

# Flipper Micro Sprinkler



## The most efficient frost protection for vineyards and other row orchards

### Flipper Micro Sprinkler

- Spreads water in a very long and narrow strip
- Saves up to 70% of water compared to conventional overhead systems
- Safe operation under frost conditions

# Flipper - a micro sprinkler ideal for frost protection

Flipper spreads water in an extended, narrow strip, precisely targeting vine rows for maximum effectiveness. Water savings can reach of up to 70% compared to traditional overhead systems.

As the Flipper micro sprinkler operates with large droplets, the cooling effect during system initiation is minimized. It's designed for safety and reliability, and ensures secure operation even in frost conditions. It requires low installation and pumping costs and its dry pathways not only reduce waterlogging but also facilitate immediate access for workers and equipment after operation, enhancing the overall operational efficiency.



## Technical data

	Recommended working pressure: <b>2.0-3.0 bar</b>
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	Flow rate: <b>25-45 l/h</b>
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	Filtration requirements: <b>130 microns</b>
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# Product components



## Performance table

Nozzle color	Flipper color	Flow rate (l/h) (at 2 bar)	Maximal recommended spacing (m) between flippers**
Black	Black	25*	6.0
Violet	Black	35*	7.0
Brown	Brown	43*	9.0

\* For regulated unit: 2.5-4.0 bar

\*\* When Flippers mounted 1.0 m above the target

## Amount of water (m<sup>3</sup>/ha/hr) required by flipper frost protection system\* and water saving compared to conventional 40 m<sup>3</sup>/ha/hr system

Nozzle color	Vineyard with 3.0 m row spacing	% of water saving	Vineyard with 2.5 m row spacing	% of water saving
Black	14.0	65	16.0	58
Violet	16.6	58	20.0	50
Brown	16.0	60	19.0	52

\* When Flippers are at maximal spacing, at 2 bar

## Recommended start-up temperatures for frost protection at various dew points

Dew point temp. (°C)	-9.5	-9.0	-8.5	-8.0	-7.5	-6.5	-6.0	-5.5	-5.0	-4.5	-4.0	-3.5	-3.0	-2.0	-1.5
Start-up temp. (°C)	+4.0	+4.0	+3.5	+3.5	+3.0	+3.0	+3.0	+2.0	+2.0	+1.5	+1.5	+1.0	+1.0	+0.5	+0.5

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