

Hanging Basket Watering Systems

A Labor Saving
Drip System
for Watering
Hanging Baskets





Lower Input Costs Increases Profitability

Hanging Basket growers needing to reduce or eliminate their hand watering labor costs can install a Netafim USA SlimLine EZ Close™ system and expect a complete payback in the first season from labor cost savings.

Only SlimLine EZ Close™ assemblies combine the benefits of:

- One-hand, EZ close shut-off of individual baskets - prevents water and fertilizer spillage and waste.
- Snag-free slim design for easy retrieval from plants at harvest – no more lost weights.
- 94% flow uniformity from the first basket to the last in any system.



Actual Size

Cut Labor Costs

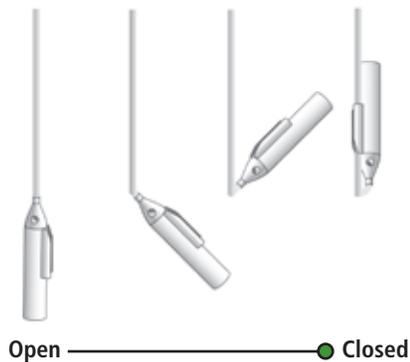
Typical labor costs for watering a hanging basket are about \$0.25 per basket each month. The Netafim solution for hanging baskets will typically pay for itself in 100 to 120 days. Use the following chart to **analyze your payback**.

Payback for Netafim Hanging Basket System

Hand Watering Schedule (<i>per plant</i>)	3 seconds once a day				
Cost per Plant for a Netafim System	\$1.00				
Labor Cost (<i>wages & benefits, per hour</i>)	\$8.00	\$9.00	\$10.00	\$12.00	\$14.00
Netafim System Payback (<i>in days</i>)	150	133	120	100	86

Easy Shut-Off

This feature allows the dripper assembly to be closed easily with one hand, preventing water and fertilizer from dripping on the plants or walkways below. With a quick glance, it's easy to see if the assembly is open or closed.





Cleaner, More Efficient Production

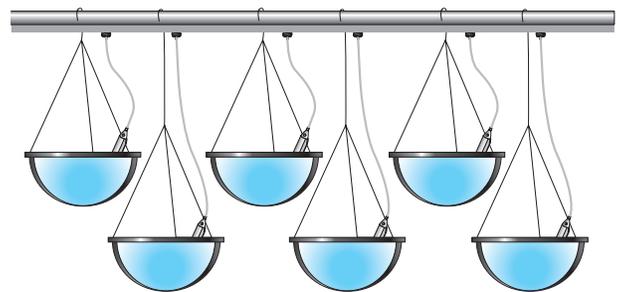
Higher Percentage of Top Quality Plants

When every plant gets precisely the same amount of water and fertilizer, exactly the amount you specify, the result is a more uniform crop.

Netafim's drippers feature both pressure compensation and a built-in check valve. This combination of features is the highest level of technology available in drippers today. It ensures that every plant will receive precisely the same amount of water and fertilizer regardless of where the plant is located within the system. Each dripper adjusts itself automatically to the system pressure, resulting in a watering uniformity of 94%. The built-in check valve assures that all the drippers will turn on at the same time (when the system is fully pressurized), and prevents the drainage of the system onto the lowest plants when the system is turned off.

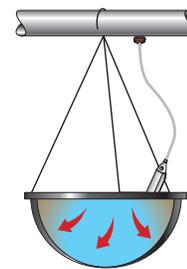
Multi-Tier Uniformity

Netafim Hanging Basket Drippers all flow precisely the same, regardless of the length of tube (unlike old generation drippers). This means that several lengths of drippers can be combined on the same line, with each dripper providing the same amount of water to both levels of baskets.

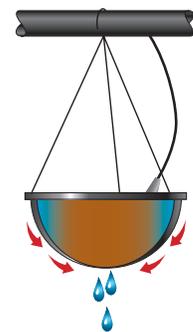


Prevent Algae Mess on Your Floor

Most old generation drippers soak the baskets to overflowing at the beginning of the line by the time the baskets at the end of the line receive adequate water. The result is both uneven watering of the plants and often a major algae mess on the floor from the overflowing baskets. One cause is the very high flow of older generation drippers (often 20 times higher than Netafim drippers). If the soil media dries a bit and shrinks away from the wall of the basket, the high flow from the old style drippers runs to the edge, into this gap and around the soil, pouring out on the plants and floor below. Netafim drippers flow slowly and uniformly, so the soil media is easily wetted without any run-off around the edges of the basket.

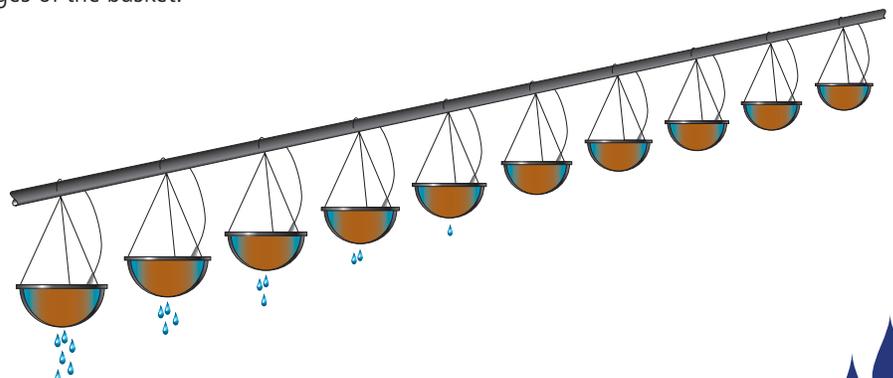


**Netafim -
Slow Flow**



**Old Generation -
High Flow**

**Old Generation -
Baskets overflowing
at beginning of
the line.**





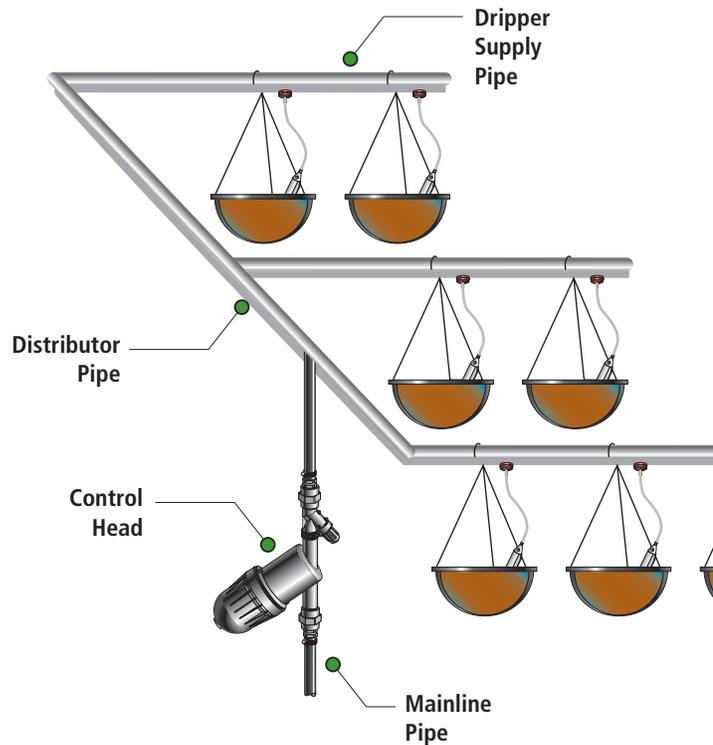
Design Help for Hanging Basket Watering Systems

Step 1 Determine the dripper supply pipe sizing.

Using the top row of the **WPCJ Dripper Supply Pipe Sizing** chart, select the dripper spacing to be used. By matching this to the length of the pipe column, the correct size Dripper Supply Pipe can be determined.

WPCJ Dripper Supply Pipe Sizing

Length of Pipe (feet)	Dripper Spacing				
	6"	12"	18"	24"	36"
50	16mm poly	16mm poly	16mm poly	16mm poly	16mm poly
100	1/2" poly	16mm poly	16mm poly	16mm poly	16mm poly
150	3/4" poly	1/2" poly	16mm poly	16mm poly	16mm poly
200	1" poly	3/4" poly	1/2" poly	16mm poly	16mm poly
250	1" poly	3/4" poly	1/2" poly	1/2" poly	16mm poly
300	1" poly	3/4" poly	3/4" poly	3/4" poly	1/2" poly
350	1" poly	3/4" poly	3/4" poly	3/4" poly	1/2" poly
400	1" poly	1" poly	3/4" poly	3/4" poly	1/2" poly



Step 2 Determine how many baskets can be watered at the same time.

Use the **Zone Flow** chart to help calculate how much water it takes to operate one zone of baskets. Select from the chart the number of baskets to be watered at the same time. Use the flow that results from this to determine the correct sizing for the pipe and control head components. Each dripper has a flow rate of 0.5 gallons per hour (GPH).

Zone Flow (GPM)

Number of Hanging Baskets	200	400	600	800	1000	1200	1400	1600	1800	2000
GPM	2	3	5	7	8	10	12	13	15	17



Step 3 *Select the distributor and mainline pipe sizes.*

Using the maximum flow demand from the largest zone or combination of zones which may be watered at the same time, you can size the Distributor and Mainline pipes from the **Distributor and Mainline Pipe Sizing** chart. Either PVC or polyethylene pipe can be used for the Distributor and Mainline. If PVC is used above ground, it should be painted to prevent light penetration, which can result in growth of algae within the pipe. This chart is appropriate for distributor lengths up to 40 feet and mainlines up to 100 feet. When slopes are a factor, when longer length pipes are needed, or for other special conditions, please consult a certified Netafim System Designer for assistance.

Distributor and Mainline Pipe Sizing

Pipe Size	Maximum GPM*
1/2"	6
3/4"	10
1"	17
1 1/4"	28
1 1/2"	37
2"	58

* Assumes class 160 PVC and 5 fps water velocity



Step 4 *Select the major system components.*

Size the Control Head (valve, filter and pressure regulator) based on the Flow Demand determined in Step 2. It is very important to recognize the minimum flow for the pressure regulator. Make sure to size the pressure regulator by determining both the minimum and the maximum number of baskets which may be watered at the same time. Use a 35 psi Low Flow Pressure Regulator with zones of 400 baskets or less. The size of the Control Head components should be determined by the flow demand and not the size of the pipe that connects to them. Mixed pipe sizes and components (e.g. 1" filter on 1 1/2" pipe) will have no negative effect on the operation of the system if properly sized by the flow demand.



Control Head Assembly Order:

1. Valve
2. Filter
3. Pressure Regulator



Valve



Filter



Pressure Regulator



Ordering Information

SlimLine EZ Close™ Weight Assemblies for hanging baskets can be ordered pre-assembled or you can build your own. Pre-assembled custom combinations are also available.



Pre-Assembled

Tube Length	Item Number	Model Number	Pack Qty
18"	40201-015402	01HBA2W-18	25
24"	40201-015403	01HBA2W-24	25
36"	40201-015405	01HBA2W-36	25
48"	40201-015406	01HBA2W-48*	25

* Assembled with WPC5 Dripper

The pre-assembled SlimLine EZ Close™ Weight assemblies include:

- 0.5 GPH WPCJ Dripper with built-in check valve
- Super Flex UV White™ PE tubing
- SlimLine EZ Close™ weight

Build Your Own

Drippers



Description	Item Number	Model Number	Bag Qty
0.5 GPH WPCJ Dripper - barbed outlet	21520-001040	01WPCJL2-B	250
1.0 GPH WPCJ Dripper - barbed outlet	21520-001440	01WPCJL4-B	
2.0 GPH WPCJ Dripper - barbed outlet	21520-001640	01WPCJL8-B	
0.5 GPH WPC Dripper - nipple outlet (for 48" assemblies)	21020-001333	WPC5-250	250

Tubing



Description	Item Number	Model Number	Pack Qty
18" Super Flex UV White™ PE Tubing (5/3mm)	40001-002800	15FPEW53-18	100
24" Super Flex UV White™ PE Tubing (5/3mm)	40001-002900	15FPEW53-24	
30" Super Flex UV White™ PE Tubing (5/3mm)	40001-003100	15FPEW53-30	
36" Super Flex UV White™ PE Tubing (5/3mm)	40001-003200	15FPEW53-36	
1,000' Coil Super Flex UV White™ PE Tubing (5/3mm)	40001-002500	15FPEW53	1

Weight



Description	Item Number	Model Number	Bag Qty
SlimLine EZ Close™ Weight (white)	00130-000033	11070085C-B	25

Accessories



Description	Item Number	Model Number	Bag Qty
3mm Punch	45000-001200	682901033	1
Goof Plug	32000-001010	1107737-B	10



System Components

Polyethylene Tubing



Description	Coil Length	Item Number	Model Number
16mm Black Polyethylene (PE) Tubing	1,000'	40510-000003	14052062
	500'	40510-000025	14052062-05
	100'	40510-000024	14052062-01
16mm UV White™ Polyethylene (PE) Tubing	500'	40510-000100	14W052062-05
18mm Black Polyethylene (PE) Tubing	1,000'	40510-000005	14060070
	500'	40510-000036	14060070-05

NOTE: Pre-punch Polyethylene Tubing also available - contact Customer Service for additional information.

Polyethylene Tubing Fittings

Description	Item Number	Model Number	Bag Qty
16mm Insert Coupling	32500-010720	H520IC-B	50
18mm Insert Coupling	32500-014215	H620IC-B	100
16mm Insert Tee	32500-011330	H520IT3-B	100
16mm Elbow Insert Connector	32500-012530	H520IE-B	100
16mm Insert Adapter 3/4" MIPT	32500-011020	H520IMA075-B	50
18mm Insert Adapter 1/2" MIPT	00115-002150	H5703414018C-B	50
16mm Figure 8 Line End	32500-013030	H620FIG8-B	100
16mm Inline Shut-off Valve	00005-008960	58ISV520	1

Valves



Description	Flow Range (GPM)	Item Number	Model Number
1" Globe Series 80 Electric Valve (12VDCL) with Aqua Pro Controller	.01-44	71610-013969	61ET1GH2-L-CONT
3/4" Globe Series 80 Electric Valve 24VAC	.01-26	71640-007355	61ET.75GH2
1" Globe Series 80 Electric Valve 24VAC	.01-44	71640-007406	61ET1GH2
1 1/2" Globe Series 80 Electric Valve 24VAC	.25-110	71640-007425	61ET1.5GH2
2" Globe Series 80 Electric Valve 24VAC	.25-176	71640-007660	61ET2GH2

NOTE: Valves also available up to 12" - contact Customer Service for additional information.

Filters



Description	Flow Range (GPM)	Item Number	Model Number
3/4" Manual Disc Filter, 120 mesh	1-12	70640-001200	25A45-120
1" Manual Disc Filter, 120 mesh	1-26	70641-001600	25A47-120
1 1/2" Super Manual Disc Filter, 120 mesh	1-52	70641-003420	25A17-120
2" Dual Manual Disc Filter, 120 mesh	1-120	70641-003640	25A30-120

NOTE: A full selection of automatic, sand, disc and screen filters are also available - contact Customer Service for additional information.

Ordering Information

System Components

Pressure Regulators



Description	Flow Range (GPM)	Item Number	Model Number
¾" Low Flow Pressure Regulator, 35 psi	.25-4.4	31000-001200	32PRV.75-LF35V2
¾" Pressure Regulator, 35 psi	45-17.7	30500-001600	32PRV.75-35V2K
1½" Pressure Regulator, 35 psi	11-35	30520-001600	32PRV1.5-35V2K
2" Pressure Regulator, 4 regulating units, 35 psi	22-70	30540-002700	32PRV2-435V2K

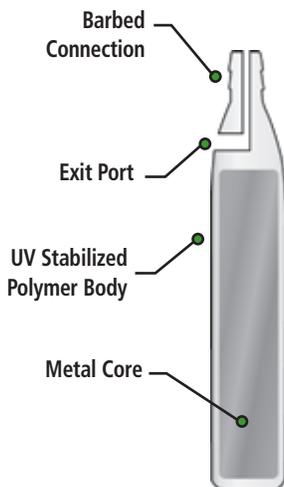
Water Meters



Description	Flow Range (GPM)	Item Number	Model Number
2" WMR Water Meter, Threaded, Standard Register	8.8-110	70261-005060	36WMR2T10
3" IRT Water Meter, Flanged, Standard Register	45-500	70261-009200	36IRT3F

NOTE: Water Meters are available up to 6" - contact Customer Service for additional information.

Specifications



Technical Specifications

Height	2 ¼"
Width	½"
Weight	11 grams (0.4 ounces)
Color	White
Connection	Fits 5/8mm tubing (0.125 I.D.) PE tubing



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