

Hunter®

Institutional Spray



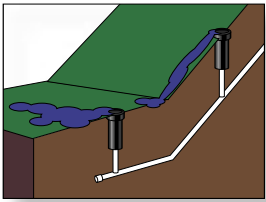
Institutional Spray

*Rugged,
Water-Saving
Sprinklers
Designed for
Commercial,
Institutional
& Public Area
Applications*

Now there is a Hunter sprinkler that delivers the ultimate in water savings, as well as the durability of a rugged body design. From top to bottom, the new Hunter Institutional Spray combines exceptional strength with a complete range of innovative features...just the need for high traffic area installations. 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 leakage, puddling and 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, the new Institutional Spray carries a 5-year warranty. Hunter's new Institutional Spray. Innovative solutions to the toughest design and installation problems.





Without check valves, water leaks out at low points creating wasteful puddles and potential liability hazards.

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. Choose from the convenience of factory-installed check valves or the flexibility of field installation.

PCN: Pop-up spray sprinkler bubbler nozzle

With our pressure compensating nozzle (PCN), there is now a solution for deep watering needs that provides all the benefits of drip irrigation, with none of the hassles... plus, the decided advantage of sitting atop a riser that retracts into the ground when not in use. More appealing to look at, less likely to be tampered with – in short, a product that specifiers will love.



Micro-Spray: A pop-up within a pop-up

The unique pop-up design of the Hunter Micro-Spray Nozzle, coupled with the fact that it attaches directly to a pop-up sprinkler, makes this alternative to drip a winner. When not in use, both the nozzle and the spray head body retract, so nothing sticks up above the surface. And when it's in operation, the pop-up nozzle gives nearly an extra inch of clearance over plants and shrubs.

FEATURES & BENEFITS



Built-in in-stem pressure regulation

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-up" flush plug design

Allows limited flow permitting controlled directional flushing

1/2" standard side inlet on 6" and 12" models

Installation convenience for deep seated bodies

Pressure regulation that's built in (so it's always there)

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 206 kPa, 2.1 bars. You'll get controlled, reliable pressure to Hunter's wide array of available nozzles, as



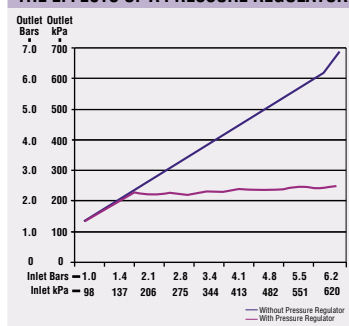
Without Regulator
Mist gets carried away



With Regulator
Large water droplets = No wasted water

well as the elimination of misting, fogging or unwanted variation. The pressure regulator is also dirt tolerant, handles extreme operating pressures up to 689 kPa, 7 bars and will control flow rates by 70% if the nozzle is damaged or removed. Best of all, unlike pressure compensating discs, this regulator is built into the sprinkler, so it's ready from the get-go to handle the extremes your site dishes out.

THE EFFECTS OF A PRESSURE REGULATOR



Performance Charts – Adjustable-Arc and Fixed-Arc Nozzles

Adjustable Arc Nozzles Performance Data – Metric																											
Arc	Pressure Bars	kPa	2.1 Meter Radius (7 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	1.8	0.04	0.6	92	107	2.7	0.04	0.6	41	47	3.4	0.06	1.0	44	50	4.3	0.09	1.5	39	45	4.9	0.11	1.8	37	42
	1.7	172	2.1	0.04	0.7	76	88	3.0	0.04	0.7	37	43	3.7	0.06	1.1	38	44	4.6	0.10	1.7	38	44	5.2	0.13	2.1	38	44
	2.1	206	2.1	0.06	0.9	96	111	3.0	0.06	0.9	47	54	3.7	0.08	1.4	49	56	4.6	0.11	1.8	40	46	5.5	0.14	2.3	41	47
90°	1.4	137	1.8	0.08	1.3	92	107	2.7	0.08	1.3	41	47	3.4	0.12	2.0	43	49	4.3	0.18	2.9	38	44	4.9	0.22	3.7	37	43
	1.7	172	2.1	0.09	1.5	78	90	3.0	0.09	1.5	38	44	3.7	0.13	2.1	38	44	4.6	0.20	3.3	38	44	5.2	0.26	4.3	38	44
	2.1	206	2.1	0.11	1.9	98	113	3.0	0.11	1.9	48	55	3.7	0.16	2.7	48	56	4.6	0.21	3.5	40	47	5.5	0.27	4.6	41	47
120°	1.4	137	1.8	0.10	1.7	92	106	2.7	0.10	1.7	41	47	3.4	0.16	2.7	43	50	4.3	0.23	3.9	38	45	4.9	0.29	4.9	37	43
	1.7	172	2.1	0.12	2.0	78	90	3.0	0.12	2.0	38	44	3.7	0.17	2.8	38	44	4.6	0.27	4.4	38	44	5.2	0.34	5.7	38	44
	2.1	206	2.1	0.15	2.5	97	112	3.0	0.15	2.5	48	55	3.7	0.22	3.6	48	56	4.6	0.28	4.7	40	47	5.5	0.36	6.1	41	47
180°	1.4	137	1.8	0.16	2.6	92	107	2.7	0.16	2.6	41	47	3.4	0.24	4.1	43	50	4.3	0.35	5.9	38	44	4.9	0.44	7.3	37	43
	1.7	172	2.1	0.18	3.0	78	90	3.0	0.18	3.0	38	44	3.7	0.26	4.3	38	44	4.6	0.40	6.6	38	44	5.2	0.51	8.5	38	44
	2.1	206	2.1	0.22	3.7	97	112	3.0	0.22	3.7	47	55	3.7	0.33	5.4	48	56	4.6	0.42	7.0	40	47	5.5	0.55	9.1	41	47
240°	1.4	137	1.8	0.21	3.4	93	107	2.7	0.21	3.4	41	48	3.4	0.32	5.4	43	50	4.3	0.47	7.8	39	45	4.9	0.59	9.7	37	43
	1.7	172	2.1	0.23	3.9	78	90	3.0	0.23	3.9	38	44	3.7	0.34	5.7	38	44	4.6	0.53	8.8	38	44	5.2	0.68	11.3	38	44
	2.1	206	2.1	0.29	4.9	97	112	3.0	0.29	4.9	48	55	3.7	0.43	7.2	48	56	4.6	0.56	9.3	40	47	5.5	0.73	12.1	41	47
270°	1.4	137	1.8	0.23	3.8	92	107	2.7	0.23	3.8	41	47	3.4	0.36	6.1	43	50	4.3	0.53	8.8	38	44	4.9	0.66	11.0	37	43
	1.7	172	2.1	0.26	4.4	78	90	3.0	0.26	4.4	38	44	3.7	0.38	6.4	38	44	4.6	0.60	9.9	38	44	5.2	0.77	12.8	38	44
	2.1	206	2.1	0.33	5.6	97	112	3.0	0.33	5.6	48	55	3.7	0.49	8.1	48	56	4.6	0.63	10.5	40	47	5.5	0.82	13.7	41	47
360°	1.4	137	1.8	0.31	5.1	92	107	2.7	0.31	5.1	41	47	3.4	0.48	8.1	43	50	4.3	0.70	11.7	38	44	4.9	0.88	14.6	37	43
	1.7	172	2.1	0.35	5.9	78	90	3.0	0.35	5.9	38	44	3.7	0.51	8.5	37	43	4.6	0.80	13.2	38	44	5.2	1.02	17.0	38	44
	2.1	206	2.1	0.44	7.4	97	112	3.0	0.44	7.4	48	55	3.7	0.65	10.8	48	56	4.6	0.84	14.0	40	47	5.5	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).

Fixed Pattern Nozzles Performance Data – Metric																												
Arc	Pattern	Pressure Bars	kPa	2.1 Meter Radius (7 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	1.8	0.04	0.6	46	53	2.7	0.08	1.3	41	47	3.4	0.12	2.0	43	49	4.3	0.18	2.9	38	44	4.9	0.22	3.7	37	43
		1.7	172	2.1	0.04	0.7	38	44	3.0	0.09	1.5	38	44	3.7	0.13	2.1	38	44	4.6	0.20	3.3	38	44	5.2	0.26	4.3	38	44
		2.1	206	2.1	0.06	0.9	48	55	3.0	0.11	1.9	48	55	3.7	0.16	2.7	48	56	4.6	0.21	3.5	40	47	5.5	0.27	4.6	41	47
180°	H	1.4	137	1.8	0.08	1.3	46	53	2.7	0.16	2.6	41	47	3.4	0.24	4.1	43	50	4.3	0.35	5.9	38	44	Coming Soon				
		1.7	172	2.1	0.09	1.5	38	44	3.0	0.18	3.0	38	44	3.7	0.26	4.3	38	44	4.6	0.40	6.6	38	44					
		2.1	206	2.1	0.11	1.8	48	55	3.0	0.22	3.7	47	55	3.7	0.33	5.4	48	56	4.6	0.42	7.0	40	47					
360°	F	1.4	137	1.8	0.15	2.5	45	53	2.7	0.31	5.1	41	47	3.4	0.48	8.1	43	50	4.3	0.70	11.7	38	44					
		1.7	172	2.1	0.17	2.9	38	44	3.0	0.35	5.9	38	44	3.7	0.51	8.5	38	44	4.6	0.80	13.2	38	44					
		2.1	206	2.1	0.22	3.6	47	55	3.0	0.44	7.4	48	55	3.7	0.65	10.8	48	56	4.6	0.84	14.0	40	47					

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

Performance Charts – Specialty Nozzles

Strip Pattern Nozzle Performance Data – Metric						
Color Code: Blue ●						
Nozzle Model	Pressure Bars	Pressure kPa	Width x Length	Flow m ³ /hr	Flow l/min	Precip mm/hr
LCS-515 Left-Corner Strip	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
	2.1	206	1.5 m x 4.6 m	0.15	2.5	21
RCS-515 Right-Corner Strip	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
	2.1	206	1.5 m x 4.6 m	0.15	2.5	21
SS-530 Side Strip	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
	2.1	206	1.5 m x 9.1 m	0.30	4.9	21

Model S-8A Stream Spray Nozzle Performance Data – Metric						
Adjustable from 25° to 360°						
Color Code: Blue ●						
Arc	Pressure Bars	Pressure kPa	Radius m	Flow m ³ /hr	Flow l/min	Precip mm/hr
90°	1.4	138	2.1	0.07	1.1	58 67
	1.7	172	2.4	0.07	1.2	49 56
	2.1	207	2.4	0.08	1.3	53 62
180°	1.4	138	2.1	0.12	2.0	54 62
	1.7	172	2.4	0.13	2.2	44 50
	2.1	207	2.4	0.14	2.3	46 53
360°	1.4	138	2.1	0.25	4.1	54 62
	1.7	172	2.4	0.25	4.2	42 49
	2.1	207	2.4	0.26	4.4	44 51

Model S-16A Stream Spray Nozzle Performance Data – Metric						
Adjustable from 25° to 360°						
Color Code: Blue ●						
Arc	Pressure Bars	Pressure kPa	Radius m	Flow m ³ /hr	Flow l/min	Precip mm/hr
90°	1.4	138	4.6	0.09	1.5	17 20
	1.7	172	4.9	0.10	1.7	18 20
	2.1	207	4.9	0.11	1.9	19 22
180°	1.4	138	4.6	0.15	2.5	15 17
	1.7	172	4.9	0.18	3.0	15 18
	2.1	207	4.9	0.20	3.3	17 19
360°	1.4	138	4.6	0.27	4.5	13 15
	1.7	172	4.9	0.33	5.5	14 16
	2.1	207	4.9	0.38	6.3	16 18

Short Radius Nozzles Performance Data – Metric																				
Arc	Pressure Bars	Pressure kPa	Color Code: Light Brown ●				Color Code: Light Green ●				Color Code: Light Blue ●									
			Nozzle	Radius m	Flow m ³ /hr	Flow l/min	Precip mm/hr	Nozzle	Radius m	Flow m ³ /hr	Flow l/min	Precip mm/hr	Nozzle	Radius m	Flow m ³ /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
180°	1.4	137	2H	0.6	0.03	0.45	147	169	4H	1.2	0.09	1.55	125	145	6H	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

Models

- 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
- Exposed diameter: 5.7 cm

Operating Specifications

- Pressure range: 1.0 to 6.9 bars; 103 to 689 kPa
- Flow-by: 0 at 68 kPa (0.7 bars) or greater; 0.02 m³/hr (0.4 l/min) otherwise
- Precipitation rates: approximately 38 mm per hour

PCN Nozzle & PCB Performance Data – Metric

Model	Pressure Bars	Pressure kPa	Flow m ³ /hr	Flow l/min
25	2.0	205	0.06	0.9
50	2.0	205	0.11	1.9
10	2.0	205	0.23	3.8
20	2.0	205	0.45	7.6

Micro-Spray Nozzles Performance Data – Metric

Arc	Pressure Bars	Pressure kPa	Nozzle	Radius m	Flow m ³ /hr	Flow l/min	Precip mm/hr
90°	1.7	172	MS-Q	1.5	0.03	0.45	47 54
							47 54
180°	1.7	172	MS-H	1.5	0.06	0.95	49 56
							49 56
360°	1.7	172	MS-F	1.5	0.11	1.89	49 56
							49 56

Options Available

- Factory-installed drain check valve for up to 3 m elevation change. "Check Valve" stamped on cap for easy identification.
- Optional rubber cover for added safety in play areas. Part number 469805 (color black)
- Optional field-installed reclaimed water identification snap-on cover (Part number 469800)
- Optional field-installed reclaimed water identification body cap (Part number 458530), with "Check Valve" stamped on top for easy ID (Part number 458535)



SPECIFICATION GUIDE

EXAMPLE: **INST - 06 - CV - 15H**

MODEL	POP-UP HEIGHT	OPTIONS	NOZZLE SERIES	PATTERN
INST = Institutional Spray (Includes Factory-Installed Pressure Regulator)	00 = Shrub 04 = 10 cm Pop-up 06 = 15 cm Pop-up 12 = 30 cm Pop-up	CV = Factory-Installed Drain Check Valve (Pop-up Models Only) CV-R = Factory-Installed Reclaimed Body Cap	7 = 7 Series 10 = 10 Series 12 = 12 Series 15 = 15 Series 17 = 17 Series*	A = Adjustable Q = Quarter-Circle H = Half-Circle F = Full-Circle

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.