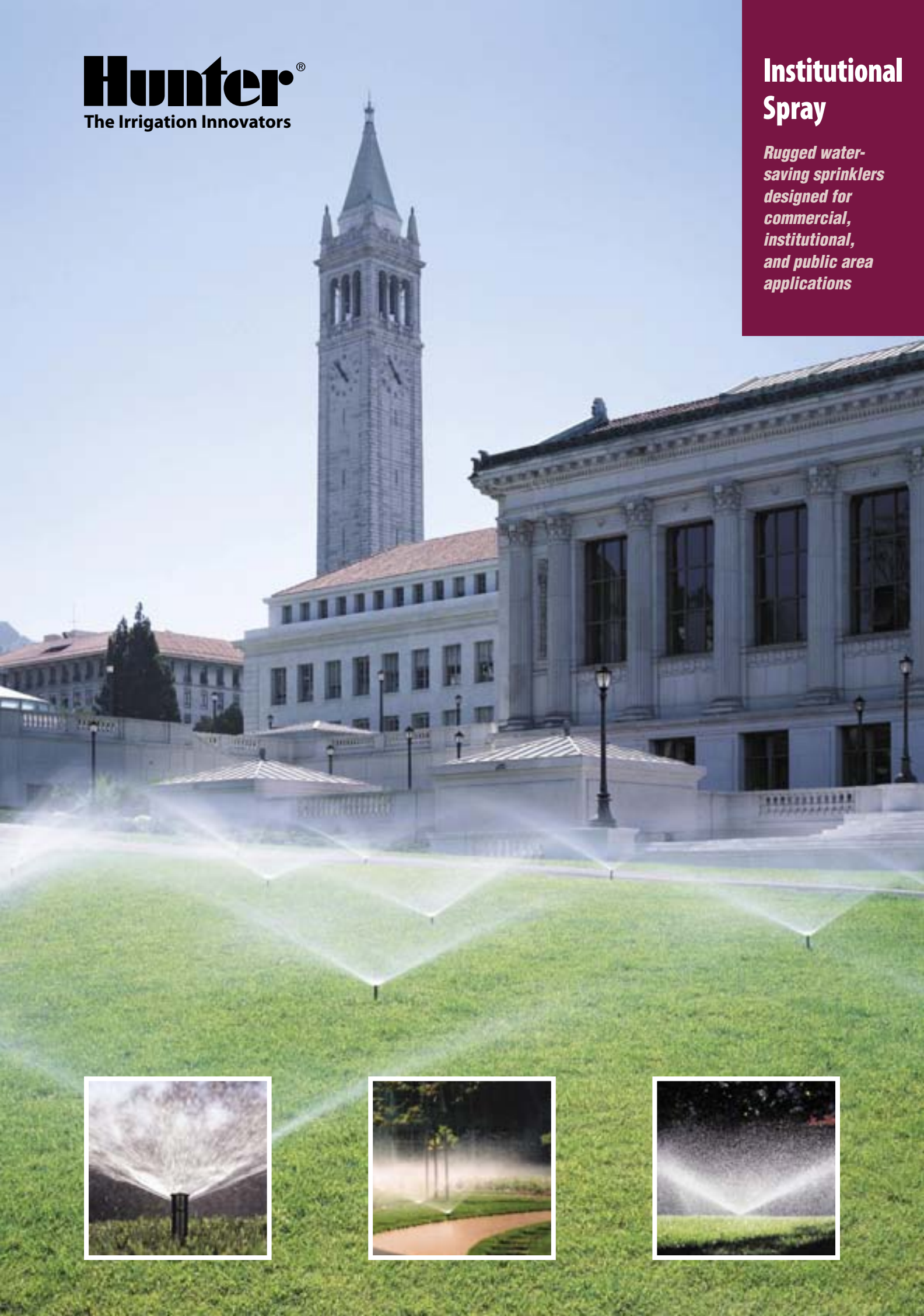


Hunter[®]
The Irrigation Innovators

Institutional Spray

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



Exceptional 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.



Shrub

10 cm

15 cm

30 cm

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 3 meters 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 – 10 cm Pop-up

INST-06 – 15 cm Pop-up

INST-12 – 30 cm Pop-up

Dimensions

- Overall height:
INST-04 – 15.5 cm
INST-06 – 22.5 cm
INST-12 – 41 cm
- ½" female inlet NPT
- Exposed diameter: 5.7 cm

Operating Specifications

- Recommended pressure range: 1.0 to 6.9 bars; 103 to 689 kPa
- Flow-by: 0.7 bars; 68 kPa or greater; 0.02 m³/hr; 0.4 l/min otherwise
- Precipitation rates: approximately 38 mm per hour

Options Available

- Factory-installed drain check valve for up to 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 2.1 bars (206 kPa). 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 7 bars (689 kPa), and will control flow rates by 70% if the nozzle is damaged or removed. Best of all, unlike pressure compensating screens, this regulator

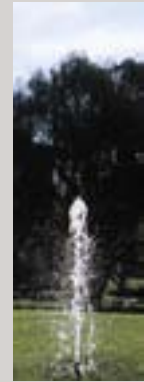


is built into the sprinkler, so it's ready from the get-go to handle the extremes your site dishes out.

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

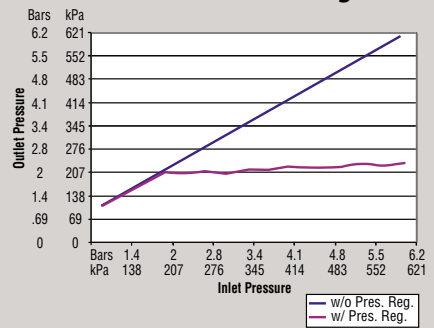


Without Regulator

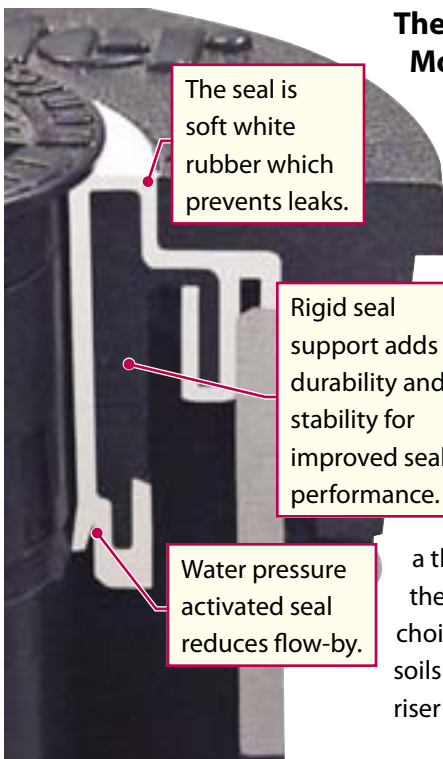


With Regulator

The Effects of a Pressure Regulator



The Wiper Seal That Allows More Heads Per Valve

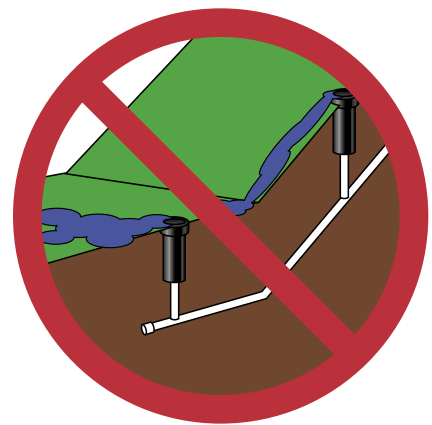


The seal is soft white rubber which prevents leaks.

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 the Institutional Spray to be the ideal choice for handling the debris of gritty soils while eliminating the worry of riser stick-ups.



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 3 meters of elevation change. Choose from the convenience of factory-installed check valves or the flexibility of field installation.

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.

Adjustable Arc Nozzles Performance Data – Metric

Arc	Pressure Bars kPa	2.4 Meter Radius (8 ft.) Adjustable from 25° to 360° Trajectory: 0° Color Code: Brown ●				3.0 Meter Radius (10 ft.) Adjustable from 25° to 360° Trajectory: 15° Color Code: Red ●				3.7 Meter Radius (12 ft.) Adjustable from 25° to 360° Trajectory: 28° Color Code: Green ●				4.6 Meter Radius (15 ft.) Adjustable from 25° to 360° Trajectory: 28° Color Code: Black ●				5.2 Meter Radius (17 ft.) Adjustable from 25° to 360° Trajectory: 28° Color Code: Gray ●								
		Radius m	Flow m³/hr	Flow l/min	Precip mm/hr	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr					
45°	1.4 137	2.1	0.04	0.6	68	78	2.7	0.04	0.6	41	47	3.4	0.06	0.9	40	47	4.2	0.09	1.5	38	44	4.8	0.11	1.8	37	43
	1.7 171	2.4	0.04	0.7	60	69	3.0	0.04	0.7	44	44	3.7	0.06	1.0	37	43	4.5	0.10	1.6	37	43	5.2	0.13	2.1	38	44
	2.1 206	2.4	0.06	0.9	75	86	3.0	0.06	0.9	55	55	3.7	0.07	1.2	43	49	4.5	0.11	1.8	40	47	5.2	0.14	2.3	41	47
90°	1.4 137	2.1	0.08	1.3	68	78	2.7	0.08	1.3	47	47	3.4	0.11	1.9	40	47	4.2	0.17	2.9	38	44	4.8	0.22	3.7	37	43
	1.7 171	2.4	0.09	1.5	60	69	3.0	0.09	1.5	44	44	3.7	0.12	2.1	37	43	4.5	0.20	3.3	37	43	5.2	0.26	4.3	38	44
	2.1 206	2.4	0.11	1.9	75	86	3.0	0.11	1.9	55	55	3.7	0.14	2.4	43	49	4.5	0.21	3.5	40	47	5.2	0.27	4.5	41	47
120°	1.4 137	2.1	0.10	1.7	68	78	2.7	0.10	1.7	47	47	3.4	0.15	2.5	40	47	4.2	0.23	3.9	38	44	4.8	0.29	4.9	37	43
	1.7 171	2.4	0.12	2.0	60	69	3.0	0.12	2.0	44	44	3.7	0.17	2.8	37	43	4.5	0.26	4.3	37	43	5.2	0.34	5.7	38	44
	2.1 206	2.4	0.15	2.5	75	86	3.0	0.15	2.5	55	55	3.7	0.19	3.2	43	49	4.5	0.28	4.7	40	47	5.2	0.36	6.1	41	47
180°	1.4 137	2.1	0.15	2.6	68	78	2.7	0.15	2.6	47	47	3.4	0.23	3.8	40	47	4.2	0.35	5.8	38	44	4.8	0.44	7.3	37	43
	1.7 171	2.4	0.18	3.0	60	69	3.0	0.18	3.0	44	44	3.7	0.25	4.2	37	43	4.5	0.39	6.5	37	43	5.2	0.51	8.6	38	44
	2.1 206	2.4	0.22	3.7	75	86	3.0	0.22	3.7	55	55	3.7	0.29	4.8	43	49	4.5	0.42	7.0	40	47	5.2	0.54	9.1	41	47
240°	1.4 137	2.1	0.21	3.4	68	78	2.7	0.21	3.4	47	47	3.4	0.30	5.0	40	47	4.2	0.47	7.8	38	44	4.8	0.59	9.8	37	43
	1.7 171	2.4	0.24	3.9	60	69	3.0	0.24	3.9	44	44	3.7	0.33	5.6	37	43	4.5	0.52	8.7	37	43	5.2	0.68	11.4	38	44
	2.1 206	2.4	0.30	4.9	75	86	3.0	0.30	4.9	55	55	3.7	0.38	6.4	43	49	4.5	0.56	9.4	40	47	5.2	0.73	12.1	41	47
270°	1.4 137	2.1	0.23	3.9	68	78	2.7	0.23	3.9	47	47	3.4	0.34	5.7	40	47	4.2	0.52	8.7	38	44	4.8	0.66	11.0	37	43
	1.7 171	2.4	0.27	4.4	60	69	3.0	0.27	4.4	44	44	3.7	0.37	6.2	37	43	4.5	0.59	9.8	37	43	5.2	0.77	12.8	38	44
	2.1 206	2.4	0.33	5.6	75	86	3.0	0.33	5.6	55	55	3.7	0.43	7.2	43	49	4.5	0.63	10.6	40	47	5.2	0.82	13.6	41	47
360°	1.4 137	2.1	0.31	5.1	68	78	2.7	0.31	5.1	47	47	3.4	0.45	7.6	40	47	4.2	0.70	11.7	38	44	4.8	0.88	14.7	37	43
	1.7 171	2.4	0.35	5.9	60	69	3.0	0.35	5.9	44	44	3.7	0.50	8.3	37	43	4.5	0.78	13.0	37	43	5.2	1.03	17.1	38	44
	2.1 206	2.4	0.44	7.4	75	86	3.0	0.44	7.4	55	55	3.7	0.57	9.5	43	49	4.5	0.84	14.1	40	47	5.2	1.09	18.2	41	47

Note: The Institutional Spray's built-in pressure regulation controls output to a maximum of 2.1 Bars (206 kPa).

Pro-Spray® Nozzles Performance Data – Metric

Arc	Pattern	Pressure Bars kPa	2.4 Meter Radius (8 ft.) Fixed (Quarter, Half, Full) Trajectory: 0° Color Code: Brown ●				3.0 Meter Radius (10 ft.) Fixed (Quarter, Half, Full) Trajectory: 15° Color Code: Red ●				3.7 Meter Radius (12 ft.) Fixed (Quarter, Half, Full) Trajectory: 28° Color Code: Green ●				4.6 Meter Radius (15 ft.) Fixed (Quarter, Half, Full) Trajectory: 28° Color Code: Black ●				5.2 Meter Radius (17 ft.) Fixed (Quarter) Trajectory: 28° Color Code: Gray ●								
			Radius m	Flow m³/hr	Flow l/min	Precip mm/hr	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr					
90°	Q	1.4 137	2.1	0.04	0.6	34	39	2.7	0.07	1.1	36	42	3.4	0.11	1.9	40	47	4.2	0.17	2.9	38	44	4.9	0.22	3.7	37	43
		1.7 171	2.4	0.04	0.7	29	34	3.0	0.07	1.3	37	44	3.7	0.12	2.1	37	43	4.5	0.20	3.3	37	43	5.2	0.26	4.3	38	44
		2.1 206	2.4	0.05	0.9	37	42	3.0	0.09	1.5	44	55	3.7	0.14	2.4	43	49	4.5	0.21	3.5	40	47	5.2	0.27	4.5	41	47
180°	H	1.4 137	2.1	0.08	1.3	34	39	2.7	0.14	2.3	42	47	3.4	0.23	3.8	40	47	4.2	0.35	5.8	38	44	4.9	0.44	7.3	37	43
		1.7 171	2.4	0.09	1.4	29	34	3.0	0.15	2.5	37	44	3.7	0.25	4.2	37	43	4.5	0.39	6.5	37	43	5.2	0.51	8.6	38	44
		2.1 206	2.4	0.11	1.8	37	42	3.0	0.19	3.1	46	55	3.7	0.30	5.0	44	51	4.5	0.42	7.0	40	47	5.2	0.54	9.1	41	47
360°	F	1.4 137	2.1	0.15	2.6	34	39	2.7	0.27	4.5	42	47	3.4	0.45	7.6	40	47	4.2	0.70	11.7	38	44	9	0.88	14.7	37	43
		1.7 171	2.4	0.17	2.9	29	34	3.0	0.30	5.0	37	44	3.7	0.50	8.3	37	43	4.5	0.78	13.0	37	43	5.2	1.03	17.1	38	44
		2.1 206	2.4	0.22	3.6	36	42	3.0	0.37	6.1	46	55	3.7	0.60	10.0	45	52	4.5	0.84	14.1	40	47	5.2	1.09	18.2	41	47

Note: The Institutional Spray's built-in pressure regulation controls output to a maximum of 2.1 Bars (206 kPa).

Short Radius Nozzles Performance Data – Metric

Arc	Pressure Bars kPa	Color Code: Light Brown ●				Color Code: Light Green ●				Color Code: Light Blue ●									
		Nozzle	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr	Nozzle	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr	Nozzle	Radius m	Flow m³/hr	Flow l/min	Precip mm/hr			
90°	1.4 137	2Q	0.6	0.02	0.34	220	254	4Q	1.2	0.05	0.76	122	141	6Q	1.8	0.11	1.78	128	147
	1.7 172		0.6	0.02	0.38	244	282		1.2	0.05	0.81	134	155		1.8	0.11	1.85	133	154
	2.1 206		0.6	0.02	0.42	269	311		1.2	0.05	0.83	134	155		1.8	0.12	1.93	139	160
	2.4 241		0.6	0.03	0.45	293	339		1.2	0.05	0.91	147	169		1.8	0.12	1.97	141	163
180°	2.8 275	2H	0.6	0.03	0.53	342	395	4H	1.2	0.05	0.91	147	169	6H	1.8	0.12	1.97	141	163
	1.4 137		0.6	0.03	0.45	147	169		1.2	0.09	1.55	125	145		1.8	0.22	3.60	129	149
	1.7 172		0.6	0.03	0.53	171	198		1.2	0.10	1.63	131	152		1.8	0.22	3.67	132	152
	2.1 206		0.6	0.04	0.61	196	226		1.2	0.10	1.67	134	155		1.8	0.22	3.71	133	154
	2.4 241		0.6	0.04	0.68	220	254		1.2	0.10	1.74	141	162		1.8	0.22	3.75	134	155
	2.8 275		0.6	0.04	0.68	220	254		1.2	0.10	1.74	141	162		1.8	0.23	3.79	136	157

Strip Pattern Nozzle Performance Data – Metric

Nozzle Model	Pressure Bars kPa	Width x Length	Flow		Precip mm/hr
			m³/hr	l/min	
LCS-515	1.4 137	1.2 m x 4.3 m	0.12	2.1	24
	1.7 172	1.5 m x 4.6 m	0.14	2.3	20
Left-Corner Strip	2.1 206	1.5 m x 4.6 m	0.15	2.5	21
	2.4 241				
RCS-515	1.4 137	1.2 m x 4.3 m	0.12	2.1	24
	1.7 172	1.5 m x 4.6 m	0.14	2.3	20
Right-Corner Strip	2.1 206	1.5 m x 4.6 m	0.15	2.5	21
	2.4 241				
SS-530	1.4 137	1.2 m x 8.5 m	0.25	4.2	24
	1.7 172	1.5 m x 9.1 m	0.27	4.5	20
Side Strip	2.1 206	1.5 m x 9.1 m	0.30	4.9	21
	2.4 241				

PCN Nozzle & PCB Performance Data – Metric

Model	Pressure		Flow		Pattern Type
	Bars	kPa	m³/hr	l/min	
25	2.1	206	0.06	0.9	Trickle
50	2.1	206	0.11	1.9	Trickle
10	2.1	206	0.23	3.8	Pattern
20	2.1	206	0.45	7.6	Pattern

Note: Typical spacing 0.3 to 0.9 m.

Multi-Stream Bubbler Nozzle – Metric

Arc	Model	Pressure	
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