

# WHEN ALL ELSE FAILS "READ THE INSTRUCTIONS"

- HAVE YOU CHECKED WITH YOUR LOCAL COUNCIL/WATER AUTHORITY?
- HAS A LICENCED PLUMBER MADE THE CONNECTION TO THE MAINS AND INSTALLED A 20MM WATER AUTHORITY APPROVED VALVE?
- CHECK THE LOCATION OF GAS, ELECTRICITY, WATER AND TELEPHONE LINES BEFORE DIGGING.
- DO YOU HAVE THE NECESSARY TOOLS?

- |   |   |
|---|---|
| <input type="checkbox"/> Tape Measure                 | <input type="checkbox"/> Wrench             |
| <input type="checkbox"/> Trenching Shovel/Spade       | <input type="checkbox"/> Axe                |
| <input type="checkbox"/> Hacksaw                      | <input type="checkbox"/> Rake               |
| <input type="checkbox"/> Hose                         | <input type="checkbox"/> Pliers             |
| <input type="checkbox"/> Stringline                   | <input type="checkbox"/> Screwdrivers       |
| <input type="checkbox"/> Trenching machine (optional) | <input type="checkbox"/> Ruler (scale rule) |

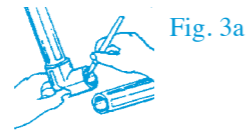


Fig. 3a



Fig. 3b



Fig. 3c

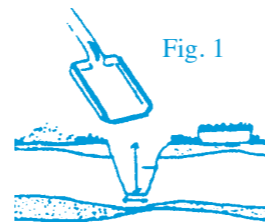


Fig. 1



Fig. 2

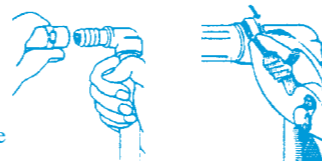


Fig. 4a



Fig. 4b

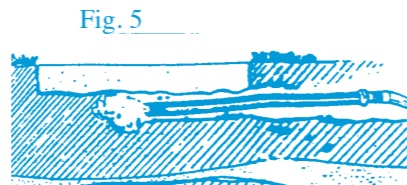


Fig. 5

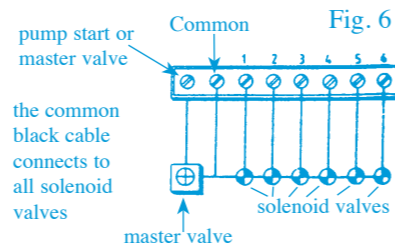


Fig. 6

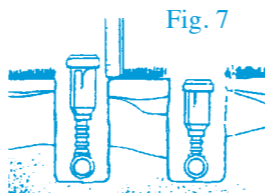


Fig. 7

Peg the location of all sprinklers as shown on your design. A stringline is helpful in keeping sprinklers in straight lines.

Assemble all screwed fittings. NOTE: Risers don't require threadseal but all other screwed fittings DO require threadseal (except for 'O'ring type manifold fittings).

Dig the trenches as marked on your design. Watering the trench line helps prevent trenches collapsing and saves time and effort. Trenches should be approx. 100mm wide and 250mm deep. See Fig. 1.

Place the fittings along the trenches where they will be used. Take notice of pipe sizing on your design. This will determine the correct size and fittings. See Fig. 2.

Solenoid valves have arrows indicating the direction of flow and will not operate if installed back to front.

Going under obstacles: A hose may be used to help tunnel under paths and driveways. Insert a hose into the pipe to go under the obstacle. Point the pipe in the correct direction and turn on the hose to full pressure. Push the pipe under the obstacle; the force of the water will blast away soil to form a tunnel. Care should be taken to avoid damage to paths and driveways. See Fig. 5.

Having installed the solenoid valves, run out the solenoid cable and connect to the valves. The black cable is "common" and must be connected to all valves. Try to keep cable runs from the controller to the valves continuous without joins. See Fig. 6. This cable carries only 24V and does not require an electrician.

Ensure cable joints are properly secured with a cable connector or crimp then enclose in a waterproof connector.

Solenoid cables should be taped to the mainline and, where possible, kept below the pipe for protection. Make sure the cable is not tight or stretched - a small amount of "slack" is required.

Install lateral pipework and fittings, taking careful note of pipe sizes marked on your design. Keep sand and debris out of the pipework.

Where pop-up sprinklers are located alongside driveways etc. leave 50mm clearance so that lawn edgers won't damage your sprinklers.

Install valve boxes over all valves to make locating and servicing much easier. The covers of the valve boxes should be level with the surrounding ground.

Backfill all trenches and be sure the tops of the pop-up sprinklers are flush with the surrounding ground or turf so that you can safely mow over them without damage to the sprinkler or mower. See Fig. 7.

As recommended by the manufacturers, allow 24 hours for the solvent to set properly.

Flush out each section separately to ensure all debris is removed from the pipework. While a section is flushing, install the sprinkler nozzles, starting with sprinklers closest to the valve. Sprinklers on the ends of lines should be the last to have nozzles fitted. You may need to close the valve while installing the last 2 or 3 nozzles.

When all sections have been flushed and nozzles fitted, test each section again to "fine tune" the sprinklers by adjusting spray direction and radius (with the radius control screw in the centre of the nozzle) as required.

## OPERATION:

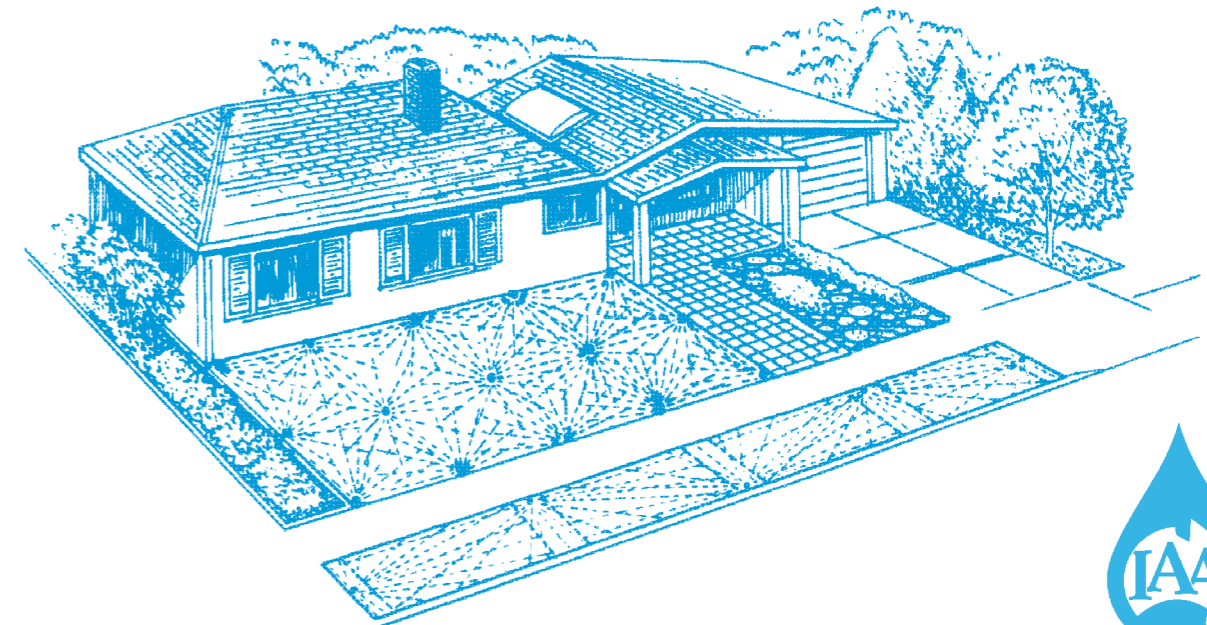
Depending on the type of lawn or garden plants, set the controller to the days you wish to water and the time you wish watering to start. Then set each zone or station to the watering duration. In sandy soil it may be preferred to water lawn for 20-25 minutes 2 to 3 times per week or in heavier soils you may wish to water for 10 minutes on start 1 and follow with 10 minutes on start 2, every 2-3 days to prevent run off. Garden beds may require daily watering of 15-20 minutes. Watering is most effective when carried out at night or early morning when pressure is greatest and evaporation less. During winter or wet periods the rain switch should be used if fitted or a rain sensor may be installed to prevent watering. Controller programs can be adjusted for the changes of seasons.



MANUFACTURERS - DISTRIBUTORS - IMPORTERS  
QUALITY IRRIGATION EQUIPMENT

# IRRIGATION DESIGN PLANNER

FREE PLANNING GUIDE



Ref No: ..... / ..... / .....  
 Date: ..... / ..... / .....  
 Customer Name: .....  
 Address: .....  
 Phone Home: .....  
 Work: .....

## BEFORE YOU BEGIN

### WATER CAPACITY DETERMINES THE SIZE OF YOUR SYSTEM.

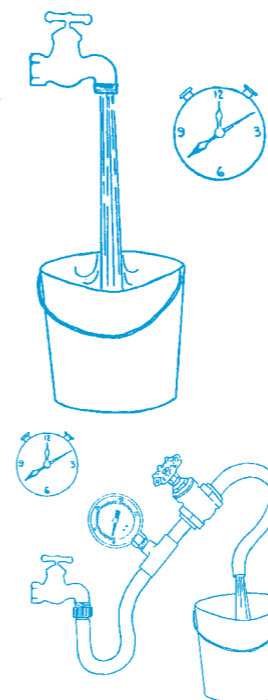
How many sprinklers your system can run at one time depends on how much water your home can supply. In this section, you will make a few simple measurements to determine this "water capacity"

### METHOD 1

Time how long it takes to fill a bucket of known volume. Tap should be closest to the meter or water source. Tap or valve should be fully open before placing bucket under tap with no other taps or valves in use.

### METHOD 2

As an alternative to Method 1 and should be used when pumps are involved, eg: bore pumps. These water flow testers are available from a distributor of your choice. They will explain their use.



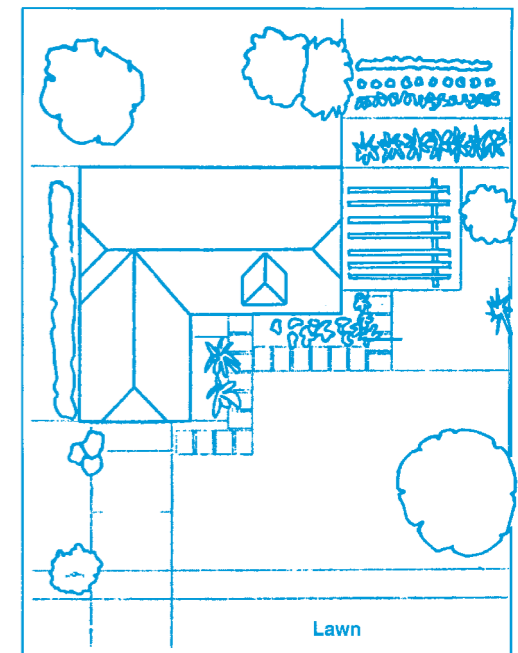
## PLANNING YOUR INSTALLATION

### DELIVERING WATER RIGHT WHERE IT IS NEEDED.

The first step in laying out your system is to decide which areas you want to water.

### PLOT THE LOCATIONS OF AREAS TO WATER

Using the grid on the back of this guide, plot the outlines of your home and garden areas. Include paths, driveways and patios. Use a tape measure for accuracy. Make sure all areas match the scale of the grid and label each area according to type of foliage (eg: lawn, shrubs, flower bed etc.). Mark positions of mains water meter and tap positions. Also mark position of bore on block or other water sources, such as dams, rivers or tanks.



### Nozzle Performance

Nozzle	Kpa	Rad. m	L/min
0.75	206	4.6	2.4
	275	4.9	2.8
	344	5.2	3.2
1.00	206	5.5	3.2
	275	5.8	3.8
	344	5.8	4.2
1.50	206	6.4	4.9
	275	6.7	5.7
	344	6.7	6.4
2.00	206	7.3	6.4
	275	7.6	7.6
	344	7.6	8.7
2.50	206	8.2	8.3
	275	8.5	9.5
	344	8.5	10.6
3.00	206	9.1	9.5
	275	9.4	11.4
	344	9.4	12.9
4.00	206	10.1	14.0
	275	10.4	15.1
	344	10.4	16.3
5.00	206	11.0	17.8
	275	11.3	18.9
	344	11.3	20.1

## Hunter PGP

### Nozzle Performance

Nozzle	Kpa	Rad. m	L/min
1	206	8.5	1.9
	275	8.8	2.3
	344	8.8	2.7
	413	9.1	3.0
2	206	8.8	2.6
	275	9.1	3.0
	344	9.1	3.4
	413	9.4	3.8
3	206	9.1	3.4
	275	9.4	3.8
	344	9.4	4.5
	413	9.8	4.9
4	206	9.8	4.5
	275	10.1	5.3
	344	10.4	6.1
	413	10.4	6.8
5	206	10.4	6.1
	275	11.0	6.8
	344	11.6	7.6
	413	11.6	8.3
6	206	11.0	7.6
	275	11.6	9.1
	344	12.2	10.2
	413	12.2	11.0
7	206	11.0	9.8
	275	12.2	11.4
	344	12.8	12.9
	413	12.8	14.0
8	206	11.3	12.1
	275	12.2	14.0
	344	13.1	15.9
	413	13.4	17.4
9	206	11.6	15.9
	275	13.1	18.5
	344	14.0	20.8
	413	14.3	22.7
10	275	13.7	22.7
	344	14.6	25.7
	413	14.9	28.8
	482	15.5	31.0
11	275	14.0	30.3
	344	14.6	33.7
	413	15.2	37.1
	482	15.5	39.7
12	275	14.0	43.2
	344	14.6	46.2
	413	15.2	50.0
	482	15.9	54.0

**KEY:**

- Tapping/Water Source
- Backflow
- Mainline
- Hunter Solenoid Valve
- Hunter Controller
- Laterals
- Isolating Valve

**Flow Test**

.....sec .....sec .....

.....sec .....sec .....

**Hunter Lawn Sprinklers**

- Small Spray Pop-up
- Mini Rotor Pop-up
- Large Rotor Pop-up

**Garden Sprinklers**

- Micro Sprays
- Drippers
- Shrub Sprays
- Driptube

**Scale**

□ = 1:200



## Hunter Adj. Arc Nozzle Performance

**3.0m S10A**  
Adjustable: 25° – 360°  
Trajectory: 15°  
Colour Code: Red **S10A**

	Kpa	Rad. m	Flow L/min
	206	3.0	0.9
	206	3.0	1.9
	206	3.0	2.5
	206	3.0	3.7
	206	3.0	4.9
	206	3.0	5.6
	206	3.0	7.4

**3.7m S12A**  
Adjustable: 25° – 360°  
Trajectory: 28°  
Colour Code: Green **S12A**

	Kpa	Rad. m	Flow L/min
	206	3.7	1.4
	206	3.7	2.7
	206	3.7	3.6
	206	3.7	5.4
	206	3.7	7.2
	206	3.7	8.1
	206	3.7	10.8

**4.6m S15A**  
Adjustable: 25° – 360°  
Trajectory: 28°  
Colour Code: Black **S15A**

	Kpa	Rad. m	Flow L/min
	206	4.6	1.8
	206	4.6	3.5
	206	4.6	4.7
	206	4.6	7.0
	206	4.6	9.3
	206	4.6	10.5
	206	4.6	14.0

