RAIN BIRD®

TECH SPECS

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. Fit 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 allows more spray heads per zone.
- 1800 Series white filter (.035" x .045") 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 (.02" x .02") filter screens.)
- Stainless steel adjustment screw to adjust flow and radius.

Operating Range

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

Specifications

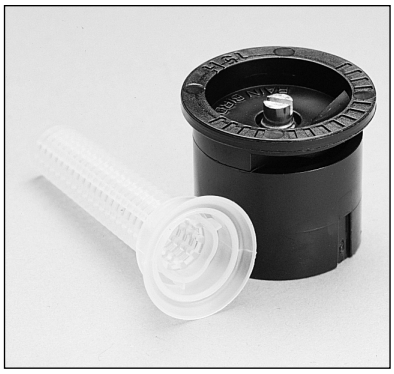
5, 8, 10, 12 and 15 Series MPR Nozzles

The nozzles shall have precipitation rates matched across sets and across patterns. The nozzle shall be capable of covering a ___ feet radius (FT. RAD)/(meter) at ___ pounds per square inch (psi)/(barbs) with a discharge rate of ___ gallons per minute (gpm)/(m3/h,l/s).

The plastic MPR nozzle shall be constructed of UV resistant plastic. The radius adjustment screw 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 Sprinkler Mfg. Corp., Glendora, California.



Models

- 5 Series **New**
- 5 Series: bubbler nozzles
- 8 Series **Improved**
- 10 Series
- 12 Series
- 15 Series
- 15 Strip Series
- 16 Series: stream spray
- 22 Series: standard stream spray

5 Series MPR - New!

5° Trajectory				■	▲
Nozzle	Pressure psi	Radius ft.	Flow gpm	Precip. in/h	Precip. in/h
5F	15	2	0.09	2.07	2.39
	20	3	0.19	2.01	2.32
	25	4	0.27	1.62	1.87
	30	5	0.41	1.58	1.83
5H	15	2	0.04	2.07	2.39
	20	3	0.09	2.01	2.32
	25	4	0.13	1.62	1.87
	30	5	0.20	1.58	1.83
5T	15	2	0.03	2.07	2.39
	20	3	0.06	2.01	2.32
	25	4	0.09	1.62	1.87
	30	5	0.13	1.58	1.83
5Q	15	2	0.02	2.07	2.39
	20	3	0.05	2.01	2.32
	25	4	0.07	1.62	1.87
	30	5	0.10	1.58	1.83

METRIC

5° Trajectory				■	▲
Nozzle	Pressure bar	Radius m	Flow m³/h	Precip. mm/h	Precip. mm/h
5F	1,0	0,6	0,02	52	60
	1,5	1,0	0,05	47	55
	2,0	1,4	0,08	41	48
	2,1	1,5	0,09	40	46
5H	1,0	0,6	0,01	52	60
	1,5	1,0	0,02	47	55
	2,0	1,4	0,04	41	48
	2,1	1,5	0,05	40	46
5T	1,0	0,6	0,01	52	60
	1,5	1,0	0,02	47	55
	2,0	1,4	0,03	41	48
	2,1	1,5	0,03	40	46
5Q	1,0	0,6	0,01	52	60
	1,5	1,0	0,01	47	55
	2,0	1,4	0,02	41	48
	2,1	1,5	0,02	40	46

How to Specify/Order:

1804-SAM-15H-PCS-060

Model — ***1804***

Optional Feature — ***SAM***

Nozzle Series Pattern — ***15H***

Optional Performance Screen — ***PCS-060***

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 .6 GPM (0,14m³/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 - New and Improved!

10° Trajectory

Nozzle	Pressure psi	Radius ft.	Flow gpm	Precip. in/h ■	Precip. in/h ▲
8F	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
8H	15	5	0.27	2.07	2.39
	20	6	0.38	2.01	2.32
	25	7	0.41	1.62	1.87
	30	8	0.52	1.58	1.83
8T	15	5	0.18	2.07	2.39
	20	6	0.25	2.01	2.32
	25	7	0.27	1.62	1.87
	30	8	0.35	1.58	1.83
8Q	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 m³/h	Flow l/s	Precip. mm/h ■	Precip. mm/h ▲
8F	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
8H	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
	2,1	2,4	0,12	0,03	40	46
8T	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
	2,1	2,4	0,08	0,02	40	46
8Q	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 ▲
10F	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
10H	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
10T	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
10Q	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 m³/h	Flow l/s	Precip. mm/h ■	Precip. mm/h ▲
10F	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
10H	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
10T	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
10Q	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 ▲
12F	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
12TQ	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
12TT	15	9	1.20	2.14	2.47
	20	10	1.40	2.02	2.34
	25	11	1.60	1.91	2.71
	30	12	1.74	1.74	2.01
12H	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
12T	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
12Q	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 m³/h	Flow l/s	Precip. mm/h ■	Precip. mm/h ▲
12F	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
12TQ	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
	2,1	3,7	0,45	0,12	44	51
12TT	1,0	2,7	0,26	0,08	55	63
	1,5	3,2	0,32	0,09	47	54
	2,0	3,6	0,40	0,11	46	53
	2,1	3,7	0,40	0,11	44	51
12H	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
	2,1	3,7	0,30	0,08	44	51
12T	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
	2,1	3,7	0,20	0,05	44	51
12Q	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 ▲
15F	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
15TQ	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
15TT	15	11	1.74	2.07	2.39
	20	12	2.01	2.01	2.32
	25	14	2.21	1.62	1.87
	30	15	2.48	1.58	1.83
15H	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
15T	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
15Q	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 m³/h	Flow l/s	Precip. mm/h ■	Precip. mm/h ▲
15F	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
15TQ	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
15TT	1,0	3,4	0,40	0,11	52	60
	1,5	3,9	0,48	0,13	47	55
	2,0	4,5	0,55	0,15	41	48
	2,1	4,6	0,56	0,16	40	46
15H	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
15T	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
15Q	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" pop-ups.
Performance data taken in zero wind conditions.
Note: Radius reduction over 25% of the normal throw of the nozzle is not recommended.

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

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
	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
	30	4 x 30	1.21
15SST	15	4 x 26	0.89
	20	4 x 28	1.00
	25	4 x 28	1.11
	30	4 x 30	1.21
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	Radius 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
	2,1	1,2 x 4,6	0,14	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
	2,1	1,2 x 9,2	0,27	0,08
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
	2,1	1,2 x 9,2	0,27	0,08
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

16 Series MPR

15° Trajectory

Nozzle	Pressure psi	Radius ft.	Flow gpm
16F-SLA	15	13	2.37
	20	14	2.66
	25	15	2.96
	30	16	3.22
16H-SLA	15	13	1.18
	20	14	1.33
	25	15	1.48
	30	16	1.61
16Q-SLA	15	13	0.59
	20	14	0.67
	25	15	0.74
	30	20	0.81

METRIC

15° Trajectory

Nozzle	Pressure bar	Radius m	Flow m³/h	Flow l/s
16F-SLA	1,0	4,0	0,54	0,15
	1,5	4,3	0,60	0,17
	2,0	4,6	0,67	0,19
	2,1	4,9	0,73	0,20
16H-SLA	1,0	4,0	0,27	0,07
	1,5	4,3	0,30	0,08
	2,0	4,6	0,34	0,09
	2,1	4,9	0,37	0,10
16Q-SLA	1,0	4,0	0,13	0,04
	1,5	4,3	0,15	0,04
	2,0	4,6	0,17	0,05
	2,1	4,9	0,18	0,05

22 Series MPR

35° Trajectory

Nozzle	Pressure psi	Radius ft.	Flow gpm
22F-SS	15	17	2.37
	20	18	2.66
	25	19	2.96
	30	20	3.22
22H-SS	15	17	1.18
	20	18	1.33
	25	19	1.48
	30	20	1.61
22Q-SS	15	17	0.59
	20	18	0.67
	25	19	0.74
	30	20	0.81

METRIC

35° Trajectory

Nozzle	Pressure bar	Radius m	Flow m³/h	Flow l/s
22F-SS	1,0	5,2	0,54	0,15
	1,5	5,5	0,60	0,17
	2,0	5,8	0,67	0,19
	2,1	6,1	0,73	0,20
22H-SS	1,0	5,2	0,27	0,07
	1,5	5,5	0,30	0,08
	2,0	5,8	0,34	0,09
	2,1	6,1	0,37	0,10
22Q-SS	1,0	5,2	0,13	0,04
	1,5	5,5	0,15	0,04
	2,0	5,8	0,17	0,05
	2,1	6,1	0,18	0,05

Note: 16 Series and 22 Series recommended for ground cover or shrub areas only.

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 @ psi shown.
Note GPM @ adjusted radius of 5'.

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