

# MP ROTATOR®

Design Guide

High-Efficiency, Multi-Stream Nozzle

**Hunter®**



# Product Introduction

### Reliable Operation

Patented double-pop nozzle keeps the sprinkler free of external debris.

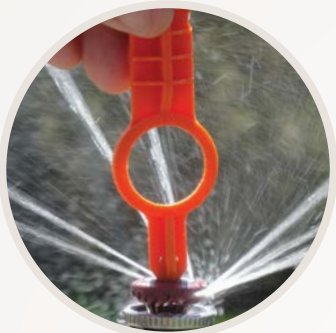
### Efficient Application

Multiple rotating streams provide even coverage and wind resistance, eliminating dry spots.



### Accurate Adjustments

Arc and radius can be adjusted while maintaining matched precipitation. Radius can be reduced up to 25%.



### Durable

Removable inlet filter keeps sprinkler free of internal debris.

### Easy Installation

Compatible with all Hunter spray bodies—perfect for retrofits. Use the MP-HT for female-threaded spray bodies.

### Pressure Regulation

For best results, use the pressure-regulated Pro-Spray® PRS40.

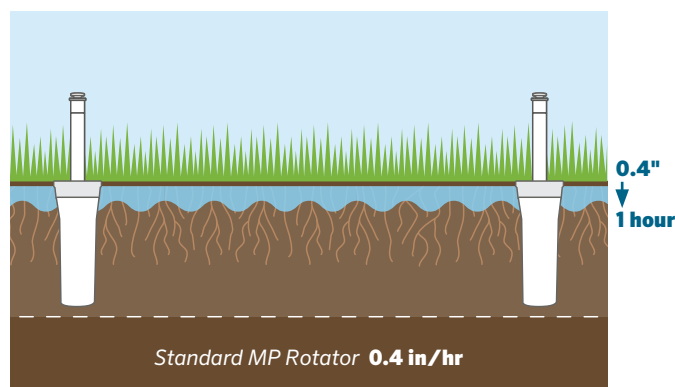


# MATCHED PRECIPITATION

*MP Rotators now come in two precipitation rate options to provide maximum flexibility for your irrigation design.*

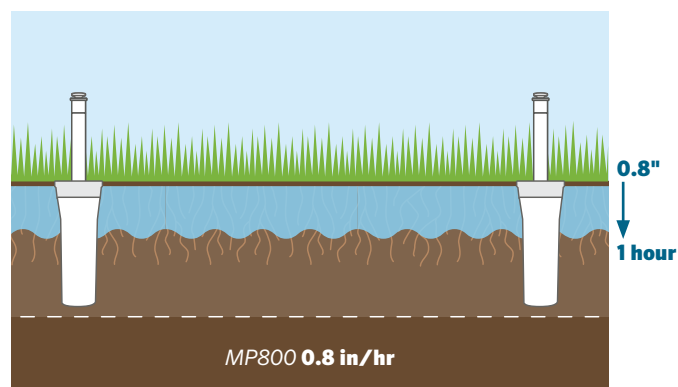
## Standard MP Rotator Precipitation Rate

The Standard MP Rotator has the slowest precipitation rate in the industry at approximately 0.4 in/hr, preventing runoff in the majority of soil applications, and allowing for gentle hydration of the landscape.



## MP800 Precipitation Rate

The MP800 has a precipitation rate of approximately 0.8 in/hr, allowing for high-efficiency irrigation of small spaces and medium-grade soils.



## Matching Soil Intake Rates

Matching your precipitation rate to your soil intake rate will eliminate the hazards of runoff and help conserve water. With two different precipitation rate options with the MP Rotator, you can now choose the best high-efficiency rotary nozzle for your plant material, soil type, and slope.

- Standard MP Rotators deliver water slowly, at a rate that most soils and slopes can effectively absorb.
- The MP800 delivers water at half the rate of a spray nozzle, better matching typical soil intake rates.
- Standard sprays apply water at a rate much higher than most soils can absorb, causing runoff in most soil types.

## INFILTRATION RATES BY SOIL TYPE

|                        | SLOPE PERCENTAGE |      |       |      |
|------------------------|------------------|------|-------|------|
|                        | 0-5%             | 5-8% | 8-12% | >12% |
| <b>COARSE SAND</b>     | ●●●              | ●●●  | ●●●   | ●    |
| <b>FINE SAND</b>       | ●●●              | ●●●  | ●     | -    |
| <b>SANDY LOAM</b>      | ●●●              | ●    | ●     | -    |
| <b>FINE SANDY LOAM</b> | ●●●              | ●    | -     | -    |
| <b>LOAM/SILT LOAM</b>  | ●                | ●    | -     | -    |
| <b>CLAY/CLAY LOAM</b>  | ●                | -    | -     | -    |

Water infiltration into the soil is less than:

■ 1.5 in/hr ■ 1 in/hr □ 0.5 in/hr

□ Cycle and Soak required to avoid runoff

# MP ROTATOR DESIGN GUIDE

## Application

### 1 MP Rotator Application

Specify the MP Rotator as the desired nozzle in a spray head body.

Retrofit spray systems by installing the MP Rotator onto any conventional spray head or shrub adapter.

### 2 Radius Adjustment

All models of the MP Rotator allow for easy radius adjustment of up to 25% while maintaining automatic matched precipitation.

Turn the nozzle adjustment screw clockwise to reduce the radius or counterclockwise to increase the radius. Four full rotations will maximize the effect. Additional rotations will not affect the performance of the nozzle.

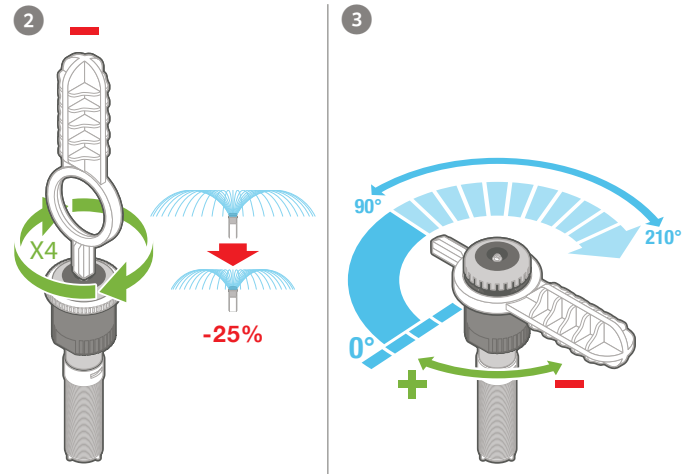
### 3 Arc Setting

The MP Rotator has a fixed left edge on all 90°–210° models and 210°–270° models. Turn the adjustment ring clockwise to increase the arc, and turn the adjustment ring counterclockwise to decrease the arc.

### 4 Pressure

Optimal performance and uniformity are reached at 40 PSI operating pressure. Use the Pro-Spray PRS40 to achieve pressure regulation of 40 PSI.

To reach the minimum radius, use the Pro-Spray PRS30 for pressure regulation to 30 PSI. To achieve maximum radius, increase the pressure over 40 PSI.



#### MP ROTATOR FACTORY SETTINGS

New MP Rotators are shipped from the factory at the maximum radius setting and with the following arc settings:

| MP MODEL              | FACTORY SET ARC |
|-----------------------|-----------------|
| 90°–210°              | 180°            |
| 210°–270°             | 210°            |
| 360°                  | Full-circle     |
| MP Corner             | 45°             |
| MP Side Strip         | 180°            |
| MP Left Corner Strip  | 90°             |
| MP Right Corner Strip | 90°             |

#### MP ROTATOR NOZZLE HEIGHT AND TRAJECTORY

| Nozzle No.            | Pressure (PSI) | Degrees of Trajectory | Max. Height of Spray |
|-----------------------|----------------|-----------------------|----------------------|
| MP815                 | 40             | 15°                   | 12"                  |
| MP800SR               | 40             | 18°                   | 18"                  |
| MP1000                | 40             | 20°                   | 20"                  |
| MP2000                | 40             | 26°                   | 45"                  |
| MP3000                | 40             | 26°                   | 79"                  |
| MP3500                | 40             | 26°                   | 79"                  |
| MP Corner             | 40             | 14°                   | 14"                  |
| MP Side Strip         | 40             | 16°                   | 19"                  |
| MP Left Corner Strip  | 40             | 16°                   | 18"                  |
| MP Right Corner Strip | 40             | 16°                   | 18"                  |

# MP ROTATOR DESIGN GUIDE

## Layout and Placement

### Run Times

Because the MP Rotator applies less water with increased uniformity, simply doubling the run time used for traditional spray nozzles may supply sufficient water to the landscape while using less water overall.

You can also calculate the run time based on the lower precipitation rate.

Visit [www.hunterindustries.com/tools/runtime](http://www.hunterindustries.com/tools/runtime) for more information on run time calculations.

### Precipitation Rate Calculations

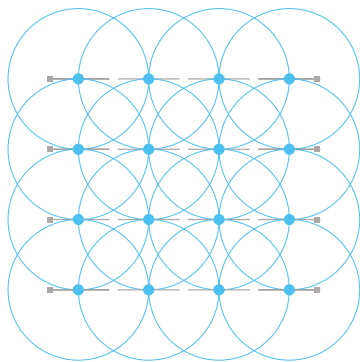
MP Rotators are recommended for use with head-to-head coverage in either square or triangular layouts.

#### Square Spacing Application Rate

$$\frac{96.25 \times \text{GPM of } 360^\circ \text{ sprinkler}}{(\text{Head spacing} \times \text{Row spacing})}$$

Example:

$$\frac{96.25 \times 1.48 \text{ GPM}}{(19' \times 19')} = \frac{142.45}{361} = 0.39 \text{ in/hr}$$



#### 19' Square Spacing

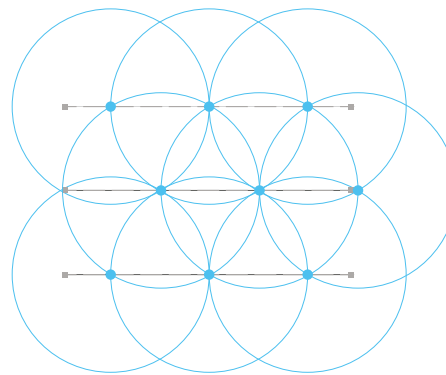
MP2000-360  
40 PSI  
19' Radius  
1.48 GPM  
19' Head x 19' Row,  
Square Spacing

#### Equilateral Triangular Spacing Application Rate

$$\frac{96.25 \times \text{GPM of } 360^\circ \text{ sprinkler}}{(\text{Head spacing} \times \text{Head spacing})0.866}$$

Example:

$$\frac{96.25 \times 3.64 \text{ GPM}}{(30' \times 30')0.866} = \frac{350.35}{(900)0.866} = \frac{350.35}{779.4} = 0.45 \text{ in/hr}$$



#### 30' Triangular Spacing

MP3000-360  
40 PSI  
30' Radius  
3.64 GPM  
30' Head x 26' Row,  
Triangular Spacing

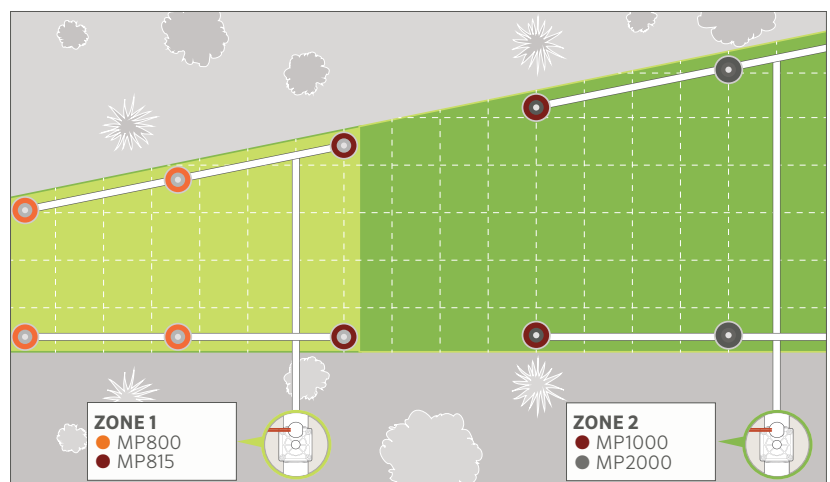
Note: Equilateral triangular spacing has a higher application rate than square spacing due to less area per sprinkler.

### Zoning with the MP Rotator

The standard MP Rotators have a matched precipitation rate of approximately 0.4 in/hr. This means any standard MP Rotator at any arc or radius can be placed on the same zone.

The MP800SR can be configured to work well in head-to-head coverage in either square or triangular layouts. When square spacing is used, the resulting precipitation rate will be approximately 0.8 in/hr.

Since this precipitation rate differs from the standard line of MP Rotators, you should zone the MP800 family separately to maintain matched precipitation within each zone.



# MP ROTATOR DESIGN GUIDE

## MP800



### Matched Precipitation

Maximize water savings for tight spaces with the MP800. The MP800 offers the benefits of multi-stream, multi-trajectory technology in smaller areas than ever before. The MP800 delivers water to distances as short as 6' at a matched precipitation rate of approximately **0.8 in/hr**, less than half that of traditional spray nozzles.

### Radius

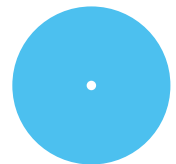
### Arc



90° to 210°

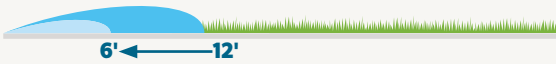


210° to 270°



360°

### MP800SR



MP800SR-90



MP800SR-360

### MP815



MP815-90



MP815-210



MP815-360

### Pressure Ratings

The MP800, just like its larger family of MP Rotators, prefers 40 PSI for optimal performance. This pressure yields optimal results for coverage and distribution uniformity. **However, to achieve the lowest radius setting of 6', you must regulate the inlet pressure to 30 PSI.** Use a Pro-Spray PRS30 to achieve a consistent inlet pressure of 30 PSI.

### Pro-Spray PRS30

Pair the MP Rotator with a Pro-Spray PRS30 to achieve the minimum radius.



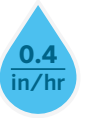
### Pro-Spray PRS40

Pair the MP Rotator with a Pro-Spray PRS40 for peak performance.



# MP ROTATOR DESIGN GUIDE

## MP1000, MP2000, MP3000, MP3500



### Matched Precipitation

All standard MP Rotator nozzles have a matched precipitation rate of approximately **0.4 in/hr** across the radius range of 8' to 35'.

| Radius | Arc             |                  |                |
|--------|-----------------|------------------|----------------|
|        | <br>90° to 210° | <br>210° to 270° | <br>360°       |
| MP1000 | <br>MP1000-90   | <br>MP1000-210   | <br>MP1000-360 |
| MP2000 | <br>MP2000-90   | <br>MP2000-210   | <br>MP2000-360 |
| MP3000 | <br>MP3000-90   | <br>MP3000-210   | <br>MP3000-360 |
| MP3500 | <br>MP3500-90   |                  |                |

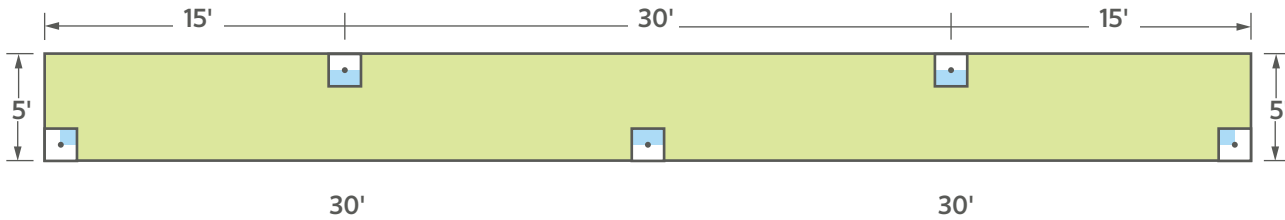
# MP ROTATOR DESIGN GUIDE

## Side Strip and Corner Models



### Side Strip Precipitation Example

The precipitation rate of the MP Strips is dependent on the layout of the system. The following is an example of a potential design and associated precipitation rate:



### Precipitation Rate Using Total Area Method

$$P = \frac{96.25 \times \text{Total Flow (GPM)}}{\text{Total Area (ft}^2\text{)}}$$

$$P = \frac{96.25 \times (0.22 + 0.44 + 0.44 + 0.22)}{5' \times 60'}$$

$$P = 0.56 \text{ in/hr}$$



**MPLCS515**  
(Left Strip)



**MPSS530**  
(Side Strip)



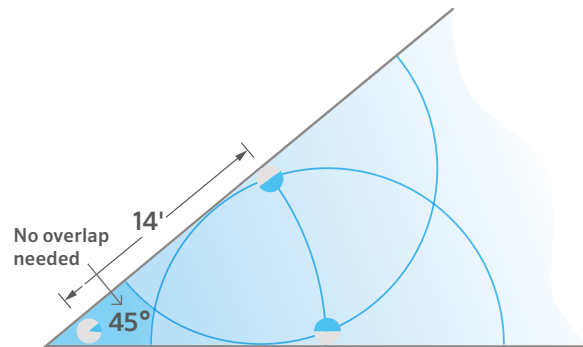
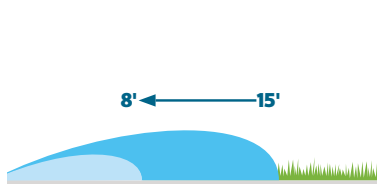
**MPRCS515**  
(Right Strip)

### MP Corner

The MP Corner is specially designed to provide extra coverage in tight corners so that neighboring heads do not need to reach into the corner to provide head-to-head coverage, avoiding unnecessary overspray onto non-target areas.



**MPCorner**





# MP ROTATOR DESIGN GUIDE

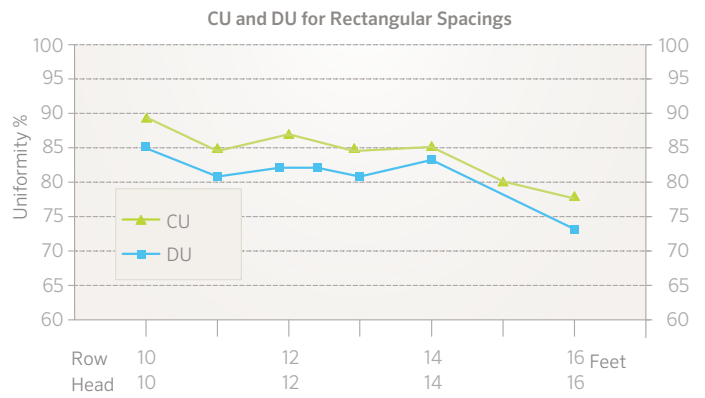
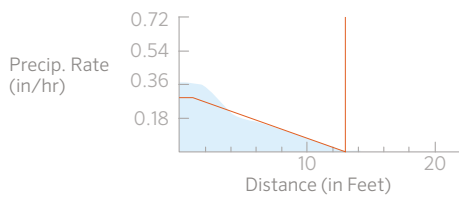
## Uniformity

### Uniformity Samples

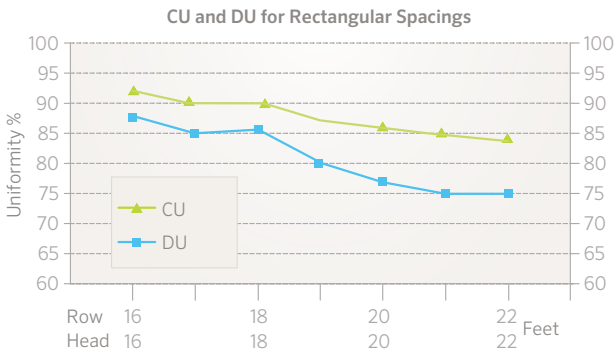
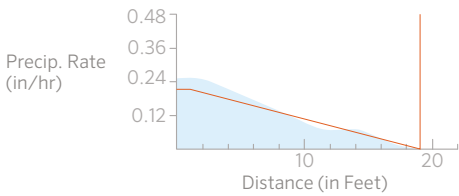
The various streams of the MP Rotator allow it to target all areas of the landscape evenly when properly installed, yielding superior uniformity over traditional spray nozzles. Several independent studies demonstrate this difference and other efficiency benefits of the MP Rotator. Read more at [hunterindustries.com/site-studies](http://hunterindustries.com/site-studies).

Below is a sampling of MP Rotator profiles and associated uniformities. These uniformity examples result from tests performed indoors in controlled conditions. On-site conditions will affect actual uniformity, and the uniformity data may change due to continuing product development.

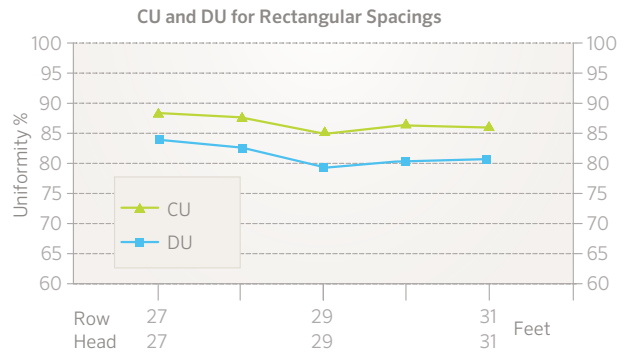
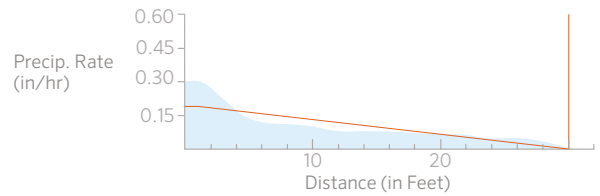
#### MP1000 90-210 180° at 40 PSI



#### MP2000 90-210 180° at 40 PSI



#### MP3000 90-210 180° at 40 PSI



# MP ROTATOR DESIGN GUIDE

## Cost and Water Savings

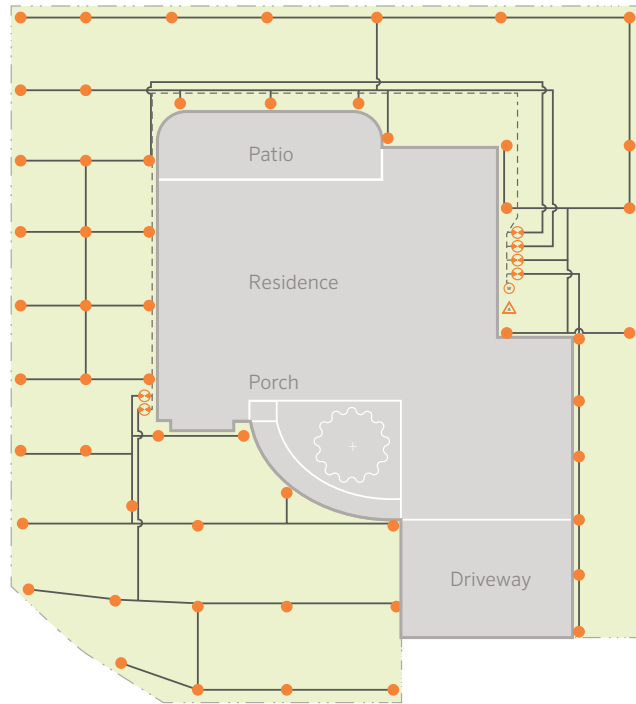
### Lower System Cost

A design with MP Rotator nozzles uses far less material and equipment than a traditional spray design, resulting in an overall reduced project cost. Due to the lower flow rates, more heads can be run at once, reducing the number of valves needed.

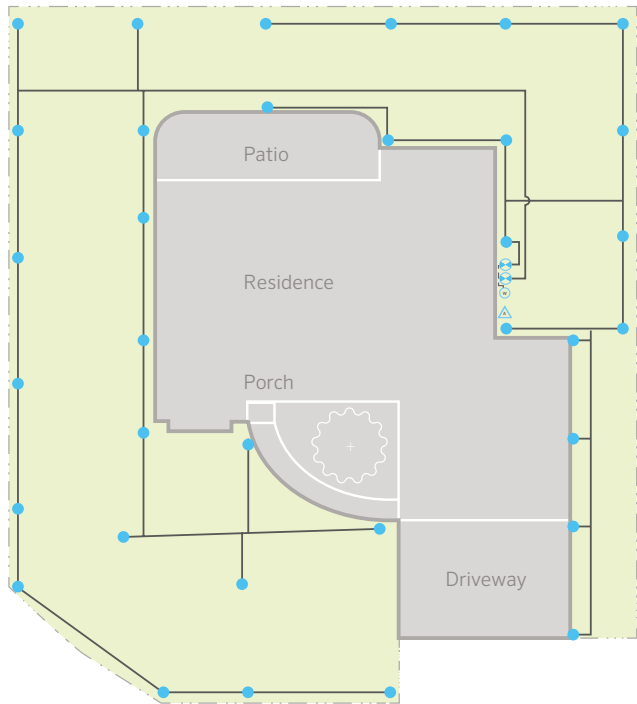
Learn more about how the MP Rotator provides material and labor savings in this residential site study:

<http://hunter.direct/mprotators>.

### Design Using Traditional Sprays



### Design Using MP Rotators



| IRRIGATION SYSTEM COST COMPARISON |                 |
|-----------------------------------|-----------------|
| Materials Needed                  | With Sprays     |
| Valves                            | 6               |
| Mainline                          | 150'            |
| Laterals                          | 800'            |
| Sprinklers                        | 55              |
| Controller                        | 6-Station       |
| Wire                              | 175'            |
| <b>SPRAY COST</b>                 | <b>\$\$\$\$</b> |

| IRRIGATION SYSTEM COST COMPARISON |                  |
|-----------------------------------|------------------|
| Materials Needed                  | With MP Rotators |
| Valves                            | 2                |
| Mainline                          | 15'              |
| Laterals                          | 600'             |
| Sprinklers                        | 34               |
| Controller                        | 4-Station        |
| Wire                              | 20'              |
| <b>MP ROTATOR COST</b>            | <b>\$\$</b>      |

## MP ROTATOR DESIGN GUIDE

### Filtration Recommendations and Wastewater Applications

#### Filtration Guidelines

You should use primary filtration when operating with dirty water.

A general rule is to use primary filtration that is five times the mesh rating of the nozzle filter. For example, if the nozzle filter is 20 mesh, the primary filter should be 100 mesh.

Field testing has shown that the MP800SR runs well in dirty water conditions with the use of a 120-mesh primary filtration system.

| NOZZLE FILTER SIZES  |                    |
|----------------------|--------------------|
| Nozzle               | Screen Size (mesh) |
| MP1000               | 40                 |
| MP2000               | 40                 |
| MP3000               | 20                 |
| MP3500               | 20                 |
| MP Strips and Corner | 40                 |
| MP800SR-90           | 60                 |
| MP800SR-360          | 40                 |
| MP815                | 40                 |

#### HY-100, HY-100-75, HY-075

Height: 6"

Width: 3"

Depth: 5"



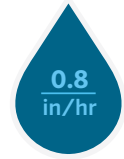
Hunter's HY filters with 150-mesh size are a great solution for zone-specific MP800SR arrangements.

#### Reclaimed Wastewater

The MP Rotator is an excellent choice when using reclaimed wastewater. The materials used in the MP Rotator are chemical-resistant polypropylene, polyurethane, acetal plastics, stainless steel, and EPDM rubber. These materials are designed to withstand the chemicals and conditions commonly used in wastewater irrigation.

# MP ROTATOR DESIGN GUIDE

## MP800



| MP ROTATOR PERFORMANCE DATA    |                 |               |             |             |                     |             |               |             |  |
|--------------------------------|-----------------|---------------|-------------|-------------|---------------------|-------------|---------------|-------------|--|
| MP800SR                        |                 |               |             |             |                     |             |               |             |  |
| Radius: 6' to 12'              |                 |               |             |             |                     |             |               |             |  |
| Adjustable Arc and Full-Circle |                 |               |             |             |                     |             |               |             |  |
| ● Orange and Gray: 90° to 210° |                 |               |             |             |                     |             |               |             |  |
| ● Lime Green and Gray: 360°    |                 |               |             |             |                     |             |               |             |  |
| MAX RADIUS                     |                 |               |             |             | MIN RADIUS          |             |               |             |  |
| Arc                            | Pressure<br>PSI | Radius<br>ft. | Flow<br>GPM | Flow<br>GPH | Precip in/hr<br>■ ▲ |             | Radius<br>ft. | Flow<br>GPM |  |
| 90°<br>                        | 30              | 8             | 0.17        | 9.6         | 0.90                | 1.04        | 6             | 0.13        |  |
|                                | 35              | 9             | 0.21        | 11.4        | 0.89                | 1.03        | 7             | 0.15        |  |
|                                | <b>40</b>       | <b>10</b>     | <b>0.23</b> | <b>13.8</b> | <b>0.83</b>         | <b>0.96</b> | <b>8</b>      | <b>0.16</b> |  |
|                                | 45              | 11            | 0.25        | 15.0        | 0.80                | 0.92        | 8             | 0.18        |  |
|                                | 50              | 11            | 0.27        | 16.2        | 0.79                | 0.92        | 9             | 0.19        |  |
| 55                             | 12              | 0.28          | 16.8        | 0.80        | 0.93                | 10          | 0.20          |             |  |
| 180°<br>                       | 30              | 8             | 0.33        | 19.2        | 0.88                | 1.02        | 6             | 0.26        |  |
|                                | 35              | 9             | 0.38        | 22.2        | 0.85                | 0.99        | 7             | 0.29        |  |
|                                | <b>40</b>       | <b>10</b>     | <b>0.42</b> | <b>25.2</b> | <b>0.81</b>         | <b>0.93</b> | <b>8</b>      | <b>0.32</b> |  |
|                                | 45              | 11            | 0.46        | 27.6        | 0.77                | 0.88        | 8             | 0.36        |  |
|                                | 50              | 11            | 0.48        | 28.8        | 0.76                | 0.88        | 9             | 0.38        |  |
| 55                             | 12              | 0.50          | 30.0        | 0.73        | 0.84                | 10          | 0.40          |             |  |
| 210°<br>                       | 30              | 8             | 0.35        | 22.2        | 0.80                | 0.93        | 6             | 0.30        |  |
|                                | 35              | 9             | 0.38        | 26.4        | 0.77                | 0.89        | 7             | 0.34        |  |
|                                | <b>40</b>       | <b>10</b>     | <b>0.43</b> | <b>29.4</b> | <b>0.81</b>         | <b>0.91</b> | <b>8</b>      | <b>0.37</b> |  |
|                                | 45              | 10            | 0.45        | 31.8        | 0.82                | 0.95        | 8             | 0.42        |  |
|                                | 50              | 11            | 0.49        | 33.6        | 0.73                | 0.85        | 9             | 0.44        |  |
| 55                             | 12              | 0.56          | 34.8        | 0.70        | 0.81                | 10          | 0.47          |             |  |
| 360°<br>                       | 30              | 8             | 0.66        | 37.8        | 0.89                | 1.03        | 6             | 0.47        |  |
|                                | 35              | 9             | 0.71        | 42.0        | 0.80                | 0.92        | 7             | 0.52        |  |
|                                | <b>40</b>       | <b>10</b>     | <b>0.78</b> | <b>46.8</b> | <b>0.79</b>         | <b>0.91</b> | <b>8</b>      | <b>0.56</b> |  |
|                                | 45              | 10            | 0.85        | 51.0        | 0.78                | 0.90        | 8             | 0.59        |  |
|                                | 50              | 11            | 0.88        | 52.8        | 0.73                | 0.85        | 9             | 0.63        |  |
| 55                             | 12              | 0.98          | 58.8        | 0.70        | 0.81                | 10          | 0.70          |             |  |

Due to its precipitation rate of approximately 0.8 in/hr, we strongly recommend zoning the MP800 separately from the Standard MP Rotator.

| MP ROTATOR PERFORMANCE DATA       |                 |               |             |              |                     |             |               |             |  |
|-----------------------------------|-----------------|---------------|-------------|--------------|---------------------|-------------|---------------|-------------|--|
| MP815                             |                 |               |             |              |                     |             |               |             |  |
| Radius: 8' to 16'                 |                 |               |             |              |                     |             |               |             |  |
| Adjustable Arc and Full-Circle    |                 |               |             |              |                     |             |               |             |  |
| ● Maroon and Gray: 90° to 210°    |                 |               |             |              |                     |             |               |             |  |
| ● Lt. Blue and Gray: 210° to 270° |                 |               |             |              |                     |             |               |             |  |
| ● Olive and Gray: 360°            |                 |               |             |              |                     |             |               |             |  |
| Arc                               | Pressure<br>PSI | Radius<br>ft. | Flow<br>GPM | Flow<br>GPH  | Precip in/hr<br>■ ▲ |             | Radius<br>ft. | Flow<br>GPM |  |
| 90°<br>                           | 30              | 14            | 0.42        | 25.2         | 0.83                | 0.95        |               |             |  |
|                                   | 35              | 15            | 0.46        | 27.6         | 0.79                | 0.91        |               |             |  |
|                                   | <b>40</b>       | <b>15</b>     | <b>0.49</b> | <b>29.4</b>  | <b>0.84</b>         | <b>0.97</b> |               |             |  |
|                                   | 45              | 16            | 0.52        | 31.2         | 0.78                | 0.90        |               |             |  |
|                                   | 50              | 16            | 0.55        | 33.0         | 0.83                | 0.96        |               |             |  |
| 55                                | 16              | 0.58          | 34.8        | 0.87         | 1.01                |             |               |             |  |
| 180°<br>                          | 30              | 13            | 0.75        | 45.0         | 0.85                | 0.99        |               |             |  |
|                                   | 35              | 14            | 0.86        | 51.6         | 0.84                | 0.98        |               |             |  |
|                                   | <b>40</b>       | <b>15</b>     | <b>0.93</b> | <b>55.8</b>  | <b>0.80</b>         | <b>0.92</b> |               |             |  |
|                                   | 45              | 15            | 0.96        | 57.6         | 0.82                | 0.95        |               |             |  |
|                                   | 50              | 16            | 1.06        | 63.6         | 0.80                | 0.92        |               |             |  |
| 55                                | 16              | 1.11          | 66.6        | 0.83         | 0.96                |             |               |             |  |
| 210°<br>                          | 30              | 13            | 0.88        | 52.8         | 0.86                | 0.99        |               |             |  |
|                                   | 35              | 14            | 0.96        | 57.6         | 0.81                | 0.93        |               |             |  |
|                                   | <b>40</b>       | <b>15</b>     | <b>1.10</b> | <b>66.0</b>  | <b>0.81</b>         | <b>0.93</b> |               |             |  |
|                                   | 45              | 15            | 1.16        | 69.6         | 0.85                | 0.98        |               |             |  |
|                                   | 50              | 16            | 1.24        | 74.4         | 0.80                | 0.92        |               |             |  |
| 55                                | 16              | 1.30          | 78.0        | 0.84         | 0.97                |             |               |             |  |
| 270°<br>                          | 30              | 13            | 1.14        | 68.4         | 0.87                | 1.00        |               |             |  |
|                                   | 35              | 14            | 1.24        | 74.4         | 0.81                | 0.94        |               |             |  |
|                                   | <b>40</b>       | <b>15</b>     | <b>1.40</b> | <b>84.0</b>  | <b>0.80</b>         | <b>0.92</b> |               |             |  |
|                                   | 45              | 15            | 1.47        | 88.2         | 0.84                | 0.97        |               |             |  |
|                                   | 50              | 16            | 1.54        | 92.4         | 0.77                | 0.89        |               |             |  |
| 55                                | 16              | 1.61          | 96.6        | 0.81         | 0.93                |             |               |             |  |
| 360°<br>                          | 30              | 13            | 1.52        | 91.2         | 0.87                | 1.00        |               |             |  |
|                                   | 35              | 14            | 1.70        | 102.0        | 0.83                | 0.96        |               |             |  |
|                                   | <b>40</b>       | <b>15</b>     | <b>1.87</b> | <b>112.2</b> | <b>0.80</b>         | <b>0.92</b> |               |             |  |
|                                   | 45              | 15            | 2.00        | 120.0        | 0.86                | 0.99        |               |             |  |
|                                   | 50              | 16            | 2.13        | 127.8        | 0.80                | 0.92        |               |             |  |
| 55                                | 16              | 2.26          | 135.6       | 0.85         | 0.98                |             |               |             |  |

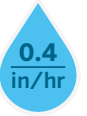
### PERFORMANCE DATA NOTE FOR ALL CHARTS:

**Bold** = Recommended Pressure.

The MP Rotator is designed to maintain matched precipitation after radius adjustment. Optimal pressure for the MP Rotator is 40 PSI. This can be achieved easily by using the MP Rotator with the Pro-Spray PRS40 Spray Body, pressure regulated at 40 PSI.

# MP ROTATOR DESIGN GUIDE

## MP1000, MP2000, MP3000, MP3500

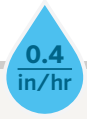


| MP ROTATOR PERFORMANCE DATA   |              |            |             |             |              |             |  |             |             |              |             |   |             |              |              |             |
|---|--------------|------------|-------------|-------------|--------------|-------------|--|-------------|-------------|--------------|-------------|---|-------------|--------------|--------------|-------------|
| MP1000<br>Radius: 8' to 15'<br>Adjustable Arc and Full-Circle<br>● Maroon: 90° to 210°<br>● Lt. Blue: 210° to 270°<br>● Olive: 360° |              |            |             |             |              |             | MP2000<br>Radius: 13' to 21'<br>Adjustable Arc and Full-Circle<br>● Black: 90° to 210°<br>● Green: 210° to 270°<br>● Red: 360° |             |             |              |             | MP3000<br>Radius: 22' to 30'<br>Adjustable Arc and Full-Circle<br>● Blue: 90° to 210°<br>● Yellow: 210° to 270°<br>● Gray: 360° |             |              |              |             |
| Arc   | Pressure PSI | Radius ft. | Flow GPM    | Flow GPH    | Precip in/hr |             | Radius ft.   | Flow GPM    | Flow GPH    | Precip in/hr |             | Radius ft.  | Flow GPM    | Flow GPH     | Precip in/hr |             |
|   |              |            |             |             | ■            | ▲           |  |             |             | ■            | ▲           |   |             |              | ■            | ▲           |
| 90°   | 25           | --         | --          | --          | --           | --          | 17   | 0.34        | 20.4        | 0.45         | 0.52        | 25  | 0.71        | 42.6         | 0.44         | 0.51        |
|   | 30           | 12         | 0.17        | 10.2        | 0.45         | 0.52        | 18   | 0.38        | 22.8        | 0.45         | 0.52        | 27  | 0.76        | 45.6         | 0.40         | 0.46        |
|   | 35           | 13         | 0.19        | 11.4        | 0.43         | 0.50        | 19   | 0.40        | 24.0        | 0.43         | 0.49        | 28  | 0.82        | 49.2         | 0.40         | 0.46        |
|   | 40           | 14         | <b>0.21</b> | <b>12.6</b> | <b>0.41</b>  | <b>0.48</b> | 20   | <b>0.43</b> | <b>25.8</b> | <b>0.41</b>  | <b>0.48</b> | 30  | <b>0.86</b> | <b>51.6</b>  | <b>0.37</b>  | <b>0.42</b> |
|   | 45           | 14         | 0.23        | 13.8        | 0.45         | 0.52        | 21   | 0.46        | 27.6        | 0.40         | 0.46        | 30  | 0.90        | 54.0         | 0.39         | 0.44        |
|   | 50           | 15         | 0.25        | 15.0        | 0.43         | 0.49        | 21   | 0.47        | 28.2        | 0.41         | 0.47        | 30  | 0.95        | 57.0         | 0.41         | 0.47        |
| 180°  | 25           | --         | --          | --          | --           | --          | 16   | 0.6         | 36.0        | 0.45         | 0.52        | 25  | 1.44        | 86.4         | 0.44         | 0.51        |
|   | 30           | 12         | 0.34        | 20.4        | 0.45         | 0.52        | 17   | 0.64        | 38.4        | 0.43         | 0.49        | 27  | 1.58        | 94.8         | 0.42         | 0.48        |
|   | 35           | 13         | 0.38        | 22.8        | 0.43         | 0.50        | 18   | 0.71        | 42.6        | 0.42         | 0.49        | 28  | 1.70        | 102.0        | 0.42         | 0.48        |
|   | 40           | 14         | <b>0.42</b> | <b>25.2</b> | <b>0.41</b>  | <b>0.48</b> | 19   | <b>0.77</b> | <b>46.2</b> | <b>0.41</b>  | <b>0.47</b> | 30  | <b>1.82</b> | <b>109.2</b> | <b>0.39</b>  | <b>0.45</b> |
|   | 45           | 14         | 0.44        | 26.4        | 0.43         | 0.50        | 20   | 0.85        | 51.0        | 0.41         | 0.47        | 30  | 1.93        | 115.8        | 0.41         | 0.48        |
|   | 50           | 15         | 0.50        | 30.0        | 0.43         | 0.49        | 21   | 0.91        | 54.6        | 0.40         | 0.46        | 30  | 2.04        | 122.4        | 0.44         | 0.50        |
| 210°  | 25           | --         | --          | --          | --           | --          | 16   | 0.72        | 43.2        | 0.46         | 0.54        | 25  | 1.68        | 100.8        | 0.44         | 0.51        |
|   | 30           | 12         | 0.40        | 24.0        | 0.46         | 0.53        | 17   | 0.75        | 45.0        | 0.43         | 0.49        | 27  | 1.84        | 110.4        | 0.42         | 0.48        |
|   | 35           | 13         | 0.45        | 27.0        | 0.44         | 0.51        | 18   | 0.81        | 48.6        | 0.41         | 0.48        | 28  | 1.99        | 119.4        | 0.42         | 0.48        |
|   | 40           | 14         | <b>0.49</b> | <b>29.4</b> | <b>0.41</b>  | <b>0.48</b> | 19   | <b>0.86</b> | <b>51.6</b> | <b>0.39</b>  | <b>0.45</b> | 30  | <b>2.12</b> | <b>127.2</b> | <b>0.39</b>  | <b>0.45</b> |
|   | 45           | 14         | 0.51        | 30.6        | 0.43         | 0.50        | 20   | 0.91        | 54.6        | 0.38         | 0.43        | 30  | 2.25        | 135.0        | 0.41         | 0.48        |
|   | 50           | 15         | 0.57        | 34.2        | 0.42         | 0.48        | 21   | 0.98        | 58.8        | 0.37         | 0.42        | 30  | 2.37        | 142.2        | 0.43         | 0.50        |
| 270°  | 25           | --         | --          | --          | --           | --          | 16   | 0.87        | 52.2        | 0.44         | 0.50        | 25  | 2.19        | 131.4        | 0.45         | 0.52        |
|   | 30           | 12         | 0.48        | 28.8        | 0.43         | 0.49        | 17   | 0.95        | 57.0        | 0.42         | 0.49        | 27  | 2.37        | 142.2        | 0.42         | 0.48        |
|   | 35           | 13         | 0.53        | 31.8        | 0.40         | 0.46        | 18   | 1.03        | 61.8        | 0.41         | 0.47        | 28  | 2.55        | 153.0        | 0.42         | 0.48        |
|   | 40           | 14         | <b>0.63</b> | <b>37.8</b> | <b>0.41</b>  | <b>0.48</b> | 19   | <b>1.10</b> | <b>66.0</b> | <b>0.39</b>  | <b>0.45</b> | 30  | <b>2.73</b> | <b>163.8</b> | <b>0.39</b>  | <b>0.45</b> |
|   | 45           | 14         | 0.67        | 40.2        | 0.44         | 0.51        | 20   | 1.17        | 70.2        | 0.38         | 0.43        | 30  | 2.89        | 173.4        | 0.41         | 0.48        |
|   | 50           | 15         | 0.72        | 43.2        | 0.41         | 0.47        | 21   | 1.23        | 73.8        | 0.36         | 0.41        | 30  | 3.06        | 183.6        | 0.44         | 0.50        |
| 360°  | 25           | --         | --          | --          | --           | --          | 16   | 1.20        | 72.0        | 0.45         | 0.52        | 25  | 2.88        | 172.8        | 0.44         | 0.51        |
|   | 30           | 12         | 0.69        | 41.4        | 0.46         | 0.53        | 17   | 1.28        | 76.8        | 0.43         | 0.49        | 27  | 3.15        | 189.0        | 0.42         | 0.48        |
|   | 35           | 13         | 0.77        | 46.2        | 0.44         | 0.51        | 18   | 1.37        | 82.2        | 0.41         | 0.47        | 28  | 3.40        | 204.0        | 0.42         | 0.48        |
|   | 40           | 14         | <b>0.84</b> | <b>50.4</b> | <b>0.41</b>  | <b>0.48</b> | 19   | <b>1.48</b> | <b>88.8</b> | <b>0.39</b>  | <b>0.46</b> | 30  | <b>3.64</b> | <b>218.4</b> | <b>0.39</b>  | <b>0.45</b> |
|   | 45           | 14         | 0.88        | 52.8        | 0.43         | 0.50        | 20   | 1.57        | 94.2        | 0.38         | 0.44        | 30  | 3.86        | 231.6        | 0.41         | 0.48        |
|   | 50           | 15         | 0.98        | 58.8        | 0.42         | 0.48        | 21   | 1.68        | 100.8       | 0.37         | 0.42        | 30  | 4.07        | 244.2        | 0.44         | 0.50        |
| 55  | 15           | 1.01       | 60.6        | 0.43        | 0.50         | 21          | 1.74   | 104.4       | 0.38        | 0.44         | 30          | 4.27  | 256.2       | 0.46         | 0.53         |             |

| MP3500<br>Radius: 31' to 35'<br>Adjustable Arc<br>● Light Brown: 90° |            |             |             |              |             |            | 90°         |              |              |             |            | MP3500<br>Radius: 31' to 35'<br>Adjustable Arc<br>● Light Brown: 180° |              |              |             |            |             |              | 180°         |             |            |             |              | MP3500<br>Radius: 31' to 35'<br>Adjustable Arc<br>● Light Brown: 210° |             |  |  |  |  |  | 210° |  |  |  |  |
|--|------------|-------------|-------------|--------------|-------------|------------|-------------|--------------|--------------|-------------|------------|---|--------------|--------------|-------------|------------|-------------|--------------|--------------|-------------|------------|-------------|--------------|---|-------------|--|--|--|--|--|------|--|--|--|--|
| Pressure PSI   | Radius ft. | Flow GPM    | Flow GPH    | Precip in/hr |             | Radius ft. | Flow GPM    | Flow GPH     | Precip in/hr |             | Radius ft. | Flow GPM  | Flow GPH     | Precip in/hr |             | Radius ft. | Flow GPM    | Flow GPH     | Precip in/hr |             | Radius ft. | Flow GPM    | Flow GPH     | Precip in/hr  |             |  |  |  |  |  |      |  |  |  |  |
|  |            |             |             | ■            | ▲           |            |             |              | ■            | ▲           |            |   |              | ■            | ▲           |            |             |              | ■            | ▲           |            |             |              | ■   | ▲           |  |  |  |  |  |      |  |  |  |  |
| 25   | 33         | 1.04        | 62.4        | 0.37         | 0.42        | 33         | 2.21        | 132.6        | 0.39         | 0.45        | 33         | 2.59  | 155.4        | 0.39         | 0.45        | 33         | 2.59        | 155.4        | 0.39         | 0.45        | 33         | 2.59        | 155.4        | 0.39  | 0.45        |  |  |  |  |  |      |  |  |  |  |
| 30   | 34         | 1.13        | 67.8        | 0.38         | 0.43        | 34         | 2.24        | 134.4        | 0.37         | 0.43        | 34         | 2.84  | 170.4        | 0.41         | 0.47        | 34         | 2.84        | 170.4        | 0.41         | 0.47        | 34         | 2.84        | 170.4        | 0.41  | 0.47        |  |  |  |  |  |      |  |  |  |  |
| 35   | 34         | 1.21        | 72.6        | 0.40         | 0.47        | 34         | 2.65        | 159.0        | 0.44         | 0.51        | 34         | 3.08  | 184.8        | 0.44         | 0.51        | 34         | 3.08        | 184.8        | 0.44         | 0.51        | 34         | 3.08        | 184.8        | 0.44  | 0.51        |  |  |  |  |  |      |  |  |  |  |
| 40   | 35         | <b>1.28</b> | <b>76.8</b> | <b>0.40</b>  | <b>0.46</b> | 35         | <b>2.86</b> | <b>171.6</b> | <b>0.45</b>  | <b>0.52</b> | 35         | <b>3.29</b>   | <b>197.4</b> | <b>0.44</b>  | <b>0.51</b> | 35         | <b>3.29</b> | <b>197.4</b> | <b>0.44</b>  | <b>0.51</b> | 35         | <b>3.29</b> | <b>197.4</b> | <b>0.44</b>   | <b>0.51</b> |  |  |  |  |  |      |  |  |  |  |
| 45   | 35         | 1.38        | 82.8        | 0.43         | 0.50        | 35         | 3.10        | 186.0        | 0.49         | 0.56        | 35         | 3.54  | 212.4        | 0.48         | 0.55        | 35         | 3.54        | 212.4        | 0.48         | 0.55        | 35         | 3.54        | 212.4        | 0.48  | 0.55        |  |  |  |  |  |      |  |  |  |  |
| 50   | 35         | 1.43        | 85.8        | 0.45         | 0.52        | 35         | 3.21        | 192.6        | 0.50         | 0.58        | 35         | 3.76  | 225.6        | 0.51         | 0.59        | 35         | 3.76        | 225.6        | 0.51         | 0.59        | 35         | 3.76        | 225.6        | 0.51  | 0.59        |  |  |  |  |  |      |  |  |  |  |
| 55   | 35         | 1.50        | 90.0        | 0.47         | 0.54        | 35         | 3.28        | 196.8        | 0.52         | 0.60        | 35         | 3.94  | 236.4        | 0.53         | 0.61        | 35         | 3.94        | 236.4        | 0.53         | 0.61        | 35         | 3.94        | 236.4        | 0.53  | 0.61        |  |  |  |  |  |      |  |  |  |  |

# MP ROTATOR DESIGN GUIDE

## MP Specialty






### MP ROTATOR PERFORMANCE DATA

#### MP Corner

Radius: 8' to 15'

Adjustable Arc




● Turquoise: 45° to 105°

| Arc  | Pressure<br>PSI | Radius<br>ft. | Flow<br>GPM | Flow<br>GPH |
|--|-----------------|---------------|-------------|-------------|
| 45°<br>   | 25              | --            | --          | --          |
|  | 30              | 12            | 0.17        | 10.2        |
|  | 35              | 13            | 0.18        | 10.8        |
|  | <b>40</b>       | <b>14</b>     | <b>0.19</b> | <b>11.4</b> |
|  | 45              | 14            | 0.21        | 12.6        |
|  | 50              | 14            | 0.22        | 13.2        |
|  | 55              | 15            | 0.23        | 13.8        |
| 90°<br>   | 25              | 11            | 0.31        | 18.6        |
|  | 30              | 12            | 0.34        | 20.4        |
|  | 35              | 13            | 0.36        | 21.6        |
|  | <b>40</b>       | <b>14</b>     | <b>0.39</b> | <b>23.4</b> |
|  | 45              | 14            | 0.41        | 24.6        |
|  | 50              | 15            | 0.43        | 25.8        |
|  | 55              | 15            | 0.46        | 27.6        |
| 105°<br> | 25              | 11            | 0.36        | 21.6        |
|  | 30              | 12            | 0.39        | 23.4        |
|  | 35              | 13            | 0.42        | 25.2        |
|  | <b>40</b>       | <b>14</b>     | <b>0.45</b> | <b>27.0</b> |
|  | 45              | 14            | 0.48        | 28.8        |
|  | 50              | 15            | 0.51        | 30.6        |
|  | 55              | 15            | 0.53        | 31.8        |



### MP ROTATOR PERFORMANCE DATA

- MPLCS515: Ivory, MP Left Corner Strip
- MPRCS515: Copper, MP Right Corner Strip
- MPSS530: Brown, MP Side Strip

|   | Pressure<br>PSI | Radius<br>ft. | Flow<br>GPM | Flow<br>GPH |
|---|-----------------|---------------|-------------|-------------|
| MP Left<br>Corner<br>Strip<br>     | 30              | 4 x 14        | 0.19        | 11.4        |
|   | 35              | 5 x 15        | 0.21        | 12.6        |
|   | <b>40</b>       | <b>5 x 15</b> | <b>0.22</b> | <b>13.2</b> |
|   | 45              | 5 x 15        | 0.23        | 13.8        |
|   | 50              | 6 x 16        | 0.25        | 15.0        |
|   | 55              | 6 x 16        | 0.26        | 15.6        |
| MP<br>Right<br>Corner<br>Strip<br> | 30              | 4 x 14        | 0.19        | 11.4        |
|   | 35              | 5 x 15        | 0.21        | 12.6        |
|   | <b>40</b>       | <b>5 x 15</b> | <b>0.22</b> | <b>13.2</b> |
|   | 45              | 5 x 15        | 0.23        | 13.8        |
|   | 50              | 6 x 16        | 0.25        | 15.0        |
|   | 55              | 6 x 16        | 0.26        | 15.6        |
| MP Side<br>Strip<br>             | 30              | 4 x 28        | 0.38        | 22.8        |
|   | 35              | 5 x 30        | 0.41        | 24.6        |
|   | <b>40</b>       | <b>5 x 30</b> | <b>0.44</b> | <b>26.4</b> |
|   | 45              | 5 x 30        | 0.47        | 28.2        |
|   | 50              | 6 x 32        | 0.49        | 29.4        |
|   | 55              | 6 x 32        | 0.51        | 30.6        |

Strip pattern radius can be adjusted by 25%.

MP Strips can be used with both the Standard MP Rotator and the MP800 depending on the layout.

#### PERFORMANCE DATA NOTE FOR ALL CHARTS:

**Bold** = Recommended Pressure.

The MP Rotator is designed to maintain matched precipitation after radius adjustment. Optimal pressure for the MP Rotator is 40 PSI. This can be achieved easily by using the MP Rotator with the Pro-Spray PRS40, pressure regulated at 40 PSI.

# MP ROTATOR DESIGN GUIDE

## Field Identification

MP Rotator models are color-coded for easy field identification.

0.4  
in/hr



| Standard MP Rotator |                   |                   |                   |                  |
|---------------------|-------------------|-------------------|-------------------|------------------|
| Radius              | 8' to 15'         | 13' to 21'        | 22' to 30'        | 31' to 35'       |
| Arc                 |                   |                   |                   |                  |
|                     |                   |                   |                   |                  |
| 90° to 210°         | <b>MP1000-90</b>  | <b>MP2000-90</b>  | <b>MP3000-90</b>  | <b>MP3500-90</b> |
|                     |                   |                   |                   |                  |
| 210° to 270°        | <b>MP1000-210</b> | <b>MP2000-210</b> | <b>MP3000-210</b> |                  |
|                     |                   |                   |                   |                  |
| 360°                | <b>MP1000-360</b> | <b>MP2000-360</b> | <b>MP3000-360</b> |                  |

| MP Strip |  |
|----------|--|
| Shape    |  |
|          | <b>MPLCS515</b><br>5' x 15' Left Corner  |
|          | <b>MPRCS515</b><br>5' x 15' Right Corner |
|          | <b>MPSS530</b><br>5' x 30' Side Strip    |

0.8  
in/hr

| MP800  |                                    |
|--------|------------------------------------|
| Radius | 6' to 12'   8' to 16'              |
| Arc    |                                    |
|        | <b>MP800SR-90</b><br>Short Radius  |
|        | <b>MP815-90</b>                    |
|        | <b>MP815-210</b>                   |
|        | <b>MP800SR-360</b><br>Short Radius |
|        | <b>MP815-360</b>                   |

0.4  
in/hr

| MP Corner |                             |
|-----------|-----------------------------|
| Arc       |                             |
|           | <b>MPCORNER</b><br>8' x 15' |

| MP Male Threaded   |                               |
|--|-------------------------------|
| Available in all MP Rotator models, except MP1000-210, MP3500-90, and MP800 models |                               |
|  | <b>MP-HT</b><br>Male-Threaded |

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