

KISSS

“Every drop of water does its job!!”

What is KISSS?

- It is a subsurface system called KISSS that uses a geotextile to spread the water in both a horizontal and lateral wetting pattern.
- It also uses an impermeable layer of polyethylene to minimise the movement of water downwards by gravity allowing the soil to make full use of the water in capillary action.
- It has a drip line delivering the water to the geotextile, and the base polyethylene layer, at a consistent and predetermined rate. The flow rates and emitter spacing can be adjusted to soil conditions and length of run.
- It creates an elliptical wetting pattern along the whole length of the material.

Who invented it?

- Irrigation & Water Technologies Pty Ltd in Sydney, Australia took out International patents on the system in 1995.
- The IWT team has a history of new product development going back 19 years with inventions like the “Joseph Sack” for gas tight grain storage, the "Easy Flow" shipping container liner for the transport and unloading of compactable powders, the "Drip Mat” system for ornamental horticulture pot plant production now used in Australia, USA, New Zealand, United Kingdom, North Africa, Chile, Japan, Canada and Tunisia.

Some of the Benefits

KISSS is the first sub surface irrigation system, which uses precision irrigation to better manage:

- Gravitational water loss by using steady state irrigation technology.
- Saline soil conditions by displacing and diluting salts through precise applications of fresh water.
- Root zone wetting patterns by only irrigating to replace daily evaporative losses or as the plant demands.
- Daily irrigation requirements directly against evaporative losses and plant requirements without overloading soils to saturation point constantly.
- Emitter blockages through protective layers of material around the drip lines.
- Rodent and insect “strikes” and mechanical damage because the system can be deeper than competitors and has protective materials around the drip lines.
- Use of treated effluent as irrigation water by ensuring an even distribution without contamination to the surface or deep percolation into ground water
- Contaminated sites by irrigating without spreading the contaminant, allowing deep percolation of the contaminant or bringing it to the surface.
- Water wastage by using low flow emission rates combined with geotextile that use capillary and mass flow to discharge water evenly *without* fluidising the soil and destroying soil structure
- Yield increase, quality and predetermined growth rates by applying water to the roots at the precise time and location

What makes it different from other Sub Surface Systems?

KISSS is unique in that it can produce a defined subsurface wetting pattern along the line and length of the system.

The combination of drip tape technology and permeable and impermeable membranes provides thousands of emission points along the system making water available to the soil capillaries to take up the water at the soil absorption rate (see actual wetting patterns on the next page).

What applications does it have?

KISSS has undergone an extensive R and D program over the last 5 years and has been used under turf, grapes, corn, lucerne, turf, tomatoes, lettuce, potatoes, fruit trees and many other applications including dispersal of treated water and pesticide application for termite control.

How is it installed?

KISSS comes in a few different widths and depending on soil types will be buried between 100 and 300 mm down in the soil.

IWT has developed an installation implement that can be used on a three-point linkage on a tractor or a bobcat.

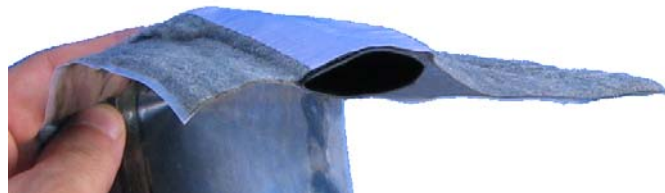
What does it look like?

There are two types of KISSS configurations. KISSS-Flat is great for turf areas where the slope is less than 3%. The other version is KISSS Wrap, which is great for informal gardens and slopes over 3% and can be lightly buried around trees and shrubs. (See technical Specifications sheet attached.

Please call our office to discuss further on 02-9679-0111 or email us at info@iwtech.com.au to discuss details. Our web site is www.kiss.net.au



KISSS wrap



KISSS flat