

AMERICAN ONSITE PRODUCTS

BIOLINE DRIP TUBING

The world's most advanced continuous self-cleaning, pressure-compensating dripperline for wastewater.



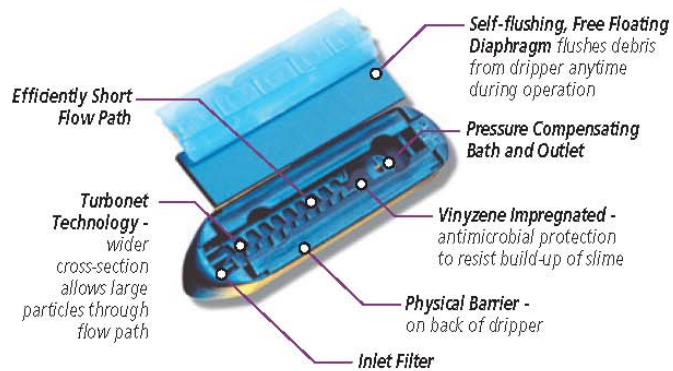
Applications

- Can be used with domestic septic tank effluent of 220/220 (ppm) BOD/TSS with proper design, filtration and operation
- Typically installed following a treatment process
- Reuse applications including municipally treated effluent designated for irrigation

Features/Benefits

- Pressure Compensation - all drippers deliver equal flow, even on sloped or rolling terrain.
- Unique Flow Path - Turbonet technology provides more control of water and a high resistance to clogging.
- Continuous Self-Flushing Dripper Design - flushes debris, as it is detected - throughout operation, not just at the beginning or end of a cycle. Ensures uninterrupted dripper operation.
- Single Hole Dripper Outlet from Tubing:
 - Better protection against root intrusion
 - Allows the dripperline to be used in subsurface applications without need for chemical protection
- Drippers Capture Water Flow From the Center of the Tubing - ensures that only the cleanest flow enters the dripper.
- Built-In Physical Root Barrier - drippers are protected from root intrusion without the need for chemical protection. Water exits dripper in one location while exiting the tubing in another.
- Three Dripper Flow Rates - provides the broadest range of flow rates available. Allows the designer to match the dripperline to any soil or slope condition.
- Bioline Tubing is Completely Wrapped in Purple - the complete tubing is purple, easily identifying it as a non-potable, regardless of how the tubing is installed.
- Vinyzene-Impregnated Drippers - prevents buildup of microbial slime.
- Can be used subsurface - Bioline can be installed on-surface, under cover or subsurface.
- No Special Storage Requirements - does not degrade if stored outdoors.
- Techfilter Compatible - an optional level of protection, provides a limited lifetime warranty against root intrusion.

EXPLODED VIEW OF BIOLINE DRIPPER



Specifications

- Dripper flow rates: 0.4, 0.6 or 0.9 GPH
 - Dripper spacings: 12", 18" or 24" dripper spacings and blank tubing
 - Pressure compensation range: 7 to 70 psi (stainless steel clamps recommended above 50 psi)
 - Maximum recommended system pressure: 50 psi
 - Tubing diameter: 0.66" OD, 0.57" ID
 - Tubing color: Purple color indicates non-potable
 - Coil lengths: 500' or 1,000' (Blank tubing in 250')
 - Recommended filtration: 120 mesh
 - Bending radius: 7"
 - UV resistant
 - Tubing material: Linear low-density polyethylene
- Additional flow, spacings, and pipe sizes available by special order. Please contact Netafim USA Customer Service for details.



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BIOLINE TECHNICAL SPECIFICATIONS

BIOLINE DOSING CHART Maximum Length (feet) of a Single Lateral

Dripper Spacing		12"			18"			24"		
Dripper Flow Rate (GPH)		0.4	0.6	0.9	0.4	0.6	0.9	0.4	0.6	0.9
Inlet Pressure (psi)	15	292	233	175	410	322	247	510	405	308
	25	397	312	238	558	438	335	660	550	423
	35	486	365	279	656	514	394	760	649	497
	45	520	407	311	732	574	439	880	725	555

Lateral lengths are calculated for operation while dosing, and allow for the pressure at the end of the dripperline to be 7 psi or greater. These data do not take scouring velocity into account.

BIOLINE FLUSHING CHART Maximum Length of a Single Lateral (feet) Allowing for 2 fps Scouring Velocity

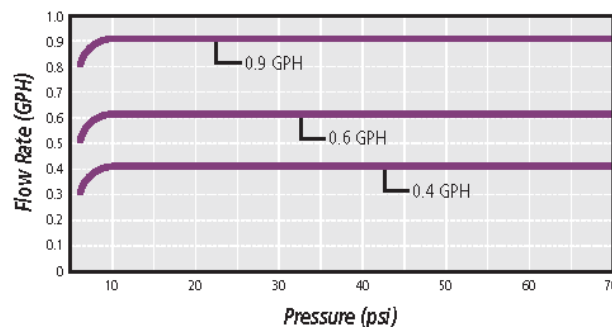
Dripper Spacing		12"			18"			24"		
Dripper Flow Rate (GPH)		0.4	0.6	0.9	0.4	0.6	0.9	0.4	0.6	0.9
Inlet Pressure (psi)	15 Inlet 8Δ	115	100	85	160	140	120	210	190	170
	25 Inlet 18Δ	200	170	140	270	230	200	360	320	280
	35 Inlet 28Δ	260	210	180	360	300	250	470	410	350
	45 Inlet 38Δ	310	250	210	420	350	290	560	490	420

Lateral lengths are calculated to achieve 2 fps scouring velocity and pressure at the distal end of the lateral to be 7 psi.

BIOLINE Flow per 100 Feet

Dripper Spacing	0.4 GPH Dripper		0.6 GPH Dripper		0.9 GPH Dripper	
	GPH	GPM	GPH	GPM	GPH	GPM
12"	40.0	0.67	61.0	1.02	92.0	1.53
18"	26.7	0.44	41.0	0.68	61.0	1.02
24"	20.0	0.34	31.0	0.51	46.0	0.77

BIOLINE Dripper Flow Rate vs. Pressure



Between 0 and 7 psi, the dripper functions as a turbulent flow emitter, ensuring that the nominal design flow is not exceeded at system start-up.

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BIOLINE TECHNICAL SPECIFICATIONS (CONT.)

BIOLINE DRIPPER OPERATION

Bioline's **continuous** self-cleaning, pressure compensating dripper is a fully self-contained unit molded to the interior wall of the dripper tubing.

As shown at right, Bioline is continuously self-cleaning during operation, not just at the beginning and end of a cycle. The result is dependable, clog-free operation, year after year.

1. Regulating mode



2. Initiation of flushing cycle



3. Flushing cycle

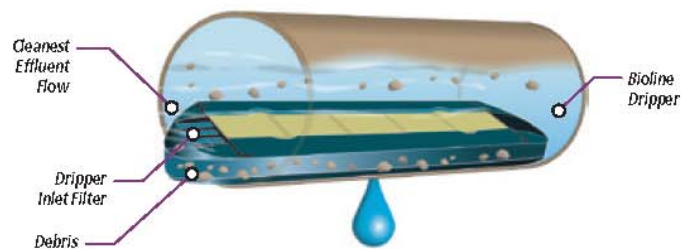


4. Regulating mode



CROSS SECTION OF BIOLINE DRIPPER

Shows how effluent enters the dripper from the center of the flow where it is the cleanest.



BIOLINE Specifying Information

SAMPLE MODEL NUMBER

A Bioline Dripperline = **08WRAM**

1 2 3

08WRAM.6-24 V

1 **Dripper Flow Rate**

0.4 GPH = .4
0.6 GPH = .6
0.9 GPH = .9

2 **Dripper Spacing**

12" = 12
18" = 18
24" = 24

3 **Coil Length**

500' = V500
1,000' = V

BLANK Tubing Model Number: 250' = 08WRAM-250

BIOLINE Ordering Information

Flow Rate	Dripper Spacing	Coil Length	Model Number
0.4 GPH	12"	1,000'	08WRAM4-12V
		500'	08WRAM 4-12V500
0.4 GPH	18"	1,000'	08WRAM4-18V
		500'	08WRAM 4-18V500
0.4 GPH	24"	1,000'	08WRAM4-24V
		500'	08WRAM 4-24V500
0.6 GPH	12"	1,000'	08WRAM 6-12V
		500'	08WRAM 6-12V500
0.6 GPH	18"	1,000'	08WRAM 6-18V
		500'	08WRAM 6-18V500
0.6 GPH	24"	1,000'	08WRAM 6-24V
		500'	08WRAM 6-24V500
0.9 GPH	12"	1,000'	08WRAM 9-12V
		500'	08WRAM 9-12V500
0.9 GPH	18"	1,000'	08WRAM 9-18V
		500'	08WRAM 9-18V500
0.9 GPH	24"	1,000'	08WRAM 9-24V
		500'	08WRAM 9-24V500
Blank Tubing 17mm		250'	08WRAM-250