

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.

Operating Range

- **Spacing:** 5 to 15 feet (1,5 to 4,5 m)
- **Pressure:** 15 to 30 psi (1 to 2,1 Bars)
- **Optimum Pressure:** 30 psi (2,1 Bars)

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						Metric 5° Trajectory					
Nozzle	Pressure psi	Radius ft	Flow gpm	Precip In/h	Precip In/h	Nozzle	Pressure bar	Radius m	Flow m³/h	Precip mm/h	Precip mm/h
SF	15	2	0.09	2.07	2.39	SF	1,0	0,6	0,02	52	60
	20	3	0.19	2.01	2.32		1,5	1,0	0,05	47	55
	25	4	0.27	1.62	1.87		2,0	1,4	0,08	41	48
	30	5	0.41	1.58	1.83		2,1	1,5	0,09	40	46
SH	15	2	0.04	2.07	2.39	SH	1,0	0,6	0,01	52	60
	20	3	0.09	2.01	2.32		1,5	1,0	0,02	47	55
	25	4	0.13	1.62	1.87		2,0	1,4	0,04	41	48
	30	5	0.20	1.58	1.83		2,1	1,5	0,05	40	46
SQ	15	2	0.02	2.07	2.39	SQ	1,0	0,6	0,01	52	60
	20	3	0.05	2.01	2.32		1,5	1,0	0,01	47	55
	25	4	0.07	1.62	1.87		2,0	1,4	0,02	41	48
	30	5	0.10	1.58	1.83		2,1	1,5	0,02	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 sprinkler body and nozzles separately. Refer to Price List for shipping quantities.

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

Performance data derived from tests that conform with ASAE Standards; ASAE S398.1.

How To Specify/Order:

1804 - SAM - 15H - PCS - 060

Model	Optional Feature	Nozzle Series Pattern	Optional Performance Screen

This specifies an 1800 Series Sprayhead with 4" (10 cm) pop-up height; Seal-A-Matic™ check valve; 15 Series Nozzle providing 180° coverage and pressure-compensating screen to reduce radius to 5' (1,5 m) at 30 psi (2,1 bars) and bring flow down to 0.6 GPM (0,14 m³/h; 0,04 l/s).

■ Square spacing based on 50% diameter of throw. ▲ Triangular spacing based on 50% diameter of throw.

NOTE: Specify sprinkler body and nozzles separately. Refer to Price List for shipping quantities.

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



8 SERIES MPR

10° Trajectory

Nozzle	Pressure psi	Radius ft	Flow gpm	Precip In/h	Precip In/h
	15	5	0.54	2.07	2.39
	20	6	0.75	2.01	2.32
	25	7	0.82	1.62	1.87
	30	8	1.05	1.58	1.83
	15	5	0.27	2.07	2.39
	20	6	0.38	2.01	2.32
	25	7	0.41	1.62	1.87
	15	5	0.18	2.07	2.39
	20	6	0.25	2.01	2.32
	25	7	0.27	1.62	1.87
	15	5	0.13	2.07	2.39
	20	6	0.19	2.01	2.32
	25	7	0.21	1.62	1.87
	30	8	0.26	1.58	1.83

Metric

10° Trajectory

Nozzle	Pressure bar	Radius m	Flow m ³ /hr	Flow l/s	Precip mm/h	Precip mm/h
	1,0	1,5	0,12	0,03	52	60
	1,5	1,9	0,16	0,05	47	55
	2,0	2,3	0,22	0,06	41	48
	2,1	2,4	0,23	0,06	40	46
	1,0	1,5	0,06	0,02	52	60
	1,5	1,9	0,09	0,02	47	55
	2,0	2,3	0,11	0,03	41	48
	1,0	1,5	0,04	0,01	52	60
	1,5	1,9	0,06	0,02	47	55
	2,0	2,3	0,07	0,02	41	48
	1,0	1,5	0,03	0,01	52	60
	1,5	1,9	0,04	0,01	47	55
	2,0	2,3	0,05	0,02	41	48
	2,1	2,4	0,06	0,02	40	46

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

Metric

15° Trajectory

Nozzle	Pressure bar	Radius m	Flow m ³ /hr	Flow l/s	Precip mm/h	Precip mm/h
	1,0	2,1	0,26	0,07	58	67
	1,5	2,4	0,29	0,08	50	58
	2,0	3,0	0,35	0,10	39	45
	2,1	3,1	0,36	0,10	37	43
	1,0	2,1	0,13	0,04	58	67
	1,5	2,4	0,14	0,04	50	58
	2,0	3,0	0,18	0,05	39	45
	2,1	3,1	0,18	0,05	37	43
	1,0	2,1	0,09	0,03	58	67
	1,5	2,4	0,10	0,03	50	58
	2,0	3,0	0,12	0,03	39	45
	2,1	3,1	0,12	0,03	37	43
	1,0	2,1	0,06	0,02	58	67
	1,5	2,4	0,07	0,02	50	58
	2,0	3,0	0,09	0,03	39	45
	2,1	3,1	0,09	0,03	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
	15	9	0.90	2.14	2.47
	20	10	1.05	2.02	2.34
	25	11	1.20	1.91	2.21
	15	9	0.60	2.14	2.47
	20	10	0.70	2.02	2.34
	25	11	0.80	1.91	2.21
	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

Metric

30° Trajectory

Nozzle	Pressure bar	Radius m	Flow m ³ /hr	Flow l/s	Precip mm/h	Precip mm/h
	1,0	2,7	0,40	0,11	55	63
	1,5	3,2	0,48	0,14	47	54
	2,0	3,6	0,59	0,16	46	53
	2,1	3,7	0,60	0,16	44	51
	1,0	2,7	0,30	0,09	55	63
	1,5	3,2	0,36	0,10	47	54
	2,0	3,6	0,45	0,12	46	53
	1,0	2,7	0,20	0,06	55	63
	1,5	3,2	0,24	0,07	47	54
	2,0	3,6	0,30	0,08	46	53
	1,0	2,7	0,13	0,04	55	63
	1,5	3,2	0,16	0,05	47	54
	2,0	3,6	0,20	0,05	46	53
	1,0	2,7	0,10	0,03	55	63
	1,5	3,2	0,12	0,03	47	54
	2,0	3,6	0,15	0,04	46	53
	2,1	3,7	0,15	0,04	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

Metric

30° Trajectory

Nozzle	Pressure bar	Radius m	Flow m ³ /hr	Flow l/s	Precip mm/h	Precip mm/h
	1,0	3,4	0,60	0,16	52	60
	1,5	3,9	0,72	0,19	47	55
	2,0	4,5	0,84	0,23	41	48
	2,1	4,6	0,84	0,23	40	46
	1,0	3,4	0,45	0,12	52	60
	1,5	3,9	0,54	0,15	47	55
	2,0	4,5	0,63	0,17	41	48
	2,1	4,6	0,63	0,18	40	46
	1,0	3,4	0,30	0,08	52	60
	1,5	3,9	0,36	0,10	47	55
	2,0	4,5	0,42	0,11	41	48
	2,1	4,6	0,42	0,12	40	46
	1,0	3,4	0,20	0,05	52	60
	1,5	3,9	0,24	0,07	47	55
	2,0	4,5	0,28	0,08	41	48
	2,1	4,6	0,28	0,08	40	46
	1,0	3,4	0,15	0,04	52	60
	1,5	3,9	0,18	0,05	47	55
	2,0	4,5	0,21	0,06	41	48
	2,1	4,6	0,21	0,06	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 sprinkler body and nozzles separately. Refer to Price List for shipping quantities.

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

Performance data derived from tests that conform with ASAE Standards; ASAE S398.1.

15 STRIP SERIES

30° Trajectory

Nozzle	Pressure psi	W x L ft	Flow gpm
15SQ 	15	18 x 18	2.68
	20	19 x 19	3.06
	25	21 x 21	3.42
	30	23 x 23	3.73
15EST 	15	4 x 13	0.45
	20	4 x 14	0.50
	25	4 x 14	0.56
15CST 	15	4 x 26	0.89
	20	4 x 28	1.00
	25	4 x 28	1.11
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	

Metric

30° Trajectory

Nozzle	Pressure bar	W x L m	Flow m³/h	Flow l/s
15SQ 	1,0	5,5 x 5,5	0,61	0,17
	1,5	5,8 x 5,8	0,69	0,19
	2,0	6,4 x 6,4	0,78	0,22
	2,1	7,0 x 7,0	0,85	0,23
15EST 	1,0	1,2 x 4,0	0,10	0,03
	1,5	1,2 x 4,3	0,11	0,03
	2,0	1,2 x 4,3	0,13	0,04
15CST 	1,0	1,2 x 7,9	0,20	0,06
	1,5	1,2 x 8,5	0,23	0,06
	2,0	1,2 x 8,5	0,25	0,07
15SST 	1,0	1,2 x 7,9	0,20	0,06
	1,5	1,2 x 8,5	0,23	0,06
	2,0	1,2 x 8,5	0,25	0,07
9SST 	1,0	2,7 x 4,6	0,30	0,08
	1,5	2,7 x 4,9	0,33	0,09
	2,0	2,7 x 5,5	0,36	0,10
2,1	2,7 x 5,5	0,39	0,11	

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

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

Metric

0° Trajectory

Nozzle	Pressure bar	Radius m	Flow m³/h	Flow l/s
5F-B 	1,0	1,5	0,35	0,09
	1,5	1,5	0,35	0,09
	2,0	1,5	0,35	0,09
	2,1	1,5	0,35	0,09
5H-B 	1,0	1,5	0,23	0,06
	1,5	1,5	0,23	0,06
	2,0	1,5	0,23	0,06
	2,1	1,5	0,23	0,06
5Q-B 	1,0	1,5	0,12	0,03
	1,5	1,5	0,12	0,03
	2,0	1,5	0,12	0,03
	2,1	1,5	0,12	0,03
5CST-B 	1,0	1,5	0,12	0,03
	1,5	1,5	0,12	0,03
	2,0	1,5	0,12	0,03
	2,1	1,5	0,12	0,03

NOTE: Indicates adjusted radius at psi shown. Flow at adjusted radius of 5 feet (1,5 m).



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