18.243	6.01	4.802	4.41	2.268	2.68	0.436	1.88	0.284	1.22	0.098	0.71	0.026
30			18.05	67.094	11.14	20.727	6.44	5.455	4.73	2.577	2.87	0.495	2.01	0.323	1.30	0.112	0.76	0.030
35 40			21.06	89.236	12.99 14.85	27.567 35.291	7.51 8.58	7.256 9.289	5.52 6.30	3.427 4.387	3.35 3.82	0.659 0.843	2.35	0.430 0.550	1.52 1.74	0.149 0.190	0.88 1.01	0.040
45					16.71	43.883	9.65	11.550	7.09	5.455	4.30	1.049	3.02	0.684	1.95	0.130	1.13	0.063
50					18.56	53.328	10.73	14.036	7.88	6.630	4.78	1.274	3.35	0.831	2.17	0.288	1.26	0.077
55					20.42	63.610	11.80	16.743	8.67	7.908	5.26	1.520	3.69	0.992	2.39	0.343	1.39	0.091
60							12.87	19.667	9.46	9.289	5.74	1.785	4.02	1.165	2.60	0.403	1.51	0.107
65 70							13.94 15.02	22.806 26.157	10.24 11.03	10.772 12.354	6.21	2.070 2.375	4.36 4.69	1.351 1.549	2.82 3.04	0.468 0.536	1.64 1.76	0.125 0.143
75							16.09	29.718	11.82	14.036	7.17	2.698	5.03	1.760	3.25	0.609	1.89	0.143
80							17.16	33.487	12.61	15.816	7.65	3.040	5.36	1.983	3.47	0.686	2.02	0.183
85							18.23	37.461	13.40	17.693	8.13	3.401	5.70	2.219	3.69	0.768	2.14	0.205
90 95									14.18 14.97	19.667 21.736	8.61 9.08	3.780 4.178	6.03	2.466 2.726	3.91 4.12	0.854 0.943	2.27	0.227
100									15.76	23.899	9.08	4.178	6.70	2.726	4.12	1.037	2.59	0.231
110									17.34	28.508	10.52	5.480	7.37	3.575	4.77	1.237	2.77	0.330
120											11.47	6.437	8.04	4.199	5.21	1.453	3.02	0.387
130											12.43	7.464	8.71	4.870	5.64	1.685	3.28	0.449
140											13.39	8.561	9.38	5.585	6.08	1.933	3.53	0.515
150 160											14.34 15.30	9.726 10.960	10.05 10.72	6.346 7.150	6.51 6.94	2.196 2.475	3.78 4.03	0.585 0.659
170											16.25	12.261	11.39	7.999	7.38	2.768	4.28	0.738
180													12.06	8.891	7.81	3.077	4.54	0.820
190													12.73	9.827	8.25	3.401	4.79	0.906
200 225													13.40 15.08	10.805 13.435	8.68 9.76	3.740 4.650	5.04 5.67	0.996
250													16.75	16.327	10.85	5.651	6.30	1.505
275													20.70	10.027	11.93	6.740	6.93	1.796
300															13.02	7.917	7.56	2.109
325															14.10	9.181	8.19	2.446
350 375															15.19 16.27	10.530 11.964	8.82 9.45	2.806 3.187
400															10.27	11.304	10.08	3.592
425																	10.71	4.018
450																	11.34	4.466
475																	11.97	4.936
500 550																	12.60 13.86	5.427 6.474
600																	15.12	7.604



## TYPE K COPPER WATER TUBE

C = 140

Loss per 100' of pipe (psi/100')

Size	e ½"		5/8"		3/4"		1"		1 ½	i"	1 1/2	,"	2"		2 1/2"		3"	
I.D.	0.52		0.6		0.74		0.995		1.24		1.48		1.95		2.43		2.907	
Flow	Velocity	psi	Velocity	psi	Velocity	psi	Velocity	psi	Velocity	psi	Velocity	psi	Velocity	psi	Velocity	psi	Velocity	psi
gpm	fps	loss	fps	loss	fps	loss	fps	loss	fps	loss	fps	loss	fps	loss	fps	loss	fps	psi loss
1	1.47	1.147	0.96	0.390	0.74	0.213	0.41	0.052	0.26	0.018	0.19	0.008	0.11	0.002	0.07	0.001	0.05	0.000
2	2.94	4.135	1.92	1.400	1.47	0.768	0.83	0.188	0.53	0.063	0.37	0.027	0.21	0.007	0.14	0.002	0.01	0.001
3	4.41	8.755	2.88	2.960	2.21	1.625	1.24	0.397	0.79	0.134	0.56	0.057	0.32	0.015	0.21	0.005	0.15	0.002
4	5.88	14.908	3.84	5.040	2.94	2.767	1.65	0.677	1.05	0.228	0.74	0.098	0.43	0.025	0.28	0.009	0.19	0.004
5	7.35	22.526	4.80	7.620	3.68	4.182	2.06	1.022	1.32	0.344	0.93	0.148	0.53	0.038	0.34	0.013	0.24	0.006
6	8.83	31.563	5.77	10.670	4.42	5.859	2.48	1.432	1.58	0.482	1.12	0.207	0.64	0.053	0.41	0.018	0.29	0.008
7	10.30	41.979	6.73	14.200	5.15	7.792	2.89	1.905	1.84	0.641	1.30	0.275	0.75	0.071	0.48	0.024	0.34	0.010
8	11.77	53.742	7.69	18.170	5.89	9.976	3.30	2.439	2.11	0.820	1.49	0.352	0.85	0.090	0.55	0.031	0.39	0.013
9			8.65	22.600	6.62	12.405	3.71	3.033	2.37	1.020	1.68	0.438	0.96	0.112	0.62	0.039	0.44	0.017
10			9.61	27.460	7.36	15.075	4.13	3.685	2.64	1.239	1.86	0.532	1.06	0.137	0.69	0.047	0.48	0.020
11 12			10.57 11.53	32.760	8.01	17.981 21.122	4.54	4.396	2.90	1.478	2.05	0.635	1.17	0.163	0.76	0.056	0.53	0.024
14			11.53	38.480	8.83 10.30		4.95	5.164 6.868	3.16	1.737 2.310	2.23	0.745 0.992	1.28	0.191 0.255	0.83	0.066	0.58 0.68	0.028
16					10.30	28.092 35.964	5.78 6.60	8.792	3.69 4.22	2.310	2.61 2.98	1.269	1.49 1.70	0.255	0.96 1.10	0.088	0.68	0.037
18					11./0	33.904	7.43	10.933	4.22	3.677	3.35	1.578	1.70	0.320	1.10	0.113	0.77	0.048
20							8.25	13.286	5.27	4.468	3.72	1.918	2.13	0.493	1.38	0.170	0.87	0.072
22							9.08	15.848	5.80	5.329	4.01	2.288	2.34	0.433	1.52	0.203	1.06	0.072
24							9.90	18.616	6.33	6.260	4.47	2.688	2.55	0.690	1.65	0.239	1.16	0.102
26							10.73	21.587	6.85	7.259	4.84	3.116	2.77	0.800	1.79	0.277	1.26	0.118
28							11.55	24.759	7.38	8.326	5.21	3.574	2.98	0.918	1.93	0.317	1.35	0.135
30							11.00	211700	7.91	9.460	5.59	4.061	3.19	1.043	2.07	0.360	1.45	0.153
35									9.22	12.581	6.52	5.401	3.73	1.387	2.41	0.479	1.69	0.204
40									10.54	16.107	7.45	6.915	4.26	1.776	2.76	0.614	1.93	0.261
45									11.86	20.028	8.38	8.598	4.79	2.208	3.10	0.763	2.18	0.325
50											9.31	10.448	5.32	2.683	3.44	0.927	2.42	0.395
55											10.24	12.463	5.85	3.201	3.79	1.106	2.66	0.471
60											11.17	14.640	6.39	3.760	4.13	1.299	2.90	0.553
65													6.92	4.360	4.48	1.507	3.14	0.641
70													7.45	5.001	4.82	1.728	3.38	0.736
75													7.98	5.681	5.17	1.963	3.63	0.836
80													8.52	6.402	5.51	2.212	3.87	0.942
85													9.05	7.162	5.86	2.475	4.11	1.053
90													9.58	7.961	6.20	2.751	4.35	1.171
95													10.11	8.798	6.55	3.040	4.59	1.294
100													10.64	9.674	6.89	3.343	4.83	1.423
110													11.71	11.539	7.58	3.987	5.32	1.697
120 130															8.27 8.96	4.684 5.431	5.80 6.28	1.994 2.312
140															9.65	6.229	6.77	2.651
150															10.33	7.077	7.25	3.012
160															11.02	7.077	7.23	3.394
170															11.02	8.921	8.22	3.797
180															11./1	0.321	8.70	4.221
190																	9.18	4.665
200																	9.67	5.129
225																	10.88	6.378
220																	10.00	0.070



### **WIRE SIZING CHART FOR 24 VAC SOLENOIDS\***

Equivalent circuit length (in feet)

5.5 VA solenoid electric valves with 26.5 V transformer

90.	nci			CC	NTROL	WIRE S	IZE		
80	hai	18	16	14	12	10	8	6	4
	18	3,000	3,700	4,300	4,800	5,200	5,500	5,200	5,800
Size	16	3,700	4,800	5,900	6,900	7,700	8,300	8,800	9,100
	14	4,300	5,900	7,700	9,400	11,000	12,300	13,300	14,000
Common	12	4,800	6,900	9,400	12,200	15,000	17,500	19,600	21,100
Son	10	5,200	7,700	11,000	15,000	19,400	23,900	27,800	31,100
	8	5,500	8,300	12,300	17,500	23,900	30,900	38,000	44,300
Valve	6	5,700	8,800	13,300	19,600	27,800	38,000	49,200	60,400
	4	5,800	9,100	14,000	21,100	31,100	44,300	60,400	78,200

Multiplying factor for two valves per station: 0.42

125	nci		CONTROL WIRE SIZE										
125 psi		18	16	14	12	10	8	6	4				
	18	2,600	3,200	3,800	4,200	4,600	4,800	5,000	5,100				
Size	16	3,200	4,200	5,200	6,000	6,700	7,300	7,700	7,900				
	14	3,800	5,200	6,700	8,200	9,600	10,800	11,600	12,200				
Common	12	4,200	6,000	8,200	10,700	13,100	15,300	17,100	18,500				
Son	10	4,600	6,700	9,600	13,100	17,000	20,900	24,400	27,300				
Ve	8	4,800	7,300	10,800	15,300	20,900	27,100	33,200	38,800				
Valve	6	5,000	7,700	11,600	17,100	24,400	33,200	43,100	52,900				
	4	5,100	7,900	12,200	18,500	27,300	38,800	52,900	68,500				

Multiplying factor for two valves per station: .038

For proper wire sizing the resistance must not exceed the maximum ohms per 1.000 feet listed below.

AWG Wire Size	Ohms/1000 ft.
18	6.39
16	4.02
14	2.52
12	1.59
10	1.00
8	0.63

Resistance is determined by the formula:

 $Rw = \frac{AVL \times 1000}{L \times 2 \times LVC}$ 

Rw = Resistance of wire (ohms)

AVL = Allowable voltage loss

(Controller Output Voltage - Minimum Valve Operating Voltage)

L = Wire length, controller to valve

Ivs = Solenoid in-rush current (for number of valves)

100	nci		CONTROL WIRE SIZE											
100	hai	18	16	14	12	10	8	6	4					
	18	2,800	3,500	4,100	4,500	4,900	5,200	5,400	5,500					
Size	16	3,500	4,500	5,500	6,500	7,300	7,800	8,300	8,500					
	14	4,100	5,500	7,200	8,900	10,300	11,600	12,500	13,200					
ĕ	12	4,500	6,500	8,900	11,500	14,100	16,500	18,400	19,900					
Common	10	4,900	7,300	10,300	14,100	18,300	22,500	26,200	29,300					
Ve Ve	8	5,200	7,800	11,600	16,500	22,500	29,100	35,700	41,700					
Valve	6	5,400	8,300	12,500	18,400	26,200	35,700	46,300	56,900					
	4	5,500	8,500	13,200	19,900	29,300	41,700	56,900	73,600					

Multiplying factor for two valves per station: 0.40

150	nci		CONTROL WIRE SIZE											
130	hai	18	16	14	12	10	8	6	4					
	18	2,400	3,000	3,500	3,900	4,300	4,500	4,600	4,700					
Size	16	3,000	3,900	4,800	5,600	6,300	6,800	7,200	7,400					
S =	14	3,500	4,800	6,200	7,700	9,000	10,000	10,800	11,400					
Ĕ	12	3,900	5,600	7,700	10,000	12,200	14,300	16,000	17,300					
Common	10	4,300	6,300	9,000	12,200	15,900	19,500	22,800	25,400					
, ke	8	4,500	6,800	10,000	14,300	19,500	25,300	31,000	36,200					
Valve	6	4,600	7,200	10,800	16,000	22,800	31,000	40,200	49,400					
	4	4,700	7,400	11,400	17,300	25,400	36,200	49,400	63,900					

Multiplying factor for two valves per station: .031

## **INSTALLATION**

 Pop-up rotary sprinklers should be installed with flexible risers to minimize pipe damage; swing-joint risers are recommended for projects where heavy grounds maintenance equipment is required

## **OPERATING PRESSURE**

 Operating pressures listed are measured at base of sprinklers; sprinklers will not operate properly or give best distribution pattern at pressures less than minimum listed in tables

#### **CAUTION**

- Water supply must be reasonably free of sand and debris to avoid malfunction and excessive wear
- When necessary, valve full and part circle sprinklers separately to avoid extreme variation in rates of precipitation

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## SPACING

- Equilateral triangular spacing is recommended for most uniform distribution; square spacing may be necessary where borders are prevalent and must be protected from over-throw
- Wind effect on sprinkler distribution must be compensated for by the proper spacing of sprinkler heads; maximum rotary sprinkler spacings are commonly based on diameter of coverage and wind velocity (see deration table below)

#### WIND DERATION FOR ROTARY SPRINKLERS

- Diameters of coverage shown in tables are for still air
   Head Spacing = Diameter of coverage (selected from Perf. Table)
   x Deration factor (listed below)
- Spacing with wind deration as follows:

Wi	nd	Multiply Diameter in Table by:				
mph	km/h	⊠	<b>A</b>			
5	8	.55	.50			
10	16	.50	.45			

## **AD596 - TURF IRRIGATION MANUAL**



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presents a step-by-step approach to the design process, including: basic hydraulics, sprinkler performance, plot plans, head layout, pipe sizing, zoning and design criteria for water conservation.

#### PRECIPITATION RATES

#### **CALCULATING PRECIPITATION RATES**

Depending upon the construction of the irrigation system, the precipitation rate may be calculated by either a "sprinkler spacing" or a "total area" method.

#### SPRINKLER SPACING METHOD

The precipitation rate should be calculated for each individual zone. If all sprinkler heads on the same zone have the same spacing, flow rate, and arc of coverage, use one of the following formulas:

#### ANY ARC AND ANY SPACING:

P.R. (in/hr) =  $\frac{\text{GPM (for any Arc) x 34,650}}{\text{Degrees of Arc x Head Spacing (ft) x Row Spacing (ft)}}$ 

P.R. (mm/hr) =  $\frac{\text{m}^3/\text{hr} \text{ (for any Arc) x } 360.000}{\text{Degrees of Arc x Head Spacing (m) x Row Spacing (m)}}$ 

#### **EQUILATERAL TRIANGULAR SPACING:**

P.R. (in/hr) =  $\frac{\text{GPM of } 360 \text{ Arc x } 96.25}{\text{(Head Spacing)}^2 \text{ x } 0.866}$ P.R. (mm/hr) =  $\frac{\text{m}^3/\text{hr of } 360 \text{ Arc x } 1.000}{\text{(Head Spacing)}^2 \text{ x } 0.866}$ 

#### **TOTAL AREA METHOD**

The precipitation rate for a "system" is the average precipitation rate of all sprinklers in an area, regardless of the spacing, flow rate, or arc for each head. The Total Area Method calculates all the flows of all of the heads in any given area.

P.R. (in/hr) =  $\frac{\text{Total GPM x 96.25}}{\text{Total Area}}$ P.R. (mm/hr) =  $\frac{\text{m}^3/\text{hr x 1.000}}{\text{Total Area}}$ 

#### **METRIC NOTE**

To convert from Bars to kPa, use 1 Bar = 100 kPa To convert m³/hr to l/s use 1 m³/hr = 16,67 l/m

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