

Microdrip

Integral dripper (non-pressure-compensated) with high clogging resistance, designed for small-diameter driplines. Suitable for low-pressure drip irrigation applications starting from 0.1 bar, ideal for short fields, irrigation kits, nurseries and kitchen gardens.



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.

Optimized for small-scale applications

Small-diameter dripline design suited for short fields, irrigation kits, nurseries and kitchen gardens.

Long-lasting, high clogging resistance

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

A large filtration area prevents suspended particles from entering the dripper, maintaining dependable performance across a wide range of water quality levels.

The TurboNet™ labyrinth features wide, deep flow passages with large cross-sections that enhance clogging resistance. Water is drawn from the center of the flow stream to further minimize suspended particle ingress.

Ultra-low pressure operation

Enables effective irrigation starting from 0.1 bar (1 m head), making it ideal for gravity-fed systems supplied by tanks or barrels positioned 1.0 m or higher above the field.

Applications



Open field



Orchards



Protected crops

- Suitable for on-surface installation.
- Delivers uniform hydraulic performance on flat terrain and slightly sloping fields.
- Ideal for irrigation in seasonal vegetables or other row crops.



Specifications

- Maximum operating pressure: 4.0 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 superior hydraulic performance.
- Weldable into medium-wall driplines: 0.80 mm.
- Injection-molded dripper with very low coefficient of variation (CV) for reliable uniformity.
- High UV resistance and compatible with standard agricultural nutrients and fertilizers.
- Compliant with ISO 9261 international standards.
- Driplines are black.

Drippers technical data

Flow rate* (l/h)	Water passages dimensions width-depth-length (mm x mm x mm)	Filtration area (mm ²)	Constant K	Exponent X	Recommended filtration (micron)/(mesh)
2.00	0.63 x 0.73 x 22	22	0.647	0.49	130/120

* Nominal flow rate at 1.0 bar.

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.

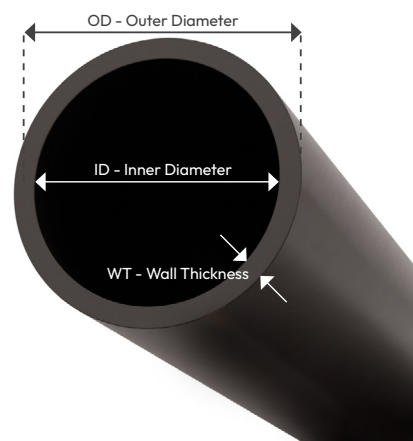


Driplines technical data

Model	Inner diameter (mm)	Wall thickness (mm)	Outer diameter (mm)	Max. working pressure (bar)	Max. flushing pressure (bar)	Kd
Microdrip 8	6.30	0.8	7.90	4.0	5.2	2.00

Kd: An integral dripper installed inside the dripline creates a localized disturbance in the water flow, generating minor head losses (Kd) as its shape and volume partially obstruct the internal flow path. The lower the Kd value for a given inner diameter, the longer the driplines can be designed under similar operating conditions.

Max. flushing pressure: The maximum permissible flushing pressures shown in the table apply to continuous flushing cycles of up to 30 minutes, with the ends of at least five driplines opened for flushing.



Driplines package data (on bundled coil)

Model	Wall thickness (mm)	Distance between drippers (m)	Coil length (m)	Average* coil weight (kg)	Coils in a 40 foot container (units)	Total in a 40 foot container (m)
Microdrip 8	0.8	0.20 to 0.50	200	3.5	1440	288000
			250	4.3	1440	360000
			300	5.2	1440	432000
			400	6.9	640	256000
			600	10.4	640	384000



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

Catalog numbers

Because of the wide range of available configurations (emitter spacings, coil lengths and additional specifications), the final catalog number must be confirmed with your local Netafim™ representative after completing the product definition.

Complete the product specification using the options provided in the following flow chart.

How to use: Select one option from each category in the chart to define the most appropriate product configuration for your application.

Product name		Flow rate (l/h)		Distance between drippers (m)		Coil length (m)
Microdrip 8	MCDRIP 8	2.0	2.00/H	0.2	0.20M	Coil length according to the values presented in the corresponding table.
				0.3	0.30M	
				0.4	0.40M	
				0.5	0.50M	
*Other distances between drippers can be ordered.						

MCDRIP 8 2.00L/H 0.30M 400M

Catalog description example

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.

Microdrip 8 flow (l/h) vs pressure (bar)

Dripper	Flow rate* (l/h)	Working pressure (bar)										
		0.10	0.20	0.40	0.60	0.80	1.00	1.20	1.40	1.60	1.80	2.00
Microdrip 8	2.00	0.65	0.91	1.28	1.56	1.79	2.00	2.19	2.36	2.52	2.67	2.81

* Nominal flow rate at 1.0 bar.

Maximum driplines length

To determine the maximum feasible run length for a given dripline, considering all hydraulic factors that influence flow within the dripline, Netafim™ uses proprietary design software based on the Darcy–Weisbach equations, supported by decades of engineering expertise and long-standing collaboration with leading academic institutions.

The precise maximum run length for any installation must be calculated using this dedicated design software, which evaluates all relevant hydraulic parameters across the system.

Minor differences may occur between design tools available on the market, due to variations in calculation methodologies and underlying design assumptions.

To calculate the maximum feasible dripline length, taking into account the required variables, such as flow rate and emitter spacing, pipe inner diameter, field slope, inlet pressure and other parameters, Netafim™ HydroCalc design software can be used.



The following tables present the maximum dripline lengths that can be used in driplines to achieve optimal performance.

The values provided here are intended to offer a preliminary reference. The actual maximum dripline length must be calculated by a hydraulic engineer responsible for designing the complete system, in order to account for additional constraints and site-specific limitations.

Max. dripline length (meters) at different slopes - 10.0% flow variation

Microdrip • ID 6.3 mm • Kd 2.00 • Flow rate 2.00 l/h • Inlet pressure 1.5 Bar

	Distance between drippers (meter)									
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
Uphill	2%	10	14	18	22	25	27	30	32	35
	1%	10	15	18	22	25	28	31	34	36
Flat terrain	0	10	15	19	23	26	29	33	35	38
Downhill	-1%	11	15	19	23	27	30	34	37	40
	-2%	11	15	20	24	28	32	35	39	42

Max. dripline length (meters) at different slopes - 10.0% flow variation

Microdrip • ID 6.3 mm • Kd 2.00 • Flow rate 2.00 l/h • Inlet pressure 0.5 Bar

	Distance between drippers (meter)									
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
Uphill	2%	9	13	16	19	20	22	24	26	27
	1%	10	14	17	20	23	25	28	30	32
Flat terrain	0	10	14	18	22	25	28	31	34	37
Downhill	-1%	11	15	19	24	27	31	34	38	41
	-2%	11	16	20	25	29	34	38	41	46

Max. dripline length (meters) at different slopes - 10.0% flow variation

Microdrip • ID 6.3 mm • Kd 2.00 • Flow rate 2.00 l/h • Inlet pressure 0.1 Bar

	Distance between drippers (meter)									
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
Uphill	2%	7	8	8	9	9	10	10	10	10
	1%	8	11	12	14	14	15	16	16	17
Flat terrain	0	10	14	17	21	23	27	30	32	34
Downhill	-1%	11	17	22	28	33	39	44	50	55
	-2%	13	20	28	12	11	10	10	10	9