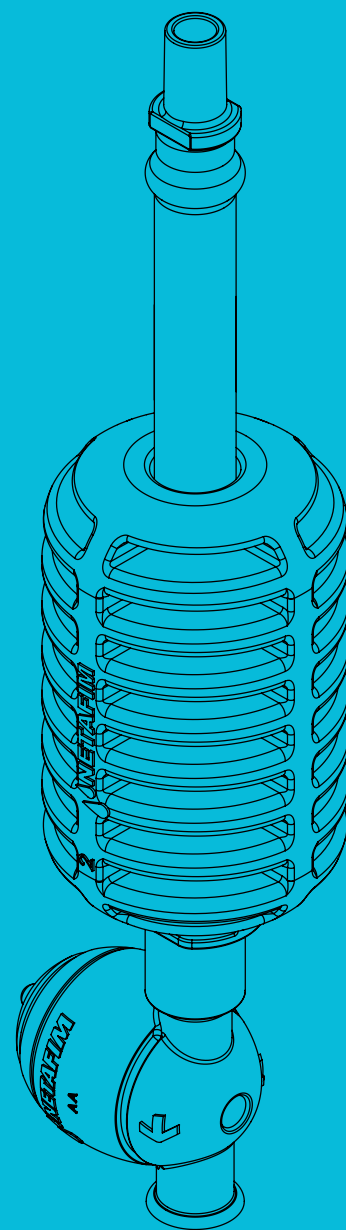


**UPSIDE-DOWN MICRO-
SPRINKLERS/EMITTERS:
SPINNET™ - SPINNET™ SD
VIBRONET™ - COOLNET PRO™**



Netafim™ micro-sprinklers/emitters have been uniquely designed for upside-down installations, and are the ideal irrigation solution for greenhouses, tunnels, nurseries and net-houses. Our products enable unprecedented watering uniformity in both standard full overlap installation and with our traditional "strip of sprinklers".

The Netafim™ versatile line of sprinklers/emitters covers a large range of applications, simplifying the design process. Whether you're designing a new application or retrofitting an existing system, our micro-sprinklers/emitters offer highly reliable solutions for all your needs.

UD MICRO-SPRINKLERS/EMITTERS, SELECTION GUIDE BY APPLICATION

	SPINNET™	SPINNET SD™	VIBRONET™	COOLNET PRO™
Full cover irrigation	√			
Double line irrigation	√			
Single line (tunnel) irrigation		√		
Germination			√	
Rooting				√
Humidification				√
Cooling				√

NETAFIM™ UD (UPSIDE DOWN) SPRINKLERS/EMITTERS

FEATURES AND BENEFITS

Drip-less micro-sprinklers/emitters - Our micro-sprinklers/emitters are constructed without a "bridge" to retain the spinner/deflector, producing a drip-less operation. Thus, plants located below the sprinklers/emitters are not damaged by water dripping off the sprinkler/emitter. Micro-sprinklers/emitters hang below the supply pipe to protect the pipe from getting wet and dripping onto the plants below.

Durability and low maintenance - All micro-sprinklers/emitters are made from the highest quality of plastics which maintain excellent durability and resistance. The integration of anti-acid plastics allows the use of acid treatments and standard agricultural chemicals and nutrients. All parts may be easily assembled and disassembled without tools.

Reliable Anti-Drain valves (AD) - The incorporation of Anti-Drain (AD) valves assembled above the sprinklers/emitters head ensures that all sprinklers/emitters start and stop simultaneously, preventing dripping onto the plants or cuttings below.

SPINNET™

Highly uniform watering

Traditional sprinkler layouts space sprinklers "head to head" or at spacing's equal to the radius of the sprinkler throw. For larger areas, patterns are overlapped.



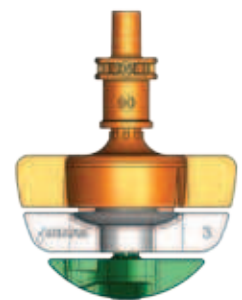
MODEL	NOZZLE CODE COLOR	WETTED DIAMETER (M.) 150 CM. ABOVE CROP 2.5 BAR PRESSURE	SWIVEL (ROTOR) CODE COLOR	WETTED DIAMETER (M.) 150 CM. ABOVE CROP 2.5 BAR PRESSURE	SWIVEL (ROTOR) CODE COLOR	WETTED DIAMETER (M.) 150 CM. ABOVE CROP 2.5 BAR PRESSURE	SWIVEL (ROTOR) CODE COLOR
50	Green	N/A	N/A	N/A	N/A	6.0	Blue
70	Black	8.0	Green	7.5	Gray	6.5	Blue
90	Orange	8.5	Green	8.5	Gray	6.5	Blue
120	Red	9.0	Green	9.0	Gray	7.0	Blue
160	Brown	9.0	Green	9.0	Gray	7.0	Blue
200	Yellow	9.5	Green	9.0	Gray	7.0	Blue

SPINNET™ SD

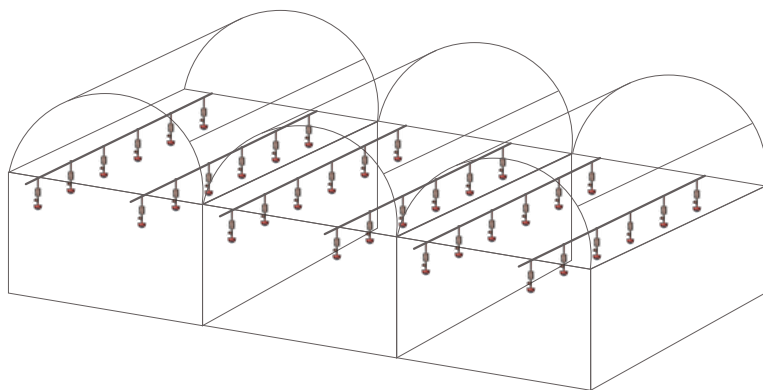
Highly uniform watering

As the SpinNet™ SD sprinklers produce a wider pattern (up to 7 meters), a single line can be used where two were once necessary. Higher levels of uniformity and efficiency are possible with single line solutions.

The SpinNet™ SD solution prevents problems of the traditional sprinkler layout and achieves a high level of uniformity within a closely spaced "strip of sprinklers". By designing with these "strips" laid out side-by-side, large areas can be covered uniformly.



MODEL	NOZZLE CODE COLOR	WETTED DIAMETER (M.) 150 CM. ABOVE CROP 2.5 BAR PRESSURE	SWIVEL (ROTOR) CODE COLOR	WETTED DIAMETER (M.) 150 CM. ABOVE CROP 2.5 BAR PRESSURE	SWIVEL (ROTOR) CODE COLOR	WETTED DIAMETER (M.) 150 CM. ABOVE CROP 2.5 BAR PRESSURE	SWIVEL (ROTOR) CODE COLOR
090/050	Orange + Orange	N/A	N/A	N/A	N/A	5.5	Blue
120/070	Red + Red	7.5	Green	7.5	Gray	6.0	Blue
160/070	Brown + Red	6.5	Green	6.0	Gray	5.5	Blue
160/090	Brown + Brown	7.0	Green	6.5	Gray	5.5	Blue
200/090	Yellow + Brown	6.5	Green	6.5	Gray	5.5	Blue
200/120	Yellow + Yellow	8.0	Green	7.5	Gray	6.5	Blue



EMITTER	LAYOUT	WORKING PRESSURE (BAR)	EMITTER FLOW RATE (L/H)	HEIGHT (M)	SPACING BETWEEN HEADS (M)	SPACING BETWEEN LINES (M.)	CU	DU	SC (5%)	PRECIPITATION (MM/H)
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Full coverage – 6.00m tunnel or greenhouse bay

SpinNet SR 120	UD-triangular	2.5	126	1.8	2.0	4.0	97%	95%	1.1	12.2
SpinNet LR 160	UD-triangular	2.5	186	1.8	3.5	2.0	97%	97%	1.0	22.9

Full coverage – 8.00m tunnel or greenhouse bay

SpinNet SR 120	UD-rectangular	2.5	126	1.8	4.0	2.0	97%	95%	1.1	12.2
SpinNet LR 160	UD-triangular	2.5	186	1.8	3.5	2.0	97%	97%	1.0	22.9

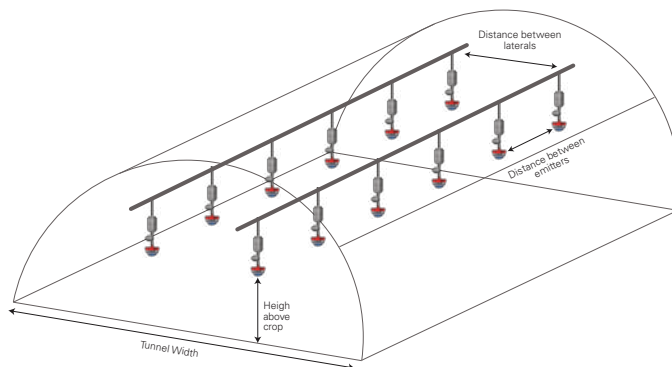
Full coverage – 10.00m tunnel or greenhouse bay

SpinNet SR 120	UD-triangular	2.5	126	1.8	4.0	3.2	97%	95%	1.1	7.6
SpinNet SR 200	UD-rectangular	2.5	210	1.8	3.0	3.2	97%	96%	1.0	17.0

Full coverage – 12.00m tunnel or greenhouse bay

SpinNet SR 120	UD-triangular	2.5	126	1.8	4.0	3.2	97%	95%	1.1	7.6
SpinNet SR 200	UD-rectangular	2.5	210	1.8	3.0	3.2	97%	96%	1.0	17.0

*Others spacings with excellent uniformity results can be achieved. For more information, please contact Netafim™ technical support.



EMITTER	LAYOUT	WORKING PRESSURE (BAR)	EMITTER FLOW RATE (L/H)	HEIGHT (M)	SPACING BETWEEN HEADS (M)	SPACING BETWEEN LINES (M.)	CU	DU	SC (5%)	PRECIPITATION (MM/H)
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Double line – 6.00m tunnel or greenhouse bay

SpinNet LR 120	UD-rectangular	2.5	126.0	180	2.0	4.5	94%	91%	1.2	11.2
SpinNet LR 120	UD-rectangular	2.5	126.0	180	1.0	4.5	95%	92%	1.1	22.4

Double line – 8.00m tunnel or greenhouse bay

SpinNet LR 200	UD-rectangular	2.0	210.0	1.8	2.6	5.5	95%	91%	1.1	10.5
SpinNet LR 200	UD-rectangular	2.0	210.0	1.8	1.6	5.5	95%	92%	1.1	17.0

Double line – 10.00m tunnel or greenhouse bay

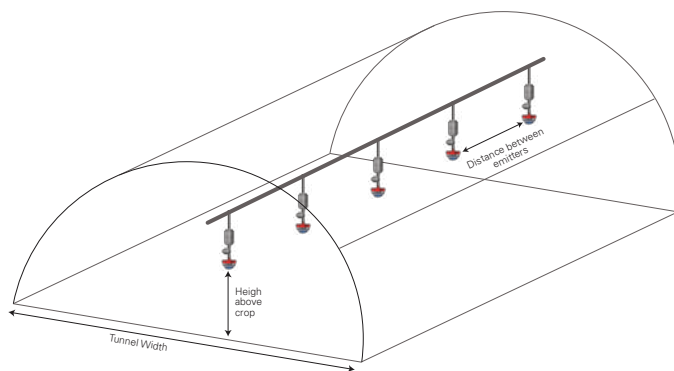
SpinNet LR 200	UD-rectangular	2.0	210.0	1.8	2.8	6.0	91%	85%	1.2	8.8
SpinNet LR 200	UD-rectangular	2.0	210.0	1.8	1.0	6.0	91%	85%	1.2	24.8

Double line – 12.00m tunnel or greenhouse bay

SpinNet SD LR 200/120	UD-rectangular	2.0	123.0	1.8	1.0	7.0	91%	91%	1.1	15.7
SpinNet SD LR 200/120	UD-rectangular	2.0	123.0	1.8	0.8	6.8	90%	90%	1.1	19.9

*Others spacings with excellent uniformity results can be achieved. For more information, please contact Netafim™ technical support.

SPINNET™ SD

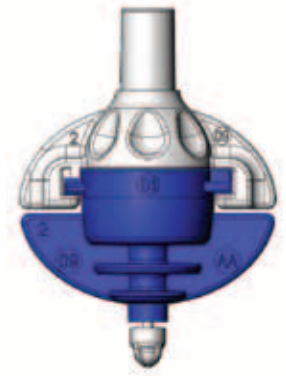


EMITTER	LAYOUT	WORKING PRESSURE (BAR)	EMITTER FLOW RATE (L/H)	HEIGHT (M)	SPACING BETWEEN HEADS (M)	AREAS WIDTH (M)	CU	DU	SC (5%)	PRECIPITATION (MM/H)	WATER % IN WETTED STRIP
Single line – 3.00m tunnel or greenhouse bay											
SpinNet SD SR 120/070	UD - single row	2.5	76.2	1.2	1.4	3.0	95%	93%	1.1	12.1	67
SpinNet SD SR 120/070	UD - single row	2.5	76.2	1.5	1.0	3.0	97%	96%	1.0	17.1	67
Single line – 4.00m tunnel or greenhouse bay											
SpinNet SD LR 120/070	UD - single row	2.5	76.2	1.2	1.0	4.0	94%	90%	1.1	11.6	61
SpinNet SD SR 160/090	UD - single row	2.5	102.0	1.5	1.0	4.0	97%	96%	1.0	20.8	82
Single line – 5.00m tunnel or greenhouse bay											
SpinNet SD LR 160/090	UD - single row	2.5	102.0	1.5	1.2	5.0	91%	87%	1.2	11.5	67
SpinNet SD SR 160/090	UD - single row	2.5	102.0	1.8	1.0	5.0	95%	90%	1.1	18	88
Single line – 6.00m tunnel or greenhouse bay											
SpinNet SD LR 160/090	UD - single row	2.5	102.0	1.5	1.2	6.0	92%	88%	1.2	11.5	81
SpinNet SD LR 160/090	UD - single row	2.5	102.0	1.5	0.8	6.0	94%	93%	1.1	17.2	81
Single line – 6.40m tunnel or greenhouse bay											
SpinNet SD LR 160/090	UD - single row	2.5	102.0	1.5	1.2	6.5	93%	88%	1.2	11.5	88
SpinNet SD LR 160/090	UD - single row	2.5	102.0	1.5	0.8	6.5	94%	93%	1.1	17.3	88
Single line – 7.00m tunnel or greenhouse bay											
SpinNet SD LR 160/090	UD - single row	2.5	102.0	1.8	1.2	7.0	91%	89%	1.1	10.7	88
SpinNet SD LR 160/090	UD - single row	2.5	102.0	1.5	0.8	7.0	93%	90%	1.1	17	93

*Others spacings with excellent uniformity results can be achieved. For more information, please contact Netafim™ technical support.

VIBRONET™

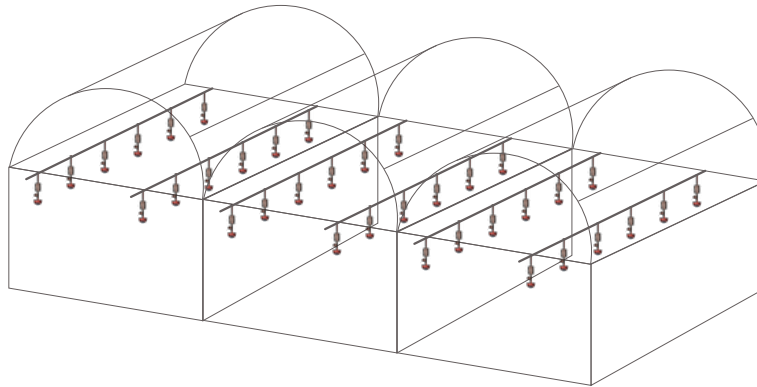
VibroNet™ are used when a light irrigation is required for germinating seeds. Excellent uniformity can be achieved with mister spacing's between 1.0 to 2.5 meters , with an elevation of 0.9 to 1.8 meter above crop.



PERFORMANCE DATA

MODEL	FLOW RATE (L/H.)*	NOZZLE CODE COLOR	PIN CODE COLOR	NOZZLE WATER PASSAGES AREA (MM2.)	RECOMMENDED WORKING PRESSURE (BAR)	K	X	WETTED DIAMETER(M.) 150 CM. ABOVE GROUND*
025	24.0	Brown	Black	0.38	3.0	5.2	0.45	3.0
040	39.7	Blue	Gray	0.60	3.0	8.6	0.45	4.0
050	47.0	Green	Gray	0.71	3.0	9.5	0.47	4.0

* at 3.0 bar working pressure



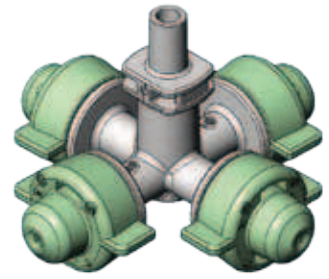
EMITTER	LAYOUT	WORKING PRESSURE (BAR)	EMITTER FLOW RATE (L/H)	HEIGHT (M)	SPACING BETWEEN HEADS (M)	AREAS WIDTH (M)	CU	DU	SC (5%)	PRECIPITATION (MM/H)
VibroNet 25 l/h.	rectangular	3.0	24.0	0.9	1.0	1.0	96%	93%	1.2	21.9
VibroNet 25 l/h.	rectangular	3.0	24.0	1.2	1.0	1.0	93%	90%	1.2	20.1
VibroNet 25 l/h.	rectangular	3.0	24.0	1.5	1.4	1.4	97%	95%	1.1	10.9
VibroNet 25 l/h.	rectangular	3.0	24.0	1.8	1.5	1.5	95%	92%	1.1	10.3
VibroNet 40 l/h.	rectangular	3.0	39.7	0.9	1.6	1.6	99%	98%	1.0	14.8
VibroNet 40 l/h.	rectangular	3.0	39.7	1.2	1.8	1.8	96%	95%	1.1	11.5
VibroNet 40 l/h.	rectangular	3.0	39.7	1.5	2.0	2.0	98%	97%	1.0	9.6
VibroNet 40 l/h.	rectangular	3.0	39.7	1.8	2.5	2.5	97%	94%	1.2	5.2
VibroNet 50 l/h.	rectangular	3.0	47.0	0.9	1.7	1.7	96%	94%	1.1	11.7
VibroNet 50 l/h.	rectangular	3.0	47.0	1.2	1.9	1.9	97%	96%	1.0	11.9
VibroNet 50 l/h.	rectangular	3.0	47.0	1.5	1.9	1.9	96%	96%	1.0	12.1
VibroNet 50 l/h.	rectangular	3.0	47.0	1.8	2.2	2.2	97%	96%	1.1	7.3

*Others spacings with excellent uniformity results can be achieved. For more information, please contact Netafim™ technical support.

COOLNET PRO™

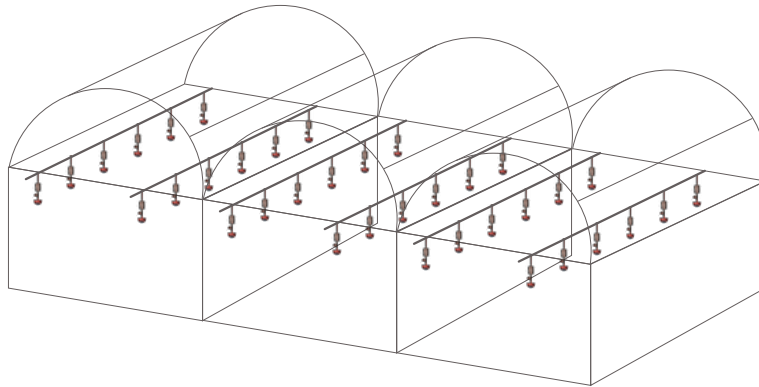
Super-fine static mister especially designed for cooling and humidifying greenhouses and livestock, and for irrigating over rooting tables.

Micro sized droplets, at a relatively low pressure of 4.0 bar the CoolNet Pro™ uniformly distributes an average drop size of 65 micron.



PERFORMANCE DATA

MODEL	NOZZLE CODE COLOR	NOZZLE SIZE (MM.)	RECOMMENDED WORKING PRESSURE (BAR)	K	X
055	Light green	0.51	4.0 to 5.0	1.03	0.45
075	Silver gray	0.61	4.0 to 5.0	1.40	0.45



COOLNET PRO™ INSTALLATION RECOMMENDATIONS

COOLNET PRO™, COOLING

Flow rate and distances between emitters:

Cross body , 4 active nozzles , 4*5.5 l/h. = 22 l/h. , each 8-10 square meters

"T" body , 2 active nozzles , 2* 5.5 l/h. = 11 l/h., each 4-5 square meters

Straight body , 1 active nozzle 5.5 l/h. , each 2-2.5 square meters

Height: As much is possible

Recommended pressure: 4.0 bar

Pulse length: 1 – 1.5 seconds

Frequency: According to climatic conditions (temperature and humidity)

COOLNET PRO™, ROOTING

Flow rate: Cross body , 4 active nozzles , 4*7.5 l/h. = 30 l/h.

Distance between emitters: 1.5 m. * 1.5 m.

Height: 1.5 meters above crop

Recommended pressure: 4.0 bar

Pulse length: 5 -10 seconds

Frequency: According to needs

COOLNET PRO™, HUMIFICATION

Flow rate: Cross body , 4 active nozzles , 4*7.5 l/h. = 30 l/h. , each 8 – 10 square meters .

Height: As much is possible

Recommended pressure: 4.0 bar

Pulse length: 3-5 seconds

Frequency: According to needs

