

# WELCOME TO SPRAY SYSTEMS

This literature was designed to introduce you to spray systems, and contains some of the information you will need to get started. If you have further questions about spray system design and installation, please do not hesitate to ask one of our sales people for assistance.

The reason you would use a spray system over a direct watering system, is the required watering area is bigger than or too densely planted to make it economical. With a spray system you can cover a larger area with fewer heads.

Whether you go to a spray or direct watering system you can connect them to your automatic sprinkler system.

## GETTING STARTED

### THE STEPS THAT ARE REQUIRED

- 1) Draw a plan of your landscape.
- 2) Determine the area's that are to be sprayed.
- 3) Determine the style or styles of watering you will use.
- 4) Determine the amount of time per week you will have the system on.

#### Step 1

Draw a plan of your area to be watered (use the graph paper on the back page). Include all plants, trees, rocks and ponds. You want to illustrate every thing that will be watered and anything that might get in the way of your watering on this plan.

#### Step 2

Take a close look at your drawing and determine the area that is to be watered. This is the time to decide if an area is to be sprayed or direct watered.

#### Step 3

Determine the style or styles of watering to be used. There are a range of heads each with their own specific application.

#### **Spectrum 360 vortex spray**

Sprays a 360 vortex circle. This spray has a fully adjustable cap that can be adjusted to a range of 0 to 10 foot spray, and from 0 to 20 gallons per hour.

#### **Vari-jet shrubler**

Available in both 360 and 180 degree circle. This head provides the versatility of a dripper, bubbler or sprayer. By turning the head counter clockwise you range from a 1 GPH dripper to a 3 GPH bubbler or a finger spray with a maximum output of 10 GPH with a diameter of 2 feet.

#### **Micro Vari-Flow jet spray**

A Vari-Flow valve used with a jet nozzle. With the adjustable valve you can fit the jet nozzle to your job. From 16.3 to 28.8 GPH and 18.4 to 26.3 feet (with the 360-18 nozzle).

#### **Caps in stock**

180°, 360°-18, Mist

## Step 4

Determine the amount of time per week you will have the system on. Remember that this is only a guide line. The exact duration and frequency of watering will depend upon temperature, wind conditions, soil types, plant variety and local restrictions. Mature plants have deeper roots, requiring a longer watering cycle. To double check your calculations after the system is running, dig down next to a plant to see the depth the water has reached. If the soil is dry within 12" of the surface, you are under-watering and more time will be required.

The hookup is your next step. Whether you use electric or manual valves, you will need a filter, pressure/flow regulator, and a backflow preventer. A filter is needed because the holes in the different styles are so small that they will plug up very fast without it. A pressure/flow regulator is required because the working pressure of drip irrigation is between 10 and 20 PSI, and the flow regulator will adjust the flow to give the emitters the water they need - not more. The backflow preventer is required by law to prevent the water in your pipes from re-entering your homes water supply.

Next look at your head layout on both your plan and site. Draw out where you think the supply line should be (you're the one who is going to be digging the trenches, so keep your layout to the minimum).

You have completed the design which is the part some people find the hardest, now it's just a matter of putting it in. Take your time, and try not to get frustrated. All layouts get changed once the digging gets started. Before you back fill, run the system and see if it covers the area's and if there are any leaks (all of us have forgotten to glue a fitting or put a clamp on so do not feel bad if you do too).

You are now ready to back fill your trenches. Besides checking your run time you are done for now. Each spring you may have to update your system as you change plants or your lay outs.

## One Piece Performance Chart

Recommended Operating Pressure		Black .03 Orifice		Blue .04 Orifice		Red .075 Orifice	
Spray Pattern	Press PSI	Flow Rate GPH	Radius Feet	Flow Rate GPH	Radius Feet	Flow Rate GPH	Diameter Feet
360 deg Circle	15	5.0		9.0		21.6	
	20	6.0	8.0	10.5	7.8	24.0	14.0
	25	6.8		11.6		27.4	
180 deg Circle	15	5.0		9.0		21.6	
	20	6.0	8.0	10.5	7.8	24.0	15.0
	25	6.8		11.6		27.4	
90 deg Circle	15	5.0		9.0		21.6	
	20	6.0	8.0	10.5	7.8	24.0	11.0
	25	6.8	(radius)	11.6	(radius)	27.4	(radius)

**Recommended Operating Pressure 20 PSI**

## Vari-Jets /w Spray Cap

Desc.	Pressure PSI	Flow GPH	Spray Pattern			
			360° x 18 Diameter Ft.	180° Radius Ft	Mist	
					Flow GPH	Diameter Ft.
0.06 Orifice	10	Up to 16.3	Up to 18.4	Up to 6.7	4.0	3.0
	15	Up to 20.1	Up to 22.6	Up to 8.1	4.8	2.6
	20	Up to 23.4	Up to 25.7	Up to 9.5	5.8	2.9
	25	Up to 26.2	Up to 26.7	Up to 10.1	6.2	2.8
	30	Up to 28.8	Up to 26.3	Up to 10.6	-	-

**Recommended Operating Pressure 20 PSI**

## Sprays

Item #		Flow	Diameter	Pressure
MI/FSF	Finger Spray 360	0 - 10 GPH	0 - 3 Ft.	20 PSI
MI/FSH	Finger Spray 180	0 - 10 GPH	0 - 3 Ft.	20 PSI
MI/VS360	Vortex 360	0 - 24 GPH	0 - 14 Ft.	25 PSI
MI/RS12	Mini Rotary (Blue)	11.7 GPH	19 Ft.	25 PSI
MI/RS18	Mini Rotary (Green)	19.5 GPH	21 Ft.	25 PSI

## Dripline Tubing

Item #		Flow	Pressure	Flow Rate 20 GPH
MI/DRIPIN1/4X12	1/4" x 12" Spacing	1/2 GPH per ft.	15 PSI	33 Ft. Max. Run
MI/DRIPIN1/4X6	1/4" x 6" Spacing	1 GPH per ft.	15 PSI	19 Ft. Max. Run

## Porous Tube

Item #		Flow	Pressure	Flow Rate 20 GPH
MI/PT25	1/4"	.25 GPH per 100ft	10 PSI	10 Ft. Max. Run
MI/PT700	1/2"	0.7 GPH per 100ft.	10 PSI	200 Ft. Max. Run