

# Gravity Fed Drip Irrigation Kit

DK100-G, DK250-G, DK500-G



## Product Information

Rivulis Gravity Fed Drip Irrigation Kit is the most economical solution for small-scale plots. Three different models: 100m<sup>2</sup>, 250m<sup>2</sup> and 500m<sup>2</sup>.

All products and parts needed for installation and operation are included.

Durable multi-season brown dripline: HydroBloom 8 mm.

## Features and Benefits

- Higher yields and improved crop quality
- Precise water and fertilizer application
- Increases water use efficiency, reduces evaporation and run-off
- Excellent water distribution uniformity
- Easy installation, operation & maintenance
- Modular kit assemblies for different plot sizes
- Emitter highly resistant to clogging even in low flow rates due to:
  - Double Large Inlet Filter.
  - Large Cross Section Labyrinth.
  - Two Water Outlets Holes.
- All products and parts needed for installation and operation are included (except the water tank)

# Gravity Fed Drip Irrigation Kit

## Specifications

Drip line diameter (mm)	8
ID (mm)	6.4
Wall thickness (mil / mm)	32 / 0.81
Dripper spacing (cm)	30
Drip line color	Brown
Recommends Drip line length on flat terrain (m) with 30 cm dripper spacing	12.5

\*On Flat Terrain.

## Technical data

Pressure (water tank height)	P = 1.0 meter	P = 1.5 meter	P = 2.0 meter
Dripper flow rate (lph)	0.36	0.45	0.54
Application rate (flow rate divided by the dripper spacing) (mm/h)	1.2	1.5	1.8
Total flow rate of full plot with 1m lateral spacing – 100m <sup>2</sup> , 250m <sup>2</sup> , 500m <sup>2</sup> (lph)	120, 300, 600	150, 375, 750	180, 450, 900
Total flow rate of half plot with 1m lateral spacing - 100m <sup>2</sup> , 250m <sup>2</sup> , 500m <sup>2</sup> (lph)	60, 150, 300	75, 187.5, 375	90, 225, 450

## Calculated Irrigation Time - Example:

Pressure (water tank height)	P = 1.0 meter	P = 1.5 meter	P = 2.0 meter
Irrigation time for 5 mm/day (hours)	4.2	3.3	2.8
Irrigation time for 6 mm/day (hours)	5	4	3.3
Irrigation time for 7 mm/day (hours)	5.8	4.7	3.9

\* To calculate irrigation time per day divide required application by the plot's application rate, for example:

Crop requirement of 6 mm per day will be divided by application rate (based on the water tank height) to obtain the total number of hours required for irrigation.

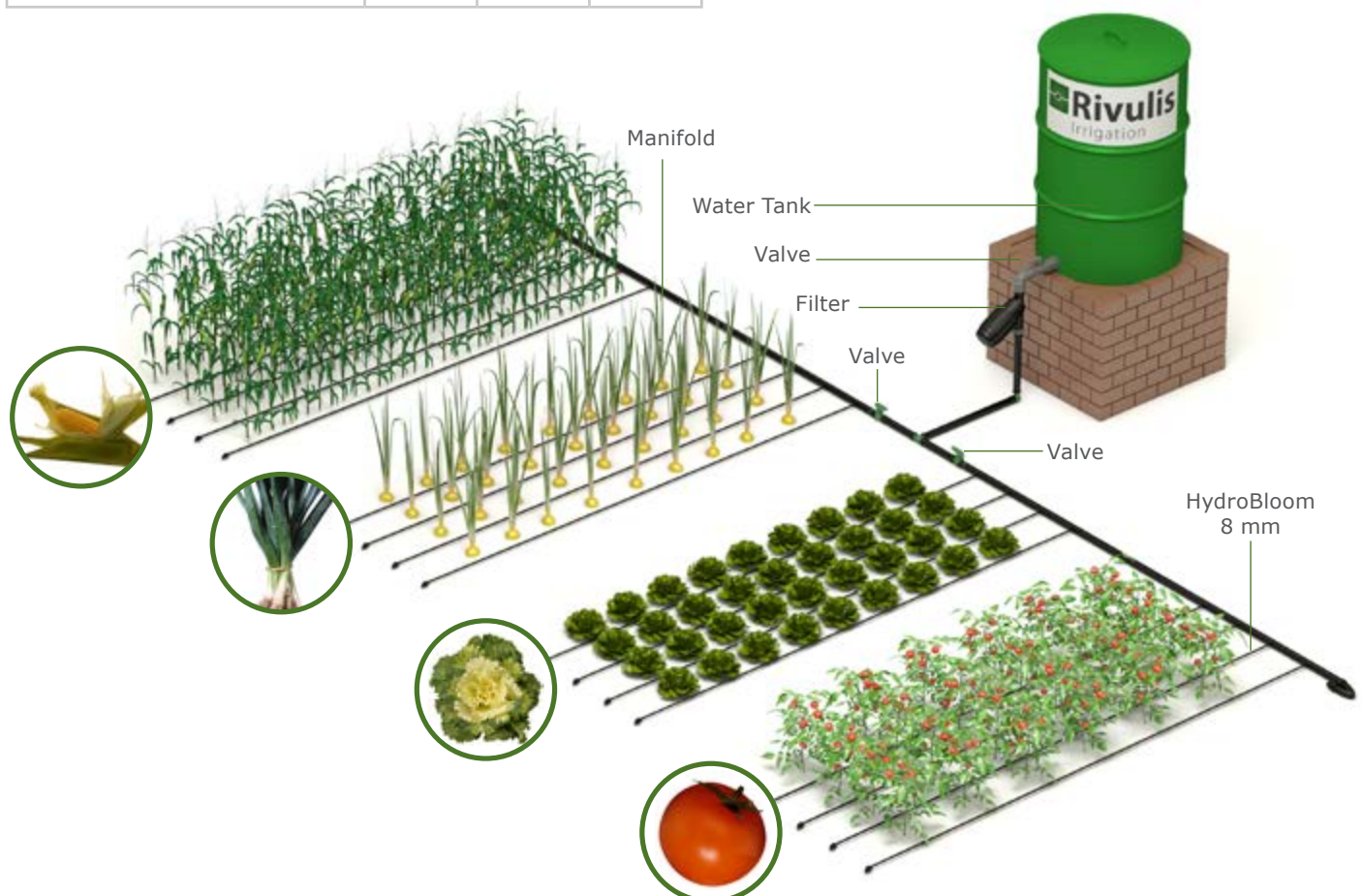
\* Hourly water amount according to the working pressures when the whole system is operated simultaneously or when the system is operated in two halves.



# Gravity Fed Drip Irrigation Kit

## Kit Components

Description	DK100-G	DK250-G	DK500-G
Water tank outlet 3/4"m	1	1	1
Plastic valve 3/4"F x 3/4"m	1	1	1
Elbow 3/4"F	1	1	1
Filter 3/4"m 100mic	1	1	1
Adaptor 20mm x 3/4"F	1	1	1
LDPE 20/2.5 Black - 15m	1		
LDPE 20/2.5 Black - 25m		1	
LDPE 20/2.5 Black - 30m			1
Barbed elbow 20mm	1	1	1
Barbed Tee 20mm	1	1	1
HydroBloom brown 8/32/1.2/0.30 -25m (2 Out)	4	10	20
Valve 20mm x 20mm	2	2	2
Coupling 8mm	20	25	30
Line end 20mm	2	2	2
Mini punch 3.7mm	1	1	1
Threaded tape (Teflon)	2	2	2
Coupling 20mm	3	4	5
Line end 8mm	20	25	30
DK-G Brush	1	1	1





# Gravity Fed Drip Irrigation Kit

## Logistic Information

Kit	DK100-G	DK250-G	DK500-G
Item code	101049411	101049412	101049413
Model kit contains	1 box + 1 LDPE roll (loose)	1 box + 1 LDPE roll (loose)	2 boxes + 1 LDPE roll (loose)
Box packaging - H x L x W (mm)	270x385 x380	490X355 X355	490X355 X355
Average box weight (kg.)	3.1	6.2	6.2
Average LDPE roll weight (kg.)	1.1	1.8	2.2
Pallet size (meter)	1.2 x 1.1	1.2 x 1.1	1.2 x 1.1
Estimated number of kits per 20' container	370	280	140
Estimated number of kits per 40' container	740	560	280
Estimated number of kits per 40'HC container	815	620	310



# Gravity Fed Drip Irrigation Kit

Instructions for installation,  
operation and maintenance

## Product Information

Rivulis Gravity Fed Drip Irrigation Kit is the most economical solution for small-scale plots.

Three different models: 100m<sup>2</sup>, 250m<sup>2</sup> and 500m<sup>2</sup>.

All products and parts needed for installation and operation are included.

Durable multi-season brown dripline: HydroBloom 8 mm.

**Gravity Drip Irrigation system is the most economical solution for small-scale growers.**

The system offers many benefits:

Higher yields and improved crop quality

Precise water and fertilizer application

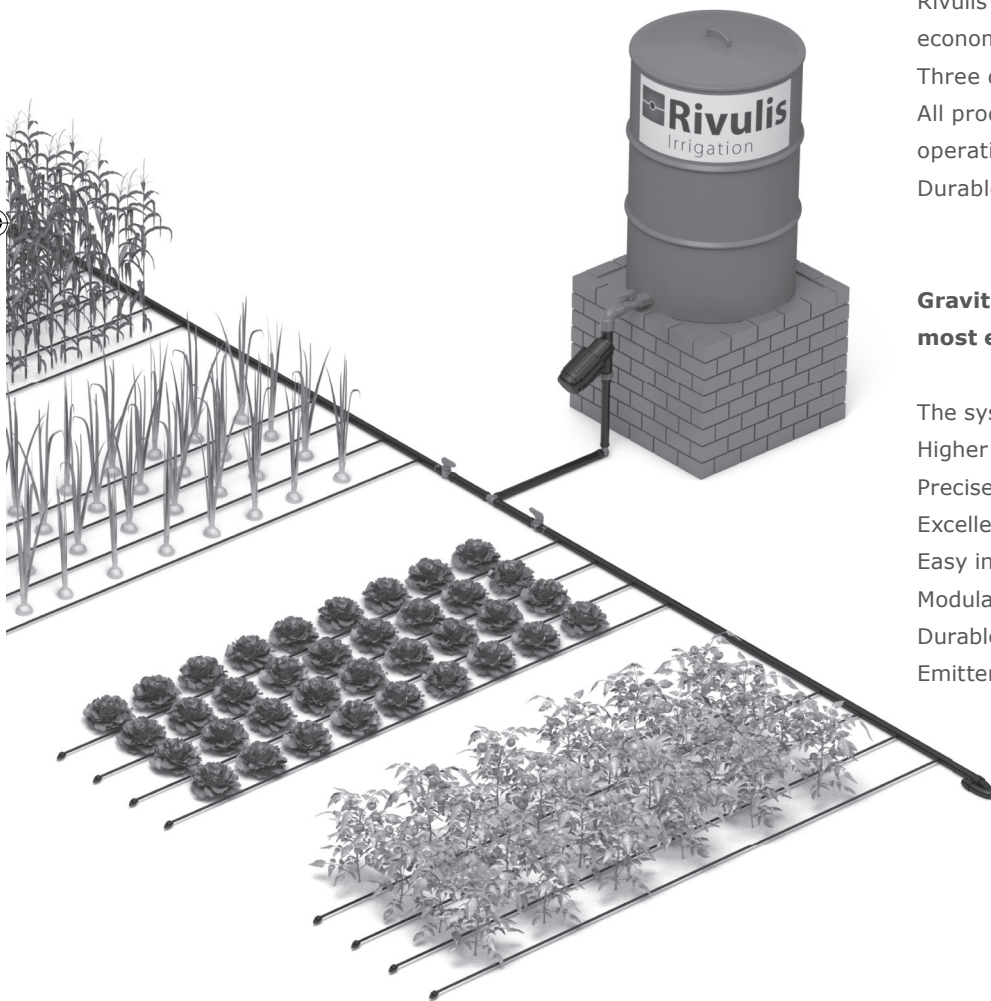
Excellent water distribution uniformity

Easy installation, operation and maintenance

Modular kit assemblies for different plot sizes

Durable multi-season dripline: Hydrogol 8

Emitter highly resistant to clogging even in low flow rates

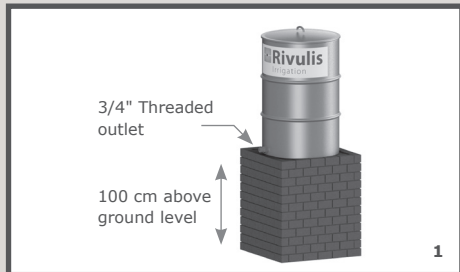


# Gravity Fed Drip Irrigation Kit

## Instructions for installation, operation and maintenance

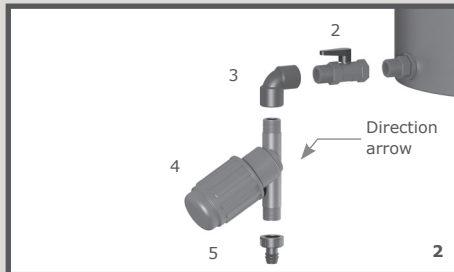
\* For the whole parts list, please see the last page.

### Step by Step Installation



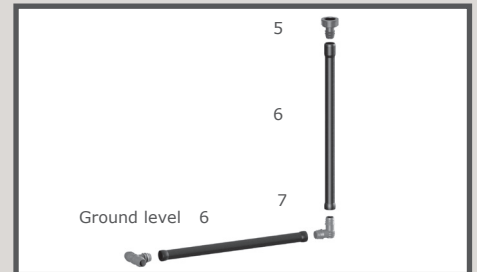
#### A

1. Prepare a water tank with cover (capacity of no less than 200 lt.) Make sure the tank is clean before connecting the system.
2. Place the 3/4" outlet (1) in the tank, 10cm above the botom.
3. Place the water tank at a height of at least 100 cm above ground level.



#### B

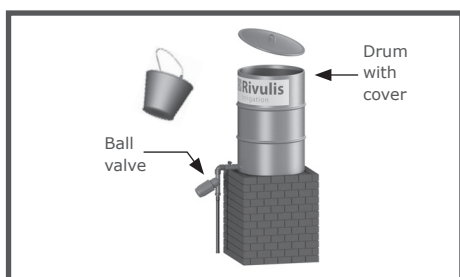
1. Connect the 3/4" ball valve (2) to the water outlet.
2. Assemble the 3/4" elbow (3) to the valve.
3. Assemble the 3/4" filter (4) to the elbow. Follow the direction arrow marked on the filter.



#### C

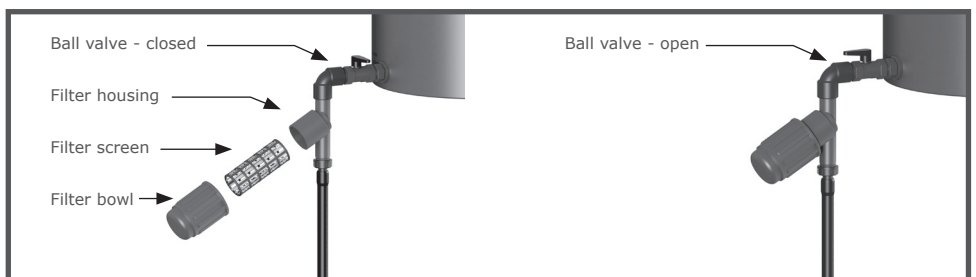
1. Attach the 20mm\*3/4" adaptor (5) to the filter.
2. Connect 20mm PE pipe (6) to the 20mm x 3/4" adaptor. Make sure it will rich the ground.
2. Attach a 20mm barbed elbow (7) to the other side of the pipe.
3. Connect another 20mm PE pipe (6) to the elbow and lay out the pipe all the way to the head of the plot.

### First operation



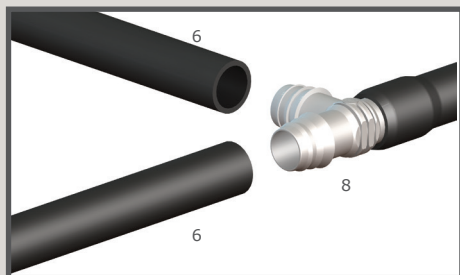
#### First operation

- I 1. Close the 3/4" ball valve.
2. Fill the water drum with clean water.



- II 1. Disassemble the filter and clean the screen with the brush (15).
2. Make sure that the filter screen is placed properly inside the filter housing.
3. Re-assemble the filter.

# Gravity Fed Drip Irrigation Kit



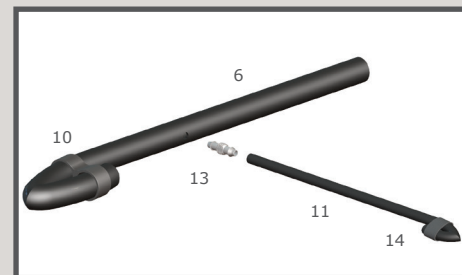
**D**

1. Insert the 20mm PE pipe (6) into a barbed tee (8).
2. Connect the 20mm PE distribution pipe (6) to both sides of the tee (8). Make sure the distribution pipe length will be according to the design.



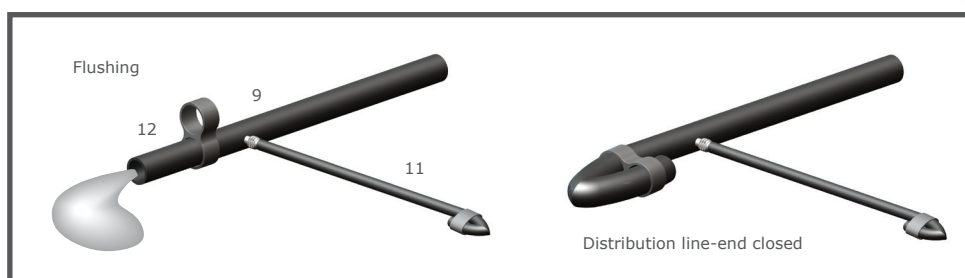
**E**

1. Cut the 20mm distribution pipe 25-30cm away from the T, both sides, and connect the 20mm valve (9).

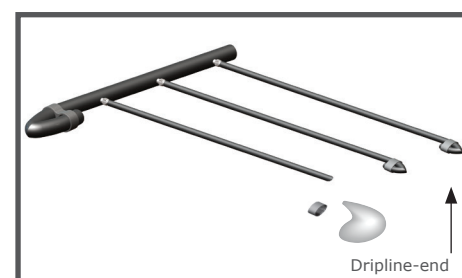


**F**

1. Close the ends of the PE pipe with 20mm line end (10).
2. Laying the 8mm dripline (11) along the bed. Max lateral length according to the design.
3. Punch 3.7mm holes with mini punch (12) in the 20mm distribution pipe in spacing of 1.0 meter, or according to row. Max holes per side according to the design.
4. Connect the 8mm coupling (13) to the 8mm dripline (11).
5. Insert the connected 8mm coupling into the 3.7mm hole in the 20mm pipe.
6. Fold and close the 8mm driplines end with a 8mm line end (14).



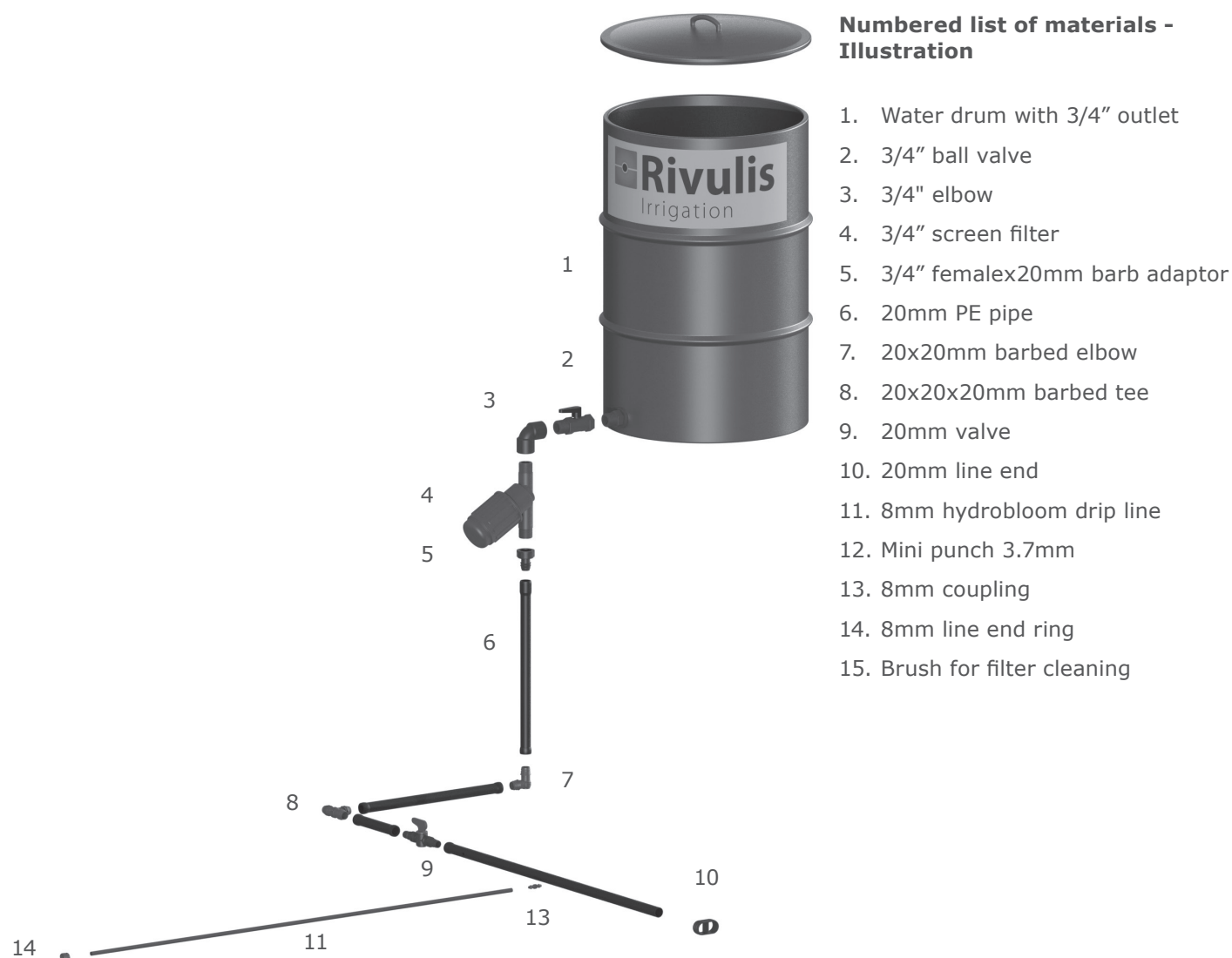
- III**
1. Open the ball valve and fill the system with water.
  2. Open one end of the 20mm distribution line and flush all debris.
  3. Reclose the distribution line with a 20mm line end (10).
  4. Open the other side of the distribution line and repeat steps 2-3.



- IV**
1. Open the dripline-end and flush the dripline, one by one.
  2. Refold and close the dripline.
  3. Repeat the same procedure with all driplines.
  4. Check the entire system and make sure it is leak-free.

Now the system is ready for start-up.

# Gravity Fed Drip Irrigation Kit



## Maintenance routine

Maintenance routine:

1. Always keep the water tank cover closed.
2. Before every irrigation cycle, make sure that the water tank is full.
3. Open the filter and wash the screen (see paragraph II - first operation).
4. Periodically, flush the distribution line and all the driplines (one by one) until the discharge water runs clean (Follow the steps in paragraphs III and IV).