



## Matched Precipitation Rate (MPR) Nozzles



### **Primary Application**

Matched Precipitation Rate (MPR) Nozzles simplify the design process by allowing sprinklers with various arcs and radii to be mixed on the same circuit. Fits all Rain Bird spray heads and shrub adapters.

### **Features**

- Matched precipitation rates across sets and across patterns in new 5 Series, 8 Series, 10 Series, 12 Series and 15 Series for even water distribution and design flexibility.
- New 5 Series nozzles meet small-area shrub or turf requirements.
- New and improved 8 Series Nozzles now have a lower water flow which allow more spray heads per zone.
- 1800 Series white filter (0.35" x 0.45") screens (shipped with nozzles) maintain precise radius adjustment and prevent clogging. New and improved 5 and 8 Series Nozzles are shipped with blue fine-mesh (0.02" x 0.02") filter screens
- Stainless steel adjustment screw to adjust flow and radius.
- Color-coded on the top to enhance your productivity.

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## Matched Precipitation Rate (MPR) Nozzles

### Operating Range

- Spacing: 1.5 to 4.5 m
- Pressure: 1 to 2.1 Bar
- Optimum Pressure: 2.1 Bar

### Specifications

#### 5, 8, 10, 12 and 15 Series MPR Nozzles:

The nozzles shall have precipitation rates matched across sets and across patterns.

The plastic MPR Nozzle shall be constructed of UV-resistant plastic. The radius adjustment screen shall be constructed of stainless steel.

The nozzle shall accept the non-clogging 1800 Series filter screens to allow for radius




adjustment and the MPR Plastic Nozzles shall also accept the pressure compensating screens (PCS Series).




The Plastic MPR Nozzles shall be manufactured by Rain Bird Corporation, Azusa, California.





### Models





- 5 Series – red
- 5 Series, Bubbler Nozzles – gray
- 8 Series – green
- 10 Series – blue
- 12 Series – brown
- 15 Series – black
- 15 Strip Series – black



5 Series MPR						
5° Trajectory						
Nozzle	Pressure psi	Radius ft.	Flow gpm	■ Precip In/h	▲ Precip In/h	
5F 	15	3	0.29	2.07	2.39	
	20	4	0.33	2.01	2.32	
	25	4	0.37	1.62	1.87	
	30	5	0.41	1.58	1.83	
5H 	15	3	0.14	2.07	2.39	
	20	4	0.16	2.01	2.32	
	25	4	0.18	1.62	1.87	
	30	5	0.20	1.58	1.83	
5Q 	15	3	0.07	2.07	2.39	
	20	4	0.08	2.01	2.32	
	25	4	0.09	1.62	1.87	
	30	5	0.10	1.58	1.83	

5 Series MPR							METRIC	
5° Trajectory								
Nozzle	Pressure bar	Radius m	Flow m³/h	Flow l/m	■ Precip mm/h	▲ Precip mm/h		
5F 	1.0	1.1	0.06	1.1	52	60		
	1.5	1.3	0.08	1.4	47	55		
	2.0	1.5	0.09	1.6	41	48		
	2.1	1.5	0.09	1.6	40	46		
5H 	1.0	1.1	0.03	0.5	52	60		
	1.5	1.3	0.04	0.7	47	55		
	2.0	1.5	0.04	0.7	41	48		
	2.1	1.5	0.05	0.9	40	46		
5Q 	1.0	1.1	0.02	0.4	52	60		
	1.5	1.3	0.02	0.4	47	55		
	2.0	1.5	0.02	0.4	41	48		
	2.1	1.5	0.02	0.4	40	46		

8 Series MPR						
10° Trajectory						
Nozzle	Pressure psi	Radius ft.	Flow gpm	■ Precip In/h	▲ Precip In/h	
8F 	15	5	0.74	1.11	1.29	
	20	6	0.86	1.29	1.49	
	25	7	0.96	1.44	1.67	
	30	8	1.05	1.58	1.82	
8H 	15	5	0.37	1.11	1.29	
	20	6	0.42	1.26	1.46	
	25	7	0.47	1.41	1.63	
	30	8	0.52	1.56	1.81	
8T 	15	5	0.25	1.13	1.30	
	20	6	0.29	1.31	1.51	
	25	7	0.32	1.44	1.67	
	30	8	0.35	1.58	1.82	
8Q 	15	5	0.18	1.08	1.25	
	20	6	0.21	1.26	1.46	
	25	7	0.24	1.44	1.67	
	30	8	0.26	1.56	1.81	





8 Series MPR							METRIC	
10° Trajectory								
Nozzle	Pressure bar	Radius m	Flow m³/h	Flow l/m	■ Precip mm/h	▲ Precip mm/h		
8F 	1.0	1.7	0.16	2.8	28.28	32.66		
	1.5	2.1	0.20	3.4	32.87	37.95		
	2.0	2.4	0.23	3.9	36.69	42.37		
	2.1	2.4	0.24	4.0	40.13	46.34		
8H 	1.0	1.7	0.08	1.4	28.28	32.66		
	1.5	2.1	0.10	1.7	32.10	37.07		
	2.0	2.4	0.12	1.9	35.93	41.48		
	2.1	2.4	0.12	2.0	39.75	45.90		
8T 	1.0	1.7	0.05	1.0	28.66	33.10		
	1.5	2.1	0.07	1.1	33.25	38.40		
	2.0	2.4	0.08	1.3	36.69	42.37		
	2.1	2.4	0.08	1.3	40.13	46.34		
8Q 	1.0	1.7	0.04	0.7	27.52	31.78		
	1.5	2.1	0.05	0.8	32.10	37.07		
	2.0	2.4	0.06	1.0	36.69	42.37		
	2.1	2.4	0.06	1.0	39.75	45.90		





**Note:** All MPR nozzles tested on 4" (10.2 cm) pop-ups  
 ■ Square spacing based on 50% diameter of throw  
 ▲ Triangular spacing based on 50% diameter of throw  
 Performance data taken in zero wind conditions






**Note:** Specify spray body and nozzles separately.  
**Note:** Radius reduction over 25% of the normal throw of the nozzle is not recommended













## Matched Precipitation Rate (MPR) Nozzles






10 Series MPR					
15° Trajectory					
Nozzle	Pressure psi	Radius ft.	Flow gpm	■ Precip In/h	▲ Precip In/h
	15	7	1.16	2.28	2.63
	20	8	1.30	1.96	2.26
	25	9	1.44	1.71	1.98
	30	10	1.58	1.52	1.75
	15	7	0.58	2.28	2.63
	20	8	0.65	1.96	2.26
	25	9	0.72	1.71	1.98
	30	10	0.79	1.52	1.75
	15	7	0.39	2.28	2.63
	20	8	0.43	1.96	2.26
	25	9	0.48	1.71	1.98
	30	10	0.53	1.52	1.75
	15	7	0.29	2.28	2.63
	20	8	0.33	1.96	2.26
	25	9	0.36	1.71	1.98
	30	10	0.39	1.52	1.75

10 Series MPR						METRIC	
15° Trajectory							
Nozzle	Pressure bar	Radius m	Flow m³/h	Flow l/m	■ Precip mm/h	▲ Precip mm/h	
	1.0	2.1	0.26	4.2	58	67	
	1.5	2.4	0.29	4.8	50	58	
	2.0	3.0	0.35	6.0	39	45	
	2.1	3.1	0.36	6.0	37	43	
	1.0	2.1	0.13	2.4	58	67	
	1.5	2.4	0.14	2.4	50	58	
	2.0	3.0	0.18	3.0	39	45	
	2.1	3.1	0.18	3.0	37	43	
	1.0	2.1	0.09	1.2	58	67	
	1.5	2.4	0.10	1.8	50	58	
	2.0	3.0	0.12	1.8	39	45	
	2.1	3.1	0.12	1.8	37	43	
	1.0	2.1	0.06	1.2	58	67	
	1.5	2.4	0.07	1.2	50	58	
	2.0	3.0	0.09	1.2	39	45	
	2.1	3.1	0.09	1.2	37	43	

12 Series MPR					
30° Trajectory					
Nozzle	Pressure psi	Radius ft.	Flow gpm	■ Precip In/h	▲ Precip In/h
	15	9	1.80	2.14	2.47
	20	10	2.10	2.02	2.34
	25	11	2.40	1.91	2.21
	30	12	2.60	1.74	2.01
	15	9	1.35	2.14	2.47
	20	10	1.58	2.02	2.34
	25	11	1.80	1.91	2.21
	30	12	1.95	1.74	2.01
	15	9	0.90	2.14	2.47
	20	10	1.05	2.02	2.34
	25	11	1.20	1.91	2.21
	30	12	1.30	1.74	2.01
	15	9	0.60	2.14	2.47
	20	10	0.70	2.02	2.34
	25	11	0.80	1.91	2.21
	30	12	0.87	1.74	2.01
	15	9	0.45	2.14	2.47
	20	10	0.53	2.02	2.34
	25	11	0.60	1.91	2.21
	30	12	0.65	1.74	2.01

12 Series MPR						METRIC	
30° Trajectory							
Nozzle	Pressure bar	Radius m	Flow m³/h	Flow l/m	■ Precip mm/h	▲ Precip mm/h	
	1.0	2.7	0.40	6.8	55	63	
	1.5	3.2	0.48	8.3	47	54	
	2.0	3.6	0.59	9.7	46	53	
	2.1	3.7	0.60	9.8	44	51	
	1.0	2.7	0.30	5.1	55	63	
	1.5	3.2	0.36	6.3	47	54	
	2.0	3.6	0.45	7.3	46	53	
	2.1	3.7	0.45	7.4	44	51	
	1.0	2.7	0.20	3.4	55	63	
	1.5	3.2	0.24	4.2	47	54	
	2.0	3.6	0.30	4.9	46	53	
	2.1	3.7	0.30	4.9	44	51	
	1.0	2.7	0.13	2.3	55	63	
	1.5	3.2	0.16	2.8	47	54	
	2.0	3.6	0.20	3.2	46	53	
	2.1	3.7	0.20	3.3	44	51	
	1.0	2.7	0.10	1.7	55	63	
	1.5	3.2	0.12	2.1	47	54	
	2.0	3.6	0.15	2.4	46	53	
	2.1	3.7	0.15	2.5	44	51	

15 Series MPR					
30° Trajectory					
Nozzle	Pressure psi	Radius ft.	Flow gpm	■ Precip In/h	▲ Precip In/h
	15	11	2.60	2.07	2.39
	20	12	3.00	2.01	2.32
	25	14	3.30	1.62	1.87
	30	15	3.70	1.58	1.83
	15	11	1.95	2.07	2.39
	20	12	2.25	2.01	2.32
	25	14	2.48	1.62	1.87
	30	15	2.78	1.58	1.83
	15	11	1.30	2.07	2.39
	20	12	1.50	2.01	2.32
	25	14	1.65	1.62	1.87
	30	15	1.85	1.58	1.83
	15	11	0.87	2.07	2.39
	20	12	1.00	2.01	2.32
	25	14	1.10	1.62	1.87
	30	15	1.23	1.58	1.83
	15	11	0.65	2.07	2.39
	20	12	0.75	2.01	2.32
	25	14	0.82	1.62	1.87
	30	15	0.92	1.58	1.83

15 Series MPR						METRIC	
30° Trajectory							
Nozzle	Pressure bar	Radius m	Flow m³/h	Flow l/m	■ Precip mm/h	▲ Precip mm/h	
	1.0	3.4	0.60	9.8	52	60	
	1.5	3.9	0.72	11.8	47	55	
	2.0	4.5	0.84	13.7	41	48	
	2.1	4.6	0.84	14.0	40	46	
	1.0	3.4	0.45	7.4	52	60	
	1.5	3.9	0.54	8.8	47	55	
	2.0	4.5	0.63	10.3	41	48	
	2.1	4.6	0.63	10.5	40	46	
	1.0	3.4	0.30	4.9	52	60	
	1.5	3.9	0.36	5.9	47	55	
	2.0	4.5	0.42	6.8	41	48	
	2.1	4.6	0.42	7.0	40	46	
	1.0	3.4	0.20	3.3	52	60	
	1.5	3.9	0.24	3.9	47	55	
	2.0	4.5	0.28	4.6	41	48	
	2.1	4.6	0.28	4.7	40	46	
	1.0	3.4	0.15	2.5	52	60	
	1.5	3.9	0.18	2.9	47	55	
	2.0	4.5	0.21	3.4	41	48	
	2.1	4.6	0.21	3.5	40	46	







Note: All MPR nozzles tested on 4" (10.2 cm) pop-ups  
 ■ Square spacing based on 50% diameter of throw  
 ▲ Triangular spacing based on 50% diameter of throw  
 Performance data taken in zero wind conditions

Note: Specify spray body and nozzles separately.  
 Note: Radius reduction over 25% of the normal throw of the nozzle is not recommended

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



## Matched Precipitation Rate (MPR) Nozzles

15 Strip Series			
30° Trajectory			
Nozzle	Pressure psi	W x L ft.	Flow gpm
15EST 	15	4 x 13	0.45
	20	4 x 14	0.50
	25	4 x 14	0.56
	30	4 x 15	0.61
15CST 	15	4 x 26	0.89
	20	4 x 28	1.00
	25	4 x 28	1.11
15RCS 	15	3 x 11	0.35
	20	3 x 12	0.40
	25	4 x 14	0.45
15LCS 	15	3 x 11	0.35
	20	3 x 12	0.40
	25	4 x 14	0.45
15SST 	15	4 x 26	0.89
	20	4 x 28	1.00
	25	4 x 28	1.11
9SST 	15	9 x 15	1.34
	20	9 x 16	1.47
	25	9 x 18	1.60
	30	9 x 18	1.73





W = Width of coverage pattern L = Length of coverage pattern

Note: Specify spray body and nozzles separately.

Note: Radius reduction over 25% of the normal throw of the nozzle is not recommended





15 Strip Series				METRIC	
30° Trajectory					
Nozzle	Pressure bar	W x L m	Flow m³/h	Flow l/m	
15EST 	1.0	1.2 x 4.0	0.10	1.7	
	1.5	1.2 x 4.3	0.11	2.0	
	2.0	1.2 x 4.3	0.13	2.3	
	2.1	1.2 x 4.6	0.14	2.3	
15CST 	1.0	1.2 x 7.9	0.20	3.4	
	1.5	1.2 x 8.5	0.23	4.0	
	2.0	1.2 x 8.5	0.25	4.5	
15RCS 	1.0	0.8 x 3.2	0.08	1.3	
	1.5	1.0 x 3.9	0.09	1.6	
	2.0	1.2 x 4.5	0.11	1.8	
15LCS 	1.0	0.8 x 3.2	0.08	1.3	
	1.5	1.0 x 3.9	0.09	1.6	
	2.0	1.2 x 4.5	0.11	1.8	
15SST 	1.0	1.2 x 7.9	0.20	3.4	
	1.5	1.2 x 8.5	0.23	4.0	
	2.0	1.2 x 8.5	0.25	4.5	
9SST 	1.0	2.7 x 4.6	0.30	5.1	
	1.5	2.7 x 4.9	0.33	5.8	
	2.0	2.7 x 5.5	0.36	6.5	
	2.1	2.7 x 5.5	0.39	6.5	



Performance data taken in zero wind conditions

5 Series MPR Stream Bubbler Nozzles			
0° Trajectory			
Nozzle	Pressure psi	Radius ft.	Flow gpm
5F-B 	15	5	1.50
	20	5	1.50
	25	5	1.50
	30	5	1.50
5H-B 	15	5	1.00
	20	5	1.00
	25	5	1.00
	30	5	1.00
5Q-B 	15	5	0.50
	20	5	0.50
	25	5	0.50
	30	5	0.50
5CST-B 	15	5	0.50
	20	5	0.50
	25	5	0.50
	30	5	0.50

Note: Indicates adjusted radius at psi shown

Note: Flow at adjusted radius of 5 feet (1.5 m)

5 Series MPR Stream Bubbler Nozzles				METRIC	
0° Trajectory					
Nozzle	Pressure bar	Radius m	Flow m³/h	Flow l/m	
5F-B 	1.0	1.5	0.35	5.7	
	1.5	1.5	0.35	5.7	
	2.0	1.5	0.35	5.7	
	2.1	1.5	0.35	5.7	
5H-B 	1.0	1.5	0.23	3.8	
	1.5	1.5	0.23	3.8	
	2.0	1.5	0.23	3.8	
	2.1	1.5	0.23	3.8	
5Q-B 	1.0	1.5	0.12	1.9	
	1.5	1.5	0.12	1.9	
	2.0	1.5	0.12	1.9	
	2.1	1.5	0.12	1.9	
5CST-B 	1.0	1.5	0.12	1.9	
	1.5	1.5	0.12	1.9	
	2.0	1.5	0.12	1.9	
	2.1	1.5	0.12	1.9	



8 FLT Series MPR					
5° Trajectory					
Nozzle	Pressure psi	Radius ft.	Flow gpm	■ Precip In/h	▲ Precip In/h
8H-FLT 	15	6	0.56	3.36	3.88
	20	7	0.65	2.91	3.36
	25	7	0.72	2.60	3.01
	30	8	0.79	2.38	2.75
8Q-FLT 	15	6	0.28	3.32	3.83
	20	7	0.32	2.87	3.32
	25	7	0.36	2.57	2.97
	30	8	0.39	2.35	2.71

Note: All MPR nozzles tested on 4" (10.2 cm) pop-ups

■ Square spacing based on 50% diameter of throw

▲ Triangular spacing based on 50% diameter of throw

Performance data taken in zero wind conditions

8 FLT Series MPR				METRIC	
5° Trajectory					
Nozzle	Pressure bar	Radius m	Flow m³/h	Flow l/m	■ Precip mm/h
8H-FLT 	1.0	1.7	0.12	2.1	87
	1.5	2.1	0.15	2.6	71
	2.0	2.4	0.18	2.9	62
	2.1	2.4	0.18	3.0	60
8Q-FLT 	1.0	1.7	0.06	1.1	86
	1.5	2.1	0.07	1.3	71
	2.0	2.4	0.09	1.4	61
	2.1	2.4	0.09	1.5	60

Note: Specify spray body and nozzles separately.

Note: Radius reduction over 25% of the normal throw of the nozzle is not recommended