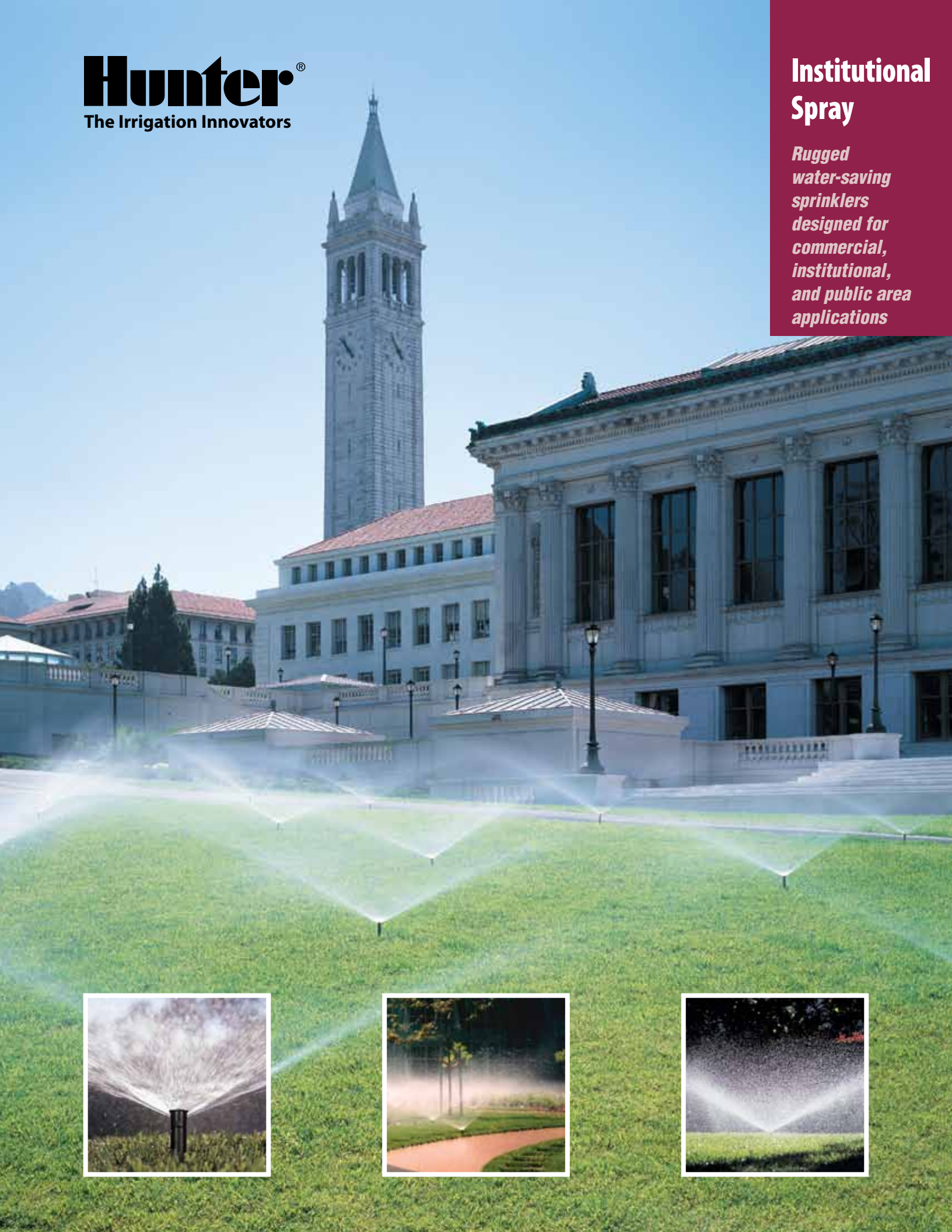


**Hunter**<sup>®</sup>  
The Irrigation Innovators

## Institutional Spray

*Rugged  
water-saving  
sprinklers  
designed for  
commercial,  
institutional,  
and public area  
applications*



**E**xceptional strength, innovative features...just the need for high traffic areas. Features like a positive-seal flush cap with an innovative pull-up design that keeps debris out. A high quality, multi-functional, pressure-activated wiper seal. True pressure regulation under a wide range of environmental and pressure conditions to reduce water waste. An in-stem regulator that acts as a flow control device if the nozzle is removed. A super heavy-duty check valve assembly that eliminates the potential liability issues of low head drainage. The most powerful retraction spring in its class. Sounds like a lot in a spray sprinkler? How about one more great feature—just like all other Hunter Institutional Series™ irrigation products, it carries a 5-year warranty.



## Features & Benefits



### In-stem pressure regulation built-in

Maximum nozzle efficiency regardless of inlet pressure

### Heavy-duty body and cap construction

Multi-thread buttress design withstands the harshest environments

### Pressure activated, multi-function, no flow-by wiper seal

Easy to remove and clean; treated with UV inhibitors to ensure long life

### Compatible with all female threaded nozzles

Accepts adjustable, fixed, and specialty nozzles from Hunter and all major brands

### Optional factory-installed drain check valve for up to 14 feet elevation change

Eliminates landscape damage from flooding and erosion

### Ratcheting riser for quick arc alignment

Make adjustments while sprinkler is operating

### Heavy-duty spring

For positive retraction under any conditions

### Innovative "pull-ring" flush plug design

Allows limited flow permitting controlled directional flushing

## Models

- INST-00 – Shrub
- INST-04 – 4" Pop-up (10 cm)
- INST-06 – 6" Pop-up (15 cm)
- INST-12 – 12" Pop-up (30 cm)

## Dimensions

- Overall height:
  - INST-04 – 5<sup>7</sup>/<sub>8</sub>" (15.5 cm)
  - INST-06 – 8<sup>3</sup>/<sub>4</sub>" (22.5 cm)
  - INST-12 – 16<sup>1</sup>/<sub>8</sub>" (41 cm)
- ½" female inlet NPT
- Exposed diameter: 2<sup>1</sup>/<sub>4</sub>" (5.7 cm)

## Operating Specifications

- Recommended pressure range: 15 to 100 PSI (1.0 to 6.9 bars; 103 to 689 kPa)
- Flow-by: 0 at 10 PSI (.7 bars; 68 kPa) or greater; .1 GPM (0.02 m<sup>3</sup>/hr; 0.4 l/min) otherwise
- Precipitation rates: approximately 1.5" (38 mm) per hour

## Options Available

- Factory-installed drain check valve for up to 14' (4.3 m) elevation change; "Check Valve" stamped on cap for easy identification
- Field-installed black rubber cover (part # 469805)
- Field-installed reclaimed water identification snap-on cover (part # 469800)
- Field-installed reclaimed water identification body cap (part # 458530), with "Check Valve" stamped on top for easy ID (part # 458535)
- Field-installed vandal-proof cap (part # INST-VPC)
- Field-installed check valve (part # 437400)

## Pressure Regulation That's Built in (So it's Always There)



Without a regulator mist gets carried away.



With a regulator large water droplets equals no wasted water.

For long pipe runs with wide variations in available pressure, large elevation changes that make design difficult, or high and variable pressure situations that create nozzle performance problems, the Institutional Spray provides a comprehensive solution. Built-in pressure regulation to a true 30 PSI. You'll get controlled, reliable pressure to Hunter's wide array of available nozzles, as well as the elimination of misting, fogging or unwanted variation. The pressure regulator is also dirt tolerant, handles extreme operating pressures up to 100 PSI, and will control flow rates by 70% if the nozzle is damaged or removed. Best of all, unlike pressure

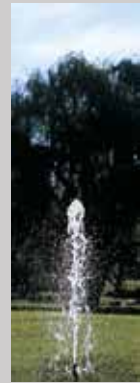


compensating screens, this regulator is built into the sprinkler, so it's ready from the get-go to handle the extremes your site dishes out.

## Regulator Also Acts as Anti-Geyser Device if Nozzle is Removed

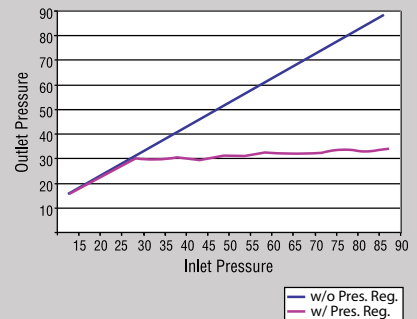


Without Regulator

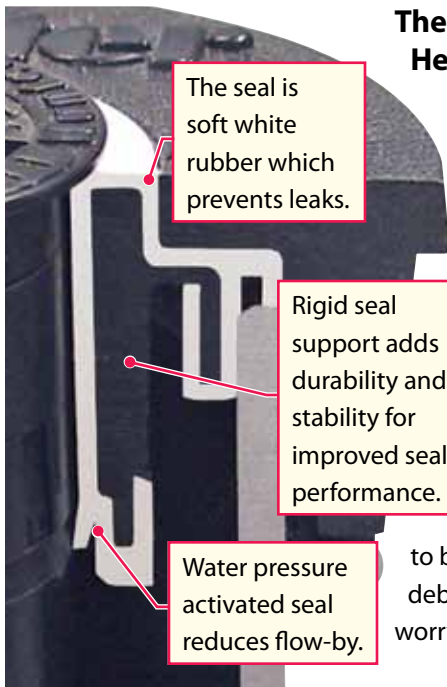


With Regulator

## The Effects of a Pressure Regulator



## The Wiper Seal That Allows More Heads Per Valve



The seal is soft white rubber which prevents leaks.

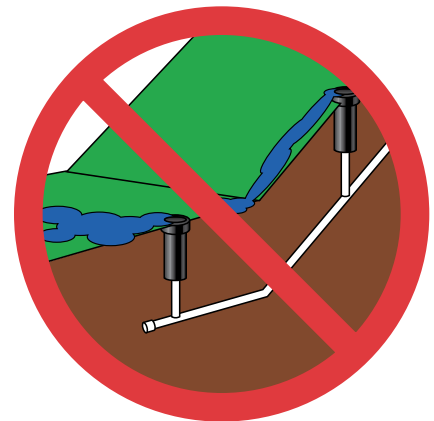
Rigid seal support adds durability and stability for improved seal performance.

Water pressure activated seal reduces flow-by.

With its pressure activated, multi-function wiper seal, the Institutional Spray has been designed to reduce "flow-by." A zero flush seal ensures dependable operation at low pressures and permits more sprinkler heads to be installed on the same zone. The wiper seal's unique design keeps debris from entering the seal when retracted. Body cap leaks will be a thing of the past, as well. You'll find Institutional Spray to be the ideal choice for handling the debris of gritty soils while eliminating the worry of riser stick-ups.

## Improved Co-molded Seal Makes a Great Seal Even Better

Co-molding is a process where two parts are molded together to create a bond between them. The soft white rubber seal is bonded to a rigid black inner support which adds stability and durability. This insures optimal seal performance and improved wear over many years of use.



## Check Valves: No Leaks, No Puddles, No Waste

The Institutional Spray check valve eliminates leaks and puddles at the lower heads, protecting landscapes from damage and erosion while reducing water waste, for up to 14 feet of elevation change. Choose from the convenience of factory-installed check valves or the flexibility of field installation.

### Adjustable Arc Nozzles Performance Data

Arc	Pressure PSI	8 Foot Radius Adjustable from 25° to 360° Nozzle Trajectory: 0° Color Code: Brown ● <b>8A</b>			10 Foot Radius Adjustable from 25° to 360° Nozzle Trajectory: 15° Color Code: Red ● <b>10A</b>			12 Foot Radius Adjustable from 25° to 360° Nozzle Trajectory: 28° Color Code: Green ● <b>12A</b>			15 Foot Radius Adjustable from 25° to 360° Nozzle Trajectory: 28° Color Code: Black ● <b>15A</b>			17 Foot Radius Adjustable from 25° to 360° Nozzle Trajectory: 28° Color Code: Gray ● <b>17A</b>							
		Radius ft.	Flow GPM	Precip in/hr	Radius ft.	Flow GPM	Precip in/hr	Radius ft.	Flow GPM	Precip in/hr	Radius ft.	Flow GPM	Precip in/hr	Radius ft.	Flow GPM	Precip in/hr					
45°	20	7'	0.17	2.67	3.08	9'	0.17	1.62	1.87	11'	0.25	1.59	1.84	14'	0.39	1.51	1.75	16'	0.49	1.46	1.68
	25	8'	0.20	2.35	2.71	10'	0.20	1.50	1.73	12'	0.28	1.47	1.70	15'	0.43	1.47	1.70	17'	0.57	1.51	1.74
	30	8'	0.25	2.95	3.40	10'	0.25	1.89	2.18	12'	0.32	1.68	1.95	15'	0.47	1.59	1.84	17'	0.60	1.60	1.85
90°	20	7'	0.34	2.67	3.08	9'	0.34	1.62	1.87	11'	0.50	1.59	1.84	14'	0.77	1.51	1.75	16'	0.97	1.46	1.68
	25	8'	0.39	2.35	2.71	10'	0.39	1.50	1.73	12'	0.55	1.47	1.70	15'	0.86	1.47	1.70	17'	1.13	1.51	1.74
	30	8'	0.49	2.95	3.40	10'	0.49	1.89	2.18	12'	0.63	1.68	1.95	15'	0.93	1.59	1.84	17'	1.20	1.60	1.85
120°	20	7'	0.45	2.67	3.08	9'	0.45	1.62	1.87	11'	0.67	1.59	1.84	14'	1.03	1.51	1.75	16'	1.29	1.46	1.68
	25	8'	0.52	2.35	2.71	10'	0.52	1.50	1.73	12'	0.73	1.47	1.70	15'	1.15	1.47	1.70	17'	1.51	1.51	1.74
	30	8'	0.65	2.95	3.40	10'	0.65	1.89	2.18	12'	0.84	1.68	1.95	15'	1.24	1.59	1.84	17'	1.60	1.60	1.85
180°	20	7'	0.68	2.67	3.08	9'	0.68	1.62	1.87	11'	1.00	1.59	1.84	14'	1.54	1.51	1.75	16'	1.94	1.46	1.68
	25	8'	0.78	2.35	2.71	10'	0.78	1.50	1.73	12'	1.10	1.47	1.70	15'	1.72	1.47	1.70	17'	2.26	1.51	1.74
	30	8'	0.98	2.95	3.40	10'	0.98	1.89	2.18	12'	1.26	1.68	1.95	15'	1.86	1.59	1.84	17'	2.40	1.60	1.85
240°	20	7'	0.91	2.67	3.08	9'	0.91	1.62	1.87	11'	1.33	1.59	1.84	14'	2.05	1.51	1.75	16'	2.59	1.46	1.68
	25	8'	1.04	2.35	2.71	10'	1.04	1.50	1.73	12'	1.47	1.47	1.70	15'	2.29	1.47	1.70	17'	3.01	1.51	1.74
	30	8'	1.31	2.95	3.40	10'	1.31	1.89	2.18	12'	1.68	1.68	1.95	15'	2.48	1.59	1.84	17'	3.20	1.60	1.85
270°	20	7'	1.02	2.67	3.08	9'	1.02	1.62	1.87	11'	1.50	1.59	1.84	14'	2.31	1.51	1.75	16'	2.91	1.46	1.68
	25	8'	1.17	2.35	2.71	10'	1.17	1.50	1.73	12'	1.65	1.47	1.70	15'	2.58	1.47	1.70	17'	3.39	1.51	1.74
	30	8'	1.47	2.95	3.40	10'	1.47	1.89	2.18	12'	1.89	1.68	1.95	15'	2.79	1.59	1.84	17'	3.60	1.60	1.85
360°	20	7'	1.36	2.67	3.08	9'	1.36	1.62	1.87	11'	2.00	1.59	1.84	14'	3.08	1.51	1.75	16'	3.88	1.46	1.68
	25	8'	1.56	2.35	2.71	10'	1.56	1.50	1.73	12'	2.20	1.47	1.70	15'	3.44	1.47	1.70	17'	4.52	1.51	1.74
	30	8'	1.96	2.95	3.40	10'	1.96	1.89	2.18	12'	2.52	1.68	1.95	15'	3.72	1.59	1.84	17'	4.80	1.60	1.85

Note: The Institutional Spray's built-in pressure regulation controls output to a maximum of 30 PSI.

### Pro-Spray® Fixed Pattern Nozzles Performance Data

Arc	Pressure PSI	Pattern	8 Foot Radius Fixed (Quarter, Half, Full) Nozzle Trajectory: 0° Color Code: Brown ● <b>8</b>			10 Foot Radius Fixed (Quarter, Half, Full) Nozzle Trajectory: 15° Color Code: Red ● <b>10</b>			12 Foot Radius Fixed (Quarter, Half, Full) Nozzle Trajectory: 28° Color Code: Green ● <b>12</b>			15 Foot Radius Fixed (Quarter, Half, Full) Nozzle Trajectory: 28° Color Code: Black ● <b>15</b>			17 Foot Radius Fixed (Quarter) Nozzle Trajectory: 28° Color Code: Gray ● <b>17</b>							
			Radius ft.	Flow GPM	Precip in/hr	Radius ft.	Flow GPM	Precip in/hr	Radius ft.	Flow GPM	Precip in/hr	Radius ft.	Flow GPM	Precip in/hr	Radius ft.	Flow GPM	Precip in/hr					
90°	20	Q	7'	0.17	1.34	1.54	9'	0.30	1.43	1.65	11'	0.50	1.59	1.84	14'	0.77	1.51	1.75	16'	0.97	1.46	1.68
	25	Q	8'	0.19	1.14	1.32	10'	0.33	1.27	1.47	12'	0.55	1.47	1.70	15'	0.86	1.47	1.70	17'	1.13	1.51	1.74
	30	Q	8'	0.24	1.44	1.67	10'	0.39	1.50	1.73	12'	0.63	1.68	1.95	15'	0.93	1.59	1.84	17'	1.20	1.60	1.85
180°	20	H	7'	0.34	1.34	1.54	9'	0.60	1.43	1.65	11'	1.00	1.59	1.84	14'	1.54	1.51	1.75	16'	1.94	1.46	1.68
	25	H	8'	0.38	1.14	1.32	10'	0.66	1.27	1.47	12'	1.10	1.47	1.70	15'	1.72	1.47	1.70	17'	2.26	1.51	1.74
	30	H	8'	0.48	1.44	1.67	10'	0.82	1.58	1.82	12'	1.31	1.75	2.02	15'	1.86	1.59	1.84	17'	2.40	1.60	1.85
360°	20	F	7'	0.68	1.34	1.54	9'	1.20	1.43	1.65	11'	2.00	1.59	1.84	14'	3.08	1.51	1.75	16'	3.88	1.46	1.68
	25	F	8'	0.76	1.14	1.32	10'	1.32	1.27	1.47	12'	2.20	1.47	1.70	15'	3.44	1.47	1.70	17'	4.52	1.51	1.74
	30	F	8'	0.95	1.43	1.65	10'	1.62	1.56	1.80	12'	2.65	1.77	2.05	15'	3.72	1.59	1.84	17'	4.80	1.60	1.85

Note: The Institutional Spray's built-in pressure regulation controls output to a maximum of 30 PSI. All precipitation rates calculated for 360 degree operation.

### Strip Pattern Nozzle Performance Data

Color Code: Blue ●				
Nozzle Model	Pressure PSI	Width x Length	Flow GPM	
LCS-515 Left-Corner Strip	20	4' x 14'	0.55	
	25	5' x 15'	0.60	
	30	5' x 15'	0.65	
RCS-515 Right-Corner Strip	20	4' x 14'	0.55	
	25	5' x 15'	0.60	
	30	5' x 15'	0.65	
SS-530 Side Strip	20	4' x 28'	1.10	
	25	5' x 30'	1.20	
	30	5' x 30'	1.30	
ES-515 End Strip	20	4' x 14'	0.55	
	25	5' x 15'	0.60	
	30	5' x 15'	0.65	
CS-530 Center Strip	20	4' x 28'	1.10	
	25	5' x 30'	1.20	
	30	5' x 30'	1.30	
SS-918 Side Strip	20	8' x 17'	1.45	
	25	9' x 18'	1.58	
	30	9' x 18'	1.72	
	35	9' x 18'	1.88	
	40	9' x 18'	2.08	

### Multi-Stream Bubbler Performance Data

Arc	Model	Pressure PSI	Flow GPM	Radius ft.
90°	● MSBN-25Q	30	0.25	1.0
	● MSBN-50Q	30	0.50	1.5
180°	● MSBN-50H	30	0.50	1.0
	● MSBN-10H	30	1.00	1.5
360°	● MSBN-10F	30	1.00	1.0
	● MSBN-20F	30	2.00	1.5

Note: Typical spacing 2 to 4 ft.

### PCN Nozzle & PCB Performance Data

Model	Pressure PSI	Flow GPM	Pattern Type
● 25	30	0.25	Trickle
● 50	30	0.50	Trickle
● 10	30	1.00	Umbrella
● 20	30	2.00	Umbrella

Note: Typical spacing 1 to 3 ft.

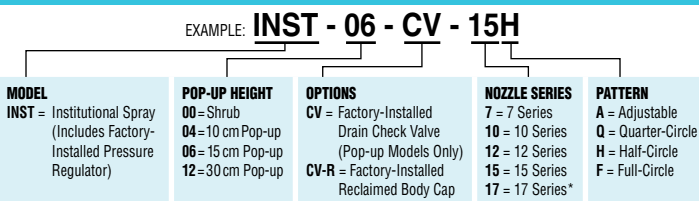
### Model S-16A Stream Spray

Nozzle Performance Data					
Adjustable from 25° to 360°					
Color Code: Blue ●					
Arc	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr	
90°	20	15	0.40	0.68	0.79
	25	16	0.46	0.69	0.80
	30	16	0.50	0.75	0.87
180°	20	15	0.67	0.57	0.66
	25	16	0.80	0.60	0.69
	30	16	0.88	0.66	0.76
360°	20	15	1.19	0.51	0.59
	25	16	1.46	0.55	0.63
	30	16	1.66	0.62	0.72

### 5-CST-B Bubbler Nozzle Performance Data

Pressure PSI	Radius ft.	Flow GPM
20	5'	0.30
25	5'	0.32
30	5'	0.38

### SPECIFICATION GUIDE



Note: Bodies and nozzles sold separately. Also compatible with Hunter's bubbler and specialty nozzles.  
\* 17 Series available in Adjustable and Quarter-Circle patterns only.