

# Conserve Water Simply With MP Rotators

## What is This?

How much water does the MP Rotator conserve over standard spray heads in a turf zone? This example demonstrates how to calculate water savings and gives you the information needed to help your customers choose a better irrigation system for their property.

## Example Sprinkler Zone

A 1,350 square foot turf area. Plant water requirements: 1.0 inches per week

Sprinkler Type	Precipitation Rate (in/hr)	Total Zone Flow Rate (GPM)
Traditional Spray Heads: 15' nozzle (#15)	1.61	22.2
MP Rotator Sprinklers (MP2000-90)	0.63*	9

\* slightly higher because of radius reduction



A 1,350 square foot turf area.

## How To Calculate Water Usage

### 1 Calculate Uniformity

Sprinkler uniformity, or Distribution Uniformity (DU) is calculated in a test lab, or can be calculated in the field by completing an audit of the system.



Sprinklers undergo testing in the Precipitation Analysis Lab.



Field audit of an irrigation zone.

Average uniformities for fixed spray heads and for MP Rotators are shown below.

Fixed spray = 40 – 75%

Rotating stream = 55 – 85%

Choose a uniformity percentage from the ranges shown. In this example we chose:

Spray Zone DU = 53%

MP Rotator DU = 79%

### 2 Calculate the Irrigation Water Requirement

Divide the plant water requirement by the DU:

$$\text{Sprays: } \frac{1.0 \text{ in/wk}}{53\%} = 1.89 \text{ in/wk}$$

$$\text{Rotators: } \frac{1.0 \text{ in}}{79\%} = 1.27 \text{ in/wk}$$

### 3 Calculate the Weekly Watering Time

Divide the irrigation water requirements by the precipitation rate:

$$\text{Sprays: } \frac{1.89 \text{ in}}{1.61 \text{ in/hr}} = 1.17 \text{ hrs}$$

$$\text{Rotators: } \frac{1.27 \text{ in}}{0.63 \text{ in/hr}} = 2 \text{ hrs}$$

Convert to minutes:

$$1.17 \times 60 = 70 \text{ min/wk}$$

$$2 \times 60 = 120 \text{ min/wk}^*$$



\* longer run time due to lower application rate

### 4 Calculate Total Water Required For The Week

Multiply the weekly run time by the total gals/min for the zone:

$$\text{Sprays: } 70 \text{ min} \times 22.2 \text{ gals/min} = 1,554 \text{ gals/wk}$$

$$\text{Rotators: } 120 \text{ min} \times 9 \text{ gals/min} = 1,080 \text{ gals/wk}$$



## What This Means For You

The superior uniformity of the MP Rotator over spray nozzles helps conserve about 475 gallons per week on just one zone. >>



**Hunter**