

Netafim™ hybrid driplines - drops migration

Merging the best features and benefits of both integral and on line drippers - in one product

Hybrid irrigation driplines combine the best of both worlds: they offer the large filtration area and high turbulence of an integral emitter at the same flow rate as on line drippers, while also incorporating some of the key features of the inserted on line dripper.

Netafim™ integral drippers offer the highest clogging resistance and are technically superior from a clogging resistance perspective to all inserted on line drippers.

The hybrid feature includes a cylindrical outlet that allows for the connection of many accessories from our product range, such as “Spiders”, NetBow™, and more. This feature is especially useful for irrigation applications in greenhouses and for protected crops.



Hybrid driplines offer farmers a pre-assembled solution, saving hours of labor and reducing the need for skilled installers to obtain operational set up.

Another critical application lies in the cultivation of fruit trees, particularly in vineyards, as well as in the mining sector. In these three applications, hybrid driplines have specific utility in preventing runoff (drop migration). This is achieved by an integral dripper with a cylindrical outlet (hybrid dripline) that prevents the water drop from adhering to the surface of the drip pipe.



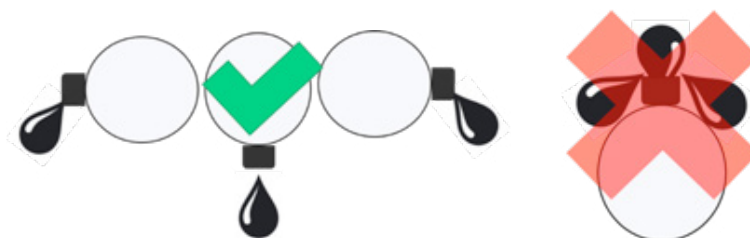
Hybrid driplines offer users a pre-assembled solution, saving hours of labor and keeping the dropping point at the required position.

Previously, the remedy for these situations involved utilizing on line drippers with cylindrical or barbed outlets, rather than those with flat outlets. This method “distanced” the droplet’s exit point from the dripline, thereby preventing the droplet from sticking to the tube’s surface. For the optimal performance, it is advised to install this type of emitter with the outlet positioned downwards.

An alternative solution involves the use of “drip-cut” rings or anti-migration clips. These devices, which can be factory-installed or, in some models, fitted in the field, are designed to intercept and reduce the flow of droplets along the tube’s surface. For optimal effectiveness, these rings should be positioned near the dripper and aligned with the slope’s direction.

Netafim’s innovative **hybrid driplines** combine the advantages of traditional irrigation systems with the innovation of integral emitters. This design optimizes water delivery, ensuring precise droplet distribution directly to the intended point, thereby meeting the specific needs of farmers (or miners) with unparalleled accuracy.

To guarantee a full separation of the drop and avoid runoff along the dripline, the cylindrical outlet should be mounted either sideways or downwards. It is crucial that this outlet is not installed facing upwards.



Given its importance in field applications, it’s crucial to determine the maximum slope at which this feature can operate effectively.

To answer this question, we conducted an extensive series of tests, allowing us to provide the following recommendations:

1. The hybrid outlet should not be installed facing upward (using the numbers of a clock as a reference, at 12). This installation will cause the droplet, or part of it, to run down the tubing.
2. Installing the emitter outlet facing downward (using the numbers of a clock as a reference, at 6), the droplet will always separate, regardless of the emitter’s flow rate.
3. If the emitter outlet were on the sides (using the numbers of a clock as reference, at 3 or 9), in this case, we must also consider the emitter’s flow rate. Emitters with flow rates up to 2.0 liters per hour will provide proper service: the droplet will completely separate from the tube even on slopes of 45 degrees. Emitters with higher flow rates, installed in this position, will cause runoff, even on shallower slopes.

NOTE

Netafim[™] recommendation is to install driplines facing upwards to prevent clogging from sedimentation, however due to the high profile of Netafim[™] driplines this allow us to allow this in other orientation to benefit from the Hybrid drop migration feature, still if we select between the orientation facing downwards is the least preferred compared to 3:00 or 9:00 clock directions.

Netafim[™] hybrid dripline superiority:

- Use the world's most clog-resistant dripper designed to work with extended spider outlets.
- Prevent non-uniform irrigation caused by drop migration.
- Reduce labor and operational complexity with a pre-assembled dripper.
- Avoid human error and leaks related to incorrect installation.

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