



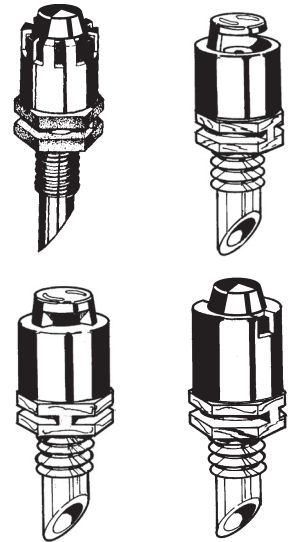
Micro Irrigation Sprays and Sprinklers

Two Piece Micro Spray

A high performance micro spray comprising a snap on cap and colour coded base. Maximum watering efficiency is made possible by a comprehensive selection of seven nozzle sizes designed for low pressure operation. These nozzle sizes are colour coded for easy recognition.

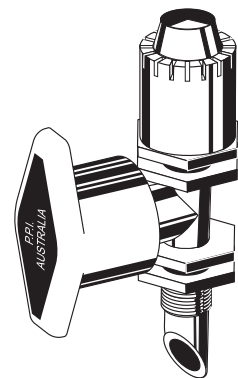
The snap on black cap determines arc pattern, and deflects and breaks up the water stream to maximise droplet size and reduce misting.

- ◆ Manufactured from UV stabilised acetal ensuring long life and consistent performance standards.
- ◆ The black cap is easily removed for cleaning, in the event of particle intrusion to pipelines.
- ◆ Low volume water discharge ensures deep soil penetration, minimising water wastage through runoff.
- ◆ Provides an effective, low cost irrigation option for a large variety of applications in domestic, commercial and agricultural irrigation.
- ◆ 4mm thread.







Adjustable Micro Sprays





- ◆ This range of variable flow sprays enables the customisation of water distribution onto the area requiring irrigation. By simply turning the built in “tap”, the flow and length of spray can be adjusted to suit your design requirements.
- ◆ Effectively irrigate narrow planter beds with minimal overspray and water wastage.
- ◆ Confine irrigation to small root zone of new plant stock with the option of increasing wetting diameter as the plant grows.
- ◆ Manufactured from UV stabilised acetal.
- ◆ 4mm thread.



Two Piece Micro Spray Performance Chart

| Nozzle colour & size | Pressure kPa | Flow Lph | Full Circle | Half Circle | Quarter | Strip length (m) |
|-------------------------|-----------------|-------------|---|---|---|---|
| | | | radius (m) | radius (m) | Circle radius (m) | |
| | | |  |  |  |  |
| BROWN 0.9 mm | 50 | 21 | 1.0 | 1.5 | 1.6 | 3.0 |
| | 100 | 30 | 2.0 | 2.0 | 1.8 | 4.8 |
| | 150 | 35 | 2.4 | 2.1 | 2.0 | 6.2 |
| | 200 | 40 | 2.7 | 2.3 | 2.2 | 7.0 |
| | 250 | 45 | 2.8 | 2.5 | 2.2 | 7.0 |
| BLUE 1.0 mm | 50 | 28 | 1.0 | 1.7 | 2.0 | 2.3 |
| | 100 | 30 | 2.5 | 2.0 | 2.1 | 4.8 |
| | 150 | 40 | 2.8 | 2.2 | 2.4 | 6.2 |
| | 200 | 50 | 3.0 | 2.5 | 2.6 | 7.0 |
| | 250 | 60 | 3.2 | 2.7 | 2.6 | 8.0 |
| GREEN 1.3 mm | 50 | 40 | 1.7 | 1.7 | 1.7 | 4.0 |
| | 100 | 60 | 2.5 | 2.2 | 2.2 | 6.2 |
| | 150 | 80 | 2.7 | 2.5 | 2.5 | 7.1 |
| | 200 | 95 | 3.0 | 2.8 | 2.5 | 8.0 |
| | 250 | 105 | 3.5 | 3.0 | 2.5 | 9.0 |
| RED 1.5 mm | 50 | 50 | 1.7 | 1.8 | 2.0 | 5.0 |
| | 100 | 70 | 2.7 | 2.3 | 2.3 | 7.0 |
| | 150 | 88 | 3.5 | 2.9 | 2.5 | 8.6 |
| | 200 | 105 | 4.5 | 3.0 | 2.7 | 9.5 |
| | 250 | 115 | 5.0 | 3.1 | 2.9 | 11.0 |
| ORANGE 1.8 mm | 50 | 70 | 2.2 | 1.8 | 2.0 | 4.4 |
| | 100 | 90 | 3.5 | 2.3 | 2.7 | 7.0 |
| | 150 | 120 | 4.3 | 2.6 | 2.8 | 9.1 |
| | 200 | 130 | 5.0 | 2.8 | 2.9 | 10.3 |
| | 250 | 150 | 5.6 | 3.2 | 3.1 | 12.3 |
| GREY 2.0 mm | 50 | 75 | 2.3 | 2.0 | 1.8 | 6.5 |
| | 100 | 100 | 4.0 | 2.5 | 2.7 | 10.0 |
| | 150 | 125 | 4.8 | 3.0 | 3.0 | 12.0 |
| | 200 | 150 | 5.4 | 3.0 | 3.2 | 13.0 |
| | 250 | 160 | 6.0 | 3.4 | 3.2 | 14.0 |
| WHITE 2.3 mm | 50 | 85 | 2.0 | 2.0 | 2.0 | 6.0 |
| | 100 | 125 | 3.9 | 2.9 | 3.1 | 11.0 |
| | 150 | 150 | 5.0 | 3.4 | 3.4 | 13.0 |
| | 200 | 175 | 5.5 | 3.8 | 3.5 | 15.0 |
| | 250 | 180 | 6.0 | 4.0 | 3.5 | 15.0 |

Adjustable Micro Spray Performance Chart

| Nozzle colour & size | Pressure kPa | Flow Lph | Full Circle | Half Circle | Quarter | Strip length (m) |
|------------------------|-----------------|-------------|---|---|---|---|
| | | | radius (m) | radius (m) | Circle radius (m) | |
| | | |  |  |  |  |
| BLACK 1.5 mm | 50 | 0 - 50 | 0 - 1.7 | 0 - 1.8 | 0 - 2.0 | 0 - 5.0 |
| | 100 | 0 - 70 | 0 - 2.7 | 0 - 2.0 | 0 - 2.2 | 0 - 7.0 |
| | 150 | 0 - 90 | 0 - 3.5 | 0 - 2.4 | 0 - 2.4 | 0 - 9.0 |
| | 200 | 0 - 105 | 0 - 4.5 | 0 - 2.7 | 0 - 2.6 | 0 - 10.0 |
| | 250 | 0 - 115 | 0 - 5.0 | 0 - 3.2 | 0 - 2.8 | 0 - 11.0 |

Mister

In applications requiring a fine mist spray, this emitter is perfect. Manufactured from the same UV stabilised acetal as other PPI microsprays, it is a two part emitter comprising a yellow base with 4mm thread and snap-on black cap. Unlike emitters which create a mist by directing water onto a flat plate, the PPI mister is designed to break up water particles and discharge them via a high velocity vortex action. This eliminates problems of inaccurate deflector alignment and mineral buildup on the deflector which can affect performance.

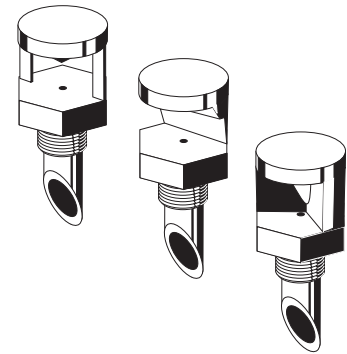


- ◆ Ideal for the irrigation of delicate seedlings.
- ◆ Used for the creation of high humidity conditions in nurseries, shadehouses, rainforest plantings.
- ◆ Ideal for cooling off enclosed areas, especially greenhouses etc.




| Nozzle colour | Pressure kPa | Flow Lph | Full Circle radius (m) |
|---------------|--------------|----------|------------------------|
| YELLOW | 50 | 0 - 50 | 0 - 1.7 |
| | 100 | 0 - 70 | 0 - 2.7 |
| | 150 | 0 - 90 | 0 - 3.5 |
| | 200 | 0 - 105 | 0 - 4.5 |
| | 250 | 0 - 115 | 0 - 5.0 |

One Piece Micro Spray Jets

This selection of micro sprays is designed for installations requiring a low pressure, low flow microspray with a small wetting diameter. They are available in the three most popular spray patterns of full, half and quarter circle. Their simple one piece construction provides an effective, economic solution to many irrigation requirements.

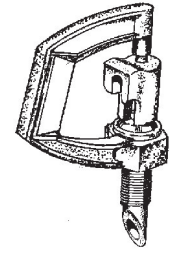


- ◆ Manufactured using UV stabilised acetal.
- ◆ Low water requirements enable irrigation of large areas with limited water resources.
- ◆ Light, efficient water distribution ensures deep penetration of water into soil without excess runoff.
- ◆ 4mm thread.

| Nozzle colour & size | Pressure kPa | Flow Lph | Full Circle | Half Circle | Quarter Circle |
|------------------------|--------------|----------|---|---|---|
| | | | radius (m) | radius (m) | radius (m) |
| BLACK 1.0 mm | 50 | 30 |  |  |  |
| | 100 | 35 | 1.2 | 1.5 | 1.5 |
| | 150 | 45 | 1.6 | 1.9 | 1.9 |
| | | | 1.9 | 2.3 | 2.2 |

Micro Sprinklers

High performance, reliability, and durability are some of the features of this range of full circle spinners. Maximum design flexibility is assured with the availability of six nozzle sizes, colour coded for easy selection. The use of UV stabilised acetal, and strict manufacturing tolerances, ensure trouble-free operation over an extended lifespan.

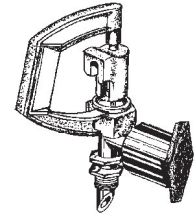


- ◆ “C” frame design ensures optimum water coverage by minimising dry area caused by the interference of the frame with the water discharge.
- ◆ The full flow spinner is engineered to provide maximum performance consistency and reliability.
- ◆ Large droplet size and flat trajectory, make them ideal for the irrigation of vegetables, and root zones of agricultural tree and vine crops.
- ◆ Suitable for many residential and commercial landscape installations.
- ◆ 4mm thread.

| Nozzle colour | Pressure kPa | Flow Lph | Full Circle radius (m) |
|------------------|--------------|----------|------------------------|
| BROWN 0.9 mm | 100 | 33 | 2.8 |
| | 150 | 40 | 3.0 |
| | 200 | 45 | 3.2 |
| | 250 | 50 | 3.2 |
| BLUE 1.0 mm | 100 | 38 | 2.9 |
| | 150 | 45 | 3.2 |
| | 200 | 55 | 3.5 |
| | 250 | 60 | 3.7 |
| GREEN 1.3 mm | 100 | 60 | 3.2 |
| | 150 | 72 | 3.5 |
| | 200 | 85 | 3.7 |
| | 250 | 95 | 4.0 |
| RED 1.5 Mm | 100 | 70 | 3.4 |
| | 150 | 90 | 3.7 |
| | 200 | 105 | 3.9 |
| | 250 | 120 | 4.2 |
| ORANGE 1.8 mm | 100 | 90 | 4.0 |
| | 150 | 115 | 4.3 |
| | 200 | 135 | 4.5 |
| | 250 | 160 | 4.7 |
| GREY 2.0 mm | 100 | 115 | 4.2 |
| | 150 | 140 | 4.5 |
| | 200 | 165 | 4.7 |
| | 250 | 190 | 5.0 |

Adjustable Micro Sprinklers

The maximum flexibility of the micro sprinkler range is attained with the use of the PPI adjustable flow micro sprinkler. Containing the same elements of design and construction as other PPI micro sprinklers, the addition of an adjustable flow tap provides a simple, effective water management option.



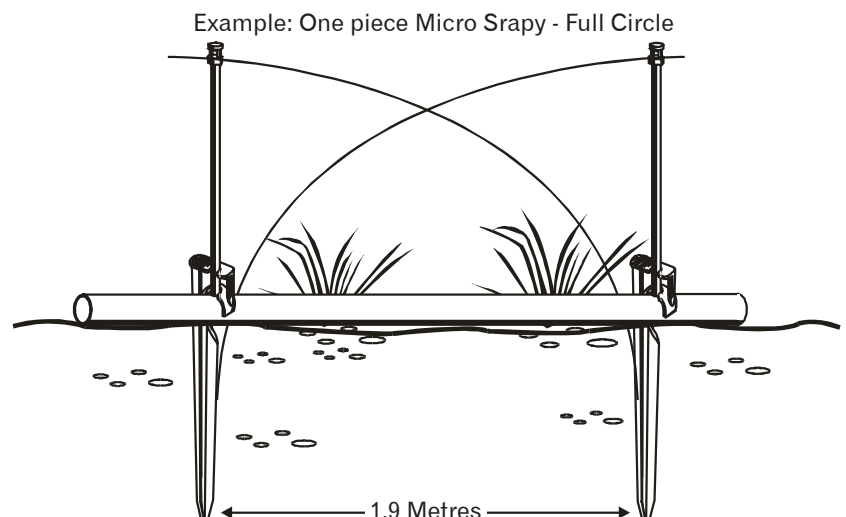
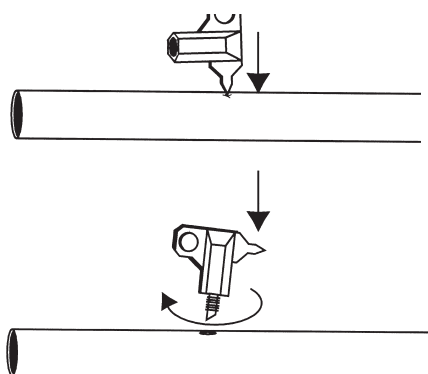
- ◆ Flow control is adjusted by simply turning the knob, thus adjusting flow and increasing or decreasing diameter of coverage.
- ◆ Ideal for the changing requirements of tree root zones.
- ◆ Useful in confined areas where overspray is to be minimised.

| Nozzle colour & size | Pressure kPa | Flow Lph | Full Circle radius (m) |
|------------------------------|--------------|----------|------------------------|
| ADJUST. FLOW 1.5mm | 100 | 0 - 70 | 0 - 3.4 |
| | 150 | 0 - 90 | 0 - 3.5 |
| | 200 | 0 - 105 | 0 - 3.9 |
| | 250 | 0 - 115 | 0 - 4.2 |

Micro Spray / Micro Sprinkler Installation Guide

Micro Sprays can be installed in many different ways. They can be used in either an upright or inverted position. They can be installed directly into pipe, or most effectively onto rigid risers or suitable stakes. Regardless of installation technique, the following guide is applicable.

- ◆ If installing into pipe, take PPI installation spanner and punch hole into pipe. Insert micro spray into spanner, and then simply screw emitter into pipe.
- ◆ Micro sprinklers can be easily installed using fingers.
- ◆ If installing onto a stake, rigid riser or adaptor, insert the microspray into the spanner and then apply pressure to the spanner (or sprinkler) to engage the thread. Continue to screw the micro spray down being careful not to over tighten.
- ◆ Emitters should be separated by the same distance as the radius of the throw. This is called head to head coverage, and achieves the best water distribution effect.



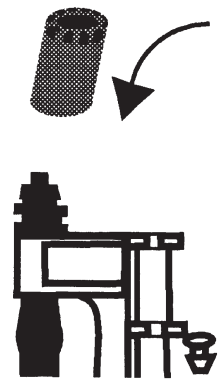
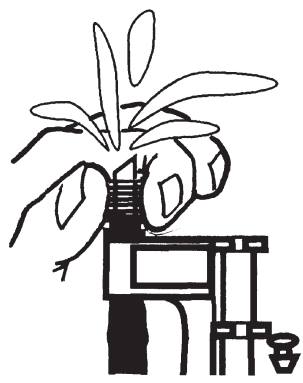
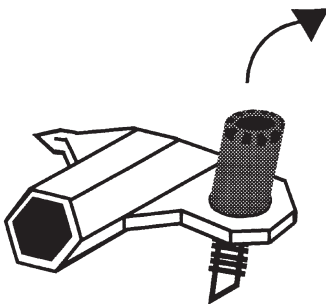
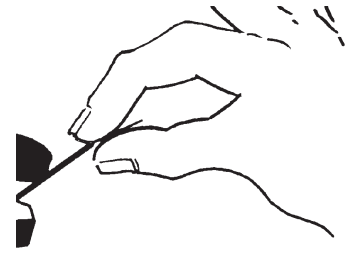
Maintenance

The PPI range of micro sprinklers is manufactured to provide reliable and consistent operating characteristics over an extended period of time. There does exist, however, the possibility of particle intrusion into the nozzle, most predominantly after breaks in the water supply pipe work, or following initial installation. These problems can be usually overcome simply and quickly due to the nature of assembly of the range.

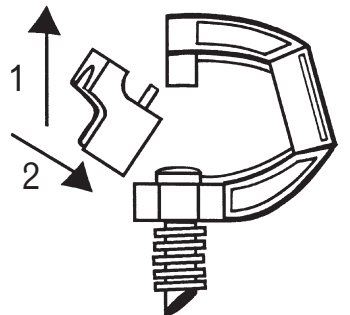
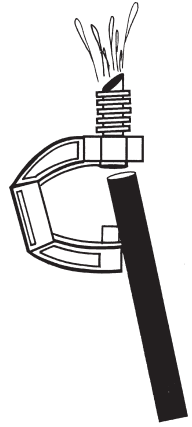
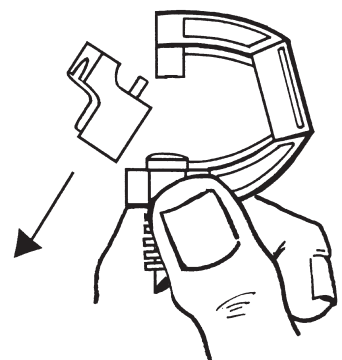
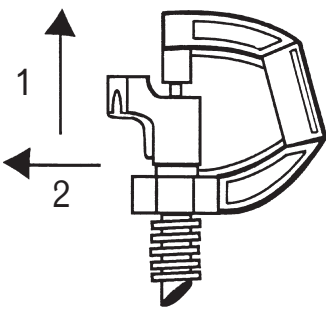


To clear the nozzles of one piece micro spray jets it is necessary to use a short length of wire or similar, less than 1mm in diameter. After removing the microspray from the pipe or stake, simply insert the wire into the nozzle and push any debris through, clearing the hole. It may also be necessary to push from the outlet side of nozzle, depending on the particle size.

Two piece sprays generally require no “tools” to clear blocked nozzles. They are best cleaned while system the is operating. Prior to removal of blocked spray from pipe or stake, use the hole in the PPI micro spanner to remove the black cap from the base. Remove the base, and invert so that the outlet side of the nozzle is placed into the water stream at the discharge point. This action is usually sufficient to remove any debris. If debris remains, it may be necessary to push it out with wire or similar. Reinstall the base and replace the snap on cap.



Micro sprinklers are cleaned in a similar way to two piece sprays. Prior to removing the sprinkler from pipe or stake, remove the spinner from the sprinkler frame. This is achieved by pushing the spinner up and across, to clear the bottom bearing, and then pulling down to remove. Remove the sprinkler base and frame and invert so that the discharge side of the nozzle is placed over the water stream at the point of delivery. When cleared, reinstall the base and frame and replace the spinner by reversing removal procedure.



If the emitter still fails to operate correctly, there may be a blockage in the supply tubing or fittings. Remove and clean to clear the debris.

Accessories

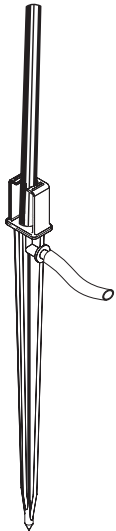
As mentioned previously in the Installation Guide, PPI manufactures a punch\spanner specifically designed for use with micro emitters.

Micros can be installed on ½” Poly Prop Risers in installations requiring the elevation of emitters above surrounding foliage or in situations where a more robust installation is required. Micro Spray Adaptors are available to allow the fitting of 4mm BSP male thread to ½” BSP male thread.

Other PPI Micro Irrigation Products

PPI also manufacture an impressive range of stakes, micro tubing and fittings, suitable for use with micro sprays and sprinklers. The PPI stakes most suitable for micro use include rigid riser stakes, riser/pipe stakes, and riser/jet stakes. For more information on these, and other products in the PPI product range, see the relevant PPI data sheet.

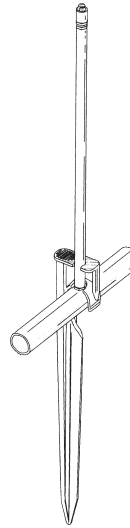
Rigid Riser Stake



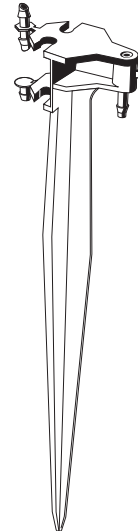
Rigid Riser



Riser Pipe Stake



Riser Jet Stake



Your Local PPI Stockist