



BOOMLESS SPRAY NOZZLES
2020 CATALOG



## BOOMLESS SPRAY NOZZLES



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U.S. Patent Numbers D458342, D480125, D473927, D474255, 7,108,204, 7,780,093, 7,487,924, 8,328,112, 8,668,153 Other U.S. Patents Pending.



## BOOMLESS SPRAY NOZZLES

#### **BOOMINATOR® FEATURES**

- All nozzles are MADE IN THE U.S.A.
- All nozzles carry a 3-YEAR LIMITED WARRANTY against defects in materials and workmanship.
- All Eco Series nozzles are made from polypropelene plastic and heat treated aluminum. No small orifices or slots to get plugged up.
- All industrial nozzles are 5-Axis CNC Machined from high grade stainless steel. No plastic parts or soft metals to wear out, break or replace. No small orifices or slots to get plugged up.
- All nozzles feature a patented round covered orifice design which improves spray pattern and distribution.
- All nozzles feature patented anti-drift technology.
- All nozzles are laser measured to ensure proper flow rate and spray pattern.

#### **BOOMINATOR® BENEFITS**

- Boominator® nozzles produce a very even large droplet pattern for minimal drift and better penetration.
- Boominator® nozzles can easily spray around obstacles & over uneven terrain.
- Boominator® nozzles eliminate the cost of spray booms & boom maintenance.
- Boominator® nozzles have superior wear and chemical resistance.
- Boominator® nozzles are designed to save time and money.

#### **BOOMINATOR® APPLICATIONS**

- ATV sprayers, tow behind sprayers.
- De-Icing on roads, bridges, sidewalks, runways and parking lots.
- Spraying fence lines and right-of-ways.
- Dust suppression in mining, dirt track and street sweeping applications.
- Lawn, turf and nursery applications.
- Grass fire fighting.
- Ponds, lakes, canals. Aquatic pest and weed control.
- Insect control.
- Disinfecting and disease control in livestock and poultry barns.
- Pasture spraying.
- Roadside and Highway spraying.
- Forestry spraying.
- Ride On sprayers.

# BOOMINATOR

## BOOMLESS SPRAY NOZZLES

#### **Short Pattern Spray Nozzles**

All Short Pattern Spray Nozzles were tested at a height of 18 inches. (Recommended operating height is between 12 & 36 inches.)

These nozzles are designed for left-hand or right-hand mounting and provide an outward to straight downward spray pattern.



#### **Regular Pattern Spray Nozzles**

All Regular Pattern Spray Nozzles were tested at a height of 36 inches. (Recommended operating height is between 18 & 48 inches.)

These nozzles are designed for left-hand or right-hand mounting and provide a wide spray pattern with approximately 15° of kickback under the nozzle. When using left-hand and right-hand nozzle



together, adjust the nozzles to allow for enough kickback overlap between the nozzles to prevent streaking in spray coverage. Nozzles can be rotated to adjust distance of spray pattern outward or amount of kickback under the nozzle.

#### Full Pattern Spray Nozzles

All Full Pattern Spray Nozzles were tested at a height of 36 inches. (Recommended operating height is between 18 & 48 inches.) These nozzles are designed to provide a full left-hand to right-hand spray pattern from a single centrally mounted nozzle.



#### **Roadside Spray Nozzles**

All Roadside Spray Nozzles were tested at a height of 36 inches. (Recommended operating height is between 18 & 48 inches.) These nozzles are designed for right-hand mounting ONLY and provide a wide spray pattern without kickback under the nozzle. These nozzles are designed for road-side and right-of-way spraying.



#### **Spraying Safety**

ALWAYS WEAR PROTECTIVE CLOTHING WHEN SPRAYING AND / OR HANDLING ANY AND ALL CHEMICALS.



## BOOMLESS SPRAY NOZZLES

#### **Nozzle Installation Tips and Operation**

#### **Nozzle Height Adjustment**

Nozzles can be used at various heights within the recommended range. However, this will affect the spray pattern width and the gallons per acre (GPA) applied.

#### **Multi-Pass Spraying**

When multi-pass spraying, be sure to overlap the ends of spray patterns 12 - 16 inches to ensure even coverage.



#### **Adverse Wind Conditions**

With boomless spray nozzles, as with other spraying methods, high or gusty wind conditions can cause drifting or pattern movements, adversely affecting spray coverage. If this occurs, wait for more favorable conditions before continuing.

#### **Plumbing Requirements**

Make sure that all plumbing and feed lines can properly supply the nozzle or nozzles at their rated GPM and PSI. The type of pump used and the length of the discharge hose will affect the volume and pressure delivered to the nozzle or nozzles.

#### Minimum hose size requirements are

1 - 1/4" MNPT Nozzle1/2" ID Hose	2 - 1/4" MNPT Nozzles5/8" ID Hose
1 - 1/2" MNPT Nozzle3/4" ID Hose	2 - 1/2" MNPT Nozzles1" ID Hose
1 - 1" MNPT Nozzle 1-1/4" ID Hose	2 - 1" MNPT Nozzles 1-1/2" ID Hose

#### **Nozzle Mounting Center Distance**

To insure proper kickback overlap between the two nozzles and spray distance outward when mounting a pair of regular pattern nozzles together these are the recommended nozzle center distances.

2 - 1/4" Nozzles	3"	- 4"	Center Distance
2 - 1/2" Nozzles	6"	- 7"	Center Distance
2 - 1" Nozzles	8"	- 9"	Center Distance

#### **Nozzle Combinations for Roadside and Right-of-Way Spraying**

Speed	Nozzle Combination	Speed	<b>Nozzle Combination</b>
2 to 12 MPH	1 - 1255 Right	5 to 15 MPH	1 - 1876 Right
	1 - 1871 Right		1 - 2651 Right
	1 - 2650RS		1 - 3750RS

For roadside and right-of-way spraying at these speeds, nozzles with patterns of 6 feet or less should be mounted 12" - 24" above the ground. Larger patterns should be mounted 18" - 48" above the ground.

#### **Nozzle Spray Coverage Calculations**

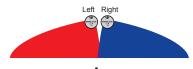
Gallons per 1,000 sq. ft.	=	GPM x 136 MPH x Spray width in inches
Gallons per Acre	=	GPM x 5940 MPH x Spray width in inches



## ECO SERIES SPRAY NOZZLES

All Eco Series Spray Nozzles were tested at a height of 36 inches. (Recommended operating height is between 12 & 36 inches.) Fresh water used for all testing.





LEFT/RIGHT COMBINATION

000000011 12	~ ~ ~ ·	, 111011	00., 110	OII VV		a00a 1	or an	10011	119.	
1200PSL						SPI	EED (MI	PH)		
1200PSR			SPRAY	1	2	3	4	5	6	7
	PSI	GPM	PATTERN			GALLO	NS PEF	R ACRE		
	20	1.0	14 ft.	35	18	12	9	7	6	5
	30	1.2	14 ft.	42	21	14	10	8	7	6
1/4" MNPT	40	1.4	14 ft.	49.5	25	16.5	12	10	8	7
1400PSL						SPI	EED (MI	PH)		
1400PSR			SPRAY	1	2	3	4	5	6	7
	PSI GPM		PATTERN			GALLO	NS PEF	R ACRE		
	20	1.7	15 ft.	56	28	19	14	11	9	8
	30	2.0	15 ft.	66	33	22	16.5	13	11	9.5
1/4" MNPT	40	2.5	15 ft.	82.5	41	27.5	20.5	16.5	13.5	12
1870PSL						SPI	EED (MI	PH)		
1870PSR			SPRAY	1	2	3	4	5	6	7
	PSI	GPM	PATTERN			GALLO	NS PEF	R ACRE		
	20	3.0	18 ft.	82	41	28	21	17	14	12
	30	3.5	18 ft.	96	48	32	24	19	16	14
1/4" MNPT	40	4.3	18 ft.	118	59	39	30	24	20	17



1200PSS						SPI	EED (MI	PH)		
FULL PATTERN			SPRAY	1	2	3	4	5	6	7
	PSI	GPM	PATTERN			GALLO	NS PEF	R ACRE		
	15	0.9	10 ft.	44.5	22	15	11	9	7.5	6
	20	1	10 ft.	49.5	25	16.5	12	10	8	7
1/4" MNPT	25	1.1	10 ft.	54.5	27	18	13.5	11	9	7.5
1200PS						SPI	EED (MI	PH)		
FULL PATTERN			SPRAY	1	2	3	4	5	6	7
	PSI	GPM	PATTERN			GALLO	NS PEF	R ACRE		
77/5	20	1.0	14 ft.	35	18	12	9	7	6	5
	30	1.2	14 ft.	42	21	14	10	8	7	6
1/4" MNPT	40	1.4	14 ft.	49.5	25	16.5	12	10	8	7
1400PS						SPI	EED (MI	PH)		
1400PS FULL PATTERN			SPRAY	1	2	SPI 3	EED (MI 4	PH) 5	6	7
1400PS FULL PATTERN	PSI	GPM	SPRAY PATTERN	1	2	3	•	5	6	7
1400PS FULL PATTERN	PSI 20	GPM 1.7		1 60	2	3	4	5	6	7 8.5
1400PS FULL PATTERN		_	PATTERN			3 GALLO	4 ONS PER	5 R ACRE		
1400PS FULL PATTERN 1/4" MNPT	20	1.7	PATTERN 14 ft.	60	30	3 GALLO 20	4 ONS PEF 15	5 R ACRE 12	10	8.5
1/4" MNPT	20 30	1.7 2.0	PATTERN 14 ft. 14 ft.	60 70	30 35	3 GALLO 20 24 29	4 ONS PEF 15 18	5 R ACRE 12 14 18	10 12	8.5 10
	20 30	1.7 2.0	PATTERN 14 ft. 14 ft.	60 70	30 35	3 GALLO 20 24 29	4 ONS PEF 15 18 22	5 R ACRE 12 14 18	10 12	8.5 10
1/4" MNPT 1400PL	20 30	1.7 2.0	PATTERN 14 ft. 14 ft. 14 ft.	60 70 88	30 35 44	3 GALLO 20 24 29 SPI 3	4 DNS PEF 15 18 22 EED (MI	5 R ACRE 12 14 18 PH)	10 12 15	8.5 10 12.5
1/4" MNPT 1400PL	20 30 40	1.7 2.0 2.5	PATTERN 14 ft. 14 ft. 14 ft. SPRAY	60 70 88	30 35 44	3 GALLO 20 24 29 SPI 3	4 DNS PEF 15 18 22 EED (MI	5 R ACRE 12 14 18 PH)	10 12 15	8.5 10 12.5
1/4" MNPT 1400PL	20 30 40 PSI	1.7 2.0 2.5	PATTERN 14 ft. 14 ft. 14 ft. SPRAY PATTERN	60 70 88	30 35 44	3 GALLO 20 24 29 SPI 3 GALLO	4 DNS PEF 15 18 22 EED (MI 4 DNS PEF	5 R ACRE 12 14 18 PH) 5 R ACRE	10 12 15	8.5 10 12.5



SPEED (MPH)														
N			SPRAY	2	3	4	5	6	7	8	9	10	11	12
	PSI	GPM	PATTERN					GALLO	NS PEF	R ACRE				
	20	3.0	30 ft.	25	17	12	10	8	7	6	5.5	5	4.5	4
	30	3.5	30 ft.	29	19	14	12	10	8	7	6	5.5	5	4.5
Т	40	4.3	30 ft.	36	25	18	14	12	10	9	8	7	6.5	6



## SHORT PATTERN SPRAY NOZZLES

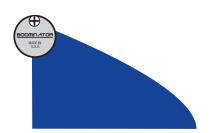
When Ordering, Please Specify  $\textbf{\textit{LEFT}}$  or  $\textbf{\textit{RIGHT}}$  Spray Pattern. Example - 1253R = Right Pattern



#### **Short Pattern Spray Nozzles**

All Short Pattern Spray Nozzles were tested at a height of 18 inches. (Recommended operating height is between 12 & 36 inches.) Fresh water used for all testing.

These nozzles are designed for left-hand or right-hand mounting and provide an outward to straight downward spray pattern.



							SPE	EED (M	PH)				
		SPRAY	2	3	4	5	6	7	8	9	10	11	12
PSI	GPM	PATTERN					GALLO	NS PEI	R ACRE				
20	1.0	5 ft.	49.5	33	24.5	20	16.5	14	12	11	10	9	8
30	1.2	5 ft.	59.5	39.5	30	23.5	20	17	15	13	12	11	10
40	1.4	5 ft.	69.5	46	34.5	27.5	23	20	17	15.5	14	12.5	11.5
							SPE	EED (M	PH)				
		SPRAY	2	3	4	5	6	7	8	9	10	11	12
PSI	GPM	PATTERN					GALLO	NS PEI	R ACRE				
20	1.5	3 ft.	124	83	62	50	41	35	31	28	25	23	21
30	1.7	3 ft.	140	94	70	56	47	40	35	31	28	26	23
40	2.0	3 ft.	165	110	83	66	55	47	41	37	33	30	28
							SPE	EED (M	PH)				
		SPRAY	2	3	4	5	6	7	8	9	10	11	12
PSI	GPM	PATTERN					GALLO	NS PEI	R ACRE				
20	1.5	5 ft.	74	50	37	30	25	21	19	17	15	14	12
30	1.7	5 ft.	84	56	42	34	28	24	21	19	17	15	14
40	2.0	5 ft.	99	66	50	40	33	28	25	22	20	18	17
							SPE	EED (M	PH)				
		SPRAY	2	3	4	5	6	7	8	9	10	11	12
PSI	GPM	PATTERN					GALLO	NS PEI	R ACRE				
20	1.7	4 ft.	105	70	53	42	35	30	26	23	21	19	18
30	2.0	4 ft.	124	83	62	50	41	35	31	28	25	23	21
40	2.5	4 ft.	155	103	77	62	52	44	39	34	31	28	26
	20 30 40 PSI 20 30 40 PSI 20 30 40	20 1.0 30 1.2 40 1.4  PSI GPM 20 1.5 30 1.7 40 2.0  PSI GPM 20 1.5 30 1.7 40 2.0  PSI GPM 20 1.5 30 1.7 40 2.0	PSI GPM PATTERN  20 1.0 5 ft.  30 1.2 5 ft.  40 1.4 5 ft.  SPRAY PSI GPM PATTERN  20 1.5 3 ft.  30 1.7 3 ft.  40 2.0 3 ft.  SPRAY PSI GPM PATTERN  20 1.5 5 ft.  30 1.7 5 ft.  40 2.0 5 ft.  SPRAY PSI GPM PATTERN  20 1.5 5 ft.  30 1.7 5 ft.  40 2.0 5 ft.  SPRAY PSI GPM PATTERN  20 1.5 4 ft.  30 2.0 4 ft.	PSI GPM PATTERN  20 1.0 5 ft. 49.5  30 1.2 5 ft. 59.5  40 1.4 5 ft. 69.5   SPRAY PSI GPM PATTERN  20 1.5 3 ft. 124  30 1.7 3 ft. 140  40 2.0 3 ft. 165   SPRAY PSI GPM PATTERN  20 1.5 5 ft. 74  30 1.7 5 ft. 84  40 2.0 5 ft. 99   PSI GPM PATTERN  20 1.5 5 ft. 74  30 1.7 5 ft. 84  40 2.0 5 ft. 99   PSI GPM PATTERN  20 1.7 4 ft. 105  30 2.0 4 ft. 124	PSI GPM PATTERN  20 1.0 5 ft. 49.5 33  30 1.2 5 ft. 59.5 39.5  40 1.4 5 ft. 69.5 46   SPRAY 2 3  PSI GPM PATTERN  20 1.5 3 ft. 124 83  30 1.7 3 ft. 140 94  40 2.0 3 ft. 165 110   SPRAY 2 3  PSI GPM PATTERN  20 1.5 5 ft. 74 50  30 1.7 5 ft. 84 56  40 2.0 5 ft. 99 66   SPRAY 2 3  PSI GPM PATTERN  20 1.5 5 ft. 74 50  30 1.7 5 ft. 84 56  40 2.0 5 ft. 99 66	PSI GPM PATTERN  20 1.0 5 ft. 49.5 33 24.5  30 1.2 5 ft. 59.5 39.5 30  40 1.4 5 ft. 69.5 46 34.5   SPRAY PATTERN  20 1.5 3 ft. 124 83 62  30 1.7 3 ft. 140 94 70  40 2.0 3 ft. 165 110 83   SPRAY PSI GPM PATTERN  20 1.5 5 ft. 74 50 37  30 1.7 5 ft. 84 56 42  40 2.0 5 ft. 99 66 50   SPRAY PATTERN  20 1.7 4 ft. 105 70 53  30 2.0 4 ft. 124 83 62	PSI GPM PATTERN  20 1.0 5 ft. 49.5 33 24.5 20  30 1.2 5 ft. 59.5 39.5 30 23.5  40 1.4 5 ft. 69.5 46 34.5 27.5   SPRAY PATTERN  20 1.5 3 ft. 124 83 62 50  30 1.7 3 ft. 140 94 70 56  40 2.0 3 ft. 165 110 83 66   SPRAY PATTERN  20 1.5 5 ft. 74 50 37 30  30 1.7 5 ft. 84 56 42 34  40 2.0 5 ft. 99 66 50 40  SPRAY PATTERN  20 1.5 5 ft. 74 50 37 30  30 1.7 5 ft. 84 56 42 34  40 2.0 5 ft. 99 66 50 40  SPRAY PATTERN  20 1.7 4 ft. 105 70 53 42  30 2.0 4 ft. 124 83 62 50	PSI GPM PATTERN  2 3 4 5 6  GALLO 20 1.0 5 ft. 49.5 33 24.5 20 16.5 30 1.2 5 ft. 59.5 39.5 30 23.5 20 40 1.4 5 ft. 69.5 46 34.5 27.5 23  SPRAY  PSI GPM PATTERN  2 3 4 5 6  SPRAY  PSI GPM PATTERN  20 1.5 3 ft. 124 83 62 50 41 30 1.7 3 ft. 140 94 70 56 47 40 2.0 3 ft. 165 110 83 66 55  SPRAY  PSI GPM PATTERN  2 3 4 5 6  SPRAY  PSI GPM PATTERN  2 3 4 5 6  SPRAY  PSI GPM PATTERN  SPRAY  2 3 4 5 6  SPRAY  PSI GPM PATTERN  SPRAY  2 3 4 5 6  SPRAY  PSI GPM PATTERN  SPRAY  2 3 4 5 6  SPRAY  PSI GPM PATTERN  GALLO 20 1.5 5 ft. 74 50 37 30 25 30 1.7 5 ft. 84 56 42 34 28 40 2.0 5 ft. 99 66 50 40 33  SPRAY  PSI GPM PATTERN  SPRAY  2 3 4 5 6  GALLO 20 1.7 4 ft. 105 70 53 42 35 30 2.0 4 ft. 124 83 62 50 41	PSI GPM PATTERN  20 1.0 5 ft. 49.5 33 24.5 20 16.5 14 30 1.2 5 ft. 59.5 39.5 30 23.5 20 17 40 1.4 5 ft. 69.5 46 34.5 27.5 23 20  SPRAY  PSI GPM PATTERN  SPRAY  PSI GPM PATTERN  20 1.5 3 ft. 124 83 62 50 41 35 30 1.7 3 ft. 140 94 70 56 47 40 40 2.0 3 ft. 165 110 83 66 55 47  PSI GPM PATTERN  SPRAY  PSI GPM PATTERN  SP	PSI   GPM   PATTERN   GALLONS PER ACRE	PSI   GPM   PATTERN   2   3   4   5   6   7   8   9	PSI   GPM	PSI   GPM   PATTERN   2   3   4   5   6   7   8   9   10   11



## SHORT PATTERN SPRAY NOZZLES

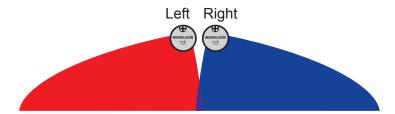
1406								SPI	EED (MI	PH)				
LEFT or RIGHT			SPRAY	2	3	4	5	6	7	8	9	10	11	12
	PSI	GPM	PATTERN					GALLO	NS PEF	R ACRE				
60	20	1.7	6 ft.	70	47	35	28	23	20	18	16	14	13	12
	30	2.0	6 ft.	83	55	41	33	28	24	21	18	17	15	14
1/4 MNPT	40	2.5	6 ft.	103	69	52	41	34	30	26	23	21	19	17
4050								CDI	EED (MI	DU\				
1876						_	_							
LEFT or RIGHT	DOL	0014	SPRAY	2	3	4	5	6	7	8	9	10	11	12
560	PSI	GPM	PATTERN	104	00	60	Ε0		NS PEF		20	25	22	24
SOMEON STATE	20 30	3.0	6 ft. 6 ft.	124	83 96	62 72	50 58	41 48	35 41	31	28 32	25 29	23	21
1/4" MNPT	40	3.5 4.3	6 ft.	144 177	118	89	71	<del>40</del> 59	51	36 44	39	35	26 32	24 30
1/4 IVIINF I	40	4.3	o it.	1//	110	03	/1	55	31	44	33	33	32	30
1871								SPI	EED (MI	PH)				
LEFT or RIGHT			SPRAY	2	3	4	5	6	7	8	9	10	11	12
	PSI	GPM	PATTERN					GALLO	NS PEF	R ACRE				
6 3	20	3.0	10 ft.	74	50	37	30	25	21	19	17	15	14	13
	30	3.5	10 ft.	87	58	43	35	29	25	22	19	17	16	15
1/4" MNPT	40	4.3	10 ft.	106	71	53	43	35	30	27	24	21	19	18
2651								SPE	EED (MI	PH)				
2651 LEFT or RIGHT			CDDAV	2	3	4	5	6	7	8	9	10	11	12
	PSI	GPM	SPRAY PATTERN	_		•			NS PEF				•	
30	20	6.7	10 ft.	166	111	83	66	55	47	41	37	33	30	28
Secondary Secondary	30	7.5	10 ft.	186	124	93	74	62	53	46	41	37	34	31
1/2" MNPT	40	8.5	10 ft.	210	140	105	84	70	60	53	47	42	38	35
2404								SPI	EED (MI	PH)				
3121				2	3	4	5	6	7	8	9	10	11	12
LEFT or RIGHT	PSI	GPM	SPRAY PATTERN		3		3		NS PEF		3	10		12
30	20	7.2	10 ft.	178	119	89	71	59	51	45	40	36	32	30
access.	30	9.0	10 ft.	223	149	111	89	74	64	56	50	45	41	37
1/2" MNPT	40	10.6	10 ft.	262	175	131	105	87	75	66	58	52	48	44
								OPI	-ED /841	<b>511</b> \				
3751									EED (MI					
LEFT or RIGHT			SPRAY	2	3	4	5	6	7	8	9	10	11	12
67.89	PSI	GPM	PATTERN						NS PEF					
SCORE OF THE PROPERTY OF THE P	20	12	10 ft.	297	198	148.5	119	99	85	74	66	59.5	54	49.5
1/2" NANDT	30	14	10 ft.	346.5	231	173 185.5	138.5	115.5	99	86.5	77	69	63 67 F	58
1/2" MNPT	40	15	10 ft.	371	247.5	185.5	148.5	124	106	93	82.5	74	67.5	62
4371								SPE	EED (MI	PH)				
LEFT or RIGHT			SPRAY	2	3	4	5	6	7	8	9	10	11	12
	PSI	GPM	PATTERN					GALLO	NS PEF	R ACRE				
30	20	13.0	10 ft.	322	214.5	161	128.5	107	92	80.5	71.5	64	58.5	53.5
	30	15.5	10 ft.	383.5	256	192	153.5	128	109.5	96	85	76.5	70	64
1/2" MNPT	40	17.5	10 ft.	433	289	216.5	173	144.5	124	108	96	86.5	79	72



### REGULAR PATTERN SPRAY NOZZLES

When Ordering, Please Specify *LEFT* or *RIGHT* Spray Pattern. Example - 1870L = Left Pattern





#### **Regular Pattern Spray Nozzles**

All Regular Pattern Spray Nozzles were tested at a height of 36 inches. (Recommended operating height is between 18 & 48 inches.) Fresh water used for all testing.

These nozzles are designed for left-hand or right-hand mounting and provide a wide spray pattern with approximately 15° of kickback under the nozzle.

When using left-hand and right-hand nozzle together, adjust nozzles to allow for enough kickback overlap between the nozzles to prevent streaking in spray coverage.

Nozzles can be rotated to adjust distance of spray pattern outward or amount of kick-back under the nozzle.

1160						SPEED	(MPH)			9	D. P.			
LEFT or RIGHT			SPRAY	2	3	4	5	6	7	O.	Sun Sun	-		
	PSI	GPM	PATTERN		GA	LLONS	PER AC	RE		10	M			
63	20	1.0	16 ft.	15.5	10	8	6	5	4.5	100				
	30	1.2	16 ft.	18.5	12.5	9	7.5	6	5.5	48				
1/4" MNPT	40	1.4	16 ft.	21.5	14.5	11	8.5	7	6	181				
1250						SPEED	(MPH)							
LEFT or RIGHT			SPRAY	2	3	4	5	6	7	7/19				
	PSI	GPM	PATTERN		GA	LLONS	PER AC	RE		1/1/3				
1 3	20	1.5	16 ft.	23	16	12	9	8	7	10.40				
	30	1.7	16 ft.	26	18	13	11	9	8					
1/4" MNPT	40	2.0	16 ft.	31	21	16	12	10	9		V 1 (4)	21/1/1/1	1.11/2/	
1400								SP	EED (MF	PH)				
LEFT or RIGHT			SPRAY	2	3	4	5	6	7	8	9	10	11	12
	PSI	GPM	PATTERN					GALLO	NS PER	ACRE				
1 3	20	1.7	17 ft.	25	17	12	10	8	7	6	5.5	5	4.5	4
	30	2.0	17 ft.	30	19	15	12	10	8	7	6.5	6	5	4.5
1/4" MNPT	40	2.5	17 ft.	36	24	18	15	12	10	9	8	7	6.5	6
1870								SP	EED (MF	PH)				
LEFT or RIGHT			SPRAY	2	3	4	5	6	7	8	9	10	11	12
	PSI	GPM	PATTERN					GALLO	NS PER	ACRE				
1 3	20	3.0	18 ft.	41	28	21	17	14	12	10	9	8	7.5	7
	30	3.5	18 ft.	48	32	24	19	16	14	12	11	10	9	8
1/4" MNPT	40	4.3	18 ft.	59	39	30	24	20	17	15	13	12	11	10



## REGULAR PATTERN SPRAY NOZZLES

When Ordering, Please Specify *LEFT* or *RIGHT* Spray Pattern. Example - 1870L = Left Pattern

2280								SP	EED (M	PH)				
LEFT or RIGHT			SPRAY	2	3	4	5	6	7	8	9	10	11	12
	PSI	GPM	PATTERN					GALLO	NS PER	R ACRE				
30	20	4.8	18 ft.	66	44	33	26	22	19	16	14	13	12	10
BOO 22804	30	6.0	18 ft.	83	55	41	33	28	24	21	18	16	15	14
1/2" MNPT	40	6.9	18 ft.	95	63	47	38	31	27	24	21	19	17	16
2650								SP	EED (M	PH)				
LEFT or RIGHT			SPRAY	2	3	4	5	6	7	8	9	10	11	12
F College	PSI	GPM	PATTERN					GALLO	NS PER	R ACRE				
313	20	6.7	20 ft.	83	55	41	33	28	24	21	18	16	15	14
and the said	30	7.5	20 ft.	93	62	46	37	32	26	23	20	18	17	15
1/2" MNPT	40	8.5	20 ft.	105	70	52	42	35	30	26	23	21	19	17
3120								SP	EED (M	PH)				
LEFT or RIGHT			SPRAY	2	3	4	5	6	7	8	9	10	11	12
(26)	PSI	GPM	PATTERN					GALLO	NS PE	R ACRE				
The same	20	7.2	21 ft.	85	56	42	34	28	24	21	19	17	15	14
	30	9.0	21 ft.	106	71	53	42	35	30	26	23	21	19	17
1/2" MNPT	40	10.6	21 ft.	125	83	62	50	41	36	31	28	25	23	21
3750								SP	EED (M	PH)				
LEFT or RIGHT			SPRAY	2	3	4	5	6	7	8	9	10	11	12
6 (26)	PSI	GPM	PATTERN						NS PE	R ACRE				
THE REPORT OF THE PARTY OF THE	20	12.0	23 ft.	129	86	64	51	43	37	32	29	26	24	22
	30	15.0	23 ft.	161	108	81	64	54	46	40	36	32	29	27
1/2" MNPT	40	16.3	23 ft.	175	117	88	70	58	50	44	39	35	32	29
4370								SP	EED (M	PH)				
LEFT or RIGHT			SPRAY	2	3	4	5	6	7	8	9	10	11	12
S Call	PSI	GPM	PATTERN					GALLO	NS PE	R ACRE				
BOXESTATOS	20	13.8	25 ft.	137	91	68	54	45	39	34	30	27	25	23
	30	15.6	25 ft.	154	103	77	62	51	44	39	34	31	28	26
1/2" MNPT	40	18	25 ft.	178	119	89	71	59	51	45	40	35	33	30
5000								SP	EED (M	PH)				
LEFT or RIGHT			SPRAY	2	3	4	5	6	7	8	9	10	11	12
100	PSI	GPM	PATTERN					GALLO	NS PER	R ACRE				
- CONTRACTOR	20	17	25 ft.	168	112	84	67	56	48	42	37	34	31	28
and the same of th	30	20	25 ft.	198	132	99	79	66	57	50	44	40	36	33
1" MNPT	40	23	25 ft.	228	152	114	91	76	65	57	51	46	41	38
6250								SP	EED (M	PH)				
LEFT or RIGHT			SPRAY	2	3	4	5	6	7	8	9	10	11	12
5	PSI	GPM	PATTERN					GALLO	NS PER	R ACRE				
- CONTRACTOR	20	21	25 ft.	104	69	52	42	35	30	26	23	21	19	17
	30	25	25 ft.	124	83	62	50	41	35	31	28	25	23	21
1" MNPT	40	29	25 ft.	144	96	72	57	48	41	36	32	29	26	24



## FULL PATTERN SPRAY NOZZLES

#### **Full Pattern Spray Nozzles**

All Full Pattern Spray Nozzles were tested at a height of 36 inches. (Recommended operating height is between 18 & 48 inches.) Fresh water used for all testing. These nozzles are designed to provide a full left-hand to right-hand spray pattern from a single centrally mounted nozzle.



1250FS						SP	EED (M	PH)						CT-SI
FULL PATTERN			SPRAY	1	2	3	4	5	6	7				
	PSI	GPM	PATTERN			GALLO	NS PER	R ACRE						
6 3	20	1.5	16 ft.	46	23	16	12	8	7.5	6.5		26	1.4	
	30	1.7	16 ft.	53	26	18	13	11	9	8				
1/4" MNPT	40	2.0	16 ft.	62	31	21	16	12	10	9				
1400FS								SP	EED (M	PH)				
FULL PATTERN			SPRAY	2	3	4	5	6	7	8	9	10	11	12
	PSI	GPM	PATTERN					GALLO	NS PER	RACRE				
63	20	1.7	17 ft.	25	17	12	10	8	7	6	5.5	5	4.5	4
The state of the s	30	2.0	17 ft.	29	19	15	12	10	8	7	6.5	6	5	4.5
1/4" MNPT	40	2.5	17 ft.	36	24	18	15	12	10	9	8	7	6.5	6
1400FM								SP	EED (M	PH)				
FULL PATTERN			SPRAY	2	3	4	5	6	7	8	9	10	11	12
	PSI	GPM	PATTERN						NS PER	RACRE				
63	20	1.7	22 ft.	19	13	10	8	6	5.5	5	4.5	4	3.5	3
	30	2.0	22 ft.	23	15	11	9	8	6	5.5	5	4.5	4	3.5
1/4" MNPT	40	2.5	22 ft.	28	19	14	11	9	8	7	6	5.5	5	4.5
1870FSS								SP	EED (M	PH)				
FULL PATTERN			SPRAY	2	3	4	5	6	7	8	9	10	11	12
	PSI	GPM	PATTERN					GALLO	NS PER	R ACRE				
63	20	3.0	10 ft.	74.5	49.5	37	29.5	25	21	18.5	16.5	15	13.5	12.5
	30	3.5	10 ft.	86.5	57.5	43	34.5	28.5	25	21.5	19	17	16	14.5
1/4" MNPT	40	4.3	10 ft.	106.5	71	53	42.5	35.5	30.5	26.5	23.5	21	19	17.5
1870FS				SPEED (MPH)										
FULL PATTERN			SPRAY	2	3	4	5	6	7	8	9	10	11	12
	PSI	GPM	PATTERN					GALLO	NS PER	R ACRE				
16 3	20	3.0	18 ft.	41	28	21	17	14	12	10	9	8	7.5	7
	30	3.5	18 ft.	48	32	24	19	16	14	12	11	10	9	8
1/4" MNPT	40	4.3	18 ft.	59	39	30	24	20	17	15	13	12	11	10



## FULL PATTERN SPRAY NOZZLES

1870FM				SPEED (MPH)										
FULL PATTERN			SPRAY	2	3	4	5	6	7	8	9	10	11	12
	PSI	GPM	PATTERN					GALLO	NS PER	R ACRE				
3	20	3.0	23 ft.	32	22	16	13	10	9	8	7	6.5	6	5
	30	3.5	23 ft.	38	25	19	15	13	11	9	8	7.5	7	6
1/4" MNPT	40	4.3	23 ft.	46	31	23	19	15	13	12	10	9	8	7.5
4070EL								SPI	EED (M	PH)				
1870FL				2	2	4	-		7		0	10	11	12
FULL PATTERN	PSI	CDM	SPRAY PATTERN		3	4	5	6	NS PER	8 2 A C D E	9	10	- 11	12
60	20	<b>GPM</b> 3.0	30 ft.	25	17	12	10	8	7 7	6	5.5	5	4.5	4
SOOTION .	30	3.5	30 ft.	29	19	14	12	10	8	7	6	5.5	5	4.5
1/4" MNPT	40	4.3	30 ft.	36	25	18	14	12	10	9	8	5.5 7	6.5	6
1/4 IVIIVE I		4.5	30 11.	30	25	-10	17	12	10	<u> </u>			0.5	
2280FM								SPI	EED (M	PH)				
FULL PATTERN			SPRAY	2	3	4	5	6	7	8	9	10	11	12
5	PSI	GPM	PATTERN					GALLO	NS PER	R ACRE				
30	20	4.8	23 ft.	52	34	26	21	17	15	13	11	10	9	8.5
and make a	30	6.0	23 ft.	64	43	32	26	21	18	16	14	13	12	11
1/2" MNPT	40	6.9	23 ft.	74	50	37	30	25	21	19	16.5	15	13.5	12
2280FL				SPEED (MPH)										
FULL PATTERN			SPRAY	2	3	4	5	6	7	8	9	10	11	12
	PSI	GPM	PATTERN					GALLO	NS PER	R ACRE				
30	20	4.8	30 ft.	40	26	20	16	13	11	10	9	8	7	6.5
Mary and a	30	6.0	30 ft.	49.5	33	25	20	16.5	14	12	11	10	9	8
1/2" MNPT	40	6.9	30 ft.	57	38	218	22	19	16	14	12.5	11	10	9.5
0050500								CDI	EED (M	DU/				
2650FSS					•		_					10	44	10
FULL PATTERN	DOL	ODM	SPRAY	2	3	4	5	6	7	8	9	10	11	12
(00	PSI 20	GPM	PATTERN 10 ft	166	110.5	83	66.5	55	NS PER		27	22	30	27 F
accounting	30	6.7 7.5	10 ft. 10 ft.	185	124	93	74	62	47.5 53	41.5 46.5	37 41	33 37	34	27.5 31
1/2" MNPT	40	8.5	10 ft.	210	140	105	84	70	60	52.5	47	42	38	35
1/2 WHAF I	40	0.5	1011.	210	140	103	04	70		32.3		72	30	
2650FS								SPI	EED (M	PH)				
FULL PATTERN			SPRAY	2	3	4	5	6	7	8	9	10	11	12
F (4)	PSI	GPM	PATTERN					GALLO	NS PER	R ACRE				
O SOMETIME	20	6.7	16 ft.	104	69	52	41	34.5	30	26	23	21	19	17
	30	8.0	16 ft.	124	82.5	52	50	41	35	31	27.5	25	22.5	21
1/2" MNPT	40	10.0	16 ft.	155	103	77	62	51.5	44	39	34	31	28	26
2650FM								SPI	EED (M	PH)				
ZOOUFIVI FULL PATTERN			SPRAY	2	3	4	5	6	7	8	9	10	11	12
OLLTAITEIIN	PSI	GPM	PATTERN							R ACRE		. •	•	
60	20	6.7	23 ft.	72	48	36	29	24	20.5	18	16	14	13	12
BOOK	30	8.0	23 ft.	86	57	43	34	29	24.5	21.5	19	17	16	14
1/2" MNPT	40	10.0	23 ft.	108	72	54	43	36	31	27	24	21.5	19.5	18
			ļ	'										



## FULL PATTERN SPRAY NOZZLES

0.05.054				SPEED (MPH)										
2650FL												4.5	4 -	4.5
FULL PATTERN			SPRAY	2	3	4	5	6	7	8	9	10	11	12
660	PSI	GPM	PATTERN						NS PEF					
and a second	20	6.7	38 ft.	43.5	29	22	17.5	14.5	12.5	11	10	9	8	7
and the same of th	30	8.0	38 ft.	52	35	26	21	17	15	13	11.5	10.5	9.5	9
1/2" MNPT	40	10.0	38 ft.	65	43	32.5	26	22	18.5	16	14.5	13	12	11
040050					-		-	SP	EED (MI	PH)				
3120FS					•		_					40	44	10
FULL PATTERN	<b>DOI</b>	0014	SPRAY	2	3	4	5	6	7	8	9	10	11	12
(00	PSI	GPM	PATTERN	400	04	04	40		NS PEF		07	0.4		
BOOM	20	11.3	23 ft.	122	81	61	49	40	37	30	27	24	22	20
4 /O// NANIDT	30	13.0	23 ft.	140	93	70	56	47	43	35	31	28	25	23
1/2" MNPT	40	15.0	23 ft.	161	108	81	65	54	50	41	36	32	29	27
3120FM								SP	EED (MI	PH)				
5 IZUFIVI FULL PATTERN			CDDAV	2	3	4	5	6	7	8	9	10	11	12
POLLTATIENI	PSI	GPM	SPRAY PATTERN	-		7			NS PEF					
00	20	11.3	27 ft.	104	69	52	41	35	30	26	23	21	19	17
acces .	30	13.0	27 ft.	119	79	60	48	40	34	30	26	24	22	20
1/2" MNPT	40	15.0	27 ft.	138	92	69	55	46	39	34	30	28	25	23
-1/2 WINT		10.0	_/											
3120FL	R120FI					SPEED (MPH)								
FULL PATTERN			SPRAY	2	3	4	5	6	7	8	9	10	11	12
	PSI	GPM	PATTERN					GALLO	NS PEF	R ACRE				
600	20	11.3	40 ft.	70	47	35	28	23	20	17.5	15.5	14	13	11.5
	30	13.0	40 ft.	80	54	40	32	27	23	20	18	16	14.5	13.5
1/2" MNPT	40	15.0	40 ft.	93	62	46.5	37	31	26.5	23	20.5	18.5	17	15.5
								- 05	EED /3	) III				
3750FM									EED (MI					
FULL PATTERN			SPRAY	2	3	4	5	6	7	8	9	10	11	12
660	PSI	GPM	PATTERN						NS PEF					
I something	20	13.8	30 ft.	114	76	57	46	38	33	28	25	23	21	19
	30	16.4	30 ft.	135	90	68	54	45	39	34	30	27	25	23
1/2" MNPT	40	18.0	30 ft.	149	99	74	59	50	42	37	33	30	27	25
275050								SPI	EED (MI	PH)				
3750FS				2	2	4	-				_	10	11	10
FULL PATTERN	DO:	0014	SPRAY	2	3	4	5	6	7	8	9	10	11	12
(09)	PSI	GPM	PATTERN	05		40	2.4		NS PEF		10	47	10	4.4
SCORPAGE	20	13.8	40 ft.	85	57	43	34	28	24	21	19	17	16	14
1/2// NANDT	30	16.4	40 ft.	101	68	51	41	34	29	25	23	20	18	17
1/2" MNPT	40	18.0	40 ft.	111	74	56	45	37	32	28	25	23	20	18
1270EL								SP	EED (MI	PH)				
43/UFL FULL PATTERN			ODD 41/	2	3	4	5	6	7	8	9	10	11	12
TOLL PAITERIN	PSI	GPM	SPRAY PATTERN		3	-	J		NS PEF		3	10		12
(00)	20	16.3	44 ft.	92	61	46	37	31	26	23	20	18	17	15
SCOREGIE	30	20.0	44 ft.	113	75	56	45	38	32	28	25	23	20	19
1/2" MNPT	40	24.0	44 ft. 44 ft.	135	90	68	45 54	36 45	39	34	30	23 27	25	23
-1/Z IVIINPT	40	24.0	44 IL.	100	30	UO	54	40	33	34	30	21	25	23



## ROADSIDE PATTERN SPRAY NOZZLES

Roadside Nozzles are available in *RIGHT* Spray Pattern models *ONLY*.

All Roadside Pattern Spray Nozzles were tested at a height of 36 inches. (Recommended operating height is between 12 & 48 inches.) Fresh water used for all testing.

			10 11101100	.,	J., 170											
1250RS						SPEED	(MPH)					-		-		
RIGHT ONLY			SPRAY	1	2	3	4	5	6	7						
	PSI	GPM	PATTERN		GA	LLONS	PER A	CRE			-460					
63	20	1.5	16 ft.	46	23	16	12	9	8	7	- 970					
BOOK	30	1.7	16 ft.	53	26	18	13	11	9	8	No.					
1/4" MNPT	40	2.0	16 ft.	62	31	21	16	12	10	9	11/46/2					
1400RS				SPEED (MPH)												
RIGHT ONLY			SPRAY	2	3	4	5	6	7	8	9	10	11	12		
	PSI	GPM	PATTERN						NS PER							
(3)	20	1.7	17 ft.	25	17	12	10	8	7	6	5.5	5	4.5	4		
SOME DE LA CONTRACTION DE LA C	30	2.0	17 ft.	30	19	15	12	10	8	7	6.5	6	5	4.5		
1/4" MNPT	40	2.5	17 ft.	36	24	18	15	12	10	9	8	7	6.5	6		
								CD		DIII)						
1870RS									EED (M							
RIGHT ONLY			SPRAY	2	3	4	5	6	7	8	9	10	11	12		
	PSI	GPM	PATTERN						NS PER							
16 Localita	20	3	18 ft.	41	28	21	17	14	12	10	9	8	7.5	7		
	30	3.5	18 ft.	48	32	24	19	16	14	12	11	10	9	8		
1/4" MNPT	40	4.3	18 ft.	59	39	30	24	20	17	15	13	12	11	10		
2650RS	26E0BC						SPEED (MPH)									
RIGHT ONLY			SPRAY	2	3	4	5	6	7	8	9	10	11	12		
5	PSI	GPM	PATTERN					GALLO	NS PER							
33	20	6.7	20 ft.	83	55	41	33	28	24	21	18	16	15	14		
acces .	30	7.5	20 ft.	93	62	46	37	32	26	23	20	18	17	15		
1/2" MNPT	40	8.5	20 ft.	105	70	52	42	35	30	26	23	21	19	17		
040000								SP	EED (M	PH)						
3120RS						_	_					10		10		
RIGHT ONLY	DOL	OD84	SPRAY	2	3	4	5	6	7	8	9	10	11	12		
660	PSI	GPM	PATTERN	OF.	EC	42	24		NS PER		10	17	15	14		
accessore.	20	7.2	21 ft.	85	56	42	34	28	24	21	19	17	15	14		
1/2" MANDT	30 40	9	21 ft.	106	71	53 62	42 50	35 41	30	26 31	23 28	21 25	19	17		
1/2" MNPT	40	10.6	21 ft.	125	83	02	50		36		20	25	23	21		
3750RS								SP	EED (M	PH)						
RIGHT ONLY			SPRAY	2	3	4	5	6	7	8	9	10	11	12		
5	PSI	GPM	PATTERN					GALLO	NS PER	R ACRE						
30	20	12	23 ft.	129	86	64	51	43	37	32	29	26	24	22		
and the second	30	15	23 ft.	161	108	81	64	54	46	40	36	32	29	27		
1/2" MNPT	40	16.3	23 ft.	175	117	88	70	58	50	44	39	35	32	29		
4370RS								SP	EED (M	PH)						
43/UN3 RIGHT ONLY			OPP AV	2	3	4	5	6	7	8	9	10	11	12		
- HIGHT ONLY	PSI	GPM	SPRAY PATTERN	<u>-</u>					) NS PER							
40	20	13.8	25 ft.	137	91	68	54	45	39	34	30	27	25	23		
accessory.	30	15.6	25 ft.	154	103	77	62	51	44	39	34	31	28	26		
1/2" MNPT	40	18	25 ft.	178	119	89	71	59	51	45	40	35	33	30		
-1/2 IVIINF1	70	10	2J II.	170	113	03	/ 1	33	31	73	-10	33	33	30		



## TROUBLESHOOTING GUIDE

PROBLEM	CAUSE	REMEDY
	1. Spray pressure too low	1. Re-adjust spray pressure
	2. Nozzle mounted too low	2. Verify/adust nozzle mounting height
SPRAY PATTERN TOO SHORT	3. Plumbing components and lines too small	3. Verify plumbing size. Replace if needed.
	4. Spray pump too small	4. Verify pump size. Replace if needed.
	1. Spray pressure too low	1. Re-adjust spray pressure
• END OF SPRAY PATTERN TOO HEAVY	2. Plumbing components and lines too small	2. Verify plumbing size. Replace if needed.
	3. Spray pump too small	3. Verify pump size. Replace if needed.
	1. Spray pressure too high	1. Re-adjust spray pressure
CENTER OF SPRAY PATTERN TOO LIGHT	2. Spray pressure too low	2. Re-adjust spray pressure
	3. Spray pump too small	3. Verify pump size. Replace if needed.
	1. Spray pressure too low	1. Re-adjust spray pressure
SPRAY PATTERN DOES NOT MEET IN THE MIDDLE. (for LEFT/RIGHT combination)	2. Plumbing components and lines too small	2. Verify plumbing size. Replace if needed.
(Tot EET TYTHETTT GOTTLETTING	3. Nozzles spacing too great	3. Refer to nozzle spacing chart on Page 3. Adjust as needed.
	4. Incorrect nozzle alignment	4. Adjust nozzles for correct spray pattern overlap
	1. Spray pressure too high	Re-adjust spray pressure
SPRAY PATTERN TOO LONG	2. Spray nozzle mounter higher than tested height	2. Verify nozzle height. Adjust as needed
• EXCESSIVE DRIFT OR SPRAY	1. Spray pressure too high	1. Re-adjust spray pressure
PATTERN SHIFT	2. Adverse wind conditions	2. Wait for wind conditions to improve



BOOMLESS SPRAY NOZZLES DISTRIBUTED BY:



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## BODMINATOR

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