

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 | | | | | |
|---------------|-----------------|--------------|-------------|---------------|------|--------|-----------------|-------------|--------------|---------------|------|
| Nozzle | Pressure psi | Radius ft | Flow gpm | Precipitation | | Nozzle | Pressure bar | Radius m | Flow m³/h | Precipitation | |
| | | | | In/h | In/h | | | | | mm/h | 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 |
| 5H | 15 | 2 | 0.04 | 2.07 | 2.39 | 5H | 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 |
| 5Q | 15 | 2 | 0.02 | 2.07 | 2.39 | 5Q | 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 |
| 5Q-B  | 15 | 5 | 0.50 |
| | 20 | 5 | 0.50 |
| | 25 | 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 |
| 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 |
| 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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