

N E T A F I M U S A

# TYPHOON™ PLUS THINWALL DRIPLINE

REVOLUTIONARY TURBUNEXT™  
TECHNOLOGY ENSURES SUPERIOR CLOG  
RESISTANCE AND UNIFORM YIELDS  
WITH ULTRA LOW-FLOW RATES



**LOOK FOR THE  
ORANGE STRIPES**



# TYPHOON™ PLUS

Netafim continues to address the changing needs of our growers and we continue to set new standards in clog resistance and enhanced performance with the all new Typhoon™ Plus thinwall driplines.

A high quality dripline for multi-season use that can be used for surface or subsurface (SDI) applications. Our newest innovation - TurbuNext™ Technology - offers a labyrinth that provides lower flow rates with a large filtration area while maximizing the internal turbulence. All this results in the durability and clog resistance growers need in challenging water conditions.

Typhoon Plus' durability and superior clog resistance allow a grower to benefit from higher and more uniform yields year after year. Optimizing results season after season means peace of mind!

New ultra-low flow rates (the lowest in the industry) mean a grower can use longer lateral lengths and fewer submain pipes which results in up to 15% savings on irrigation system costs (materials and labor).

It's time to see a faster return on your investment and Typhoon Plus thinwall driplines will help you do it!

- **LONGEVITY = PROFITS**

The ability to use Typhoon Plus for multi-season applications means a smaller initial investment and a faster return with higher, more uniform yields.

- **LOWER FLOW RATES = LOWER COSTS**

All new lower flow rates allow longer lateral lengths, less submain pipes and connectors ultimately saving on system and labor costs.

- **OUTSTANDING PERFORMANCE**

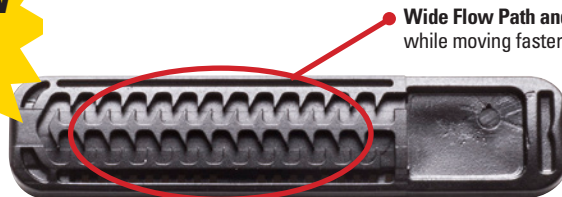
The TurbuNext dripper labyrinth moves the debris out of the dripper preventing clogging so you won't have to worry about system performance.



**SAVE  
15%  
ON IRRIGATION  
SYSTEM COSTS**

**ULTRA LOW  
FLOW RATES  
STARTING AT  
0.11 GPH**

## TYPHOON PLUS DRIPPER FEATURING TURBUNEXT™



**Wide Flow Path and Angled Teeth** - maximizes water flow velocity while moving faster through the dripper to eliminate clogging.

### **Innovative Labyrinth Passage**

Our patented labyrinth water passage maintains a unique geometric tooth-shaped structure that increases turbulence, enabling the creation of wider, deeper and shorter passages.

## PRODUCT ADVANTAGES

- Seamless construction and injection molded drippers provide strength and durability.
- Fortifies against splitting or bursting under high pressures required for proper flushing.
- Industry's lowest filtration requirement - 80 mesh for 0.36 and 0.49 GPH drippers.
- Driplines packaged with more feet per reel, the industry's longest, requiring fewer fittings and less time changing reels during installation.
- Flap outlet prevents soil ingestion and root intrusion.



## OPEN FIELD ROW CROPS - ON SURFACE OR SUBSURFACE (SDI)

Typhoon Plus is the ideal solution for multi-season crops such as processing tomatoes, fruits, vegetables, corn, soybeans and many others.

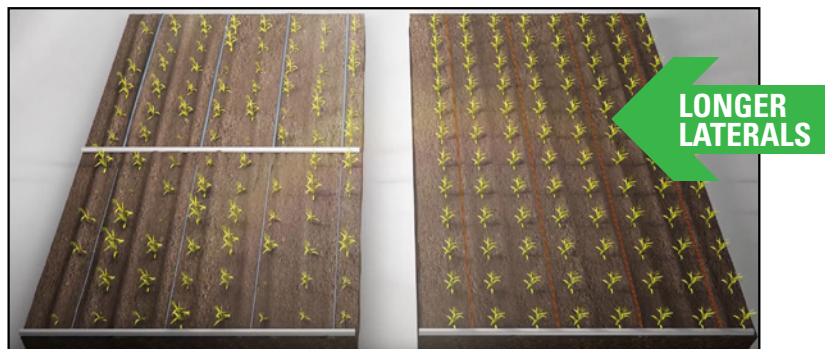


### HIGHER AND MORE UNIFORM YIELD SEASON AFTER SEASON

With Netafim's proven dripper technology which provides the ultimate in clog resistance, you can be confident that your system is operating accurately and efficiently - day after day, year after year.

### LOWER FLOW RATE AND LONGER LATERALS

The ultra-low flow rate enables a grower to install longer row lengths reducing the amount and cost for additional irrigation equipment such as submains, fittings and accessories.



#### TYPHOON PLUS 638 SERIES

- **8 mil** - seasonal or multi-seasonal use, surface or shallow burial (up to 8")
- **10 mil** - multi-seasonal use, surface or shallow burial (up to 10"), rocky or clod soils
- **13/15 mil** - sub-surface use where durability is needed with deep burial (up to 24")

#### TYPHOON PLUS 875 SERIES

- **8 mil** - seasonal or multi-seasonal use, surface or shallow burial (up to 8")
- **10 mil** - multi-seasonal use, surface or shallow burial (up to 10"), retrieval or reuse
- **13 mil** - sub-surface durable protection against rocks and insect intrusion with deep burial (up to 24")
- **15 mil** - multi-seasonal use subsurface (not recommended for surface use)

#### TYPHOON PLUS 990 SERIES

- **13/15 mil** - sub-surface durable protection against rocks and insect intrusion with deep burial (up to 24")

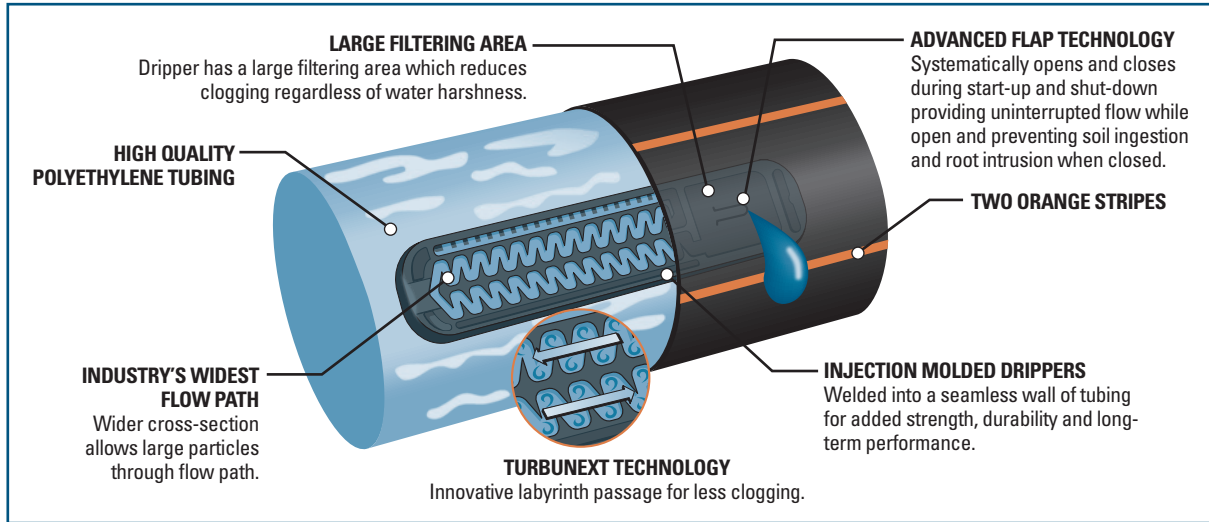
#### TYPHOON PLUS 1 1/8 SERIES

- **13/15 mil** - sub-surface durable protection against rocks and insect intrusion with deep burial (up to 24")

#### TYPHOON PLUS 1 3/8 SERIES

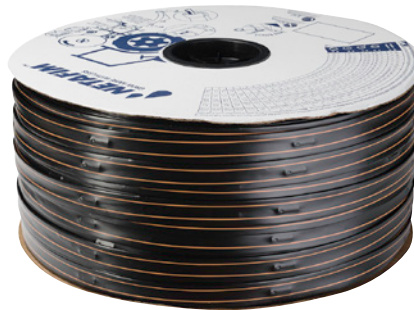
- **15 mil** - sub-surface durable protection against rocks and insect intrusion with deep burial (up to 24")

# TECHNICAL INFORMATION



## MAXIMUM PRESSURE RANGES

WALL THICKNESS	OPERATING (psi)	FLUSHING (psi)
638 SERIES 8 MIL	15	21.8
638 SERIES 10 MIL	17	26.1
638 SERIES 13 MIL	26	39.2
638 SERIES 15 MIL	32	47.9
875 SERIES 8 MIL	12	17.4
875 SERIES 10 MIL	15	21.8
875 SERIES 13 MIL	22	32.7
875 SERIES 15 MIL	26	39.2
990 SERIES 13 MIL	17	26.1
990 SERIES 15 MIL	20	30.5
1 1/8 SERIES 13 MIL	16	24.0
1 1/8 SERIES 15 MIL	17	26.0
1 3/8 SERIES 15 MIL	17	25.5



**LOOK FOR THE ORANGE STRIPES**

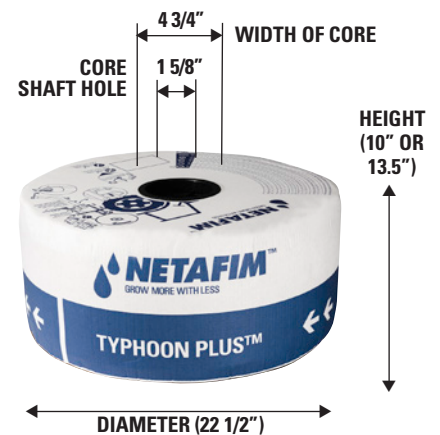
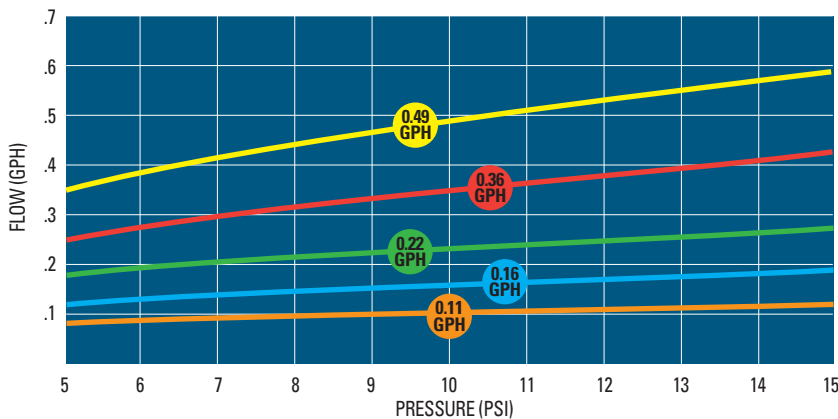
**NETAFIM**



## SPECIFICATIONS

TYPHOON PLUS SERIES	WALL THICKNESS (MIL)	INSIDE DIAMETER	NOMINAL FLOW RATES GPH @ 10 psi
638 SERIES	8, 10, 13, 15	0.638"	0.11, 0.16, 0.22, 0.36, 0.49
875 SERIES	8, 10, 13, 15	0.875"	0.11, 0.16, 0.22, 0.36, 0.49
990 SERIES	13, 15	0.990"	0.11, 0.16, 0.22, 0.36, 0.49
1 1/8 SERIES	13, 15	1.125"	0.11, 0.16, 0.22, 0.36, 0.49
1 3/8 SERIES	15	1.375"	0.11, 0.16, 0.22, 0.36, 0.49

## FLOW RATE VS. PRESSURE



# TECHNICAL INFORMATION

## PACKAGING DATA

WALL THICKNESS	REEL LENGTH > 12" SPACING	REEL LENGTH < 12" SPACING	REEL WEIGHT > 12" SPACING	REEL WEIGHT < 12" SPACING	REELS PER PALLET	REEL HEIGHT
638 SERIES 8 MIL	8,200'	8,000'	60 LBS.	59 LBS.	16	10"
638 SERIES 10 MIL	6,600'	6,300'	59 LBS.	58 LBS.	16	10"
638 SERIES 13 MIL	5,300'	5,000'	58 LBS.	58 LBS.	16	10"
638 SERIES 15 MIL	4,300'	4,000'	57 LBS.	58 LBS.	16	10"
875 SERIES 8 MIL	6,200'	6,000'	61 LBS.	59 LBS.	16	10"
875 SERIES 10 MIL	5,000'	4,600'	60 LBS.	57 LBS.	16	10"
875 SERIES 13 MIL	3,600'	3,600'	60 LBS.	59 LBS.	16	10"
875 SERIES 15 MIL	3,300'	3,300'	60 LBS.	61 LBS.	16	10"
990 SERIES 13 MIL	3,300'	3,000'	60 LBS.	55 LBS.	16	10"
990 SERIES 15 MIL	3,000'	3,000'	60 LBS.	60 LBS.	16	10"
1 1/8 SERIES 13 MIL	3,300'	-	58 LBS.	-	16	10"
1 1/8 SERIES 15 MIL	2,700'	-	64 LBS.	-	16	10"
1 3/8 SERIES 15 MIL	2,700'	-	77 LBS.	-	12	13 1/2"

REEL DIAMETER: 22 1/2" for all Sizes

CORE SHAFT HOLE: 1 5/8" for all Sizes

WIDTH OF CORE: 4 3/4" for all Sizes

Weights are approximate. When calculating pallet weight, include 45 lbs. for the weight of pallet. Reels per pallet are for standard reel lengths only. Length of reels and reels per pallet may change for custom reel lengths.

## DRIPPER DATA - CONSTANT, EXPONENT, KD AND CV ALL TYPHOON PLUS SERIES

FLOW RATE @ 10 PSI	CONSTANT	EXPONENT	KD 638 SERIES	KD 875 SERIES	KD 990 SERIES	KD 1 1/8 & 1 3/8 SERIES	CV
0.11 GPH	0.0397	0.45	0.1	0.02	0.01	0.01	0.025
0.16 GPH	0.0555	0.45	0.1	0.02	0.01	0.01	0.025
0.22 GPH	0.0793	0.45	0.1	0.02	0.01	0.01	0.025
0.36 GPH	0.1269	0.45	0.1	0.02	0.01	0.01	0.025
0.49 GPH	0.1745	0.45	0.1	0.02	0.01	0.01	0.025



### FILTRATION REQUIREMENT

DRIPPER FLOW RATE	FILTRATION MESH
0.11 GPH	120
0.16 GPH	120
0.22 GPH	120
0.36 GPH	80
0.49 GPH	80

### DRIPPER FLOW CODE

DRIPPER FLOW RATE	DRIPPER FLOW CODE
0.11 GPH	.1
0.16 GPH	.16
0.22 GPH	.2
0.36 GPH	.4
0.49 GPH	.5

### DRIPPER FLOW PATH DIMENSIONS

DRIPPER FLOW RATE	LENGTH (IN.)	DEPTH (IN.)	WIDTH (IN.)
0.11	1.388	0.018	0.018
0.16	1.388	0.021	0.021
0.22	1.388	0.024	0.024
0.36	0.735	0.026	0.027
0.49	0.735	0.030	0.031

# ORDERING INFORMATION

## INSIDE DIAMETER

Inside Diameter	Code
.638"	638
.875"	875
.990"	990
1 1/8"	113
1 3/8"	138

## WALL THICKNESS

Wall Thickness	Code
8 mil	08
10 mil	10
13 mil	13
15 mil	15

## FLOW RATE

Flow Rate	Code
0.11 GPH	.1
0.16 GPH	.16
0.22 GPH	.2
0.36 GPH	.4
0.49 GPH	.5

## DRIPPER SPACING

Dripper Spacing	Code
8"	08
10"	10
12"	12
14"	14
16"	16
18"	18
20"	20
24"	24
27"	27
30"	30
36"	36

<b>TPF</b>	<b>638</b>	<b>08</b>	<b>.16</b>	<b>-12</b>
	<b>Inside Diameter</b>	<b>Wall Thickness</b>	<b>Flow Rate</b>	<b>Dripper Spacing</b>

## ORDERING EXAMPLE

To create the Model Number, select the appropriate codes from the options listed in the charts and insert them into the sequence. For the example above: Typhoon Plus with Flap, .638" Inside Diameter, 8 mil Wall Thickness, 0.16 GPH Flow Rate, 12" Drifter Spacing

- Model Number: **TPF63808.16-12**

**Notes:** Flow rate based on 10 psi inlet pressure  
Call Netafim Customer Service for drifter spacings not listed

# LENGTH OF RUN CHARTS

**NOTE:** Information contained in these Length of Run Charts represents single lateral uniformities only. For further detail regarding block and system uniformity, please contact your Irrigation Design Professional.

TYPHOON PLUS 638 SERIES - LENGTH OF RUN @ 0% SLOPE									
0.11 GPH DRIPPER (0.11 @ 10 psi)					0.36 GPH DRIPPER (0.36 @ 10 psi)				
DRIPPER SPACING	GPM/100 FT @ 94% EU	EMISSION UNIFORMITY (EU)			DRIPPER SPACING	GPM/100 FT @ 94% EU	EMISSION UNIFORMITY (EU)		
		94%	92%	90%			94%	92%	90%
12"	0.183	768'	925'	1,056'	12"	0.600	350'	424'	486'
14"	0.158	857'	1,031'	1,172'	14"	0.516	387'	472'	537'
16"	0.138	938'	1,131'	1,287'	16"	0.450	429'	518'	589'
18"	0.123	1,021'	1,227'	1,396'	18"	0.402	460'	561'	638'
20"	0.110	1,098'	1,320'	1,501'	20"	0.360	500'	602'	686'
24"	0.092	1,248'	1,469'	1,695'	24"	0.300	566'	681'	775'
0.16 GPH DRIPPER (0.16 @ 10 psi)					0.49 GPH DRIPPER (0.49 @ 10 psi)				
12"	0.267	610'	744'	849'	12"	0.817	282'	345'	395'
14"	0.229	687'	828'	941'	14"	0.702	317'	384'	436'
16"	0.200	753'	908'	1,033'	16"	0.613	343'	420'	496'
18"	0.179	819'	984'	1,121'	18"	0.547	378'	455'	519'
20"	0.160	876'	1,058'	1,025'	20"	0.490	404'	489'	557'
24"	0.133	997'	1,199'	1,361'	24"	0.408	457'	553'	630'
0.22 GPH DRIPPER (0.22 @ 10 psi)									
12"	0.367	479'	576'	660'					
14"	0.315	533'	642'	730'					
16"	0.275	585'	704'	800'					
18"	0.246	635'	764'	869'					
20"	0.220	683'	821'	934'					
24"	0.183	774'	930'	1,062'					

# LENGTH OF RUN CHARTS

**NOTE:** Information contained in these Length of Run Charts represents single lateral uniformities only. For further detail regarding block and system uniformity, please contact your Irrigation Design Professional.  
For length of run spacings for Typhoon Plus 1 3/8" Series, please contact Netafim Customer Service.

TYPHOON PLUS 875 SERIES LENGTH OF RUN @ 0% SLOPE				
0.11 GPH DRIPPER (0.11 @ 10 psi)				
DRIPPER SPACING	GPM/100 FT @ 94% EU	EMISSION UNIFORMITY (EU)		
		94%	92%	90%
12"	0.183	1,328'	1,601'	1,827'
14"	0.158	1,473'	1,774'	2,019'
16"	0.138	1,612'	1,939'	2,208'
18"	0.123	1,745'	2,098'	2,387'
20"	0.110	1,873'	2,252'	2,562'
24"	0.092	2,118'	2,542'	2,884'

0.16 GPH DRIPPER (0.16 @ 10 psi)				
DRIPPER SPACING	GPM/100 FT @ 94% EU	EMISSION UNIFORMITY (EU)		
		94%	92%	90%
12"	0.267	1,065'	1,287'	1,477'
14"	0.229	1,180'	1,425'	1,623'
16"	0.200	1,292'	1,556'	1,774'
18"	0.179	1,396'	1,684'	1,919'
20"	0.160	1,499'	1,806'	2,058'
24"	0.133	1,695'	2,038'	2,315'

0.22 GPH DRIPPER (0.22 @ 10 psi)				
DRIPPER SPACING	GPM/100 FT @ 94% EU	EMISSION UNIFORMITY (EU)		
		94%	92%	90%
12"	0.367	843'	1,021'	1,173'
14"	0.315	934'	1,129'	1,288'
16"	0.275	1,020'	1,233'	1,407'
18"	0.246	1,105'	1,333'	1,522'
20"	0.220	1,185'	1,430'	1,631'
24"	0.183	1,338'	1,613'	1,835'

0.36 GPH DRIPPER (0.36 @ 10 psi)				
DRIPPER SPACING	GPM/100 FT @ 94% EU	EMISSION UNIFORMITY (EU)		
		94%	92%	90%
12"	0.600	621'	768'	863'
14"	0.516	679'	834'	950'
16"	0.450	752'	909'	1,039'
18"	0.402	811'	983'	1,122'
20"	0.360	869'	1,053'	1,203'
24"	0.300	981'	1,186'	1,351'

0.49 GPH DRIPPER (0.49 @ 10 psi)				
DRIPPER SPACING	GPM/100 FT @ 94% EU	EMISSION UNIFORMITY (EU)		
		94%	92%	90%
12"	0.817	512'	623'	713'
14"	0.702	568'	689'	787'
16"	0.613	619'	752'	859'
18"	0.547	669'	812'	929'
20"	0.490	717'	869'	995'
24"	0.408	809'	979'	1,169'

TYPHOON PLUS 990 SERIES LENGTH OF RUN @ 0% SLOPE				
0.11 GPH DRIPPER (0.11 @ 10 psi)				
DRIPPER SPACING	GPM/100 FT @ 94% EU	EMISSION UNIFORMITY (EU)		
		94%	92%	90%
12"	0.183	1,663'	2,012'	2,295'
14"	0.158	1,842'	2,226'	2,539'
16"	0.138	2,011'	2,430'	2,772'
18"	0.123	2,175'	2,626'	2,995'
20"	0.110	2,333'	2,814'	3,211'
24"	0.092	2,634'	3,173'	3,609'

0.16 GPH DRIPPER (0.16 @ 10 psi)				
DRIPPER SPACING	GPM/100 FT @ 94% EU	EMISSION UNIFORMITY (EU)		
		94%	92%	90%
12"	0.267	1,337'	1,619'	1,856'
14"	0.229	1,479'	1,791'	2,044'
16"	0.200	1,617'	1,955'	2,232'
18"	0.179	1,746'	2,111'	2,410'
20"	0.160	1,872'	2,262'	2,583'
24"	0.133	2,078'	2,552'	2,924'

0.22 GPH DRIPPER (0.22 @ 10 psi)				
DRIPPER SPACING	GPM/100 FT @ 94% EU	EMISSION UNIFORMITY (EU)		
		94%	92%	90%
12"	0.367	1,062'	1,288'	1,474'
14"	0.315	1,172'	1,422'	1,624'
16"	0.275	1,280'	1,553'	1,774'
18"	0.246	1,382'	1,675'	1,915'
20"	0.220	1,483'	1,795'	2,051'
24"	0.183	1,670'	2,021'	2,304'

0.36 GPH DRIPPER (0.36 @ 10 psi)				
DRIPPER SPACING	GPM/100 FT @ 94% EU	EMISSION UNIFORMITY (EU)		
		94%	92%	90%
12"	0.600	783'	951'	1,091'
14"	0.516	866'	1,051'	1,201'
16"	0.450	944'	1,146'	1,311'
18"	0.402	1,019'	1,238'	1,415'
20"	0.360	1,092'	1,325'	1,515'
24"	0.300	1,231'	1,491'	1,702'

0.49 GPH DRIPPER (0.49 @ 10 psi)				
DRIPPER SPACING	GPM/100 FT @ 94% EU	EMISSION UNIFORMITY (EU)		
		94%	92%	90%
12"	0.817	639'	776'	895'
14"	0.702	705'	857'	979'
16"	0.613	771'	935'	1,069'
18"	0.547	830'	1,008'	1,154'
20"	0.490	890'	1,080'	1,235'
24"	0.408	1,002'	1,215'	1,386'

TYPHOON PLUS 1 1/8" SERIES LENGTH OF RUN @ 0% SLOPE				
0.11 GPH DRIPPER (0.11 @ 10 psi)				
DRIPPER SPACING	GPM/100 FT @ 94% EU	EMISSION UNIFORMITY (EU)		
		94%	92%	90%
12"	0.183	2,064'	2,500'	2,852'
14"	0.158	2,285'	2,765'	3,155'
16"	0.138	2,495'	3,018'	3,445'
18"	0.123	2,698'	3,261'	3,721'
20"	0.110	2,893'	3,494'	3,988'
24"	0.092	3,261'	3,937'	4,482'

0.16 GPH DRIPPER (0.16 @ 10 psi)				
DRIPPER SPACING	GPM/100 FT @ 94% EU	EMISSION UNIFORMITY (EU)		
		94%	92%	90%
12"	0.267	1,660'	2,014'	2,316'
14"	0.229	1,838'	2,227'	2,542'
16"	0.200	2,007'	2,430'	2,775'
18"	0.179	2,168'	2,624'	2,997'
20"	0.160	2,323'	2,812'	3,212'
24"	0.133	2,618'	3,167'	3,606'

0.22 GPH DRIPPER (0.22 @ 10 psi)				
DRIPPER SPACING	GPM/100 FT @ 94% EU	EMISSION UNIFORMITY (EU)		
		94%	92%	90%
12"	0.367	1,318'	1,601'	1,842'
14"	0.315	1,458'	1,769'	2,021'
16"	0.275	1,590'	1,930'	2,206'
18"	0.246	1,719'	2,084'	2,382'
20"	0.220	1,841'	2,232'	2,552'
24"	0.183	2,075'	2,513'	2,865'

0.36 GPH DRIPPER (0.36 @ 10 psi)				
DRIPPER SPACING	GPM/100 FT @ 94% EU	EMISSION UNIFORMITY (EU)		
		94%	92%	90%
12"	0.600	975'	1,184'	1,357'
14"	0.516	1,077'	1,308'	1,495'
16"	0.450	1,175'	1,426'	1,632'
18"	0.402	1,269'	1,540'	1,762'
20"	0.360	1,349'	1,649'	1,887'
24"	0.300	1,528'	1,856'	2,117'

0.49 GPH DRIPPER (0.49 @ 10 psi)				
DRIPPER SPACING	GPM/100 FT @ 94% EU	EMISSION UNIFORMITY (EU)		
		94%	92%	90%
12"	0.817	793'	965'	1,110'
14"	0.702	878'	1,067'	1,219'
16"	0.613	957'	1,163'	1,330'
18"	0.547	1,032'	1,256'	1,437'
20"	0.490	1,105'	1,345'	1,537'
24"	0.408	1,246'	1,511'	1,726'





# NETAFIM SYSTEM COMPONENTS

To achieve maximum performance and increase the longevity of your Typhoon Plus Thinwall Dripline and the complete irrigation system, include the following high quality Netafim system components.

## FILTERS

Many factors should be considered when selecting a filter system including: flow rate, quality of incoming and discharged water and the type of dripper - the smaller the flow path, the more critical the required filtration. Netafim offers disc, sand and screen filters to fit all applications.



**APOLLO DISC FILTER**  
Discs provide depth filtration for high flow water systems



**MANUAL DISC FILTERS**  
Discs provide depth filtration



**SAND MEDIA**  
Reliable, corrosion proof, trouble-free sand media filtration



**SCREEN FILTERS**  
Durable, reinforced stainless steel screens

## WATER METERS

Reliable and accurate Water Meters are specifically designed for irrigation systems to provide the most accurate and reliable flow readings. Water meters can be the most accurate and easiest method for measuring water flow in the pipelines and improving efficiency. Netafim offers Water Meters with and without straightening vanes and in multiple sizes.



**OCTAVE ULTRASONIC WATER METER**  
Double beam ultrasonic sensors provide highly accurate flow data



**WST WATER METER**  
Low wear, long-life impeller shaft and bearings

## VALVES

Manufactured from high quality materials, Netafim offers control valves in nylon, pvc, iron and bronze materials. They provide superior hydraulic performance and are available in multiple sizes and control functions to meet any application.



**IRON VALVES**  
Straight flow patterns for low friction loss



**SERIES 80 VALVES**  
Electric 2-Way valve with flow control



**PVC VALVES**  
High resistance to corrosive water

## AIR VENTS

Air/Vacuum Relief Air Vents ensure maximum protection of an irrigation system with proper sizing and placement. A properly vented irrigation system will extend the life of the drippers and prevent potential clogging. Netafim offers Air Vents in many styles and sizes.



**VACUUM RELIEF AND CONTINUOUS ACTING**  
Releases large volumes of air at pump and filter stations and at high elevations in the piping network



**CONTINUOUS ACTING**  
For high spots where air accumulates



**AIR/VACUUM VENT**  
For downstream of valves and at manifolds to break vacuum caused by system draining



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