Hunter®
The Irrigation Innovators

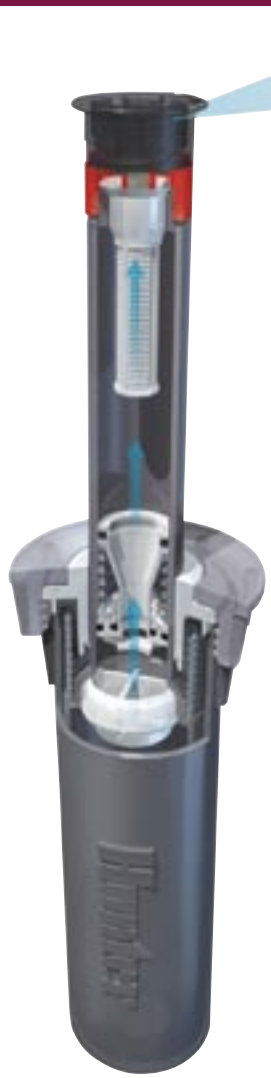
Institutional Spray

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 4" Inch 6" Inch 12" Inch

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 – 5⅞" (15.5 cm)
  INST-06 – 8¾" (22.5 cm)
  INST-12 – 16⅛" (41 cm)
- ½" female inlet NPT
- Exposed diameter: 2¼" (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^3/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.

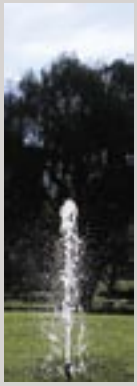
With a regulator large water droplets equals no wasted water.

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.

PROVEN WATER SAVER

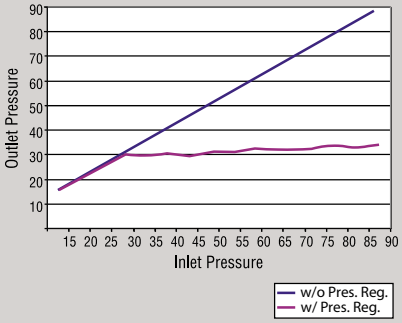
Regulator Also Acts as Anti-Geyser Device if Nozzle is Removed

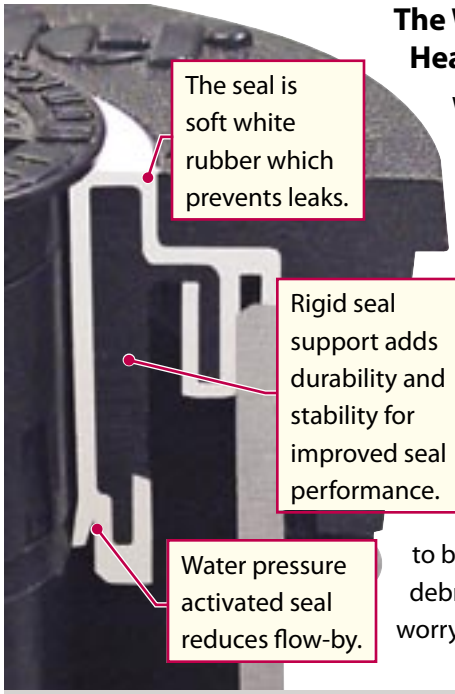
Without Regulator



With Regulator

The Effects of a Pressure Regulator



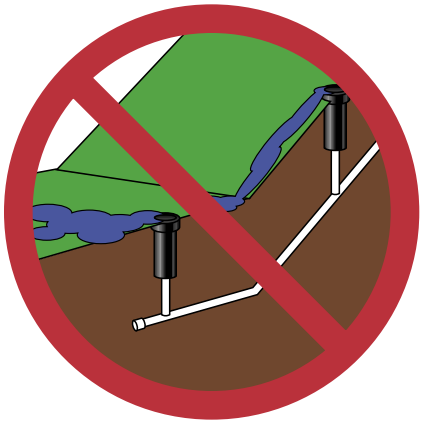


The Wiper Seal That Allows More Heads Per Valve

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

	8 Foot Radius Adjustable from 25° to 360° Trajectory: 0° Color Code: Brown Nozzle 8A					10 Foot Radius Adjustable from 25° to 360° Trajectory: 15° Color Code: Red Nozzle 10A				12 Foot Radius Adjustable from 25° to 360° Trajectory: 28° Color Code: Green Nozzle 12A				15 Foot Radius Adjustable from 25° to 360° Trajectory: 28° Color Code: Black Nozzle 15A				17 Foot Radius Adjustable from 25° to 360° Trajectory: 28° Color Code: Gray Nozzle 17A			
Arc	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr ■	Precip in/hr ▲	Radius ft.	Flow GPM	Precip in/hr ■	Precip in/hr ▲	Radius ft.	Flow GPM	Precip in/hr ■	Precip in/hr ▲	Radius ft.	Flow GPM	Precip in/hr ■	Precip in/hr ▲	Radius ft.	Flow GPM	Precip in/hr ■	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

			8 Foot Radius Fixed (Quarter, Half, Full) Trajectory: 0° Color Code: Brown Nozzle 8				10 Foot Radius Fixed (Quarter, Half, Full) Trajectory: 15° Color Code: Red Nozzle 10				12 Foot Radius Fixed (Quarter, Half, Full) Trajectory: 28° Color Code: Green Nozzle 12				15 Foot Radius Fixed (Quarter, Half, Full) Trajectory: 28° Color Code: Black Nozzle 15				17 Foot Radius Fixed (Quarter) Trajectory: 28° Color Code: Gray Nozzle 17			
Arc	Pressure PSI	Pattern	Radius ft.	Flow GPM	Precip in/hr ■	Precip in/hr ▲	Radius ft.	Flow GPM	Precip in/hr ■	Precip in/hr ▲	Radius ft.	Flow GPM	Precip in/hr ■	Precip in/hr ▲	Radius ft.	Flow GPM	Precip in/hr ■	Precip in/hr ▲	Radius ft.	Flow GPM	Precip in/hr ■	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		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		**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		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		**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				
	25		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				
	30		**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**				

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

Strip Pattern Nozzle Performance Data

Color Code: Blue

Nozzle Model	Pressure PSI	Width x Length	Flow GPM	Precip in/hr
LCS-515 Left-Corner Strip	20	4' x 14'	0.55	0.95
	25	5' x 15'	0.60	0.77
	30	**5' x 15'**	**0.65**	**0.83**
RCS-515 Right-Corner Strip	20	4' x 14'	0.55	0.95
	25	5' x 15'	0.60	0.77
	30	**5' x 15'**	**0.65**	**0.83**
SS-530 Side Strip	20	4' x 28'	1.10	0.95
	25	5' x 30'	1.20	0.77
	30	**5' x 30'**	**1.30**	**0.83**

Micro-Spray Nozzles Performance Data

Arc	Pressure PSI	Nozzle	Radius ft.	Flow GPM	Precip in/hr ■	Precip in/hr ▲
90°	25	**MS-Q**	5'	0.12	1.85	2.13
180°	25	**MS-H**	5'	0.25	1.93	2.22
360°	25	**MS-F**	5'	0.50	1.93	2.22

Multi-Stream Bubbler Performance Data

Arc	Model	Pressure PSI	Flow GPM
	MSBN-25Q	30	0.25
	MSBN-50Q	30	0.50
	MSBN-50H	30	0.50
	MSBN-10H	30	1.00
	MSBN-10F	30	1.00
	MSBN-20F	30	2.00

Model S-8A Stream Spray Nozzle Performance Data

Adjustable from 25° to 360°
Color Code: Blue

Arc	Pressure PSI	Radius ft.	Flow GPM	Precip in/hr ■	Precip in/hr ▲
90°	20	7	0.29	2.28	2.63
	25	8	0.32	1.93	2.22
	30	**8**	**0.35**	**2.11**	**2.43**
180°	20	7	0.54	2.12	2.45
	25	8	0.57	1.71	1.98
	30	**8**	**0.60**	**1.80**	**2.08**
360°	20	7	1.08	2.12	2.45
	25	8	1.11	1.67	1.93
	30	**8**	**1.15**	**1.73**	**2.00**

PCN Nozzle & PCB Performance Data

Model	Pressure PSI	Flow GPM
25	30	0.25
50	30	0.50
10	30	1.0
20	30	2.0

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 ■	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

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

MODEL
INST = Institutional Spray (Includes Factory-Installed Pressure Regulator)

POP-UP HEIGHT
00 = Shrub
04 = 4" Pop-up
06 = 6" Pop-up
12 = 12" Pop-up

OPTIONS
CV = Factory-Installed Drain Check Valve (Pop-up Models Only)
CV-R = Factory-Installed Reclaimed Body Cap

NOZZLE SERIES
8 = 8 Series
10 = 10 Series
12 = 12 Series
15 = 15 Series
17 = 17 Series*

PATTERN
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, Quarter, and Half-Circle patterns only.

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