

# DRIP IRRIGATION –

*the complete training package*

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# Drip Irrigation

Australia's current water crisis has seen the implementation of severe water restrictions and permanent water conservation measures which has challenged the way that we have traditionally irrigated our gardens.

Searching for efficient irrigation solutions has increased the interest in drip irrigation. With drip's increased popularity we are now faced by the challenge that the general irrigation and horticultural industry has not kept up with the rate of development in drip and dripperline technology. Current training modules will refer to drip irrigation as a simple network of poly pipe with 4L/H drippers punched into it.



# Drip Irrigation

As a leading manufacturer of drip irrigation equipment Netafim promotes a complete training package of up to date information on drip and dripperline technology that will help all dealers, installers, operators and owners to successfully select, design and install a complete and efficient drip irrigation system.

We provide training to a large cross section of people both new to and currently working within our industry:

- ◆ Netafim Dealers/Distributors
- ◆ Irrigation, Landscape and Garden Designers & Installers
- ◆ Irrigation and Horticultural Training Organizations & Students
- ◆ Home owners & End users

# Drip Irrigation

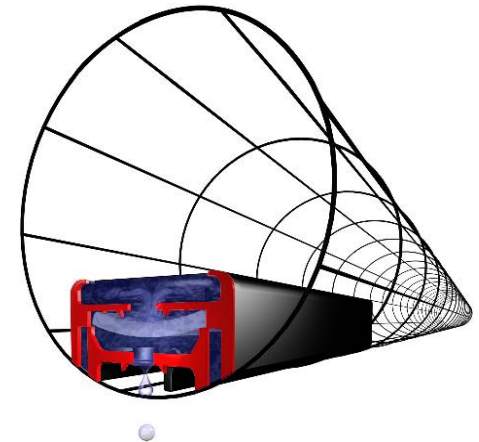
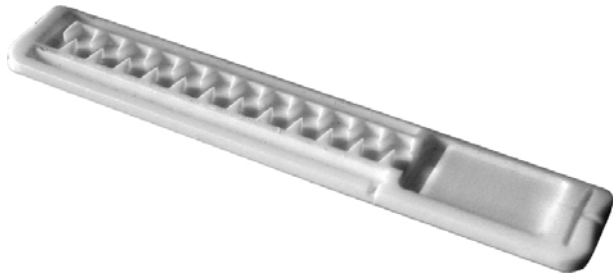
What is covered in Netafim's complete training package?

1. Discovery and Development of Drip Irrigation
2. Benefits of Drip Irrigation (low volume, low pressure, minimal waste)
3. Correct Drip and Dripperline Selection
4. Dripperline Accessories
5. Drip System Design Principles
6. Drip System Installation Principles
7. Drip System Maintenance
8. Drip System Operation Guide
9. Training Assessment

# Drip Irrigation

## 1. Discovery and Development of Drip Irrigation:

- History – 40 years of R&D in dripper development and how this has led to significant increased reliability, efficiency etc
- How do drippers work
- Different types of drippers (non PC, PC, AS, CNL etc) for different applications
- Special features (Inlet filters & TurboNet flow path)
- Different Dripperlines
- Handout Drip & Dripperline Samples



# Drip Irrigation

2. Benefits of Drip Irrigation; low volume/low pressure irrigation.

- Low Application Rates (8.4mm/Hr – 22.0mm/Hr)
- Reduced Water Run-off
- Elimination of Misting & Overspray
- Application of Water from Below Surface (sub mulch or sub turf)
- No Contact with Plant Foliage



# Drip Irrigation

## 3. Drip and Dripperline selection - based on:

- Soil Type (Light or Heavy Soil; Infiltration rate, Lateral moisture movement)
- Topography (Flat or sloping ground; PC or Non PC, AS or CNL, etc)
- Plant Type (flowers, shrubs, trees – OSDI, turf - SDI)
- Water Quality (Mains, bore or treated waste water/re:SOURCE)
- Suitability to the site



# Drip Irrigation

## 4. Dripperline Accessories:

- Additional components that are integral parts of the Drip System and are required for successful operation:
- Filters, TechFilters, Pressure Reducing Valves (PRV), Air Release Valves, Flush Valves, Start Connectors, Stakes, Indicator Flags, Back Flow devices, etc
- Identify key components and explain what function the devices perform and where they are used within the drip system how they are installed



# Drip Irrigation

## 5. Drip System Design Principles:

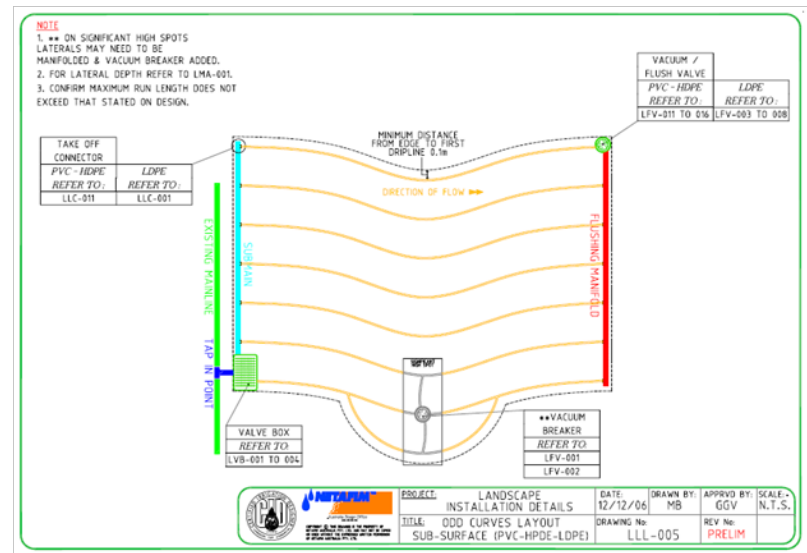
- Soil type (Infiltration rate) – Drip discharge and spacing
- Topography – Dripper type (PC or Non PC), Direction of Dripperline
- Size of Area - Maximum run lengths for drip-line and sub-mains
- Water Pressure/Flow rate – number of valves required, size and length of sub-mains
- Water Quality – type of dripper required, filtration, flushing valves, etc
- Formulae to determine drip system application rate, total flow rate, total tube amounts etc



# Drip Irrigation

## 6. Drip System Installation Principles:

- System set out - Grid layout, direction & spacing of dripperlines, set back distances etc
- Installation of key components – Filter, TechFilter (SDI), PRV's, etc
- Connection of Dripperline to Sub-mains
- Depth of Burial
- Flushing of System
- Pressure checks etc



# Drip Irrigation

## 7. Drip System Maintenance:

- Visual Check of Drip System
- Removal and Cleaning of Filters and Valves
- Check System Operating Pressure
- Compare System Flow Rate etc



# Drip Irrigation

## 8. Drip System Operation Guide:

- Calculate the Drip Systems Application Rate
- Calculate the Plant Weekly Water Requirement
- Record Weekly Evaporation Rate Loss
- Observe Current Water Restrictions
- Calculate Drip System Duration Time

$$\frac{\text{Plant Water Requirement}}{\text{System Application Rate}} = \text{Duration of Irrigation}$$

# Drip Irrigation

## 9. Training Assessment:

- Written Assessment for one day course
- Verbal questions for afternoon/evening courses
- Allows us to gauge if participants understand course content
- Indicates if course content is delivered in a clear and concise manner



# Drip Irrigation

Conclusion:

Netafim's Drip Irrigation training package is designed to ensure that all participants gain a better understanding of both the concept and utilization of drip irrigation.

This in turn increases the acceptance of Drip Irrigation in urban applications and has resulted in an increase in the overall quality of Drip System design and its installation.

