

Arrow on-line drippers

On-line non-pressure-compensated dripper with integrated drop-leading stake, designed for precise water delivery in pots, grow bags and container applications. Functions as a key component in multi-outlet irrigation systems, ensuring accurate and uniform water distribution at each irrigation point.



Benefits & Features

Hydraulic performance adaptability

Flow rate varies with pressure, following pressure-dependent flow characteristics that enable flexible system design under specific field conditions.

A low exponent (X) allows improved irrigation uniformity and enables longer dripline lengths under similar operating conditions.

Long-lasting, high clogging resistance

Ensures reliable performance through a self-cleaning labyrinth that continuously flushes debris during operation.

The filtration area prevents suspended particles from entering the dripper.

The TurboNet™ labyrinth features wide, deep flow passages with large cross-sections that enhance clogging resistance.

Precise water delivery

The drop-leading design directs water accurately to the root zone, improving irrigation efficiency and minimizing water losses.

Integrated stake for stable positioning

The integrated stake allows secure positioning in pots, grow bags and containers.

System integration capability

Can be connected to Netafim™ on-line drippers via barbs, manifolds or adapters, enabling pressure-compensated and anti-drain functionality when required.

Ensures uniform water distribution across multiple outlets when used as part of "Spider" irrigation systems.

Flexible configurations

Available in multiple configurations (angled, straight, with plug or splitter), allowing adaptation to a wide range of irrigation layouts and crop requirements.

Applications



Open field



Orchards



Protected crops

- Suitable for on-surface installation.
- For irrigation in greenhouses, nurseries, pots and grow bags.
- Designed for precise water delivery in multi-outlet irrigation systems.



Specifications

- Maximum operating pressure: 2.0 bar.
- Filtration requirements: A filtration grade of 130 micron / 120 mesh is recommended to ensure long-term operational reliability. When sand content exceeds 2 ppm, a Hydrocyclone must be installed upstream of the main filter. For sand/silt/clay solids above 100 ppm, apply pre-treatment in line with Netafim™ expert guidelines.
- TurboNet™ labyrinth with enhanced clogging resistance and stable hydraulic performance.
- Connectable to 3 x 5 mm micro-tubes.
- Injection-molded dripper with low coefficient of variation (CV) for reliable uniformity.
- High UV resistance and compatible with standard agricultural nutrients and fertilizers.
- Available in two colors, black and gray, the gray intended for protected crop to increase light reflection.

Assembly guidelines

When supplied as a standalone unit (not factory-connected to a micro-tube), proper assembly is essential to ensure accurate flow performance. The micro-tube must be cut cleanly and perpendicular to its axis, avoiding angled or irregular cuts. It must then be inserted fully until it reaches the internal stop (end of the dripper labyrinth). Incorrect assembly may result in flow rate variation.

Drippers technical data

Flow rate* (l/h)	Water passages dimensions width-depth-length (mm x mm x mm)	Filtration area (mm²)	Constant K	Exponent X	Recommended filtration (micron)/(mesh)
1.6**	0.83 x 0.56 x 20	9.0	0.529	0.48	130/120
2.30	0.83 x 0.84 x 20	13.0	0.761	0.48	130/120

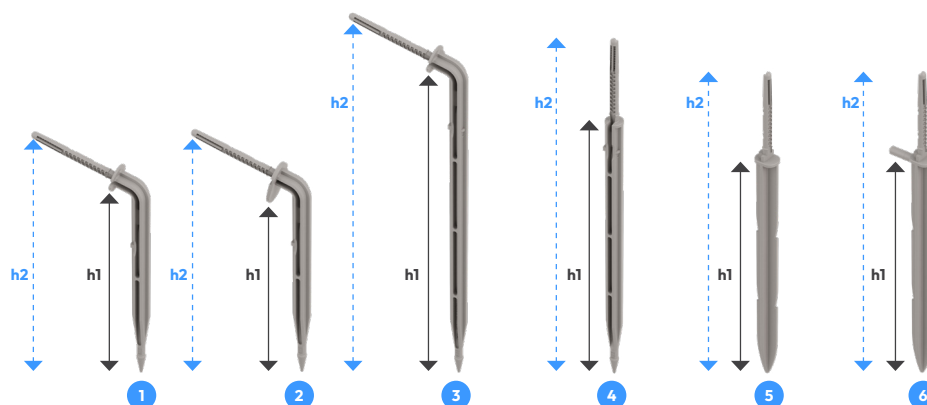
* Nominal flow rate at 1.0 bar. **Only in angled model

Both the K constant and the X exponent are fundamental hydraulic parameters used to calculate the actual flow rate of each dripper at a given operating pressure as detailed in the following pages.



Drippers models and technical data

Arrow	Model	h1 (cm)	h2 (cm)
1	Angled short	8.49	10.12
2	Angled short DS	8.49	10.12
3	Angled long	15.00	16.51
4	Straight with splitter	13.07	16.76
5	Straight	10.97	14.87
6	Straight with plug	10.97	14.87



DS - Drop Splitter. Surface drip delivery solution ideal for small plants and potted applications. Water is discharged at the surface, creating a wider initial wetting pattern.

Drippers package data (on carton box)

Model	Quantity p/box (units)	Box dimensions (cm x cm x cm)	Average* box weight (kg)	Boxes p/pallet (units)	Pallet dimensions (cm x cm x cm)	Average* pallet weight (kg)
Angled short	3000	57 x 28 x 27	5.7	32	114 x 114 x 112	192
Angled short DS	3000		6.0	32		202
Angled long	1250		4.0	32		138
Straight with splitter	2500		10.4	32		343
Straight	3000		9.8	32		324
Straight with plug	2000		5.3	32		180

*Values shown are average weights and may vary due to injection tolerances. Refer to the official Netafim™ disclaimers for details.



Catalog numbers

Catalog number 22000 - (any of the below 6 digits)

Model	Flow rate* (l/h)	1 unit	50 units/bag	100 units/bag	1000 units/box
Angled short (gray)	2.3	001500		001550	
Angled short (black)	2.3	000900	000930	000920	000940
Angled short DS (gray)	1.6	001560			
Angled short DS (black)	1.6	000950	000980	000970	000960
Angled short (black)	1.6	001250			
Angled long (gray)	2.3	001420	001440	001450	
Angled long (black)	2.3	001300	001317	001320	001350
Straight with splitter (gray)	2.3	001160	001170	001180	
Straight with splitter (black)	2.3	001100		001120	001140
Straight (gray)	2.3				
Straight (black)	2.3	001000	001020	001030	001040
Straight with plug (gray)	2.3				
Straight with plug (black)	2.3	001200	001220	001230	001245

*Nominal flow rate at 1.0 bar. **Missing catalog numbers available upon request

Drippers flow rate vs working pressure

To determine the actual flow rate of a dripper under different operating pressures, the following equation is applied:

$$Q = K \times P^X$$

Where:

Q = Dripper flow rate (liters per hour)

K = Dripper-specific flow constant (manufacturer-defined)

P = Actual working pressure (meters of water column)

X = Dripper-specific exponent (manufacturer-defined)

In accordance with ISO 9261, manufacturers must declare both the K constant and the X exponent for each dripper model.

Non-pressure-compensated drippers deliver a flow rate that varies with operating pressure, following the relationship defined by the formula presented above.

To provide a general understanding of how flow rate responds to changes in operating pressure, tables are provided showing the dripper flow rate at different working pressures for each model in this document.

Arrow drippers flow (l/h) vs pressure (bar)

Dripper	Flow rate* (l/h)	Working pressure (bar)									
		0.20	0.40	0.60	0.80	1.00	1.20	1.40	1.60	1.80	2.00
Arrow drippers	1.60	0.74	1.03	1.25	1.44	1.60	1.74	1.88	2.00	2.12	2.23
	2.30	1.06	1.48	1.80	2.06	2.30	2.51	2.70	2.88	3.05	3.21

* Nominal flow rate at 1.0 bar.