

BOOMINATOR[®]



**BOOMLESS
SPRAY NOZZLES**
TECHNOLOGY THAT WORKS

U.S. and International Patents Pending.

BOOMINATOR®

SPRAY NOZZLES FEATURES, BENEFITS AND APPLICATIONS

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 nozzles are *CNC Machined from stainless steel. NO PLASTIC PARTS* to wear out, break or replace.
- All nozzles are *INDIVIDUALLY FACTORY TESTED* to ensure proper spray pattern.

BOOMINATOR® BENEFITS

- Boominator® nozzles produce a superior spray pattern with even distribution over the entire pattern.
- Boominator® nozzles produce a heavy droplet pattern for minimal drift and better crop penetration.
- Boominator® nozzles can easily spray around obstacles and over uneven terrain.

BOOMINATOR® APPLICATIONS

- *De-icing on roads, bridges, sidewalks, runways and parking lots.*
- *Spraying fencelines and right-of-ways.*
- *Dust suppression.*
- *Lawn, turf and nursery applications.*
- *Grass fire fighting.*
- *Orchard, vineyard and vegetable spraying.*
- *Ponds, lakes, canals. Aquatic pest and weed control.*
- *Insect control.*

PROBLEM	CAUSE	REMEDY
<ul style="list-style-type: none"> • SPRAY PATTERN IS SHORT 	<ol style="list-style-type: none"> 1) Spray pressure is too low 2) Nozzle mounted too low 3) Plumbing components and lines are too small 4) Spray pump is too small 	<ul style="list-style-type: none"> • Re-adjust spray pressure • Verify correct mounting height • Make sure all plumbing components and lines are large enough • Check size of spray pump
<ul style="list-style-type: none"> • END OF SPRAY PATTERN IS HEAVY 	<ol style="list-style-type: none"> 1) Spray pressure is too low 2) Plumbing components and lines are too small 3) Spray pump is too small 	<ul style="list-style-type: none"> • Re-adjust spray pressure • Make sure all plumbing components and lines are large enough • Check size of spray pump
<ul style="list-style-type: none"> • CENTER OF SPRAY PATTERN IS LIGHT 	<ol style="list-style-type: none"> 1) Spray pressure is too high 2) Spray pressure is too low 3) Spray pump is too small 	<ul style="list-style-type: none"> • Re-adjust spray pressure • Re-adjust spray pressure • Check size of spray pump
<ul style="list-style-type: none"> • SPRAY PATTERN DOES NOT MEET IN CENTER* *Left and Right nozzle together 	<ol style="list-style-type: none"> 1) Spray pressure is too low 2) Plumbing components and lines are too small 3) Center mounting distance is too great 4) Nozzles adjusted incorrectly 	<ul style="list-style-type: none"> • Re-adjust spray pressure • Make sure all plumbing components and lines are large enough • Refer to nozzle mounting center distance chart • Re-adjust nozzles – rotate downward until spray pattern meets
<ul style="list-style-type: none"> • SPRAY PATTERN IS TOO LONG 	<ol style="list-style-type: none"> 1) Spray pressure is too high 2) Nozzle mounted higher than tested height 	<ul style="list-style-type: none"> • Re-adjust spray pressure • Verify correct mounting height
<ul style="list-style-type: none"> • EXCESSIVE DRIFT OR PATTERN SHIFTING 	<ol style="list-style-type: none"> 1) Spray pressure is too high 2) Adverse wind conditions 	<ul style="list-style-type: none"> • Re-adjust spray pressure • Wait for calmer conditions

***Spray pressure should always be checked at the nozzle or nozzles, not at the feed pump**

***All spray nozzles are tested at 30 PSI; operating range 20-40 PSI**

SPRAY NOZZLE CONVERSION FORMULAS

$$\text{Gallons per 1,000 sq. ft.} = \frac{\text{GPM} \times 136}{\text{MPH} \times \text{Spray width in inches}}$$

$$\text{Gallons per Acre} = \frac{\text{GPM} \times 5940}{\text{MPH} \times \text{Spray width in inches}}$$

NOZZLE MOUNTING CENTER DISTANCE CHART

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

Tested mounting height of spray nozzles:

Short pattern nozzles – 18"
Regular pattern nozzles – 36"
Full spray nozzles – 36"

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SPRAY NOZZLES NOZZLE INSTALLATION TIPS AND OPERATION

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.

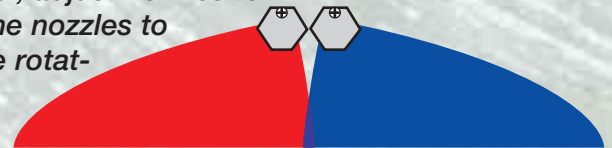


Regular Pattern Spray Nozzles

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 nozzles together, adjust nozzles to allow for 1 - 2 inches of 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.



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.

Spraying Safety

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

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SPRAY NOZZLES

SHORT PATTERN

1253 RIGHT or LEFT	PSI	GPM	SPRAY PATTERN	SPEED (MPH)											
				2	3	4	5	6	7	8	9	10	11	12	
				GALLONS PER 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	

1255 RIGHT or LEFT	PSI	GPM	SPRAY PATTERN	SPEED (MPH)											
				2	3	4	5	6	7	8	9	10	11	12	
				GALLONS PER 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	

1404 RIGHT or LEFT	PSI	GPM	SPRAY PATTERN	SPEED (MPH)											
				2	3	4	5	6	7	8	9	10	11	12	
				GALLONS PER 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	

1406 RIGHT or LEFT	PSI	GPM	SPRAY PATTERN	SPEED (MPH)											
				2	3	4	5	6	7	8	9	10	11	12	
				GALLONS PER ACRE											
	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	
	40	2.5	6 ft.	103	69	52	41	34	30	26	23	21	19	17	

1876 RIGHT or LEFT	PSI	GPM	SPRAY PATTERN	SPEED (MPH)														
				2	3	4	5	6	7	8	9	10	11	12	13	14	15	
				GALLONS PER ACRE														
	20	3.0	6 ft.	124	83	62	50	41	35	31	28	25	23	21	19	18	17	
	30	3.5	6 ft.	144	96	72	58	48	41	36	32	29	26	24	22	21	19	
	40	4.3	6 ft.	177	118	89	71	59	51	44	39	35	32	30	27	25	24	

1871 RIGHT or LEFT	PSI	GPM	SPRAY PATTERN	SPEED (MPH)														
				2	3	4	5	6	7	8	9	10	11	12	13	14	15	
				GALLONS PER ACRE														
	20	3.0	10 ft.	74	50	37	30	25	21	19	17	15	14	13	12	11	10	
	30	3.5	10 ft.	87	58	43	35	29	25	22	19	17	16	15	13	12	11	
	40	4.3	10 ft.	106	71	53	43	35	30	27	24	21	19	18	16	15	14	

2651 RIGHT or LEFT	PSI	GPM	SPRAY PATTERN	SPEED (MPH)														
				2	3	4	5	6	7	8	9	10	11	12	13	14	15	
				GALLONS PER ACRE														
	20	6.7	10 ft.	166	111	83	66	55	47	41	37	33	30	28	26	24	22	
	30	7.5	10 ft.	186	124	93	74	62	53	46	41	37	34	31	29	27	25	
	40	8.5	10 ft.	210	140	105	84	70	60	53	47	42	38	35	32	30	28	

3121 RIGHT or LEFT	PSI	GPM	SPRAY PATTERN	SPEED (MPH)														
				2	3	4	5	6	7	8	9	10	11	12	13	14	15	
				GALLONS PER ACRE														
	20	7.2	10 ft.	178	119	89	71	59	51	45	40	36	32	30	27	25	24	
	30	9.0	10 ft.	223	149	111	89	74	64	56	50	45	41	37	34	32	30	
	40	10.6	10 ft.	262	175	131	105	87	75	66	58	52	48	44	40	37	35	



**SHORT
PATTERN
SPRAY
NOZZLES**

BOOMINATOR®

SPRAY NOZZLES

REGULAR PATTERN



**REGULAR PATTERN
SPRAY NOZZLES**

1250 RIGHT or LEFT	PSI	GPM	SPRAY PATTERN	SPEED (MPH)						
				1	2	3	4	5	6	7
				GALLONS PER ACRE						
20	1.5	16 ft.		46	23	16	12	9	8	7
30	1.7	16 ft.		53	26	18	13	11	9	8
40	2.0	16 ft.		62	31	21	16	12	10	9

1400 RIGHT or LEFT	PSI	GPM	SPRAY PATTERN	SPEED (MPH)											
				2	3	4	5	6	7	8	9	10	11	12	
				GALLONS PER ACRE											
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	
40	2.5	17 ft.		36	24	18	15	12	10	9	8	7	6.5	6	

1870 RIGHT or LEFT	PSI	GPM	SPRAY PATTERN	SPEED (MPH)											
				2	3	4	5	6	7	8	9	10	11	12	
				GALLONS PER ACRE											
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	
40	4.3	18 ft.		59	39	30	24	20	17	15	13	12	11	10	

2650 RIGHT or LEFT	PSI	GPM	SPRAY PATTERN	SPEED (MPH)														
				2	3	4	5	6	7	8	9	10	11	12	13	14	15	
				GALLONS PER ACRE														
20	6.7	20 ft.		83	55	41	33	28	24	21	18	16	15	14	13	12	11	
30	7.5	20 ft.		93	62	46	37	32	26	23	20	18	17	15	14	13	12	
40	8.5	20 ft.		105	70	52	42	35	30	26	23	21	19	17	16	15	14	

3120 RIGHT or LEFT	PSI	GPM	SPRAY PATTERN	SPEED (MPH)														
				2	3	4	5	6	7	8	9	10	11	12	13	14	15	
				GALLONS PER ACRE														
20	7.2	21 ft.		85	56	42	34	28	24	21	19	17	15	14	13	12	11	
30	9.0	21 ft.		106	71	53	42	35	30	26	23	21	19	17	16	15	14	
40	10.6	21 ft.		125	83	62	50	41	36	31	28	25	23	21	19	18	16	

3750 RIGHT or LEFT	PSI	GPM	SPRAY PATTERN	SPEED (MPH)														
				2	3	4	5	6	7	8	9	10	11	12	13	14	15	
				GALLONS PER ACRE														
20	12.0	23 ft.		129	86	64	51	43	37	32	29	26	24	22	20	18	17	
30	15.0	23 ft.		161	108	81	64	54	46	40	36	32	29	27	25	23	21	
40	16.3	23 ft.		175	117	88	70	58	50	44	39	35	32	29	27	25	23	

4370 RIGHT or LEFT	PSI	GPM	SPRAY PATTERN	SPEED (MPH)														
				2	3	4	5	6	7	8	9	10	11	12	13	14	15	
				GALLONS PER ACRE														
20	13.8	25 ft.		137	91	68	54	45	39	34	30	27	25	23	21	19	18	
30	15.6	25 ft.		154	103	77	62	51	44	39	34	31	28	26	24	22	20	
40	18.0	25 ft.		178	119	89	71	59	51	45	40	35	33	30	27	25	24	

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SPRAY NOZZLES FULL PATTERN

1250FS	SPRAY			SPEED (MPH)						
	PSI	GPM	PATTERN	1	2	3	4	5	6	7
	GALLONS PER ACRE									
	20	1.5	16 ft.	46	23	16	12	8	7.5	6.5
30	1.7	16 ft.	53	26	18	13	11	9	8	
40	2.0	16 ft.	62	31	21	16	12	10	9	

1400FS	SPRAY			SPEED (MPH)										
	PSI	GPM	PATTERN	2	3	4	5	6	7	8	9	10	11	12
	GALLONS PER ACRE													
	20	1.7	17 ft.	25	17	12	10	8	7	6	5.5	5	4.5	4
30	2.0	17 ft.	29	19	15	12	10	8	7	6.5	6	5	4.5	
40	2.5	17 ft.	36	24	18	15	12	10	9	8	7	6.5	6	

1400FM	SPRAY			SPEED (MPH)										
	PSI	GPM	PATTERN	2	3	4	5	6	7	8	9	10	11	12
	GALLONS PER ACRE													
	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	
40	2.5	22 ft.	28	19	14	11	9	8	7	6	5.5	5	4.5	

1870FS	SPRAY			SPEED (MPH)										
	PSI	GPM	PATTERN	2	3	4	5	6	7	8	9	10	11	12
	GALLONS PER ACRE													
	20	3.0	18 ft.	41	28	21	17	14	12	10	9	8	7.5	7
30	3.5 <th>18 ft.</th> <td>48</td> <td>32</td> <td>24</td> <td>19</td> <td>16</td> <td>14</td> <td>12</td> <td>11</td> <td>10</td> <td>9</td> <td>8</td> <td></td>	18 ft.	48	32	24	19	16	14	12	11	10	9	8	
40	4.3 <th>18 ft.</th> <td>59</td> <td>39</td> <td>30</td> <td>24</td> <td>20</td> <td>17</td> <td>15</td> <td>13</td> <td>12</td> <td>11</td> <td>10</td> <td></td>	18 ft.	59	39	30	24	20	17	15	13	12	11	10	

1870FM	SPRAY			SPEED (MPH)										
	PSI	GPM	PATTERN	2	3	4	5	6	7	8	9	10	11	12
	GALLONS PER ACRE													
	20	3.0	23 ft.	32	22	16	13	10	9	8	7	6.5	6	5
30	3.5 <th>23 ft.</th> <td>38</td> <td>25</td> <td>19</td> <td>15</td> <td>13</td> <td>11</td> <td>9</td> <td>8</td> <td>7.5</td> <td>7</td> <td>6</td> <td></td>	23 ft.	38	25	19	15	13	11	9	8	7.5	7	6	
40	4.3 <th>23 ft.</th> <td>46</td> <td>31</td> <td>23</td> <td>19</td> <td>15</td> <td>13</td> <td>12</td> <td>10</td> <td>9</td> <td>8</td> <td>7.5</td> <td></td>	23 ft.	46	31	23	19	15	13	12	10	9	8	7.5	

1870FL	SPRAY			SPEED (MPH)										
	PSI	GPM	PATTERN	2	3	4	5	6	7	8	9	10	11	12
	GALLONS PER ACRE													
	20	3.0	30 ft.	25	17	12	10	8	7	6	5.5	5	4.5	4
30	3.5 <th>30 ft.</th> <td>29</td> <td>19</td> <td>14</td> <td>12</td> <td>10</td> <td>8</td> <td>7</td> <td>6</td> <td>5.5</td> <td>5</td> <td>4.5</td> <td></td>	30 ft.	29	19	14	12	10	8	7	6	5.5	5	4.5	
40	4.3 <th>30 ft.</th> <td>36</td> <td>25</td> <td>18</td> <td>14</td> <td>12</td> <td>10</td> <td>9</td> <td>8</td> <td>7</td> <td>6.5</td> <td>6</td> <td></td>	30 ft.	36	25	18	14	12	10	9	8	7	6.5	6	



FULL PATTERN SPRAY NOZZLES

3120FS	SPRAY			SPEED (MPH)													
	PSI	GPM	PATTERN	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	GALLONS PER ACRE																
	20	11.3	23 ft.	122	81	61	49	40	37	30	27	24	22	20	19	17	16
	30	13.0	23 ft.	140	93	70	56	47	43	35	31	28	25	23	21	20	19
40	15.0	23 ft.	161	108	81	65	54	50	41	36	32	29	27	25	23	22	

3120FM	SPRAY			SPEED (MPH)													
	PSI	GPM	PATTERN	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	GALLONS PER ACRE																
	20	11.3	27 ft.	104	69	52	41	35	30	26	23	21	19	17	16	15	14
	30	13.0	27 ft.	119	79	60	48	40	34	30	26	24	22	20	18	17	16
40	15.0	27 ft.	138	92	69	55	46	39	34	30	28	25	23	21	20	18	

3750FM	SPRAY			SPEED (MPH)													
	PSI	GPM	PATTERN	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	GALLONS PER ACRE																
	20	13.8	30 ft.	114	76	57	46	38	33	28	25	23	21	19	18	16	15
	30	16.4	30 ft.	135	90	68	54	45	39	34	30	27	25	23	21	19	18
40	18.0	30 ft.	149	99	74	59	50	42	37	33	30	27	25	23	21	20	

3750FL	SPRAY			SPEED (MPH)													
	PSI	GPM	PATTERN	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	GALLONS PER ACRE																
	20	13.8	40 ft.	85	57	43	34	28	24	21	19	17	16	14	13	12	11
	30	16.4	40 ft.	101	68	51	41	34	29	25	23	20	18	17	16	14	13
40	18.0	40 ft.	111	74	56	45	37	32	28	25	23	20	18	17	16	15	

4370FL	SPRAY			SPEED (MPH)													
	PSI	GPM	PATTERN	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	GALLONS PER ACRE																
	20	16.3	44 ft.	92	61	46	37	31	26	23	20	18	17	15	14	13	12
	30	20.0	44 ft.	113	75	56	45	38	32	28	25	23	20	19	17	16	15
40	24.0	44 ft.	135	90	68	54	45	39	34	30	27	25	23	21	19	18	

BOOMINATOR[®]

BOOMLESS SPRAY NOZZLES
TECHNOLOGY THAT WORKS

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