

http://WaterWiseNow.com/MPRotatorWorksheet



This worksheet is designed to help you convert the sprinkler nozzles in your irrigation system to the Hunter Industries rotary nozzles called MP Rotators.

As you work through this process, keep in mind you'll be reducing your water use in the upgraded areas by 30%!



**Adjustable Arc & Radius** 

## **EQUIPMENT YOU'LL NEED**

Required: Measuring Tape

Required: Pencil (you might get wet and ink bleeds)

Required: A Clipboard (or something hard to write on)

**Highly Recommended:** A helper! Having one makes the

process go a LOT faster.

**Recommended:** Gardening gloves. Your hands might get dirty while unearthing sprinkler heads.

**Recommended:** Sprinkler Flags. Order from us or pick them up at your local hardware store. If you don't want to purchase sprinkler flags, you'll need something else you can stick in the ground to mark where sprinklers are located (one customer used shish-kabob skewers!)

## **PREREQUISITES**

#### **KNOW YOUR SYSTEM PRESSURE**

Hunter MP Rotators are optimized to run at 40 psi. You need to know your system pressure to install these sprinkler nozzles. If you do not know your system pressure, you'll need to make a decision about how to address it.

If you know your pressure is 25 - 55 psi, skip ahead to figuring out which nozzles you need.

If your pressure is greater than 55 psi or you don't know what it is, you have options:

#### **Option 1: Investigate First**

You can determine your system pressure using a pressure gauge. If you don't have one, you can order a Hunter MP Pressure Gauge from us.

You can use this later to test individual sprinkler heads to ensure each head is operating at 40 psi.



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#### Option 2: Do it the Easiest Way

Instead of only replacing the sprinkler nozzles, also replace the sprinkler bodies.





Hunter MP Rotators cost \$7.50 each. The recommended Hunter sprinkler bodies (pressure-compensating with with check-valves) are \$8-20 each, depending on pop-up height—most are 4" (\$8).

These sprinklers are designed to have the optimal 40 psi for Hunter MP Rotators. This combination should yield optimal performance.

Rebate info: Many water districts offer a rebate on the MP Rotator nozzles to help offset your cost!

Note, if your sprinklers are on risers, instead of popups, you can purchase a pressure-regulated adapter instead of the spray bodies, and still convert to Hunter MP Rotators!

#### Option 3: Do it the Cheapest Way

Purchase an inline pressure regulator (\$15) and install it for your whole system.

By installing a pressure regulator on your water main line after it forks to the landscape, or after the valve for the station you are retrofitting, your are ensuring your entire system operates at the correct pressure.

If you are uncomfortable with cutting and assembling PVC pipe, you should hire a landscape contractor to do this work for you. It's a one-hour project for a pro.

# YOU'LL NEED TO KNOW HOW TO TURN ON A SPRINKLER LINE MANUALLY.

You can either do this at your controller, or by physically turning on the valve you want to work with. We recommend the former.

If you don't already know how to manually start a station (valve) from the controller, the process is usually listed on a quick start guide on the inside cover of the controller.

If you don't have this guide or the owners manual, write down the make and model of your controller and go to the manufacturer's website. Manufacturer's usually have downloadable instructions for operating your controller. Print them out and keep them with the controller for future reference.

# PURCHASE SPRINKLER FLAGS TO KEEP TRACK OF SPRINKLER LOCATIONS.

25-50 is probably enough, unless you plan to leave all



of your sprinklers marked while you wait for your MP Rotators to arrive.

We recommend blue for properly operating sprinklers, red for problem sprinklers—but you can use any system you want.



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#### **INSTRUCTIONS**

#### **IDENTIFY YOUR SPRINKLER LOCATIONS**

NOTE: You will get wet. Make sure you're wearing clothes you don't mind getting wet in, and take your phone out of your pocket!

- 1. Go to the controller and manually turn on the station you're working on. Write down the station number and a description of the area that's being watered to the right. Go ahead and fill in all the stations as you work through the rest of your yard.
- 2. With the water running, put a sprinkler flag next to each spray head so you can find them easily later. Sometimes they're hiding under dirt and thick grass and you may have to dig around to find them.
- 3. Go back to the controller, turn off the station. (Or have your helper do this!)
- 4. Count the number of sprinklers on the station and note it to the right.
- 5. Go back inside and print out one copy of Page 6 for every four sprinklers on this station.

#### SPRINKLER STATIONS

STATION #1 Description
# of Sprinklers
STATION #2 Description
# of Sprinklers
STATION #3 Description
# of Sprinklers
STATION #4 Description
# of Sprinklers
STATION #5 Description
# of Sprinklers
STATION #6 Description
# of Sprinklers
STATION #7 Description
# of Sprinklers
STATION #8 Description
# of Sprinklers



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#### Measure distances

# STARTING COUNTING WITH THE SPRINKLER CLOSEST TO THE VALVE...

1. Identify the brand name for a sprinkler head is almost always written on top of it. If you have old sprinklers, you might have to dig a little and wipe down the head to see the brand.

The sprinkler body is the part that looks like a tire. The nozzle is the part in the middle. You might see a name on the sprinkler nozzle, too. Just note the sprinkler body brand and ignore the nozzle brand.

#### SPRINKLER STATION #

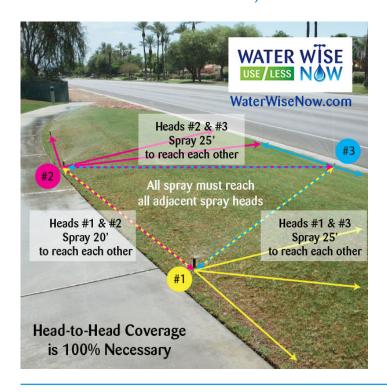
SPRINKLER #\_\_\_\_

#### Sprinkler Brand (circle one)

Rain Bird Hunter Toro Orbit K-Rain Other



2. For each sprinkler head, you want to measure the distance between that head and its adjacent heads.



#### Distance to ALL Adjacent Sprinkler Heads

Round up to the nearest foot.

The idea is to ensure what is called "head to head coverage" as shown in the diagram at the left. Sprinkler heads are designed for head-to-head coverage, assuring no areas go underwatered.

You may find, if your system was not laid out precisely, that the distances between sprinkler heads are not the same. That's okay. You'll take an average for your order and you can make final adjustments later.

Since we're trying to stop run-off, the only time it's important to limit your radius to a particular distance is when the head is spraying toward hardscape (like streets, sidewalks, and pathways). If this is the case, circle that distance so you know it's firm number.



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#### Measure distances

# distances SPRINKLER STATION #\_\_\_

STARTING COUNTING WITH THE SPRINKLER CLOSEST TO THE VALVE...

SPRINKLER #\_\_\_\_\_

3. To determine the spray pattern, think more along the lines of what is desirable instead of what the current spray pattern is. Hunter MPRs are VERY adjustable, so you can get within the right range, and adjust the pattern very specifically once you install them.





4. If you are replacing your entire sprinkler bodies, and not just the nozzles, pull up the sprinkler nozzle manually to measure its height. Pop-ups are almost always 4" 6" or 12" and you'll want to replace the body with the correct height.

#### Pop-up Height

**Spray Pattern** 

4" 6" 12<sup>3</sup>

Now repeat this process for all of the remaining sprinklers on this valve. The entire valve must be switched over to Hunter MP Rotators and must have the same pressure regulation.

When you 've finished all of the sprinklers and valves you plan to upgrade, go to Page 7 of this worksheet and tally up the sprinkler nozzles you need.

You can document which sprinkler nozzle you ordered, so when they arrive, you'll know which sprinkler nozzle goes in which sprinkler body.

Model # of Hunter MPR Order	rec	er	e	d	r	O	ĸ	Pł	MI	nter	Hu	ot	#	odel	M
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MP - \_\_\_\_\_



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SPRINKLER STATION #	, , , ) ) ) •					
	45° 90° 105° 180° 210° 270° 360°					
SPRINKLER #	MODEL # ORDERED MP					
Sprinkler Brand (circle one)	Pop-up Height					
Rain Bird Hunter Toro Orbit K-Rain Other	4" 6" 12"					
Distance to ALL Adjacent Sprinkler Heads	Spray Pattern					
	45° - 105° 90° - 210° 210° - 270° 360°					
SPRINKLER #	MODEL # ORDERED MP					
Sprinkler Brand (circle one)	Pop-up Height					
Rain Bird Hunter Toro Orbit K-Rain Other	4" 6" 12"					
Distance to ALL Adjacent Sprinkler Heads	Spray Pattern					
	45° - 105° 90° - 210° 210° - 270° 360°					
SPRINKLER #	MODEL # ORDERED MP					
Sprinkler Brand (circle one)	Pop-up Height					
Rain Bird Hunter Toro Orbit K-Rain Other	4" 6" 12"					
Distance to ALL Adjacent Sprinkler Heads	Spray Pattern					
,,,,,,	45° - 105° 90° - 210° 210° - 270° 360°					



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# Now tally up all of the shapes and sizes of Hunter MP Rotators you need to order.

It doesn't matter which sprinkler brand you have, you'll always order Hunter MP Rotators

If you circled Rain Bird / Hunter / Orbit, you'll order Female Hunter MP Rotators.

If you circled Toro / K-Rain, you'll order Male Hunter MP Rotators.

If it's not any of those, please call or email us and tell us what you have. We'll find out whether you should order male or female Hunter MP Rotators.

Model #	Radius	Spray Pattern	Male (How many?)	Female (How many?)
MP800SR-90	6'-12'	90° - 210°		
MPCORNER	8'-15'	45° - 105°		
MP1000-90	8'-15'	90° - 210°		
MP1000-210	8'-15'	210° - 270°		
MP1000-360	8'-15'	360°		
MP2000-90	13'-21'	90° - 210°		
MP2000-210	13'-21'	210° - 270°		
MP2000-360	13'-21'	360°		
MP3000-90	22'-30'	90° - 210°		
MP3000-210	22'-30'	210° - 270°		
MP3000-360	22'-30'	360°		
MP3500-90	33'-35'	90° - 210°		

#### **Order Hunter MP Rotators here:**

# http://WaterWiseNow.com/MPRotators

Did you decide earlier to regulate your pressure by installing new spray bodies or adapters for risers? Order one for each sprinkler here:

http://WaterWiseNow.com/HunterPRS40