Microdrip

Integral non-pressure-compensated high clogging resistant dripper. Small dripline diameter for short fields, irrigation kits, nurseries.

Small diameter

High clogging resistance

Wide filtration area

Benefits & Features

→ Economic	Small diameter that suits small farms with short laterals, irrgation kits, nurseries, and kitchen gardens.
→ High clogging resistance	Even with challenging water quality, with self-cleaning labyrinth that flushes debris throughout operation.
→ Wide filtration area	Ensures optimal performance even under harsh water conditions, preventing the entrance of sediment into the labyrinths.
→ Wide water passages	TurboNet™ labyrinth ensures wide water passages, large deep and wide cross-section that improves clogging resistance.

Specifications

- Maximum operating pressure 4.0 bar.
- Recommended filtration: 130 micron / 120 mesh. Filtration method selected based on the kind and concentration of dirt particles contained in the water. Wherever sand exceeding 2 ppm exists in the water, a Hydrocyclone should be installed before the main filter. Where sand/silt/clay solids exceed 100 ppm, pre treatment it should be applied following Netafim™ expert instructions.
- TurboNet™ labyrinth with large water passage.
- Weldable into medium wall driplines (0.80 mm).
- Injected dripper, very low CV.
- High UV resistant. Resistant to standard nutrients used in agriculture.
- Compliance ISO 9261 international standards.

→ Drippers technical data

Flow rate* (l/h)	Max. working pressure (bar)**	Water passages dimensions width-depth-length (mm)	Filtration area (mm^2)	Constant K	Exponent X	Recommended filtration (micron)/(mesh)
2.00	4.0	0.63 x 0.73 x 22	22	0.647	0.49	130/120

*Flow rate at 1.0 bar pressure

→ Driplines technical data

Model	Inside diameter (mm)	Wall thickness (mm)	Outside diameter (mm)	Max. working pressure (bar)	Max. flushing pressure (bar)	KD
Microdrip	6.30	0.80	7.90	4.0	5.2	2.00

→ 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 feet container (units)	Total in a 40 feet container (m)
Microdrip	0.80	0.20 to 0.40	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

* Calculated weight average. For further details see “Average Coil Weight Disclaimer”.

/ Drippers flow rate vs working pressure

In order to calculate the right flow rate of each dripper, under different working pressures, we use the following formula:
$Q = K * P^X$

Where:
Q = Dripper flow rate (liters/hour)
K = Constant (each dripper has his singular constant and must be defined by the dripper producer)
P = Real working pressure (meter)
X = Exponent (each dripper has its singular exponent and must be declared and defined by the dripper producer)

*ISO 9261 require from the manufacturer to declare the constant K and dripper exponent

Non-pressure-compensated drippers provide flow adequate to the pressure it is exposed to, according to the formula presented above. In order to simplify the calculations and understandings of the linkage between the flow and the pressure, a table with the flow rates at different working pressures is presented here for each of the drippers presented in this document.

Flow rate (l/h) vs pressure (bar)

8 - 0.80 mm wall thickness driplines

Flow rate* (l/h)	Pressure (bar)									
	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0
2.00	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 pressure

/ Max. lateral length

Flow Variation (FV) expresses the flow variation between the dripper “sensing” the highest pressure and the one “sensing” the lowest pressure in an irrigation block (zone).

These drippers will not always be the first and last drippers on the dripline.

FV % = $(Q_{max} - Q_{min}) / Q_{max} * 100$

*International standards define 10% flow variation to be considered as uniform irrigation.

In order to calculate the maximum run lengths that can be planned for specific dripline (considering all the hydraulic factors influencing the flow within the same dripline), we use a calculation software that was developed by Netafim™ based on Darcy-Waisbach formulas + years of design experience and cooperation with academic institutes.

All the tables presented in this document are for initial reference only; the exact run length of the driplines is obtained from design software that considers various hydraulic factors in the entire system.

There might be small variance between the different software’s in the market due to the calculation method and assumptions each software is using. For an initial estimate of the dripline length, the data that is presented in this document (within the tables shown) is sufficiently accurate.

Non-pressure-compensated drippers of Netafim™ will provide different flow according to the real working pressure, therefore, the influencing factors will be: the pressure that each dripper in the dripline is exposed to, and the allowed flow variation the dripline is designed to, which in most cases is defined as 10% difference in flow, according to the international standards, and / or any other limitation that the customer / planner will prefer to design while considering the crop needs and area topography.

The following table is only displayed at one inlet pressure, since in non-regulated drippers the flow varies according to the pressure. There might be differences in run lengths with different inlet pressures; however for an initial estimate of the dripline length, the data that is presented in this document (within the table shown) is sufficiently accurate.

Max. lateral length (meters) at different slopes - 10% flow variation

Microdrip • ID 6.3 mm • Kd 2.0 • Flow rate 2.0 l/h • Inlet pressure 1.5 Bar

	Distance between drippers (meter)										
	Slope	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
Uphill	2%	6	10	15	18	22	25	28	30	33	35
	1%	6	11	15	19	23	26	29	32	35	37
Flat terrain	0	6	11	15	19	23	26	30	34	36	39
Downhill	-1%	6	11	16	20	24	28	32	34	38	41
	-2%	6	11	16	20	25	28	32	36	40	43

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