



DRIP IRRIGATION

NaanDanJain's dripline technologies provide **efficient, flexible and cost-effective solutions** for a wide range of crops in diverse conditions, **tailored to varied customer** needs. The extensive product range includes pressure-compensating driplines, traditional driplines, thin-walled driplines and button drippers.

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Introduction

NaanDanJain develops, manufactures and markets the largest selection of comprehensive irrigation technologies, designed for economical and efficient water management.

With over seventy years of experience, the company operates in over 80 countries on all continents, meeting all the requirements of efficient modern irrigation. NaanDanJain's broad range of dripline technologies provides efficient, flexible and cost-effective solutions for a wide range of crops in diverse conditions, tailored to varied customer needs.

NaanDanJain's dripline range provides optimum solutions for subsurface drip irrigation, organic agriculture, greenhouse technologies, and ecological applications.

NaanDanJain's 800-hectare farm includes open fields, citrus orchards and avocado plantations that serve as a large scale testing site for the company's intensive R&D.

NaanDanJain's state-of-the-art dripline laboratory operates according to the international ISO 9001:2000 standard.



The Cascade Labyrinth

The Cascade Labyrinth signifies a breakthrough in low-volume dripline systems. The unique structure of the dripper facilitates intensified self-cleaning, preventing clogging and vastly improving durability.

ADVANTAGES

- Reliable use of low-volume drippers
- Unique self-cleaning operation
- Wider water passages
- Very high resistance to clogging
- Long-term flow accuracy and uniformity
- Longer laterals
- Lower costs per area
- Extended product life

DOUBLE FLOW SYSTEM

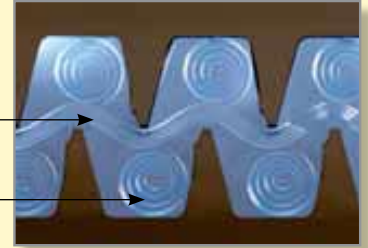
The Cascade labyrinth teeth create a double-flow regime that combines rapid central flow with cyclone turbulence, facilitating constant cleaning and flushing. This prevents clogging and improves dripper durability.

EFFICIENT SELF-CLEANING

During the self-cleaning process, dirt and sand particles that penetrate the filtration system are washed away, preventing sedimentation and clogging.

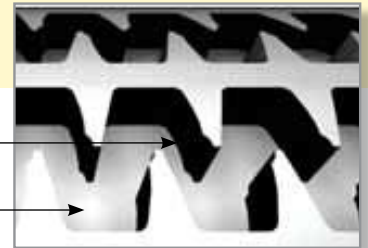
HYDRAULIC CHARACTERISTIC OF THE LABYRINTH

The regulating ratio of the Cascade labyrinth is 1:2.2 - while the pressure is doubled, the flow rate changes by only 45%.



floating tortuous stream

cyclone turbulence



unique Cascade teeth

wide water passages

Small particles penetrate the filtration system



Cyclone turbulence washes away the particles

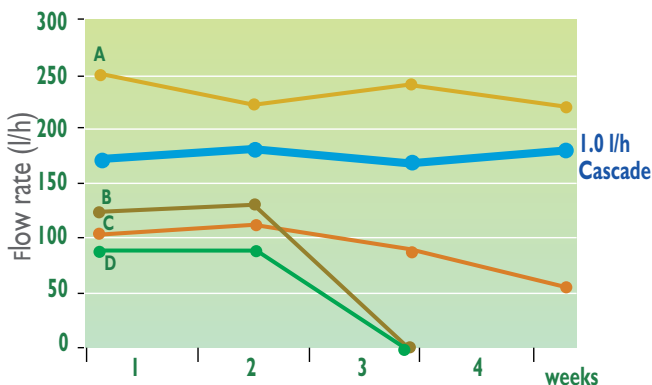


The labyrinth is cleaned



Clogging test

NaanDan Jain Cascade vs. other driplines



NaanPC



State-of-the-art cylindrical PC (Pressure-Compensating) dripper ensures highest durability and excellent performance

APPLICATIONS

- Ideal solution for irrigation in topographically challenging terrain, or where long laterals are required
- For accurate irrigation of orchards, open field crops and greenhouses

STRUCTURE AND FEATURES

- Continuous 16 mm and 20 mm polyethylene dripline with integrated pressure-compensating drippers
- Double water inlets and outlets per dripper
- New formulated silicone diaphragm ensures reliable and accurate performance with diverse water qualities, chemicals and fertilizers
- Individual double filter and flushing mechanism for maximal clog resistance and self-cleaning

NaanPC 16 mm



1.1



1.6



2.2



3.5

NaanPC 20 mm



0.9



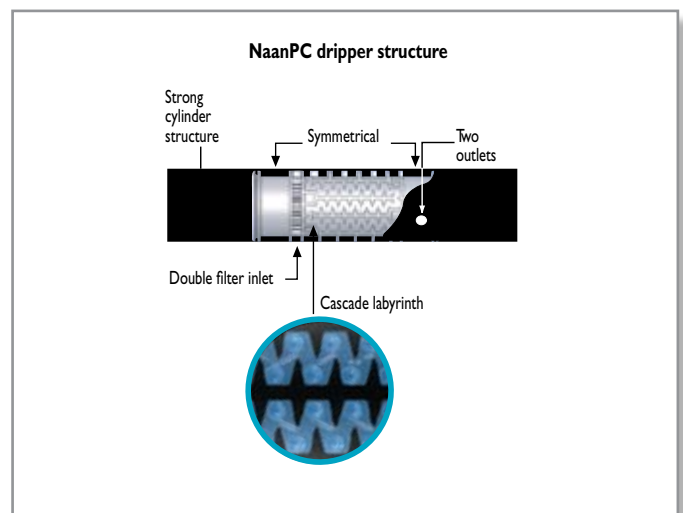
1.6



2.2



3.8



NaanPC

TECHNICAL DATA

Product name	Wall thickness (mm)	ID (mm)	OD (mm)	Nominal flow rate (l/h)	Pressure regulating range (bar)	Max pressure (bar)	Connector Type
NaanPC 16/1.1	0.90	13.9	15.7	1.2	0.5-3.0	3.0	Barb 16
	1.00		15.9	1.2	0.5-3.5	3.5	
	1.15		16.2	1.1	0.5-3.5	3.5	
NaanPC 16/1.6	0.90	13.9	15.7	1.6	0.5-3.0	3.0	
	1.00		15.9	1.6	0.5-3.5	3.5	
	1.15		16.2	1.6	0.5-3.5	3.5	
NaanPC 16/2.2	0.90	13.9	15.7	2.3	0.5-3.0	3.0	
	1.00		15.9	2.3	0.5-3.5	3.5	
	1.15		16.2	2.2	0.5-3.5	3.5	
NaanPC 16/3.5	0.90	13.9	15.7	3.5	0.7-3.0	3.0	
	1.00		15.9	3.5	0.7-3.5	3.5	
	1.15		16.2	3.5	0.7-3.5	3.5	
NaanPC light 16/1.25	0.65	13.9	15.2	1.25	0.5-2.0	2.0	Barb 16
NaanPC light 16/1.7	0.65	13.9	15.2	1.7	0.5-2.0	2.0	
NaanPC light 16/2.5	0.65	13.9	15.2	2.5	0.5-2.0	2.0	
NaanPC light 16/3.5	0.65	13.9	15.2	3.5	0.7-2.0	2.0	
NaanPC 20/0.9	1.00	17.7	19.7	0.95	0.7-3.0	3.0	Barb 20
	1.20		20.1	0.95	0.7-3.5	3.5	
NaanPC 20/1.6	1.00	17.7	19.7	1.6	0.5-3.0	3.0	
	1.20		20.1	1.6	0.5-3.5	3.5	
NaanPC 20/2.2	1.00	17.7	19.7	2.3	0.5-3.0	3.0	
	1.20		20.1	2.2	0.5-3.5	3.5	
NaanPC 20/3.8	1.00	17.7	19.7	4.0	0.5-3.0	3.0	
	1.20		20.1	3.8	0.5-3.5	3.5	



NAANPC PACKAGING AND SHIPPING

Nominal diameter (mm)	Wall thickness (mm)	Standard coil length (m)	Coils per 20 ft. container	Coils per 40 ft. container	Coils per 40 ft. HC container
16	0.65	500	145	330	350
16	0.90	400	165	350	395
16	1.00	400	165	350	395
16	1.15	400	165	350	395
20	1.00	300	120	270	300
20	1.20	300	130	290	320



NaanPC 16mm



HEAD LOSS (M) IN RELATION TO LATERAL LENGTH (M), DRIPPER FLOW RATE AND SPACING (CM)

NaanPC 16/1.1 1.2 l/h, W.T 0.9 -1.00mm ID 13.9mm
Dripper spacing (cm)

Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00
20	0.1						
40	0.7	0.3	0.1	0.1	0.1		
60	2.3	0.9	0.4	0.3	0.2	0.1	0.1
80	5.4	2	1	0.6	0.4	0.3	0.1
100	10.6	3.9	2	1.2	0.8	0.6	0.3
120	18.3	6.7	3.3	2	1.4	1	0.5
140		10.5	5.2	3.1	2.1	1.5	0.7
160		15.6	7.8	4.7	3.1	2.2	1.1
180		22	11	6.6	4.4	3.1	1.5
200			15	8.9	6	4.2	2
220			19.9	11.8	7.9	5.6	2.7
240			25.7	15.3	10.2	7.2	3.4
260				19.3	12.8	9.1	4.3
280				24	15.9	11.4	5.3
300					19.6	13.8	6.5
320					23.6	16.8	7.8
340						19.9	9.3
360						23.6	11
380							12.9
400							14.9
420							17.2
440							19.6
460							22.3
480							25.3

NaanPC 16/1.1 1.1 l/h, W.T 1.15 mm ID 13.9mm
Dripper spacing (cm)

Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00
20	0.1						
40	0.6	0.2	0.1	0.1			
60	1.9	0.7	0.4	0.2	0.2	0.1	0.1
80	4.6	1.7	0.9	0.5	0.4	0.3	0.1
100	8.9	3.3	1.6	1	0.7	0.5	0.2
120	15.4	5.6	2.8	1.7	1.1	0.8	0.4
140	24.4	8.8	4.4	2.7	1.8	1.3	0.6
160		13.1	6.6	3.9	2.6	1.9	0.9
180		18.5	9.3	5.6	3.7	2.7	1.3
200		25.4	12.7	7.6	5.1	3.6	1.7
220			16.8	10	6.7	4.8	2.2
240			21.7	12.9	8.6	6.1	2.9
260				16.3	10.9	7.7	3.6
280				20.3	13.5	9.6	4.5
300				24.9	16.5	11.7	5.5
320					19.9	14.2	6.6
340					23.7	16.9	7.9
360						20	9.3
380						23.3	10.9
400							12.6
420							14.5
440							16.6
460							18.9
480							21.4
500							24.1

NaanPC 16/1.6 1.6 l/h, W.T 0.9 -1.15 mm ID 13.9mm
Dripper spacing (cm)

Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00
20	0.2	0.1					
40	1.2	0.5	0.2	0.1	0.1	0.1	
60	4.1	1.5	0.8	0.5	0.3	0.2	0.1
80	9.7	3.5	1.8	1.1	0.7	0.5	0.3
100	18.8	6.8	3.4	2	1.4	1	0.5
120		11.7	5.8	3.5	2.4	1.7	0.8
140		18.4	9.2	5.5	3.7	2.6	1.3
160			13.6	8.1	5.4	3.9	1.8
180			19.3	11.5	7.7	5.5	2.6
200				15.6	10.4	7.4	3.5
220				20.7	13.7	9.8	4.6
240					17.8	12.5	5.9
260					22.4	15.9	7.4
280						19.8	9.2
300						24.1	11.2
320							13.5
340							16.1
360							19
380							22.2
400							25.8

NaanPC 16/2.2 2.3 l/h, W.T 0.9-1.00 mm ID 13.9mm
Dripper spacing (cm)

Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
20	0.3	0.1	0.1						
40	2.5	0.9	0.5	0.3	0.2	0.1	0.1	0.1	0.1
60	8.4	3.1	1.6	0.9	0.6	0.5	0.3	0.3	0.2
80	19.9	7.2	3.6	2.2	1.5	1	0.8	0.6	0.5
100		14	6.9	4.1	2.8	2	1.5	1.2	1
120		24	11.9	7.1	4.7	3.4	2.5	2	1.6
140			18.7	11.1	7.4	5.2	4	3.1	2.5
160				16.4	10.9	7.7	5.8	4.5	3.7
180				23.2	15.5	11	8.1	6.3	5.1
200					21	14.8	11	8.6	6.9
220						19.6	14.6	11.4	9.1
240						25.2	18.7	14.6	11.8
260							23.7	18.4	14.8
280								22.9	18.4
300									22.4

NaanPC 16/2.2 2.2 l/h, W.T 1.15 mm ID 13.9mm
Dripper spacing (cm)

Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00
20	0.3	0.1	0.1				
40	2.3	0.9	0.4	0.3	0.2	0.1	0.1
60	7.7	2.8	1.4	0.9	0.6	0.4	0.2
80	18.2	6.6	3.3	2	1.3	1	0.5
100		12.8	6.4	3.8	2.5	1.8	0.9
120		22	10.9	6.5	4.4	3.1	1.5
140			17.1	10.2	6.8	4.8	2.3
160			25.4	15.1	10	7.1	3.4
180				21.3	14.2	10.1	4.7
200					19.2	13.6	6.4
220					25.3	18	8.4
240						23.1	10.8
260							13.6
280							16.9
300							20.6
320							24.8

NaanPC 16/3.5 3.5 l/h, W.T 0.9-1.15 mm ID 13.9mm
Dripper spacing (cm)

Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00
20	0.8	0.3	0.1	0.1	0.1		
40	5.8	2.1	1.1	0.6	0.4	0.3	0.2
60	19.5	7.1	3.6	2.1	1.4	1	0.5
80		16.4	8.2	4.9	3.3	2.3	1.1
100			15.8	9.3	6.2	4.4	2.1
120				15.9	10.7	7.5	3.6
140				25.1	16.7	11.7	5.5
160					24.5	17.4	8.1
180						24.6	11.4
200							15.5
220							20.4

NaanPC Light 16mm

Combines the advantages of a PC dripper with an attractive economical solution



HEAD LOSS (M) IN RELATION TO LATERAL LENGTH (M), DRIPPER FLOW RATE AND SPACING (CM)

NaanPC Light 16/1.25 1.25 l/h, W.T 0.65 mm ID 13.9mm							
Lateral length(m)	Dripper spacing (cm)						
	0.20	0.30	0.40	0.50	0.60	0.70	1.00
20	0.1						
40	0.7	0.3	0.1	0.1	0.1		
60	2.5	0.9	0.5	0.3	0.2	0.1	0.1
80	5.9	2.2	1.1	0.7	0.5	0.3	0.2
100	11.5	4.2	2.1	1.3	0.9	0.6	0.3
120		7.2	3.6	2.2	1.5	1	0.5
140		11.3	5.7	3.4	2.3	1.6	0.8
160			8.4	5	3.4	2.4	1.1
180			11.9	7.1	4.8	3.4	1.6
200				9.7	6.5	4.6	2.2
220				12.8	8.5	6.1	2.9
240					11	7.8	3.7
260					13.9	9.9	4.6
280						12.3	5.7
300							7
320							8.5
340							10.1
360							11.9

NaanPC Light 16/1.7 1.7 l/h, W.T 0.65 mm ID 13.9mm							
Lateral length(m)	Dripper spacing (cm)						
	0.20	0.30	0.40	0.50	0.60	0.70	1.00
20	0.2	0.1					
40	1.2	0.5	0.2	0.1	0.1	0.1	
60	4.1	1.5	0.8	0.5	0.3	0.2	0.1
80	9.7	3.5	1.8	1.1	0.7	0.5	0.3
100		6.8	3.4	2	1.4	1	0.5
120		11.7	5.8	3.5	2.4	1.7	0.8
140			9.2	5.5	3.7	2.6	1.3
160				8.1	5.4	3.9	1.8
180				11.5	7.7	5.5	2.6
200					10.4	7.4	3.5
220						9.8	4.6
240						12.5	5.9
260							7.4
280							9.2
300							11.2

NaanPC Light 16/2.5 2.5 l/h, W.T 0.65 mm ID 13.9mm							
Lateral length(m)	Dripper spacing (cm)						
	0.20	0.30	0.40	0.50	0.60	0.70	1.00
20	0.4	0.1	0.1				
40	3	1.1	0.6	0.3	0.2	0.2	0.1
60	10	3.6	1.8	1.1	0.7	0.5	0.3
80		8.5	4.2	2.5	1.7	1.2	0.6
100			8.2	4.9	3.2	2.3	1.1
120				8.3	5.6	3.9	1.9
140				13	8.7	6.1	2.9
160					12.8	9.1	4.3
180						12.9	6
200							8.1
220							10.7
240							13.8

NaanPC Light 16/3.5 3.5 l/h, W.T 0.65 mm ID 13.9mm							
Lateral length(m)	Dripper spacing (cm)						
	0.20	0.30	0.40	0.50	0.60	0.70	1.00
20	0.8	0.3	0.1	0.1	0.1		
40	5.8	2.1	1.1	0.6	0.4	0.3	0.2
60		7.1	3.6	2.1	1.4	1	0.5
80			8.2	4.9	3.3	2.3	1.1
100				9.3	6.2	4.4	2.1
120					10.7	7.5	3.6
140						11.7	5.5
160							8.1
180							11.4

NaanPC 20mm



HEAD LOSS (M) IN RELATION TO LATERAL LENGTH (M), DRIPPER FLOW RATE AND SPACING (CM)

NaanPC 20/0.9 0.95 l/h, W.T 1.00-1.20mm ID 17.7mm

Lateral length(m)	Dripper spacing (cm)						
	0.20	0.30	0.40	0.50	0.60	0.70	1.00
40	0.2	0.1					
60	0.7	0.2	0.1	0.1			
80	1.5	0.6	0.3	0.2	0.1	0.1	
100	2.9	1.1	0.5	0.3	0.2	0.1	0.1
120	5	1.8	0.9	0.5	0.3	0.2	0.1
140	7.8	2.8	1.4	0.8	0.5	0.4	0.2
160	11.5	4.1	2	1.2	0.8	0.5	0.3
180	16.2	5.7	2.8	1.7	1.1	0.8	0.4
200	22	7.8	3.8	2.2	1.5	1	0.5
220		10.3	5	2.9	1.9	1.4	0.6
240		13.2	6.5	3.8	2.5	1.7	0.8
260		16.6	8.1	4.8	3.1	2.2	1
280		20.3	10.1	5.9	3.9	2.7	1.2
300		25.1	12.3	7.2	4.7	3.3	1.5
320			14.9	8.7	5.7	4	1.8
340			17.7	10.3	6.8	4.7	2.2
360			20.9	12.2	7.9	5.6	2.5
380			24.5	14.3	9.3	6.5	3
400				16.5	10.8	7.6	3.4
420				19	12.4	8.7	3.9
440				21.8	14.2	10	4.5
460				24.7	16.1	11.3	5.1
480					18.2	12.8	5.8
500					20.5	14.4	6.5

NaanPC 20/1.6 1.6 l/h, W.T 1.00-1.20mm ID 17.7mm

Lateral length(m)	Dripper spacing (cm)						
	0.20	0.30	0.40	0.50	0.60	0.70	1.00
40	0.6	0.2	0.1	0.1			
60	1.8	0.7	0.3	0.2	0.1	0.1	
80	4.1	1.5	0.7	0.4	0.3	0.2	0.1
100	7.9	2.8	1.4	0.8	0.5	0.4	0.2
120	13.4	4.8	2.3	1.4	0.9	0.6	0.3
140	21	7.4	3.7	2.1	1.4	1.0	0.5
160		11	5.4	3.1	2.1	1.5	0.7
180		15.4	7.5	4.4	2.9	2.0	0.9
200		20.9	10.2	6.0	3.9	2.7	1.3
220			13.5	7.9	5.2	3.6	1.6
240			17.3	10.1	6.6	4.6	2.1
260			21.8	12.8	8.3	5.9	2.7
280				15.8	10.3	7.3	3.3
300				19.3	12.6	8.8	4.0
320				23.2	15.2	10.7	4.8
340					18	12.6	5.7
360					21.2	14.9	6.7
380					24.9	17.4	7.9
400						20.2	9.1
420						23.3	10.5
440							12
460							13.6
480							15.4
500							17.3

NaanPC 20/2.2 2.2 l/h, W.T 1.00-1.20mm ID 17.7mm

Lateral length(m)	Dripper spacing (cm)							
	0.2	0.3	0.4	0.5	0.6	0.7	1.0	
40	1.0	0.4	0.2	0.1	0.1	0.1		
60	3.3	1.2	0.6	0.3	0.2	0.2	0.1	
80	7.6	2.7	1.3	0.8	0.5	0.4	0.2	
100	14.5	5.2	2.5	1.5	1.0	0.7	0.3	
120	24.6	8.8	4.3	2.5	1.7	1.2	0.5	
140		13.6	6.7	3.9	2.6	1.8	0.8	
160		20.1	9.8	5.7	3.8	2.6	1.2	
180			13.8	8.1	5.3	3.7	1.7	
200			18.7	10.9	7.2	5.0	2.3	
220			24.6	14.4	9.4	6.6	3.0	
240				18.5	12.1	8.4	3.8	
260				23.3	15.2	10.7	4.8	
280					18.8	13.2	6.0	
300					23.0	16.1	7.3	
320						19.4	8.7	
340						23.0	10.4	
360							12.3	
380							14.3	
400							16.6	
420							19.1	
440							21.8	
460							24.7	

NaanPC 20/3.8 3.8 l/h, W.T 1.00-1.20mm ID 17.7mm

Lateral length(m)	Dripper spacing (cm)						
	0.2	0.3	0.4	0.5	0.6	0.7	1.0
40	2.9	1.0	0.5	0.3	0.2	0.1	0.1
60	9.3	3.4	1.7	1.0	0.6	0.4	0.2
80	21.5	7.6	3.7	2.2	1.4	1.0	0.5
100		14.6	7.1	4.2	2.7	1.9	0.9
120		24.7	12.0	7.0	4.6	3.2	1.5
140			18.8	11.0	7.2	5.0	2.3
160				16.1	10.5	7.4	3.4
180				22.6	14.8	10.4	4.7
200					20.0	14.0	6.4
220						18.5	8.4
240						23.6	10.7
260							13.5
280							16.6
300							20.3
320							24.4

AmnonDrip PC, CNL & PC AS



Innovative, pressure-compensating (PC) dripline with special anti-syphon (AS) and compensating non-leakage (CNL) models, based on the Cascade labyrinth

APPLICATIONS

- Versatile, all-purpose dripline
- Pulse irrigation of greenhouses, vegetables and orchards
- Subsurface Drip Irrigation (SDI)
- Reduces filling time for large fields with long rows

STRUCTURE AND FEATURES

- Pressure-compensating (PC) for maximum accuracy at variable topography and long laterals
- Cascade labyrinth provides strong self-cleaning turbulence
- Hydrodynamic dripper design ensures continuous flushing of sediments and small dirt particles
- Low CV for maximal uniformity
- Weir structure prevents root intrusion and sand suction
- Side water inlet structure improves clog resistance
- High-quality diaphragm
- Available as regular coil or on carton spool (see packing and shipping table)

SPECIAL MODELS

- CNL: Pressure-compensating non-drainage design reduces lateral filling time and facilitates pulse irrigation.
- PC AS: Pressure compensating anti-syphon design prevents suction at draining stage. Suitable for subsurface drip irrigation.

AmnonDrip PC



1.1, 1.6, 2.2, 3.8 l/h

AmnonDrip CNL



1.1, 1.6, 2.2, 3.8 l/h

AmnonDrip PC AS



1.1, 1.6, 2.2, 3.8 l/h

TECHNICAL DATA

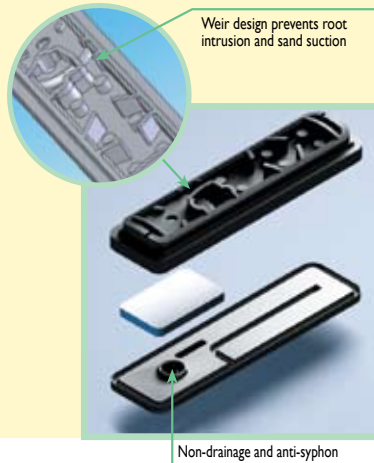
- Flow rate: 1.1, 1.6, 2.2, 3.8 l/h
- CNL: Opening pressure - 1.0 bar
Closing pressure - 0.25 bar
- Pressure regulating range:
PC & AS models - 0.5-4.0 bar
PC CNL - 1.0-4.0 bar
- Filtration recommended: 130 micron (120 mesh)

AmnonDrip PC, CNL & PC AS

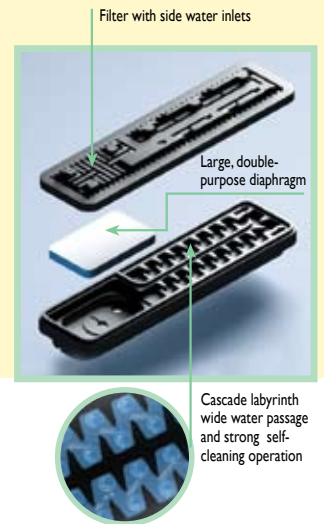
TECHNICAL DATA

Nominal diameter (mm)	Wall thickness		OD (mm)	ID (mm)	Maximum Pressure (bar)	Connector type	
	(mm)	(mil)				Barb	Tape
16	0.65	25	15.20	13.9	2.0	●	
16	0.90	35	15.70	13.9	3.0	●	
16	1.00	39	15.90	13.9	3.5	●	
16	1.15	45	16.20	13.9	3.5	●	
17	0.90	35	16.20	14.4	3.0	●	
17	1.20	47	17.00	14.6	3.5	●	
20	1.00	39	19.70	17.70	3.0	●	
20	1.20	45	20.10	17.70	3.5	●	
22	0.65	25	22.10	20.8	2.5		●
23	1.00	37	22.80	20.8	3.0	●	

TOP VIEW



BOTTOM VIEW



AMNONDRIP PACKAGING AND SHIPPING

Coils (standard)

Nominal diameter (mm)	Wall thickness (mm)	Standard coil length (m)	Coils per 20 ft. container	Coils per 40 ft. container	Coils per 40 ft. HC container
16	0.65	500	150	330	375
16	0.90	500	150	330	375
16	1.00	500	150	330	375
16	1.15	500	150	330	375
17	0.90	500	150	330	375
17	1.00	500	150	330	375
17	1.20	500	150	330	375
20	1.00	300	150	330	375
20	1.20	300	150	330	375

Carton spools

Nominal diameter (mm)	Wall thickness (mm)	Standard coil length (m)	Coils per 20 ft. container	Coils per 40 ft. container	Coils per 40 ft. HC container
16	0.65	500	320	640	720
16	0.90	450	320	640	720
16	1.00	450	320	640	720
17	0.65	500	320	640	720
17	0.90	450	320	640	720
17	1.00	400	320	640	720
20	0.90	300	320	640	720
20	1.00	300	320	640	720
22	0.65	300	320	640	720
23	0.90	250	320	640	720
23	1.00	250	320	640	720



* Dropper spacing can affect coil length.

AmnonDrip PC, CNL & PC AS

HEAD LOSS (M) IN RELATION TO LATERAL LENGTH (M), DRIPPER FLOW RATE AND SPACING (CM)

AmnonDrip 16, 1.1l/h, W.T 0.65-1.15mm, ID 13.9								AmnonDrip 16, 1.6l/h, W.T 0.65-1.15mm, ID 13.9								AmnonDrip 16, 2.2l/h, W.T 0.65-1.15mm, ID 13.9								AmnonDrip 16, 3.8 l/h, 0.65-1.15mm, ID 13.9										
Dripper spacing (cm)								Dripper spacing (cm)								Dripper spacing (cm)								Dripper spacing (cm)										
Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00	Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00	Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00	Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00			
20	0.2	0.1						20	0.3	0.1	0.1					20	0.5	0.2	0.1	0.1				20	1.2	0.5	0.3	0.1	0.1	0.1				
40	0.9	0.4	0.2	0.1	0.1	0.1		40	1.8	0.7	0.4	0.2	0.1	0.1	0.1	40	3	1.2	0.6	0.4	0.3	0.2	0.1	40	7.7	3.0	1.6	1.0	0.7	0.5	0.2			
60	2.8	1.1	0.6	0.3	0.2	0.2	0.1	60	5.2	2.1	1.1	0.6	0.4	0.3	0.1	60	9	3.6	1.9	1.1	0.7	0.5	0.3	60	22.9	9.2	4.8	2.9	2.0	1.4	0.7			
80	6	2.3	1.2	0.7	0.5	0.4	0.2	80	11.4	4.5	2.3	1.4	1	0.7	0.3	80	19.6	7.7	4.0	2.5	1.7	1.2	0.6	80		19.9	10.4	6.4	4.4	3.2	1.5			
100	11	4.3	2.2	1.4	0.9	0.6	0.3	100	20.8	8.2	4.3	2.6	1.7	1.2	0.6	100		14.2	7.4	4.5	3.1	2.2	1.1	100			19.2	11.8	8.0	5.8	2.8			
120	18	7.1	3.7	2.2	1.5	1.1	0.5	120		13.5	7	4.3	2.9	2.1	1	120		23.4	12.2	7.5	5.1	3.6	1.7	120				19.5	13.3	9.6	4.6			
140		10.7	5.6	3.4	2.3	1.6	0.8	140		20.4	10.7	6.5	4.4	3.1	1.5	140			18.6	11.4	7.7	5.5	2.7	140					20.3	14.5	7.1			
160		15.4	8	4.9	3.3	2.4	1.1	160			15.4	9.4	6.4	4.6	2.2	160				16.5	11.1	8.0	3.8	160						21.2	10.2			
180		21.2	11.1	6.8	4.6	3.3	1.5	180			21.2	13	8.8	6.4	3	180				22.8	15.5	11.2	5.3	180							14.1			
200			14.8	9	6.1	4	2.1	200				17.4	11.8	8.4	4	200					20.7	14.8	7.1	200							18.9			
220			19.2	11.7	7.9	5.7	2.7	220				22.6	15.3	11	5.3	220						19.4	9.3	220										
240			24.3	14.9	10.1	7.2	3.4	240					19.5	14	6.7	240						24.6	11.8	240										
260				18.5	12.5	9	4.3	260					24.3	17.5	8.3	260							14.7	260										
280				22.7	15.3	11.1	5.2	280						21.5	10.2	280							18.1	280										
300					18.6	13.4	6.3	300						25.9	12.4	300								300										
320					22.2	16	7.6	320							14.8	320								320										
340						18.9	9	340							17.5	340								340										
360						22.1	10.5	360							20.6	360								360										
380						25.6	12.2	380							23.9	380								380										
400							14.1																											
420							16.1																											
440							18.4																											
460							20.8																											
480							23.4																											



AmnonDrip PC, CNL & PC AS

HEAD LOSS (M) IN RELATION TO LATERAL LENGTH (M), DRIPPER FLOW RATE AND SPACING (CM)

AmnonDrip 17, 1.1l/h, W.T 0.9mm, ID 14.4							
Dripper spacing (cm)							
Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00
40	0.7	0.3	0.1	0.1	0.1		
60	2	0.8	0.4	0.3	0.2	0.1	0.1
80	4.3	1.7	0.9	0.6	0.4	0.3	0.1
100	7.8	3.2	1.7	1	0.7	0.5	0.2
120	12.7	5.2	2.7	1.7	1.2	0.8	0.4
140	19.1	7.8	4.2	2.6	1.8	1.3	0.6
160		11.2	6	3.7	2.5	1.8	0.9
180		15.3	8.2	5.1	3.5	2.5	1.2
200		20.4	11	6.8	4.7	3.4	1.6
220			14.2	8.8	6	4.4	2.1
240			18	11.2	7.7	5.6	2.7
260			22.4	14	9.6	7	3.4
280				17.1	11.7	8.5	4.1
300				20.7	14.2	10.3	5
320				24.6	16.9	12.3	6
340					20	14.5	7.1
360					23.3	17	8.3
380						19.7	9.6
400						22.8	11.1
420							12.7
440							14.4
460							16.3
480							18.4
500							20.6

AmnonDrip 17, 1.6l/h, W.T 0.9mm, ID 14.4							
Dripper spacing (cm)							
Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00
40	1.3	0.5	0.3	0.2	0.1	0.1	
60	3.7	1.5	0.8	0.5	0.3	0.2	0.1
80	8	3.3	1.7	1.1	0.7	0.5	0.3
100	14.6	6	3.2	2	1.3	1	0.5
120	23.7	9.8	5.2	3.2	2.2	1.6	0.8
140		14.8	7.9	4.9	3.4	2.4	1.2
160			21.2	11.4	7.1	4.9	3.5
180				15.7	9.8	6.7	4.9
200				20.9	13.1	9	6
220					17	11.6	8.5
240					21.5	14.8	10.7
260						18.5	13.4
280						22.6	16.5
300							19.9
320							23.9
340							13.8
360							16.1
380							18.7
400							21.6
420							24.7

AmnonDrip 17, 2.2l/h, W.T 0.9mm, ID 14.4							
Dripper spacing (cm)							
Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00
40	2.2	0.9	0.5	0.3	0.2	0.1	0.1
60	6.3	2.6	1.4	0.9	0.6	0.4	0.2
80	13.7	5.6	3	1.9	1.3	0.9	0.5
100	24.9	10.3	5.5	3.4	2.3	1.7	0.8
120		16.8	9	5.6	3.9	2.8	1.4
140			25.4	13.7	8	5.9	4.3
160				19.7	12.4	8.5	6.2
180					17.1	11.8	8.6
200					22.8	15.7	11.4
220						20.4	14.9
240							18.8
260							23.6
280							14.2
300							17.2
320							20.5
340							24.3

AmnonDrip 17mm, 3.8 l/h, W.T 0.65-0.9mm ID 14.4							
Dripper spacing (cm)							
Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00
20	1	0.4	0.2	0.1	0.1	0.1	
40	6.5	2.5	1.3	0.7	0.5	0.4	0.2
60	19.2	7.4	3.8	2.2	1.5	1	0.5
80		15.8	8.1	4.8	3.2	2.3	1.1
100			14.7	8.8	5.9	4.2	1.9
120			24.1	14.5	9.8	6.9	3.2
140				22.1	14.8	10.4	4.9
160					21.2	15.1	7
180						20.9	9.7
200							12.9
220							16.8
240							21.3

AmnonDrip 17, 1.1l/h, W.T 1.2mm, ID 14.6							
Dripper spacing (cm)							
Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00
40	0.7	0.3	0.1	0.1	0.1		
60	1.9	0.8	0.4	0.3	0.2	0.1	0.1
80	4.1	1.7	0.9	0.5	0.4	0.3	0.1
100	7.5	3	1.6	1	0.7	0.5	0.2
120	12.1	5	2.6	1.6	1.1	0.8	0.4
140	18.2	7.5	4	2.5	1.7	1.2	0.6
160		10.7	5.7	3.6	2.4	1.8	0.9
180		14.6	7.9	4.9	3.4	2.4	1.2
200		19.4	10.4	6.5	4.5	3.2	1.6
220			25.1	13.5	8.4	5	4.2
240				17.1	10.7	7.3	5.3
260					21.2	13.3	9.1
280						16.2	11.1
300						19.6	13.5
320						23.4	16
340							18.9
360							22.1
380							25.7
400							21.5
420							24.7
440							13.6
460							15.4
480							17.4
500							19.4

AmnonDrip 17, 1.6l/h, W.T 1.2mm, ID 14.6							
Dripper spacing (cm)							
Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00
40	1.2	0.5	0.3	0.2	0.1	0.1	
60	3.6	1.5	0.8	0.5	0.3	0.2	0.1
80	7.7	3.1	1.7	1	0.7	0.5	0.3
100	13.9	5.7	3	1.9	1.3	0.9	0.5
120	22.5	9.3	5	3.1	2.1	1.5	0.8
140		14	7.5	4.7	3.2	2.3	1.1
160			20.1	10.8	6.8	4.6	3.4
180				14.9	9.3	6.4	4.7
200					19.8	12.4	8.5
220						25.7	16.1
240							20.4
260							25.4
280							21.3
300							25.9
320							22.5
340							13
360							15.2
380							17.7
400							20.4
420							23.3

AmnonDrip 17, 2.2l/h, W.T 1.2mm, ID 14.6							
Dripper spacing (cm)							
Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00
40	2.1	0.9	0.5	0.3	0.2	0.1	0.1
60	6.1	2.5	1.3	0.8	0.6	0.4	0.2
80	13	5.4	2.9	1.8	1.2	0.9	0.4
100	23.6	9.8	5.2	3.3	2.2	1.6	0.8
120		16	8.6	5.3	3.7	2.7	1.3
140			24.1	13	8.1	5.6	4
160				18.7	11.7	8	5.9
180					25.7	16.1	11.2
200						21.5	14.8
220							19.2
240							24.5
260							22.2
280							13.4
300							16.2
320							19.4
340							22.9

AmnonDrip 17, 3.8 l/h, 1.2mm, ID 14.6							
Dripper spacing (cm)							
Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00
20	0.8	0.3	0.2	0.1	0.1	0.1	0.2
40	5.1	2.1	1.2	0.7	0.5	0.4	0.2
60	15	6.3	3.4	2.1	1.4	1	0.5
80		13.5	7.3	4.6	3.2	2.3	1.1
100			24.7	13.3	8.4	5.8	4.2
120				21.9	13.8	9.6	7
140					21	14.5	10.5
160						20.9	15.3
180							21.2
200							14
220							18
240							23

AmnonDrip PC, CNL & PC AS



HEAD LOSS (M) IN RELATION TO LATERAL LENGTH (M), DRIPPER FLOW RATE AND SPACING (CM)

AmnonDrip 20, 1.1l/h, W.T 1.0-1.2mm, ID 17.7								AmnonDrip 20, 1.6l/h, W.T 1.0-1.2mm, ID 17.7								AmnonDrip 20, 2.2l/h, W.T 1.0-1.2mm, ID 17.7								AmnonDrip 20, 3.8 l/h, W.T 1.0-1.2mm, ID 17.7								
Dripper spacing (cm)								Dripper spacing (cm)								Dripper spacing (cm)								Dripper spacing (cm)								
Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00	Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00	Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00	Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00	
40	0.5	0.2	0.1	0.1	0.1			40	0.9	0.4	0.2	0.1	0.1	0.1		40	1.3	0.6	0.3	0.2	0.1	0.1	0.1	20	0.5	0.2	0.1	0.1	0.1			
60	1.3	0.6	0.3	0.2	0.1	0.1	0.1	60	2.1	1	0.5	0.3	0.2	0.2	0.1	60	3.2	1.5	0.8	0.5	0.4	0.3	0.1	40	2.6	1.2	0.7	0.4	0.3	0.2	0.1	
80	2.6	1.1	0.6	0.4	0.3	0.2	0.1	80	4.1	1.8	1	0.7	0.5	0.3	0.2	80	6.3	2.8	1.6	1	0.7	0.5	0.3	60	6.8	3.1	1.7	1.1	0.8	0.6	0.3	
100	4.3	1.9	1.1	0.7	0.5	0.3	0.2	100	6.9	3.1	1.7	1.1	0.8	0.6	0.3	100	10.7	4.8	2.7	1.7	1.2	0.9	0.5	80	13.5	6.1	3.5	2.2	1.6	1.2	0.6	
120	6.5	2.9	1.6	1	0.7	0.5	0.3	120	10.7	4.8	2.7	1.7	1.2	0.9	0.4	120	16.6	7.5	4.2	2.7	1.9	1.4	0.7	100	23.3	10.6	6	3.9	2.7	2	1	
140	9.2	4.1	2.3	1.5	1	0.8	0.4	140	15.4	6.9	3.9	2.5	1.8	1.3	0.7	140	24	10.8	6.1	4	2.8	2.1	1	120		16.6	9.4	6.1	4.4	3.2	1.6	
160	12.7	5.6	3.2	2	1.4	1.1	0.5	160	21.2	9.5	5.4	3.5	2.4	1.8	0.9	160		15	8.5	5.5	3.9	2.9	1.5	140		24.4	13.9	9.1	6.4	4.7	2.4	
180	16.7	7.4	4.2	2.7	1.9	1.4	0.7	180		12.6	7.2	4.6	3.3	2.4	1.2	180		20.1	11.4	7.4	5.2	3.9	2	160			19.6	12.7	9	6.7	3.4	
200	21.4	9.6	5.4	3.5	2.4	1.8	0.9	200		16.3	9.3	6	4.2	3.1	1.6	200			14.9	9.6	6.8	5	2.5	180			26.5	17.2	12.2	9.1	4.6	
220		12.1	6.8	4.4	3.1	2.3	1.1	220		20.7	11.7	7.6	5.3	4	2	220			18.9	12.3	8.6	6.4	3.2	200				22.6	16	11.9	6.1	
240		14.8	8.4	5.4	3.8	2.8	1.4	240		25.6	14.6	9.4	6.6	4.9	2.5	240			23.6	15.3	10.8	8	4.1	220					20.5	15.3	7.8	
260		18	10.2	6.6	4.6	3.4	1.7	260			17.8	11	8.1	6	3	260				18.8	13.2	9.8	5	240					25.9	19.2	9.8	
280		21.6	12.3	7.9	5.5	4.1	2.1	280			21.4	13.9	9.7	7.3	3.6	280				22.7	16	11.9	6	260					23.7	12.1		
300		25.6	14.5	9.4	6.6	4.9	2.4	300			25.5	16.5	11.6	8.6	4.3	300				19.2	14.2	7.2		280						14.7		
320			17.1	11	7.7	5.7	2.9	320				19.4	13.7	10.2	5.1	320					22.6	16.8	8.5		300						17.7	
340			19.9	12.8	9	6.7	3.3	340				22.7	16	11.9	6	340						19.7	10		320						21	
360			22.9	14.8	10.4	7.7	3.9	360					18.5	13.8	6.9	360						22.9	11.6		340						24.7	
380				16.9	11.9	8.8	4.4	380					21.3	15.8	8	380							13.4									
400				19.3	13.5	10	5	400					24.2	18	9.1	400							15.3									
420				21.8	15.3	11.4	5.7	420						20.5	10.3	420							17.4									
440				24.5	17.2	12.8	6.4	440						23.1	11.7	440							19.7									
460					19.3	14.3	7.2	460						25.9	13.1	460							22.1									
480					21.5	15.9	8	480							14.7	480							24.8									
500					23.9	17.7	8.9	500							16.3	500																

AmnonDrip PC, CNL & PC AS



HEAD LOSS (M) IN RELATION TO LATERAL LENGTH (M), DRIPPER FLOW RATE AND SPACING (CM)

AmnonDrip 22/23, 1.1 l/h, W.T 0.65/1.0mm, ID 20.8								AmnonDrip 22/23, 1.6l/h, W.T 0.65/1.0mm, ID 20.8								AmnonDrip 22/23, 2.2l/h, W.T 0.65/1.0mm, ID 20.8								AmnonDrip 22/23, 3.8 l/h, W.T 0.65mm, I.D 20.8								
Dripper spacing (cm)								Dripper spacing (cm)								Dripper spacing (cm)								Dripper spacing (cm)								
Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00	Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00	Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00	Lateral length(m)	0.20	0.30	0.40	0.50	0.60	0.70	1.00	
40	0.2	0.1						40	0.2	0.1	0.1					40	0.4	0.2	0.1	0.1				20	0.2	0.1						
60	0.4	0.2	0.1	0.1				60	0.6	0.3	0.2	0.1	0.1	0.1		60	0.9	0.4	0.3	0.2	0.1	0.1		40	0.7	0.4	0.2	0.1	0.1	0.1		
80	0.7	0.3	0.2	0.1	0.1	0.1		80	1.2	0.5	0.3	0.2	0.1	0.1	0.1	80	1.8	0.9	0.5	0.3	0.2	0.2	0.1	60	2	1	0.6	0.4	0.3	0.2	0.1	
100	1.2	0.6	0.3	0.2	0.1	0.1	0.1	100	2	0.9	0.5	0.4	0.3	0.2	0.1	100	3.2	1.5	0.9	0.6	0.4	0.3	0.2	80	4.2	2	1.1	0.7	0.5	0.4	0.2	
120	1.8	0.9	0.5	0.3	0.2	0.2	0.1	120	3.1	1.5	0.8	0.6	0.4	0.3	0.2	120	5	2.4	1.4	0.9	0.6	0.5	0.3	100	7.4	3.5	2	1.3	0.9	0.7	0.4	
140	2.7	1.2	0.7	0.5	0.3	0.2	0.1	140	4.6	2.1	1.2	0.8	0.6	0.4	0.2	140	7.4	3.5	2	1.3	1	0.7	0.4	120	11.9	5.6	3.2	2.1	1.5	1.2	0.6	
160	3.7	1.7	1	0.7	0.5	0.3	0.2	160	6.4	3	1.7	1.1	0.8	0.6	0.3	160	10.5	4.9	2.9	1.9	1.3	1	0.5	140	17.8	8.4	4.9	3.2	2.3	1.7	0.9	
180	4.9	2.3	1.3	0.9	0.6	0.5	0.2	180	8.7	4	2.3	1.5	1.1	0.8	0.4	180	14.2	6.6	3.9	2.5	1.8	1.4	0.7	160	25.5	11.9	7	4.6	3.3	2.5	1.3	
200	6.4	3	1.7	1.1	0.8	0.6	0.3	200	11.3	5.3	3.1	2	1.4	1.1	0.6	200	18.7	8.8	5.1	3.4	2.4	1.8	0.9	180		16.3	9.5	6.3	4.5	3.4	1.8	
220	8.1	3.8	2.2	1.4	1	0.8	0.4	220	14.4	6.7	3.9	2.6	1.8	1.4	0.7	220	24	11.2	6.5	4.3	3.1	2.3	1.2	200		21.7	12.6	8.3	6	4.5	2.3	
240	10.1	4.7	2.7	1.8	1.3	1	0.5	240	18.1	8.4	4.9	3.2	2.3	1.7	0.9	240		14.1	8.2	5.4	3.9	2.9	1.5	220			16.4	10.8	7.7	5.8	3	
260	12.3	5.7	3.3	2.2	1.6	1.2	0.6	260	22.2	10.4	6	4	2.8	2.1	1.1	260		17.5	10.2	6.7	4.8	3.6	1.9	240			20.7	13.7	9.8	7.3	3.8	
280	14.9	7	4	2.7	1.9	1.4	0.7	280		12.6	7.3	4.8	3.4	2.6	1.3	280		21.3	12.4	8.2	5.8	4.4	2.3	260				17	12.1	9.1	4.7	
300	17.8	8.3	4.8	3.2	2.3	1.7	0.9	300		15.1	8.8	5.8	4.1	3.1	1.6	300		25.6	14.9	9.8	7	5.3	2.7	280				20.8	14.8	11.2	5.8	
320	21	9.8	5.7	3.7	2.7	2	1	320		17.9	10.5	6.9	4.9	3.7	1.9	320			17.8	11.7	8.4	6.3	3.2	300					25.1	18	13.5	7
340	24.5	11.5	6.7	4.4	3.1	2.3	1.2	340		21	12.3	8.1	5.8	4.3	2.2	340			21	13.8	9.8	7.4	3.8	320								
360		13.3	7.8	5.1	3.6	2.7	1.4	360		24.4	14.3	9.4	6.7	5	2.6	360			24.5	16.1	11.4	8.6	4.5	340								
380		15.3	8.9	5.9	4.2	3.1	1.6	380			16.5	10.9	7.7	5.8	3	380				18.6	13.3	9.9	5.2	360								
400		17.5	10.2	6.7	4.8	3.6	1.8	400			18.9	12.5	8.9	6.7	3.4	400				21.4	15.2	11.5	5.9	380								
420		19.8	11.6	7.6	5.4	4.1	2.1	420			21.6	14.2	10.1	7.6	3.9	420				24.4	17.4	13.1	6.8	400								
440		22.4	13.1	8.6	6.1	4.6	2.4	440			24.5	16.1	11.5	8.6	4.4	440					19.8	14.8	7.7	420								
460		25.22	14.7	9.7	6.9	5.2	2.7	460				18.1	12.9	9.7	5	460					22.3	16.8	8.7	440								
480			16.5	10.8	7.7	5.8	3	480				20.3	14.5	10.9	5.6	480					25	18.8	9.7	460								
500			18.4	12.1	8.6	6.5	3.3	500				22.7	16.2	12.2	6.3	500						21.1	10.9	480								

TopDrip PC & PC AS



Pressure-compensating (PC) and anti-syphon (PC AS), thin to medium-walled dripline for maximum irrigation uniformity (EU-95%) at minimum cost

APPLICATIONS

- Row crops and vegetables
- Subsurface drip irrigation (SDI)
- Variable topography
- Irrigation of long rows with high uniformity

STRUCTURE AND FEATURES

- Accurate pressure-compensating dripper
- Low CV: 3.0%
- Cascade labyrinth incorporated for maximal clog resistance
- Protection from root intrusion
- Unique double self-cleaning mechanism
- Allows longer laterals with EU of 95%
- Large water passages for optimal durability at low flow rates
- Multiple channel water inlet for operation under heavy dirt load
- Close dripper spacing creates a continuous wetted strip

SPECIAL MODEL PC AS :

- Anti-syphon design prevents suction at draining stage
- Recommended for subsurface drip irrigation

TopDrip PC



1.1, 1.6 l/h

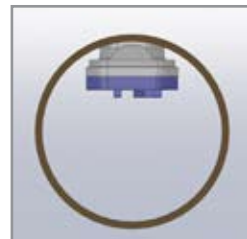
TopDrip PC AS



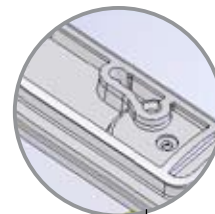
1.1, 1.6 l/h



Shallow profile reduces head losses and raised water inlet reduces clogging

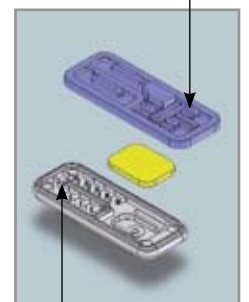
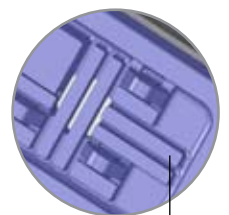


Weir design prevents root intrusion and sand suction

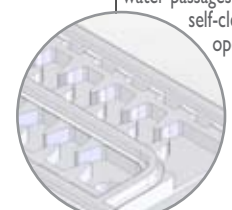


3 PARTS-UPPER VIEW

Multi-channel: three-dimensional water inlets and eleven independent entrances



Cascade labyrinth wide water passages and strong self-cleaning operation



3 PARTS-BOTTOM VIEW

TopDrip PC & PC AS

TECHNICAL DATA

- Flow rate: 1.0, 1.6 l/h
- Pressure regulating range: 0.4-2.5 bar
- Operating pressure: 0.4-2.5 bar, according to wall thickness
- Wall thickness: 13-25 mil, 0.33-0.63 mm
- Recommended filtration: 130 micron (120 mesh)

TECHNICAL DATA

Nominal diameter	Wall thickness		ID (mm)	OD (mm)	Max. Pressure (bar)	Connectors
	mil	mm				Tape
16	13	0.33	16.2	16.86	1.4	●
	15	0.38	16.2	16.96	1.8	●
	18	0.45	15.8	16.70	2.0	●
22	25	0.63	15.6	16.86	2.5	●
	13	0.33	22.2	22.86	1.2	●
	15	0.38	22.2	22.96	1.4	●
	18	0.45	22.2	23.10	1.7	●
	25	0.63	22.2	23.46	2.0	●

TOPDRIP PACKAGING AND SHIPPING

Carton spools						
Nominal diameter (mm)	Wall thickness (mil)	Standard coil* length (m)	Coils per pallet	Coils per 20 ft. container	Coils per 40 ft. container	Coils per 40 ft. HC container
16mm	13	1250	16	320	640	720
16mm	15	1250	16	320	640	720
16mm	18	1150	16	320	640	720
16mm	25	700	16	320	640	720
22mm	13	550	16	320	640	720
22mm	15	500	16	320	640	720
22mm	18	450	16	320	640	720
22mm	25	375	16	320	640	720

* Dropper spacing can affect coil length.



TopDrip PC & PC AS

HEAD LOSS (M) IN RELATION TO LATERAL LENGTH (M), DRIPPER FLOW RATE AND SPACING (CM)

TopDrip 16, 1.0 l/h, W.T13-15 mil, ID 16.2								
Lateral length(m)	Dripper spacing (cm)							
	20	30	40	50	60	70	100	
20	0.1							
40	0.3	0.1	0.1					
60	0.9	0.4	0.2	0.1	0.1	0.1		
80	2.0	0.8	0.4	0.3	0.2	0.1	0.1	
100	3.5	1.5	0.8	0.5	0.3	0.2	0.1	
120	5.8	2.4	1.3	0.8	0.5	0.4	0.2	
140	8.7	3.6	1.9	1.2	0.8	0.6	0.3	
160	12.4	5.1	2.8	1.7	1.2	0.9	0.4	
180		7.0	3.8	2.4	1.6	1.2	0.6	
200		9.3	5.0	3.2	2.2	1.6	0.8	
220		12.1	6.5	4.1	2.8	2.0	1.0	
240			8.3	5.2	3.6	2.6	1.3	
260			10.3	6.4	4.4	3.2	1.6	
280			12.6	7.9	5.4	4.0	1.9	
300				9.5	6.6	4.8	2.3	
320				11.4	7.8	5.7	2.8	
340					9.2	6.7	3.3	
360					10.8	7.9	3.9	
380						9.1	4.5	
400						10.6	5.2	
420							5.9	
440							6.7	
460							7.6	
480							8.6	
500							9.6	

TopDrip 16, 1.0 l/h, W.T 18mil, ID 15.8								
Lateral length(m)	Dripper spacing (cm)							
	20	30	40	50	60	70	100	
20	0.1							
40	0.3	0.1	0.1					
60	1	0.4	0.2	0.1	0.1	0.1		
80	2.1	0.9	0.5	0.3	0.2	0.1	0.1	
100	3.7	1.6	0.8	0.5	0.4	0.3	0.1	
120	6.1	2.5	1.4	0.8	0.6	0.4	0.2	
140	9.2	3.8	2.1	1.3	0.9	0.6	0.3	
160		5.5	3	1.9	1.3	0.9	0.5	
180		7.5	4.1	2.6	1.8	1.3	0.6	
200		10	5.4	3.4	2.4	1.7	0.8	
220			7	4.4	3	2.2	1.1	
240			8.9	5.6	3.9	2.8	1.4	
260			11.1	7	4.8	3.5	1.7	
280				8.6	5.9	4.3	2.1	
300				10.3	7.2	5.2	2.6	
320					8.5	6.3	3.1	
340					10.1	7.4	3.6	
360						8.6	4.2	
380						10.0	4.9	
400							5.7	
420							6.5	
440							7.4	
460							8.4	
480							9.4	
500							10.6	

TopDrip 16, 1.0 l/h, W.T 25mil, ID 15.6								
Lateral length(m)	Dripper spacing (cm)							
	20	30	40	50	60	70	100	
20	0.1							
40	0.3	0.1	0.1					
60	1.0	0.4	0.2	0.1	0.1	0.1		
80	2.2	0.9	0.5	0.3	0.2	0.2	0.1	
100	3.9	1.6	0.9	0.5	0.4	0.3	0.1	
120	6.4	2.7	1.4	0.9	0.6	0.5	0.2	
140	9.6	4.0	2.2	1.4	0.9	0.7	0.3	
160	13.8	5.8	3.1	2	1.4	1.0	0.5	
180	18.9	7.9	4.3	2.7	1.9	1.4	0.7	
200		10.5	5.8	3.6	2.5	1.8	0.9	
220		13.7	7.5	4.7	3.3	2.4	1.2	
240		17.3	9.5	6.0	4.1	3.0	1.5	
260		21.5	11.8	7.4	5.2	3.8	1.9	
280			14.4	9.1	6.3	4.6	2.3	
300			17.4	11.0	7.7	5.6	2.8	
320			20.9	13.2	9.1	6.7	3.3	
340				15.6	10.8	7.9	3.9	
360				18.2	12.6	9.3	4.6	
380				21.1	14.7	10.7	5.3	
400					16.9	12.4	6.1	
420					19.3	14.2	7.0	
440					22.0	16.1	8.0	
460						18.3	9.0	
480						20.5	10.2	
500							11.4	

* Minimum working pressure 0.4 bar. Maximum working pressure according to wall thickness.



TopDrip PC & PC AS

HEAD LOSS (M) IN RELATION TO LATERAL LENGTH (M), DRIPPER FLOW RATE AND SPACING (CM)

TopDrip 16, 1.6 l/h, W.T 13-15mil, ID 16.2

Lateral length(m)	Dripper spacing (cm)						
	20	30	40	50	60	70	100
20	0.1						
40	0.7	0.3	0.2	0.1	0.1		
60	2.0	0.8	0.4	0.3	0.2	0.1	0.1
80	4.3	1.8	0.9	0.6	0.4	0.3	0.1
100	7.7	3.2	1.7	1.1	0.7	0.5	0.3
120	12.6	5.3	2.8	1.8	1.2	0.9	0.4
140		7.9	4.3	2.7	1.9	1.3	0.7
160		11.4	6.2	3.9	2.7	1.9	1.0
180			8.5	5.3	3.7	2.7	1.3
200			11.3	7.1	4.9	3.6	1.8
220				9.2	6.4	4.7	2.3
240				11.7	8.1	5.9	2.9
260					10.1	7.4	3.6
280					12.3	9.1	4.4
300						10.9	5.4
320							6.4
340							7.6
360							8.9
380							10.3
400							11.9
420							
440							
460							
480							
500							

TopDrip 16, 1.6 l/h, W.T 18mil, ID 15.8

Lateral length(m)	Dripper spacing (cm)						
	20	30	40	50	60	70	100
20	0.1						
40	0.7	0.3	0.2	0.1	0.1	0.1	
60	2.1	0.9	0.5	0.3	0.2	0.1	0.1
80	4.5	1.9	1.0	0.6	0.4	0.3	0.2
100	8.2	3.4	1.9	1.2	0.8	0.6	0.3
120	13.4	5.6	3.0	1.9	1.3	1.0	0.5
140		8.5	4.6	2.9	2.0	1.5	0.7
160		12.2	6.7	4.2	2.9	2.1	1.0
180			9.2	5.8	4.0	2.9	1.4
200			12.2	7.7	5.4	3.9	1.9
220				10.0	6.9	5.1	2.5
240				12.7	8.9	6.4	3.2
260					11.0	8.1	4.0
280						9.9	4.9
300						12.0	5.9
320							7.1
340							8.4
360							9.8
380							11.4
400							
420							
440							
460							
480							
500							

TopDrip 16, 1.6 l/h, W.T 25mil, ID 15.6

Lateral length(m)	Dripper spacing (cm)						
	20	30	40	50	60	70	100
20	0.1						
40	0.7	0.3	0.2	8	0.1	0.1	
60	2.2	0.9	0.5	0.3	0.2	0.2	0.1
80	4.7	2	1.1	0.7	0.5	0.3	0.2
100	8.6	3.6	2	1.2	0.9	0.6	0.3
120	14	5.9	3.2	2	1.4	1.0	0.5
140	21.2	9	4.9	3.1	2.2	1.6	0.8
160		12.9	7.1	4.5	3.1	2.3	1.1
180		17.7	9.8	6.2	4.3	3.2	1.6
200		23.7	13.0	8.2	5.7	4.2	2.1
220			16.9	10.7	7.4	5.5	2.7
240			21.5	13.6	9.5	6.9	3.4
260				17	11.8	8.7	4.3
280				20.8	14.4	10.7	5.3
300					17.5	12.9	6.4
320					20.9	15.4	7.6
340						18.2	9
360						21.3	10.6
380							12.3
400							14.2
420							16.3
440							18.5
460							
480							
500							

* Minimum working pressure 0.4 bar. Maximum working pressure according to wall thickness.

TopDrip 22, 1.0l/h, W.T 13-25mil, ID 22.2

Lateral length(m)	Dripper spacing (cm)						
	20	30	40	50	60	70	100
40	0.1	0.1					
60	0.3	0.1	0.1	0.1			
80	0.6	0.3	0.2	0.1	0.1	0.1	
100	0.9	0.4	0.2	0.2	0.1	0.1	
120	1.4	0.7	0.4	0.2	0.2	0.1	0.1
140	2	0.9	0.5	0.4	0.3	0.2	0.1
160	2.8	1.3	0.7	0.5	0.3	0.3	0.1
180	3.6	1.7	1.0	0.6	0.5	0.3	0.2
200	4.7	2.2	1.3	0.8	0.6	0.4	0.2
220	5.9	2.7	1.6	1.0	0.7	0.6	0.3
240	7.3	3.4	2.0	1.3	0.9	0.7	0.3
260	8.8	4.1	2.4	1.6	1.1	0.8	0.4
280	10.6	4.9	2.9	1.9	1.3	1.0	0.5
300	12.6	5.8	3.4	2.2	1.6	1.2	0.6
320	14.6	6.9	4.0	2.6	1.9	1.4	0.7
340		8.0	4.6	3.0	2.2	1.6	0.8
360		9.2	5.4	3.5	2.5	1.9	1.0
380		10.6	6.2	4.0	2.9	2.1	1.1
400		12.0	7.0	4.6	3.3	2.4	1.3
420		13.6	7.9	5.2	3.7	2.8	1.4
440		15.3	8.9	5.9	4.2	3.1	1.6
460			10.0	6.6	4.7	3.5	1.8
480			11.2	7.3	5.2	3.9	2.0
500			12.4	8.2	5.8	4.3	2.2

TopDrip 22, 1.6l/h, W.T 13-25mil, ID 22.2

Lateral length(m)	Dripper spacing (cm)						
	20	30	40	50	60	70	100
40	0.2	0.1	0.1				
60	0.5	0.2	0.1	0.1	0.1		
80	1.0	0.5	0.3	0.2	0.1	0.1	
100	1.7	0.8	0.5	0.3	0.2	0.2	0.1
120	2.7	1.2	0.7	0.5	0.3	0.2	0.1
140	3.8	1.8	1.0	0.7	0.5	0.4	0.2
160	5.3	2.5	1.4	0.9	0.7	0.5	0.3
180	7.1	3.3	1.9	1.3	0.9	0.7	0.3
200	9.2	4.3	2.5	1.6	1.2	0.9	0.4
220	11.7	5.5	3.2	2.1	1.5	1.1	0.6
240	14.6	6.8	3.9	2.6	1.9	1.4	0.7
260	17.9	8.3	4.8	3.2	2.3	1.7	0.9
280		10.1	5.8	3.8	2.7	2.1	1.1
300		12.0	7.0	4.6	3.3	2.4	1.3
320		14.2	8.3	5.4	3.9	2.9	1.5
340		16.6	9.7	6.3	4.5	3.4	1.7
360			11.2	7.4	5.2	3.9	2.0
380			12.9	8.5	6.1	4.5	2.3
400			14.8	9.7	6.9	5.2	2.7
420			16.8	11.0	7.9	5.9	3.0
440				12.5	8.9	6.7	3.4
460				14.0	10.0	7.5	3.9
480				15.7	11.2	8.4	4.3
500				17.5	12.5	9.4	4.8

* Minimum working pressure 0.4 bar. Maximum working pressure according to wall thickness.



TifDrip



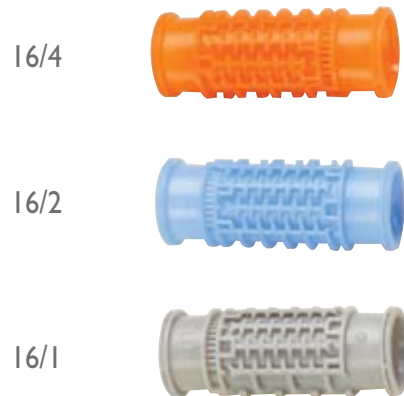
High-performance, long-lasting cylindrical 16 mm dripper incorporates the unique advantages of the Cascade labyrinth

APPLICATIONS

- All-purpose dripline
- Suitable for greenhouses, vegetables and flower fields
- Recommended where low flow rate and dense spacing are required

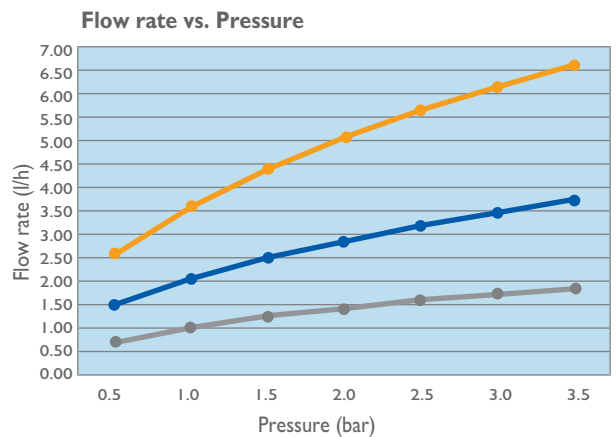
STRUCTURE AND FEATURES

- Compact cylindrical design with double water inlets and outlets ensures high clog resistance and improved durability
- Wide range of wall thicknesses: 0.65-1.15 mm
- Wide water passages facilitates constant flushing of sand and dirt particles, contributing to efficient self-cleaning
- Low CV ensures accurate and reliable flow
- Significant saving in water and fertilizers



FLOW RATE VS. PRESSURE

P (bar) W.T	Nominal flow rate (l/h)											
	16/1				16/2				16/4			
	0.65mm	0.9mm	1.0mm	1.15mm	0.65mm	0.9mm	1.0mm	1.15mm	0.65mm	0.9mm	1.0mm	1.15mm
0.5	0.82	0.82	0.82	0.72	1.61	1.50	1.50	1.43	2.72	2.58	2.58	2.58
1.0	1.15	1.15	1.15	1.00	2.25	2.10	2.10	2.00	3.80	3.60	3.60	3.60
1.5	1.40	1.40	1.40	1.21	2.73	2.55	2.55	2.43	4.62	4.37	4.37	4.37
2.0	1.60	1.60	1.60	1.39	3.14	2.93	2.93	2.79	5.30	5.02	5.02	5.02
2.5		1.79	1.79	1.55		3.26	3.26	3.10		5.59	5.59	5.59
3.0		1.95	1.95	1.69		3.56	3.56	3.39		6.10	6.10	6.10
3.5			2.10	1.82			3.83	3.65			6.57	6.57
a	0.381	0.381	0.381	0.331	0.745	0.695	0.695	0.662	1.258	1.192	1.192	1.192
x	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48



a=Dripper flow constant, x=Dripper flow exponent

TifDrip

MAXIMAL LATERAL LENGTH (M), AT 10% FLOW VARIATION AND 1 BAR INLET PRESSURE*

Dripline Type		Maximal Lateral Length (m) for Dripper Spacing (cm)						
Nominal diameter (mm)	Wall thickness (mm)	20	30	40	50	60	70	100

TifDrip 16/1

16	0.65	63	88	110	130	149	167	207
	0.90	63	88	110	130	149	167	207
	1.00	63	88	110	130	149	167	207
	1.15	69	96	120	142	163	183	231

TifDrip 16/2

16	0.65	48	63	77	90	101	113	138
	0.90	44	61	76	90	103	115	144
	1.00	44	61	76	90	103	115	144
	1.15	45	62	78	92	106	118	149

TifDrip 16/4

16	0.65	36	47	56	66	74	83	101
	0.90	32	43	54	64	73	82	103
	1.00	32	43	54	64	73	82	103
	1.15	32	43	54	64	73	82	103

* On flat ground

*Higher pressure can increase length

*See pressure range in the technical data table.



TECHNICAL DATA

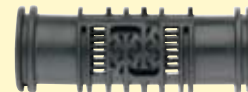
Nominal diameter (mm)	Wall thickness		ID (mm)	OD (mm)	Maximum working pressure (bar)	Connectors Barb	Packaging and shipping			
	(mm)	(mil)					Coil length	Coils per 20 ft. container	Coils per 40 ft. container	Coils per 40 ft. HC container
16	0.65	25	13.9	15.20	2.0	•	500	145	330	350
	0.90	35	13.9	15.70	3.0	•	400	165	350	395
	1.00	39	13.9	15.90	3.5	•	400	165	350	395
	1.15	45	13.9	16.20	3.5	•	400	165	350	395



J-Turbo Line - 12 mm



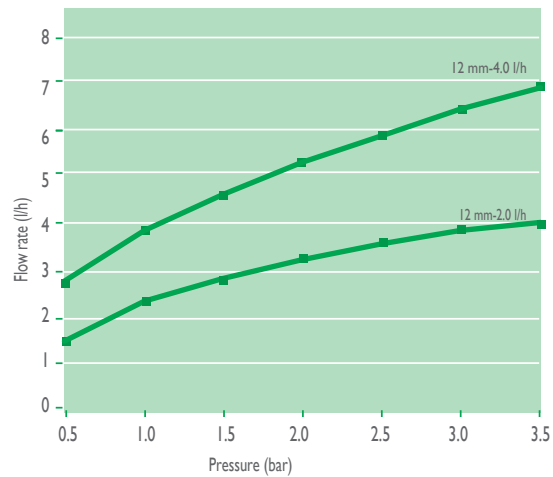
All-purpose dripline ideal economical solution for irrigation of short rows and greenhouses



STRUCTURE AND FEATURES

- Manufactured from high performance polyethylene
- Three features contribute significantly to clog resistance:
 - Multiple inlet filters provide large filtration area
 - Cylindrical shape facilitates wide flow path
 - Turbulent flow path
- Excellent CV ensures optimal field emission uniformity
- J-Turbo Line also supplied in group spacings
- Filtration recommended: 130 micron, (120 mesh)

PERFORMANCE GRAPH



TECHNICAL DATA

Nominal diameter	Wall thickness mm	OD (mm)	ID (mm)	Dripper flow rate (l/h)	Dripper spacing (cm)	Maximum working pressure (bar)	Coil length (m)
12	0.65	11.8	10.5	4.0	20-100	2.0	500
	0.90	12.3	10.5	4.0	20-100	3.5	400
	1.10	12.7	10.5	4.0	20-100	3.5	400

MAXIMAL LATERAL LENGTH (M), AT 10% FLOW VARIATIONS ON FLAT GROUND

J-Turbo Line - 12mm							
Dripper model	Dripper spacing (cm)						
	20	30	40	50	60	75	100
2.4	29	38	45	52	59	67	82
4.0	21	27	32	38	42	49	59

Pressure (bar)	Flow rate (l/h)	
	2.4 (l/h)	4.0 (l/h)
0.5	1.6	2.7
1.0	2.3	3.8
1.5	2.8	4.6
2.0	3.2	5.3
2.5	3.6	5.9
3.0	3.9	6.4
3.5	4.2	6.9



J-Turbo Line - 20 mm

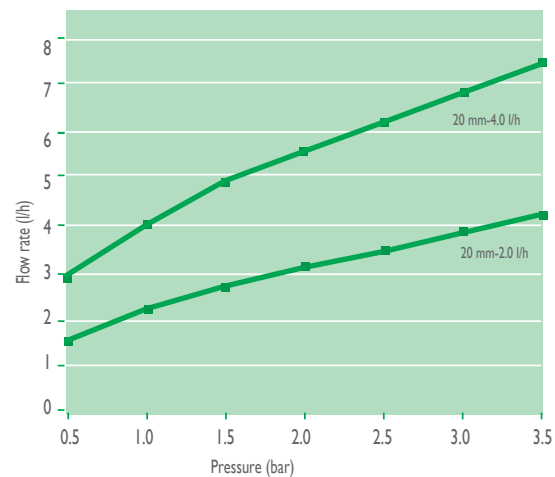
All-purpose dripline ideal for irrigation of orchards and field crops



STRUCTURE AND FEATURES

- Manufactured from high performance polyethylene
- Three features contribute significantly to clog resistance:
 - Multiple inlet filters provide large filtration area
 - Cylindrical shape facilitates wide flow path
 - Turbulent flow path
- Excellent CV ensures optimal field emission uniformity
- J-Turbo Line also supplied in group spacings
- Filtration recommended: 130 micron, (120 mesh)

PERFORMANCE GRAPH



TECHNICAL DATA

Nominal diameter	Wall thickness (mm)	OD (mm)	ID (mm)	Dripper flow rate (l/h)	Dripper spacing (cm)	Maximum working pressure (bar)	Coil length (m)
20	1.0	20.0	18	2.0, 4.0	20-100	3.0	300
	1.2	20.4	18	2.0, 4.0	20-100	3.0	300

MAXIMAL LATERAL LENGTH (M), AT 10% FLOW VARIATIONS ON FLAT GROUND

J-Turbo Line - 20mm								
Dripper model	Dripper spacing(cm)							
	20	30	40	50	60	75	100	
2.0	86	112	135	156	176	203	245	
4.0	55	71	86	99	112	130	156	

FLOW VS. PRESSURE

Pressure (bar)	Flow rate (l/h)	
	2.0 (l/h)	4.0 (l/h)
0.5	1.4	2.9
1.0	2.0	4.0
1.5	2.4	4.9
2.0	2.8	5.6
2.5	3.1	6.2
3.0	3.4	6.8
3.5	3.6	7.3

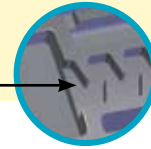


TalDrip



Innovative thin/medium-walled dripline with the most advanced labyrinth dripper on the market: maximum durability, accuracy and clog resistance

Protection from sand and root



APPLICATIONS

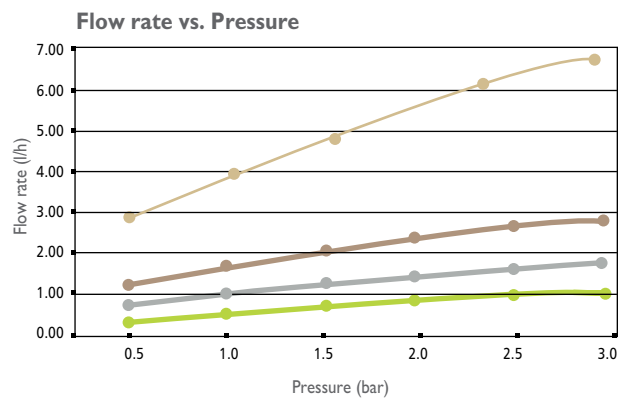
- Ideal for sugarcane and biofuel crops, vegetables, flowers and other row crops requiring low discharge and close dripper spacing
- Germination and seedling establishment
- SDI (sub-surface drip irrigation) and surface installation

STRUCTURE AND FEATURES

- Incorporates the Cascade labyrinth
Sets new standards of clog resistance for thin-walled driplines:
 - Double flow regime for highly effective self-cleaning
 - 3D water inlet triples handling of dirt load
 - Grooved surface design ensures reliable performance, even when inlet surface area is covered with clogging materials
- Spacial design to minimize root intrusion and sand suction
- Closer dripper spacing (from 10 cm) for successful germination and improved irrigation management
- Very low CV ensures accurate performance
- Advanced quality-control technology for reliable performance
- Longer lateral and higher accuracy with excellent dripper exponent
- Filtration Recommendation: 130 micron (120 mesh)



*Available in thin-walled dripline only W.T 6-15 mil



FLOW RATE VS. PRESSURE

p (bar)	Nominal flow rate (l/h)									
	0.6			1.0			1.7			4.0
	6-15 mil	6-18 mil	25 mil	35 mil	6-18 mil	25 mil	35 mil	6-18 mil	25 mil	35 mil
0.5	0.47	0.75	0.77	0.80	1.27	1.25	1.30	2.55	2.70	2.90
1.0	0.60	1.00	1.05	1.10	1.60	1.70	1.80	3.50	3.70	4.00
1.5	0.80	1.20	1.25	1.30	1.90	2.05	2.15	4.20	4.45	4.80
2.0	0.90	1.35	1.45	1.50	2.20	2.30	2.45	4.80	5.10	5.50
2.5			1.60	1.65		2.60	2.70		5.65	6.10
3.0			1.70	1.80		2.80	2.95		6.10	6.60
a	0.208	0.348	0.362	0.381	0.555	0.590	0.639	1.241	1.283	1.387
x	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46

a=Dripper flow constant, x=Dripper flow exponent

TalDrip

TECHNICAL DATA

Nominal diameter	Wall thickness		OD	ID	Max. pressure	Connectors type		Packaging and shipping				
	(mm)	(mil)				Barb	Tape	Standard coil length (m)	Coils per pallet	Coils per 20 ft. container	Coils per 40 ft. container	Coils per 40 ft. HC container
16	0.90	35	15.70	13.9	3.0	*		500	16	320	640	720
17	0.15	6	16.30	16.0	0.7		*	4000	16	320	640	720
	0.20	8	16.40	16.0	0.9		*	3000	16	320	640	720
	0.25	10	16.30	15.8	1.0		*	2000	16	320	640	720
	0.33	13	16.46	15.8	1.4		*	2000	16	320	640	720
	0.38	15	16.56	15.8	1.8		*	2000	16	320	640	720
	0.45	18	16.70	15.8	2.0		*	1500	16	320	640	720
	0.63	25	16.86	15.6	2.5		*	900	16	320	640	720
	0.85	35	17.10	15.4	3.0		*	500	16	320	640	720
20	0.95	37	19.6	17.7	3.0	*		400	16	320	640	720
22	0.63	25	22.06	20.8	2.5		*	700	16	320	640	720
	0.90	35	22.60	20.8	3.0		*	400	16	320	640	720
23	0.20	8	22.60	22.2	0.7		*	1500	16	320	640	720
	0.25	10	22.70	22.2	0.8		*	1000	16	320	640	720
	0.33	13	22.86	22.2	1.2		*	800	16	320	640	720
	0.38	15	22.96	22.2	1.4		*	600	16	320	640	720
	0.45	18	23.10	22.2	1.7		*	500	16	320	640	720



MAXIMAL LATERAL LENGTH (M), AT 10% FLOW VARIATION FOR THE SPECIFIED INLET PRESSURE*

TalDrip 0.6 l/h

Dripline Type				Dripper Spacing (cm)					
Nominal diameter (mm)	Wall thickness (mil)	Internal diameter (mm)	Inlet pressure (bar)	20	30	40	50	60	70
17	6	16.0	0.7	135	182	224	262	298	331
17	8	16.0	0.9	130	174	214	250	283	315
17	10;13;15	15.8	1.0*	130	174	214	250	283	315
23	8	22.2	0.7	182	254	320	382	439	493
23	10	22.2	0.8	185	259	325	387	445	500
23	13;15	22.2	1.0*	191	266	333	396	454	510

TalDrip 1.0 l/h

Dripline Type				Dripper Spacing (cm)					
Nominal diameter (mm)	Wall thickness (mil)	Internal diameter (mm)	Inlet pressure (bar)	20	30	40	50	60	70
16	35	13.9	1.0*	79	108	134	159	181	202
17	6	16.0	0.7	102	137	168	196	223	247
17	8	16.0	0.9	104	139	171	200	226	252
17	10,13,15,18	15.8	1.0*	105	141	172	201	228	253
17	25	15.6	1.0*	102	136	167	195	221	246
17	35	15.4	1.0*	99	133	162	190	215	239
20	37	18.0	1.0*	105	145	181	215	245	274
22	25;35	20.8	1.0*	144	198	245	290	331	369
23	8	22.2	0.7	150	208	261	310	355	399
23	10	22.2	0.8	153	212	266	315	361	405
23	13;15;18	22.2	1.0*	159	219	273	324	371	415

TalDrip 1.7 l/h

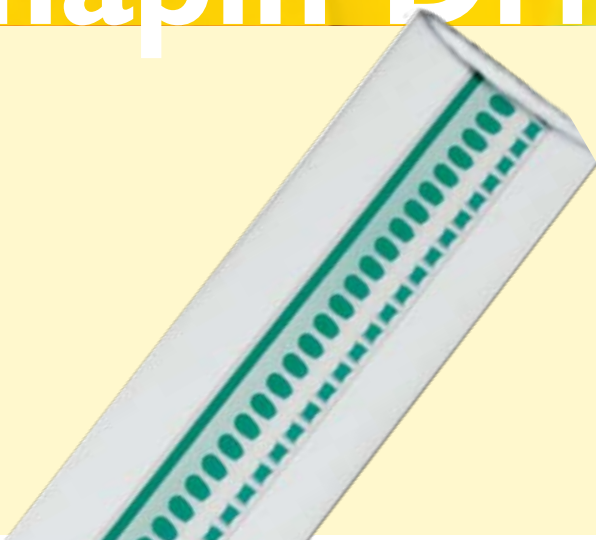
Dripline Type				Dripper Spacing (cm)					
Nominal diameter (mm)	Wall thickness (mil)	Internal diameter (mm)	Inlet pressure (bar)	20	30	40	50	60	70
16	35	13.9	1.0*	59	80	100	117	133	149
17	6	16.0	0.7	72	96	118	137	155	173
17	8	16.0	0.9	79	105	129	151	171	188
17	10,13,15,18	15.8	1.0*	78	104	128	149	169	188
17	25	15.6	1.0*	74	99	120	144	159	177
17	35	15.4	1.0*	70	93	114	133	151	167
20	37	18.0	1.0*	79	108	134	159	181	202
22	25;35	20.8	1.0*	109	148	183	215	245	274
23	8	22.2	0.7	114	158	197	233	267	300
23	10	22.2	0.8	116	161	200	237	271	304
23	13;15;18	22.2	1.0*	121	166	206	243	278	311

TalDrip 4.0 l/h

Dripline Type				Dripper Spacing (cm)					
Nominal diameter (mm)	Wall thickness (mil)	Internal diameter (mm)	Inlet pressure (bar)	20	30	40	50	60	70
16	35	13.9	1.0*	36	49	60	71	80	90
17	6	16.0	0.7	42	56	69	80	91	101
17	8	16.0	0.9	47	62	76	89	100	111
17	10,13,15,18	15.8	1.0*	47	63	76	89	101	112
17	25	15.6	1.0*	45	61	74	86	97	109
17	35	15.4	1.0*	43	58	70	82	93	103
20	37	18.0	1.0*	49	66	82	96	109	122
22	25	20.8	1.0*	67	91	112	132	149	167
22	35	20.8	1.0*	64	87	107	125	142	158
23	8	22.2	0.7	71	98	122	143	164	183
23	10	22.2	0.8	73	99	123	145	166	185
23	13;15;18	22.2	1.0*	75	102	126	149	169	189

* On flat ground *Higher pressure can increase length *See maximum pressure in technical data table

Chapin-Drip Tape



Uniquely designed 16 mm and 22 mm tape for increased durability and clog resistance

APPLICATIONS

- Irrigation of row crop such as tomatoes, corn, cotton and cane

STRUCTURE AND FEATURES

- Manufactured from high-quality polyethylene
- Unique turbulent flow path with wide cross-section facilitates clog resistance
- High resistance to insect damage and field abrasion
- Extruded film pattern ensures round sides, offering higher resistance to insect bites
- Excellent hydraulic performance against pressure variations - emitter exponent less than 0.49
- Slit outlet reduces root intrusion
- Lower winding tension reduces retraction in the field and prevents kinking and snaking

Deluxe

- Continuous inlet filter channel (333 inlets per 1.0 m) provides extremely high clog resistance



BTf



Deluxe

CHAPIN PACKAGING AND SHIPPING

Wall thickness (mil)	Coil length (m)	Coils per pallet #	Estimated quantity in container			
			20'		40'	
			Pallets	Coils	Pallets	Coils

5/8" BTf (Basic Turbulent Flow)

4	4,573	12	20	232	39	468
5	3,659	12	20	240	40	480
6	3,049	16	20	312	38	608
7	2,561	16	20	312	40	640
8	2,287	16	20	312	40	640
10	1,829	16	20	312	40	640
12	1,524	16	20	312	40	640
15	1,200	16	20	312	40	640

7/8" BTf (Basic Turbulent Flow)

6	2,287	12	20	320	40	640
7	1,982	12	20	320	40	640
8	1,677	12	20	320	40	640
10	1,372	12	20	320	40	640
13	1,067	12	20	320	40	640
15	915	12	20	320	40	640

5/8" Twinwall-Deluxe (Basic Turbulent Flow with Continuous Inlet Filter Channel)

6	3,049	12	10	280	20	560
8	2,287	12	10	280	20	560
10	1,829	12	10	280	20	560
12	1,524	12	10	280	20	560
15	1,220	12	10	280	20	560

7/8" Twinwall-Deluxe (Basic Turbulent Flow with Continuous Inlet Filter Channel)

6	2,287	12	20	320	40	640
8	1,677	12	20	320	40	640
10	1,372	12	20	320	40	640
13	1,067	12	20	320	40	640
15	915	12	20	320	40	640



Chapin-Drip Tape



TECHNICAL DATA

- Filtration recommendation : 130 micron, (120 mesh)
- Recommended operating pressure 0.7 bar

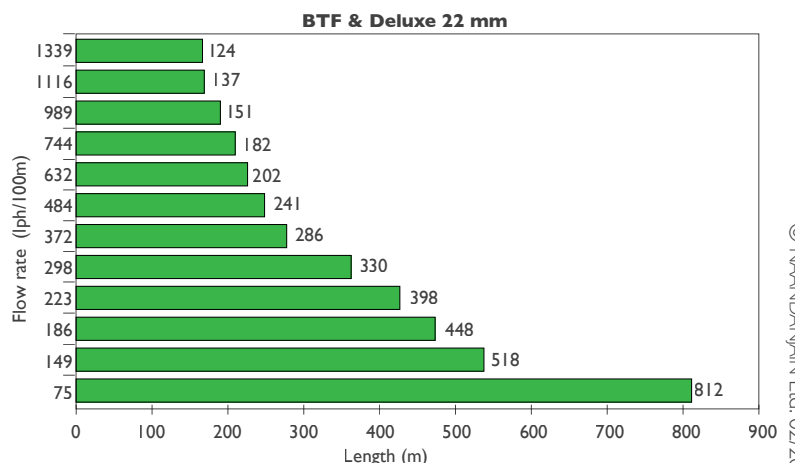
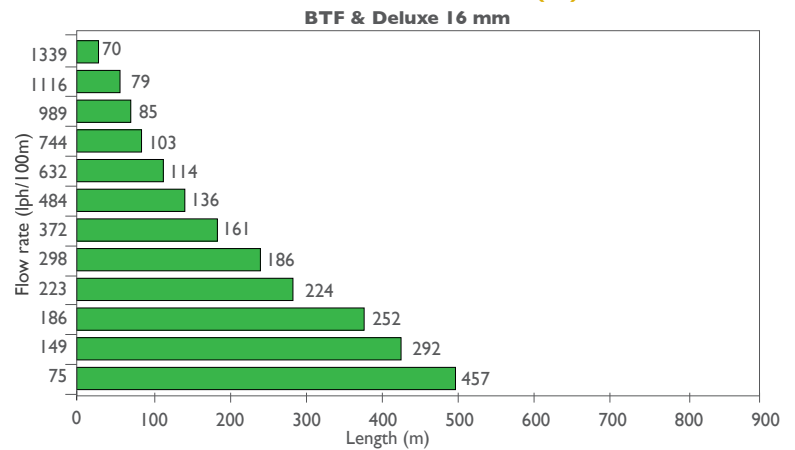
FLOW RATE AND SPACING

For all wall-thicknesses and diameters, BTF and Deluxe models

Spacing (cm)	Flow rate		Cv	K	X
	lph/100m	lph/outlet			
5*	1,116	0.57	2.5	0.041	0.51
10*	513	0.53	3	0.007	0.53
10*	744	0.76	2.4	0.07	0.47
10*	989	1.01	1.3	0.083	0.54
10*	1,339	1.36	2.5	0.001	0.6
15	223	0.34	3.5	0.032	0.47
15	372	0.57	3.4	0.052	0.47
15	484	0.74	3	0.071	0.42
15	744	1.13	4.4	0.017	0.49
15	989	1.51	2	0.117	0.5
20	298	0.60	3.7	0.111	0.45
20	372	0.76	1.6	0.064	0.49
20	484	0.98	2.1	0.081	0.51
20	632	1.29	1.6	0.064	0.49
20	1,116	2.27	1.5	0.182	0.5
30	186	0.57	2.6	0.044	0.53
30	223	0.68	2	0.068	0.43
30	298	0.91	1.4	0.075	0.54
30	372	1.13	1.7	0.101	0.48
30	484	1.47	2.7	0.138	0.46
30	744	2.27	3	0.202	0.47
41	149	0.60	2.7	0.056	0.43
41	186	0.76	1.9	0.061	0.53
41	298	1.21	2.2	0.121	0.46
41	372	1.51	2.2	0.118	0.52
46	372	1.70	2.9	0.15	0.49
61	75	0.80	2.2	0.027	0.72
61	149	0.91	2	0.001	0.6
61	223	1.36	1.9	0.094	0.61
61	372	2.27	1.8	0.193	0.5

* BTF Only

MAXIMUM LATERAL LENGTH (M)*



*For 90% uniformity *On flat ground *Inlet pressure 0.7 bar

ClickTif



Pressure-compensating (PC) & compensating non leakage (CNL) button dripper

Taper lock outlet

Barb outlet 3/5



PC

CNL

PC

CNL

PC=Black body CNL=Brown body

APPLICATIONS

- For orchards and vineyards, greenhouses, nurseries and landscape
- For pulse irrigation and irrigation in soilless conditions
- Prevents surplus drainage in low places (CNL model)
- Subsurface installation protects dripper from animal damage
- For irrigation of pot-plants

STRUCTURE AND FEATURES

- Four dripper design elements minimize clogging:
 - Protected cross-shaped water inlet
 - Flushing mechanism of regulating diaphragm
 - Strong turbulent flow in labyrinth with continual cleaning and flushing
- Large water passages
- Two models available: PC and CNL (Compensating Non-leakage)
- Color-coded for identification of discharge and model
- Standard 5 mm nipple for protection against woodpeckers and for pot application
- Chemical-resistant, high-grade plastic for precision and durability

TECHNICAL DATA

- Nominal discharge: 1.3, 2.0, 3.0, 4.0, 8.0, 12.0 l/h
- Regulating pressure range: 0.5-4 bar
- CV: less than 4%
- Anti-drainage: - Opening pressure: 4.0 m
- Closing pressure: 2.0 m
- Working with multiple outlets affects minimum pressure and regulation range. See table at page 29.

COLOR CODE



1.3 l/h

Grey cover



4.0 l/h

Black cover



2.0 l/h

Brown cover



8.0 l/h

Green cover



3.0 l/h

Blue cover



12.0 l/h

Red cover

Maximum recommended lateral length (m) on flat ground*

Lateral diameter	P m	ø 16-ID-13.6					ø 20-ID-17.4				
		Dripper Spacing (cm)					Dripper Spacing (cm)				
		30	40	50	75	100	30	40	50	75	100
Dripper 1.3 Grey	15	180	220	260	360	430	275	330	390	500	500
	20	210	260	310	410	500	310	390	455	500	500
	25	250	290	340	455	500	350	430	500	500	500
Dripper 2.0 Brown	15	95	120	143	193	237	140	172	202	268	326
	20	101	127	151	204	250	171	211	247	328	399
	25	114	144	171	231	285	186	230	271	359	436
Dripper 3.0 Blue	30	122	153	182	247	304	206	255	300	398	484
	15	77	96	114	154	188	126	157	184	244	296
	20	88	110	132	176	217	146	182	213	280	342
Dripper 4.0 Black	25	97	122	145	195	240	162	200	235	313	380
	30	105	132	157	212	260	176	217	255	340	410
	15	58	68	81	108	132	97	112	131	174	211
Dripper 8.0 Green	20	72	84	100	135	167	121	140	165	218	265
	25	82	95	114	154	191	140	161	189	251	306
	30	88	103	123	167	205	150	172	203	269	328
Dripper 12.0 Red**	15	37	44	52	71	86	63	72	86	113	138
	20	45	52	63	85	104	76	88	103	137	166
	25	51	59	70	95	117	85	98	116	155	188
Dripper 12.0 Red**	30	55	64	77	104	128	93	108	112	169	205
	20			54	74	91			85	113	138
	25			60	81	101			94	126	153
	30			65	88	109			109	145	177

* Minimum pressure at lateral end: 0.5 bar

** See recommended pressure range

Lateral length exceeding 500 m is not recommended

ClickTif Pointer stakes & accessories

Pointer drop guide



Catalog no. 802840

Pointer elbow labyrinth stakes



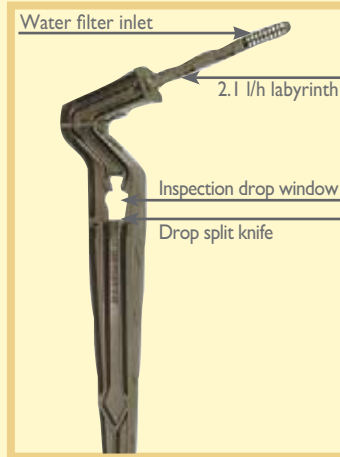
Catalog no. 802830

Catalog no. 802850

Pointer straight labyrinth stake



Catalog no. 802800



Stabilizer stake



Catalog no. 6466040000



2, 4, 8 outlets with flow control stakes

Pointer

Use as single outlet for drop guide

Pointer labyrinth stake

Can be used as an independent dripper or to stabilize flow rate at multiple outlets

Flow rate vs. pressure - Pointer Stake

Pressure (bar)	0.5	1.0	1.5	2.0
Flow rate (l/h)	1.5	2.1	2.5	3.0

When working with multiple outlets:

1. Use labyrinth stakes to improve uniformity
2. Minimum recommended working pressure: 1 bar
3. Maximum recommended flow per outlet: 2.0 l/h.
4. Minimum recommended flow per outlet:
 - Flat surface and uniform tube length - 0.5 l/h
 - On a slope or uneven elevation - 1.0 l/h

Recommended combinations:

Number of outlets	Dripper flow rate l/h					
	1.3	2	3	4	8	12
2	●	●	●	●	-	-
3	-	●	●	●	-	-
4	-	-	●	●	●	-
5	-	-	●	●	●	-
6	-	-	●	●	●	●

- Only on flat surface and with uniform tube length
- For all conditions, including slopes and uneven elevations

2.5 mm Punch

Special design for comfortable punching and inserting of ClickTif drippers



Catalog no. 897284

3/5 Connectors



Catalog no. 802908



Catalog no. 802920



Catalog no. 802940

3/5 PVC or PE extension tube stabilizer stake



Multi-level connectors



Catalog no. 802928



Catalog no. 802948



J-SC-PC-Plus

Openable Pressure-compensating (PC) button dripper



APPLICATIONS

- Recommended for orchards, fruit crops, plantations and nurseries
- Ideal for undulating terrain and steep slopes

STRUCTURE AND FEATURES

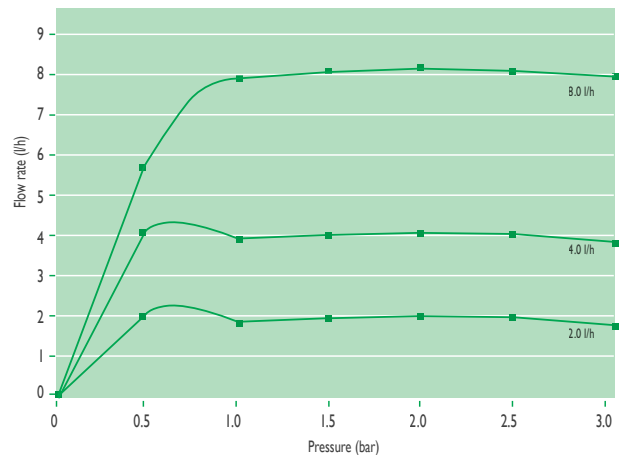
- Dripper can be opened to facilitate easy cleaning
- Manufactured from virgin plastic for stable performance
- Silicone rubber diaphragm ensures consistent performance for longer period
- Narrow cross-shaped inlet acts as a filter
- Optional anti-bug cap prevents intrusion of insects
- Self-cleaning design ensures flushing at all times during operation
- Wide operating pressure-compensating range allows longer length of laterals
- Manufacturing coefficient of variation

TECHNICAL DATA

- $CV \leq 5\%$
- Regulating pressure range: 1.0-3.0 bar
- Filtration requirement: 130 micron, (120 mesh)
Required punch diameter: 2.5 mm

TECHNICAL DATA

Discharge (l/h)	Cap color and insert	Emitter exponent (x)	Flow coefficient (k)
2.2	Yellow	0.04	2.4
4.2	Black	0.03	4.2
8.2	Blue	0.08	7.5



J-Turbo KeyPlus

Openable button dripper



APPLICATIONS

- Recommended for orchards, fruit crops, plantations, nurseries and landscapes

STRUCTURE AND FEATURES

- Dripper can be opened to facilitate easy cleaning
- Manufactured from virgin plastic for stable performance
- Turbulent flow path with wide cross-sectional area ensures clog resistance
- Extended outlet facilitates use of PE extension tube or vinyl tube
- Narrow cross-shaped inlet acts as a filter
- Manufacturing coefficient of variation $CV \leq 3\%$ ensures high field emission uniformity (EU)
- Colored cap facilitates easy identification of flow rate

TECHNICAL DATA

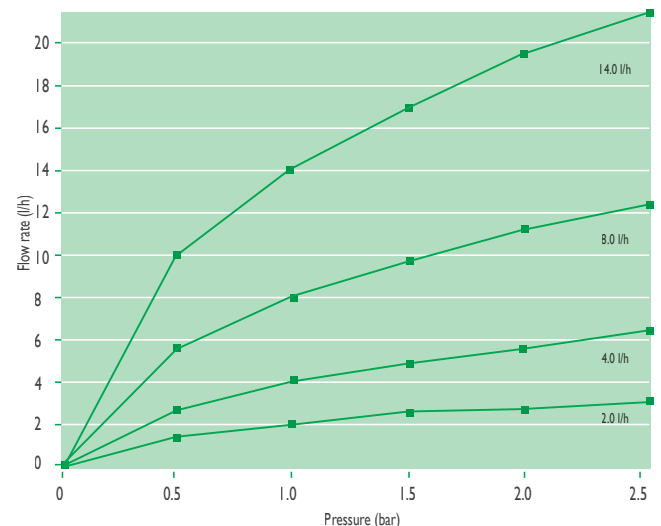
- $CV \leq 3\%$
- Recommended operating pressure: 0.5-2.5 bar
- Filtration requirement: 130 micron, (120 mesh)
- Required punch diameter: 2.5 mm

TECHNICAL DATA

Discharge (l/h)	Cap color and insert	Emitter exponent (x)	Flow coefficient (k)
2.0	Yellow	0.48	2.0
4.0	Black	0.48	4.0
8.0	Blue	0.48	8.0
14.0	Green	0.48	14.0

FLOW VS. PRESSURE

Pressure (bar)	Flow rate (l/h)			
	2.0 (l/h)	4.0 (l/h)	8.0 (l/h)	14.0 (l/h)
0.5	1.4	2.9	5.7	10.0
1.0	2.0	4.0	8.0	14.0
1.5	2.4	4.9	9.7	17.0
2.0	2.8	5.6	11.2	19.5
2.5	3.1	6.2	12.4	21.7
3.0	3.4	6.8	13.6	23.7
3.5	3.6	7.3	14.6	25.5



Mini in Line

In line button dripper for loop type installation



APPLICATIONS

- Recommended for fruit orchards, landscapes and gardens

STRUCTURE AND FEATURES

- Facilitates loop type installation
- Manufactured from virgin plastic for stable performance
- Factory-sealed button dripper
- Turbulent flow path with wide cross-sectional area ensures clog resistance
- Narrow cross-shaped inlet acts as a filter
- Colored base facilitates easy identification of flow rate
- 4 mm barbed connection on both sides facilitates dripper looping around tree trunk
- Manufacturing coefficient of variation $CV \leq 3\%$ ensures high field emission uniformity (EU)

TECHNICAL DATA

- $CV \leq 3\%$
- Regulating pressure range: 0.5-2.0 bar
- Filtration requirement: 130 micron, (120 msh)
- Required punch diameter: 2.5 mm

FLOW VS. PRESSURE

Pressure (bar)	Flow rate (l/h)		
	2.0 (l/h)	4.0 (l/h)	8.0 (l/h)
0.5	1.4	2.9	5.7
1.0	2.0	4.0	8.0
1.5	2.4	4.9	9.7
2.0	2.8	5.6	11.2
2.5	3.1	6.2	12.4
3.0	3.4	6.8	13.6
3.5	3.6	7.3	14.6

TECHNICAL DATA

Discharge (l/h)	Cap color and insert	Emitter exponent (x)	Flow coefficient (k)
2.0	Yellow	0.44	2.0
4.0	Black	0.44	4.0
8.0	Blue	0.47	8.0



Vari Flow

Adjustable button dripper



APPLICATIONS

- Suitable for trees with high water requirement
- Recommended for sandy soils and desert conditions

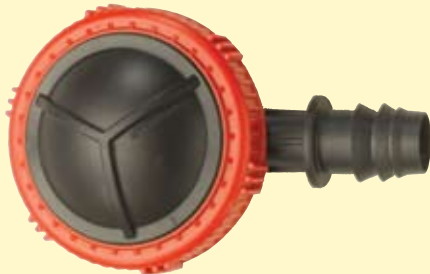
STRUCTURE AND FEATURES

- Manufactured with durable virgin plastic
- Adjustable discharge according to the water requirements and growth stage
- Total shut-off option
- Nominal operating pressure of 1 bar, but can be used at low pressures
- Designed to prevent dripper blockage in desert conditions
- Colors: black, green, blue (please specify when ordering)

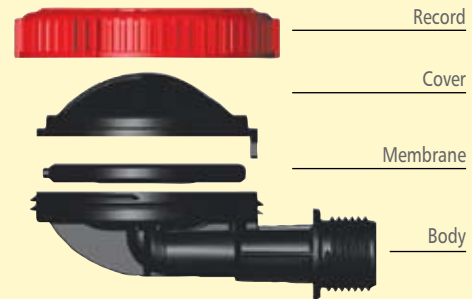
TECHNICAL DATA

- Adjustable flow rate: 0-100 l/h at 1.0 bar
- Filtration requirement: 130 micron, (120 mesh)
- Required punch diameter: 2.5 mm

Lateral Flush Valve



Automatic lateral flush valve for efficient dripline maintenance



APPLICATIONS

- For surface and subsurface drip irrigation
- Automatically flushes the drip lateral at the beginning of every irrigation
- Effective in water quality conditions that require frequent flushing
- Saves manual labor

STRUCTURE AND FEATURES

- Robust, simple structure with no metal parts
- High-quality, chemical resistant materials
- Large water passages for maximum reliability
- Large variety of integral connectors to suit all dripline types (see table)
- Red ring for easy identification and inspection
- Easy to open and clean



TECHNICAL DATA

- Operating pressure: 0.5-3.0 bar
- Flushing time: 15-25 seconds
- Flush volume: 2-2.5 liters

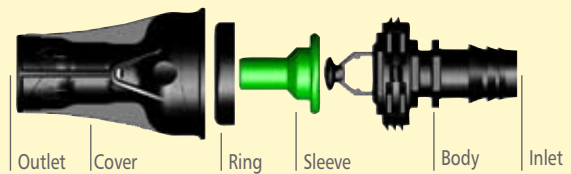
PRODUCT RANGE

Description	Catalog number
Thread 1/2" NPT male	790701
Thread 3/4" BSP male	790702
Barb 16 mm (for W.T 0.9-1.2mm, ID 13.9)*	790716
Barb 17 mm (for W.T 0.9-1.2mm, ID 14.4/14.6)*	790717
Barb 20 mm (for W.T 0.9-1.2mm, ID 18.0)*	790720
Tape 17 mm (5/8") (for W.T 10-18mil, ID 15.4-16mm) black ring	790727
Tape 17 mm (5/8") (for W.T 25 mil, ID 15.4-16mm) brown ring	790728
Tape 17 mm (5/8") (for W.T 35 mil, ID 15.4-16mm) red ring	790729
Tape 22 mm (7/8") (for W.T 25 mil, ID 20.8mm) with ring	790722

*All barb connectors come with a free snap clip. Use it to secure the flush valve in place.

Lateral LPD

Dripline leakage prevention device



APPLICATIONS

Installed at the beginning of drip laterals

- Prevents draining of sub-main and main pipes after system shut-off
- Improves irrigation uniformity by synchronizing lateral opening and closure along the sub-main
- Reduces system filling times
- Can reinforce CNL driplines and button drippers where slopes exceed the closing pressure of CNL

Installed along the lateral

- In steep slopes, it improves water distribution during lateral draining

STRUCTURE AND FEATURES

- Simple, plastic 4-part structure
- Available with a large variety of integral inlet connections
- Outlet is 1/2" female-threaded NPT in all options
- Low head loss
- Recommended working pressure 1-4 bar

TECHNICAL DATA

Lateral Discharge (l/h)	Head Loss (m)
250	0.1
500	0.2
750	0.8
1000	1.1
1250	1.3
1500	2.6

PRODUCT RANGE

Inlet* (integral)*	Catalog no.	Outlet connector	Catalog no.
Barb 16 mm (for W.T 0.9-1.2 mm, ID 13.9 mm)	N790616	1/2" male x barb 16 mm	6424040610
Barb 17 mm (for W.T 0.9-1.2 mm ID 14.4/14.6 mm)	N790617	1/2" male x barb 17 mm	6424040620
Barb 20 mm (for W.T 0.9-1.2 mm ID 18.0 mm)	N790610	1/2" male x barb 20 mm	6424040630
Tape 17 mm (5/8") (for W.T 10-18 mil ID 15.4-16.2 mm) black ring	N790627	1/2" male x tape 17 mm	6425041003
Tape 17 mm (5/8") (for W.T 25 mil, ID 15.4-16.2 mm) brown ring	N790628	1/2" male x tape 17 mm	6425041003
Tape 17 mm (5/8") (for W.T 35 mil, ID 15.4-16.2 mm) red ring	N790629	1/2" male x tape 17 mm	6425041003
Tape connector 22 mm (7/8") (for W.T 25 mil, ID 20.8 mm) with ring	N790622	3/4" male x tape 22 mm Adaptor 1/2" male x 3/4 female	6425041020 6460590200
Hose Thread 3/4" USA Version	N790630		
Thread NPT 1/2" male	N790601		
Thread NPT 3/4" male	N790602		

*All outlets are thread NPT 1/2" female

OPERATING PRESSURE (M)

Dripline type	PC/Non PC	CNL
Opening pressure	14m	14m*
Closing pressure	8m	6m

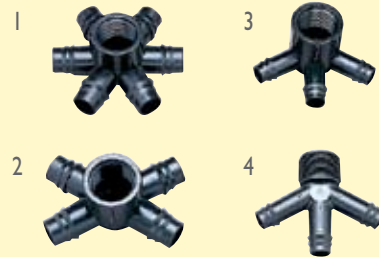
*When dripline is full, opening pressure is 12 m

Accessories

**BARB CONNECTORS FOR:
NAANPC, AMNONDRIP, TIFDRIP
& TALDRIP 16, 20 MM**

Barbed/Threaded Multi-Outlets

	Description	Item # 20 mm	Item # 16 mm	Qty/Bag
1	6-way 3/4" female	6424045020	6424045010	50
2	4-way 3/4" female	6424234000	6424044010	
3	3-way elbow 3/4" female	6424042050	6424042010	
4	3-way straight 3/4" male	6424043030	6424043010	



Barbed/Threaded Connectors

	Description	Item # 20 mm	Item # 16 mm	Qty/Bag
1	Tee barb 3/4" female	6424040230	6424040210	50
2	Tee barb 3/4" male	6424040050	6424040040	
3	Y connector 3/4" male	6416040600	6416040200	
4	Barbed connector 3/4" male	6424040635	6424040615	100
4	Barbed connector 1/2" male	6424040630	6424040610	
5	Elbow barb 3/4" male	6424040450	6424040445	



Barbed Connectors

	Description	Item #		Qty/Bag
1	Barbed connector silver ring 20 x 20	483222		100
2	Barbed connector 16 x 16	483161		
2	Barbed connector 17 x 17	6423040620		
3	Barbed reducer 20 x 17	6423040830		
3	Barbed reducer 20 x 16	6423040850		
3	Barbed reducer 17 x 16	6423040820		
		Item # 20 mm	Item # 16 mm	
4	Tee barbed	6423040030	6423040010	
5	Tee reducer barbed	6423040250	6423040220	
6	Elbow barb	6423040440	6423040410	
7	Star 3-way	-	6423049900	



Start Connectors & Accessories

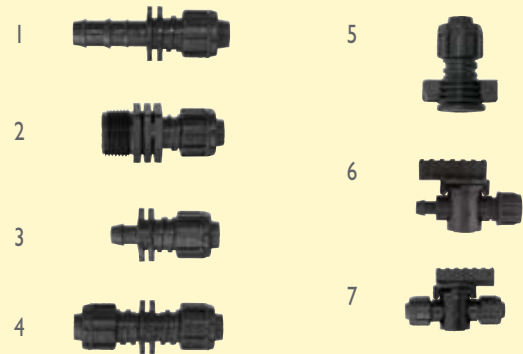
	Description	Item # 20 mm	Item # 16 mm	Qty/Bag
1	Quick start for PE & PVC	6431041000	6431040400	100
2	Grommet for quick start for PVC	6431999900	6431999900	
3	End line	6419300420	6419300410	
4	Snap clip	6720150825	6720150815	
5	Dripper clip seal	480920	480916	
6	Vine drip clip	809000		



Accessories

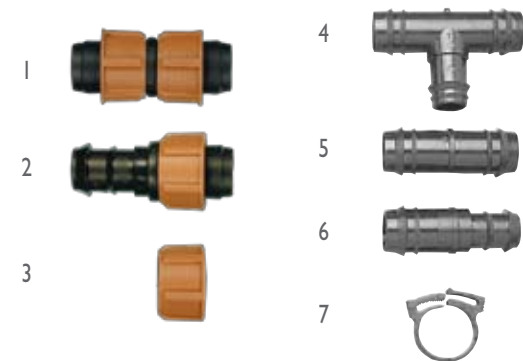
FITTINGS: 16;17 & 22;23 TAPE LOCK, 4-35 MIL FOR TALDRIP, TOPDRIP & CHAPIN

	Description	Item #	Qty/Bag
1	Tape 16;17 x 16 barb	6425040438	800
1	Tape 22;23 x 20 barb	6425041017	700
2	Tape 16;17 x 3/4" M	6425041005	1000
3	Start conn. & grommet	6431040402	700
4	Tape 16;17 x 16;17	6425040436	800
4	Tape 22;23 x 22 ;23	6425041015	400
5	Start conn. for layflat	6431040403	300
6	PE start conn. & grommet & valve	6431040401	300
7	Tape 16; 17 & valve	6425040015	250



FITTINGS: 22 MM FOR TALDRIP 25 & 35 MIL & AMNONDRIP 0.65 & 1.0 MM

	Description	Item #	Qty/Bag
1	Connector 22 x 22	6425040800	100
2	Reducer 22 x 20	6425040810	
3	Ring for connector 22 (25,35 mil)	6425040820	
4	Tee reducer 25 x 20 x 25	6423040280	
5	Barb connector 25 x 25	6423040640	
6	Barb reducer 25 x 20	6423040870	
7	Snap clip R-25*	6720150835	



RING CONNECTORS: THIN-WALLED 16; 17MM, 10-35MIL FOR TALDRIP & TOPDRIP

	Description	Item # Black 10,13 mil	Item # Brown 25 mil	Item # Red 35 mil	Qty/ Bag
1	Start connector 16/17	6431301505	6431302005	6431303005	100
2	Connector 17 x 16 barb	6425300638	6425300640	6425300642	
3	Tee 16/17 x 16 x 16/17 Tee 17 x 20 x 17	6425300606 6425300608	6425300610 6425300612	6425300614 6425300616	
4	Connector 16/17 x 16/17	6425300646	6425300648	6425300650	
5	End line 16/17	6425300655	6425300656	6425300658	
6	Ring for connector Black:10-18 mil Brown: 25 mil Red:35 mi	6425300600	6425300602	6425300604	
7	Grommet for quick start for PVC	6431999900	6431999900	6431999900	



Drip Irrigation System

LATERAL FLUSHING

Lateral flushing flushes out debris that accumulates in the dripline and can eventually clog the dripper's water inlet or labyrinth.

During the irrigation season, laterals should be flushed every 2-3 weeks. Flushing is done by opening the lateral end for 30-60 seconds until the water coming out of the lateral is clear.

Flushing with a flushing submain or with a NaanDanJain Lateral Flush Valve will reduce costs of manual labor and guarantee frequent flushing.

ACID TREATMENT

Application of acid is recommended as part of a routine maintenance procedure. Acid injection reduces clogging caused by low solubility salts, such as calcium carbonate. The following recommendations are for hydrochloric acid 33% or phosphoric acid 85%.

Determining the acid quantity to be injected:

Take a 10 liter bucket and gradually start adding acid in small portions and measuring the accepted pH. Once you reach the required pH of 2.5, calculate the amount of acid required for receiving this value in your system by multiplying the acid quantity by 100 and injecting this amount per 1 m³ of the system discharge.

Treatment instructions:

1. Treatment should be carried out 1-2 times during the irrigation season or when system discharge drops by 5%.
2. Flush all submains and laterals before starting the treatment.
3. Check the discharge of the system before the treatment so you can later compare this with the discharge of the treated system.
4. Solution preparation: The solution volume (water + acid) should be equal to one quarter (1/4) of the hourly discharge of the injector. This way the injection will last for 15 minutes.
We recommend working with the maximum injector discharge in order to avoid working with a highly concentrated solution.
5. Start the injection only after the system is full of water and the drippers are emitting.
6. Control: Using a litmus indicator strip, check the pH

- at the furthest lateral for residual acid (pH 2.5). A second application is recommended if no residual acid is detected.
7. Inject during 15 minutes.
8. Continue irrigation for 30-60 minutes to ensure the complete flushing of the system.
9. Check the discharge of the system.

Example:

- Acid needed for receiving pH (2.5) in the 10 liter bucket = 12 cc
- 12 cc X 100 = 1200 cc = 1.2 liters
- Inject 1.2 liters of acid per 1 m³ of the system discharge
- System discharge (of the treated sector) = 30 m³/h
- System discharge during the 15 minute treatment = 7.5 m³
- Acid required = 1.2 liter X 7.5 = 9 liter
- Max. injector discharge = 200 l/h
- Total solution volume required (1/4 of 200 liters) = 50 liters
- 50 liters of solution = 9 liters of acid + 41 liters of water
- Injection time = 15 minutes (50 liters injected with a 200 l/h injector)



Maintenance

CHLORINATION

Chlorine injection reduces clogging caused by organic materials. It is recommended as an intermittent treatment or as an ongoing preventive treatment in systems that use water that contains a high concentration of organic materials.

The most commonly used material is sodium hypochlorite 10-12%.

Treatment instructions:

1. Find out the required dose, treatment frequency and longevity. Refer to the chart below:

Application method	Residual free chlorine concentration		Treatment frequency	Contact time
	At point of injection	At end of lateral		
Continuous	3-5	1	Every irrigation	1 hour or more
Intermittent	5-10	1	Whenever needed, according to water quality	30 minutes

Contact Time:

The time in which the system is in contact with the injected chlorine. This time is measured from the moment you detect free chlorine in the emitters.

Concentration of free chlorine:

Measure active free chlorine concentration (residual chlorine), using a color comparison set. This is the same set that is used to monitor the chlorine level in swimming pools. The residual chlorine concentration depends on the water chlorine demand.

2. Flush all submains and laterals before starting the treatment.
3. Dosing and injecting: Use the following formula to determine injection rate and stock solution concentration:

$$\frac{(\text{System discharge m}^3/\text{h}) \times (\text{chlorine concentration PPM at injection point})}{(\text{Concentration of the stock solution \%}) \times (10)} = (\text{Injector discharge l/h})$$

If the injector can be manipulated to inject at different discharge levels, you may do so, according to your requirements. If not, you can adapt the stock solution concentration.

Adapting the stock solution concentration to a fixed injection rate:

Example:

- System discharge (of the treated sector) = 30 m³/h
- Chlorine concentration required at injection point = 10 PPM
- Injector discharge = 200 l/h
- Concentration of stock solution % = ?

A. Determining the needed stock solution concentration:

$$(200 \text{ l/h}) = \frac{(30 \text{ m}^3/\text{h}) \times (10 \text{ PPM})}{(? \%) \times (10)}$$

$$(0.15) = \frac{(30) \times (10)}{(200) \times (10)}$$

Concentration of the stock solution required = 0.15%

B. Diluting the commercial product to achieve the adequate stock solution concentration:

$$\frac{(\text{Concentration of commercial product \%})}{(\text{Needed concentration of stock solution \%})} = (\text{Diluting ratio})$$

Example:

$$\frac{\text{Concentration of commercial product} = 10\%}{\text{Needed concentration of stock solution} = 0.15\%} = \text{Diluting ratio} = 1/66$$

Mix 1 liter of commercial product 10% with 66 liters of water to have a 0.15% stock solution.



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