



MICRO IRRIGATION SYSTEMS

As a rule of thumb, when designing a micro irrigation system design the system based on 150 KPA or 21.7 PSI as this is the general operating pressure for such systems in Darwin.

Remember, as you use more of your available water supply (0.48 LPS) you reduce the pressure of the system. Thus, as you add more micro sprays to the system the pressure in the system will reduce. If you do not use more than your available water supply the pressure should not fall below 150 KPA or 21.7 PSI.

Example:

A green micro spray (1.3 mm nozzle) 180 degrees has a radius of 2.3 meters and a flow rate of 68 litres per hour , which when divided by 60 = 1.133 litres per minute (LPM). If you divide this by 60 again you will get Litres per Second, i.e. 1.133 divided 60 – 0.0188 LPS.

Your available water supply is 0.48 LPS

If you divide 0.48 by 0.0189 you will obtain the number of sprays of this type that you can use based on your available water supply, i.e: 0.48 divided by 0.0189 = 25.

Hence, you can use 25 green 180 degree micro sprays in a system that has 0.48 LPS of available water supply.

You apply the above basic formula to all micro systems.

When you study a micro spray chart you will notice that as the pressure rises the flow rate also rises as to does the radius. This means that as the pressure rises the radius of the spray increases. Remember, always to space your sprinklers to spray head to head to ensure even coverage. This means to space your sprinklers in this case, micro sprays at the specified radius distance apart.

This means you should space your green 180 degree micro sprays at 2.3 metre spacing. This principle applies to all irrigation systems.

You should now refer to a number of performance charts on micro irrigation sprays and make sure that you understand them.

For further access to Philmac Micro Irrigation performance charts, visit www.philmac.com.au website technical library.

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