

*All the precision of drip with none of the maintenance hassles*



**H**unter presents a way to meet your deep watering needs that offers considerably more efficiency than drip irrigation. With the ability to compensate for pressure differences, the Hunter PCB (and the PCN, which attaches directly to pop-up spray bodies) allows the output of water to remain constant regardless of the input pressure, resulting in a precise application never before achieved in bubblers. The same holds true with the MSBN and 5-CST-B nozzles, designed for deep

watering of larger planted areas. Now, every plant, shrub or tree can receive the same amount of water required with no excess runoff or waste. Best of all, because it's so simple to install, you'll have the perfect alternative to drip...no fancy filtration, no unsightly above-ground tubes, and considerably less chance of damage. For a more attractive, more efficient way to deep water, let the idea of Hunter's bubbler products sink in.

### PCN Bubbler Nozzles



With the pressure compensating nozzle (PCN), you get all the advantages over traditional drip irrigation plus a product that sits atop a riser that retracts into the ground when not in use. It's the most tamper-proof, eye-appealing method of deep watering available today (attention specifiers...you're going to like this).

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.

PCN Nozzle & PCB Performance Data - Metric					
Model	Pressure Bars	kPa	m <sup>3</sup> /hr	l/min	Pattern Type
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.

### PCB and AFB Bubbler Nozzles



Four different PCB models means that you can choose from color-coded flow rates of either .25, .50, 1.0, or 2.0 gallons per minute to eliminate guesswork and guarantee that all your greenery gets exactly the water it needs. Or choose the AFB model which pressure compensates to a 2.0 GPM flow and can be fine-tuned with a stainless steel screw adjustment.

SPECIFICATION GUIDE		
EXAMPLE: <b>PCB - 25 - R</b>		
<b>MODELS</b> PCB = ½" FIPT PCN = Standard Female Nozzle Thread	<b>FLOW</b> 25 = .25 GPM 50 = .50 GPM 10 = 1.0 GPM 20 = 2.0 GPM	<b>OPTIONS</b> R = Reclaimed Water
AFB = ½" FIPT	Adjustable Flow	

## MSBN – Multi-Stream Bubbler Nozzles



A Hunter exclusive! Four streams on the half-circle, eight streams on the full-circle discharge water to more effectively cover a larger area needed in many planted zones. And because it installs on a pop-up sprinkler, the bubbler retracts when not irrigating, which prevents damage.

### 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.

### Multi-Stream Bubbler Nozzle – Metric

Arc	Model	Pressure Bars	Pressure kPa	Flow m <sup>3</sup> /hr	Flow l/min	Radius m
90°	MSBN-25Q	2.0	206	0.06	0.9	0.30
	MSBN-50Q	2.0	206	0.11	1.9	0.46
180°	MSBN-50H	2.0	206	0.11	1.9	0.30
	MSBN-10H	2.0	206	0.23	3.8	0.46
360°	MSBN-10F	2.0	206	0.23	3.8	0.30
	MSBN-20F	2.0	206	0.45	7.6	0.46

Note: Typical spacing 0.6 to 1.2 m.

## 5-CST-B – Dual-Stream Bubbler Nozzles



This center strip nozzle expands our collection of specialty pattern offerings designed to accommodate the needs of long, narrow planting strips. The 5' stream coverage can be adjusted down 25% without the loss of pattern distribution. And only Hunter's version of this nozzle delivers optimum performance right out of the box.

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

	Pressure PSI	Radius ft.	Flow GPM
90°	20	5'	0.30
	25	5'	0.32
	<b>30</b>	<b>5'</b>	<b>0.38</b>
	35	5'	0.40
	40	5'	0.42

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

	Pressure Bars	Pressure kPa	Radius m	Flow m <sup>3</sup> /hr	Flow l/min
90°	1.4	138	1.52	0.30	1.14
	1.7	172	1.52	0.32	1.21
	<b>2.1</b>	<b>207</b>	<b>1.52</b>	<b>0.38</b>	<b>1.44</b>
	2.4	241	1.52	0.40	1.51
	2.8	276	1.52	0.42	1.59

## Pop-Up Micro-Spray Nozzles



The Pop-Up Micro-Spray retracts into the sprinkler body, reducing the chance of accidental damage or vandalism.

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.



### Micro-Spray Nozzles Performance Data

Arc	Pressure PSI	Nozzle	Radius ft.	Flow GPM	Precip in/hr
90°	25	MS-Q	5'	0.12	1.85
	40		0.14	2.16	
	60		0.14	2.16	
180°	25	MS-H	5'	0.25	1.93
	40		0.28	2.16	
	60		0.29	2.23	
360°	25	MS-F	5'	0.50	1.93
	40		0.56	2.16	
	60		0.58	2.23	

### Micro-Spray Nozzles Performance Data – Metric

Arc	Pressure Bars	Pressure kPa	Nozzle	Radius m	Flow m <sup>3</sup> /hr	Flow l/min	Precip mm/hr
90°	1.7	172	MS-Q	1.5	0.03	0.45	47
	2.8	275		0.03	0.53	55	
	4.1	413		0.03	0.53	55	
180°	1.7	172	MS-H	1.5	0.06	0.95	49
	2.8	275		0.06	1.06	55	
	4.1	413		0.07	1.10	57	
360°	1.7	172	MS-F	1.5	0.11	1.89	49
	2.8	275		0.13	2.12	55	
	4.1	413		0.13	2.20	57	