



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. Our extensive product range includes pressure-compensating driplines, traditional driplines, thin-walled driplines, button drippers and LayFlats.

NAANDANJAIN

A **JAIN IRRIGATION** COMPANY

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Introduction

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

With over seventy years of experience, the company operates in over 90 countries in all continents, meeting all the requirements of efficient modern irrigation. NaanDanJain's wide 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 NaanDanJain is a ISO 9001:2008 and ISO 14001:2004 certified company.

The Cascade Labyrinth

The Cascade Labyrinth incorporated in all our drippers signifies a breakthrough in low-volume labyrinth 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.

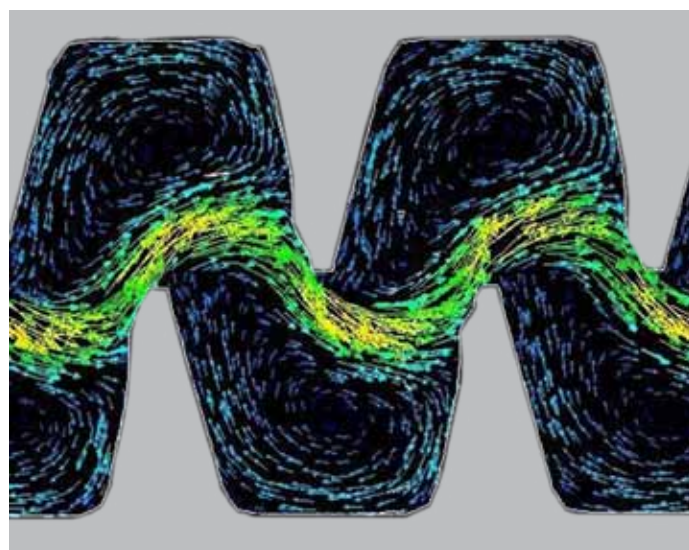
EFFICIENT SELF-CLEANING

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 only by 45%.

VELOCITY VECTORS IN THE CASCADE LABYRINTH



- Fast central flow
- Cyclone turbulence, self cleaning flow

THICK-WALLED PC FLAT DRIPLINE

AmnonDrip PC, CNL & PC AS



Innovative, pressure-compensating (PC) dripline with special anti-syphon (AS) and compensating non-leakage (CNL) models. Cascade labyrinth feature incorporated in all drippers

APPLICATIONS

- Ideal solution for irrigation in topographically challenging terrain, and where long laterals are required
- CNL option for pulse irrigation of orchards, open field crops and greenhouses
- Subsurface Drip Irrigation (SDI), for accurate irrigation of orchards, open field crops and greenhouses

STRUCTURE AND FEATURES

- Pressure-compensating (PC) enabling water application accuracy at variable topography and the installation of long laterals
- Efficient self-cleaning turbulence provided by the Cascade labyrinth
- Hydrodynamic dripper design ensures continuous flushing of sediments and small dirt particles
- Low CV for maximal uniformity
- Weir structure improves root intrusion resistance and sand suction
- 3D water inlet structure improves clog resistance
- High-quality silicon diaphragm
- Both carton and coil package options are available (see packing and shipping table)
- Colored cap facilitates easy identification of dripper models

SPECIAL MODELS

- CNL: Pressure-compensating non-leakage 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



0.5, 1.1, 1.6, 2.0, 2.2, 3.8 l/h

AmnonDrip CNL



0.5, 1.1, 1.6, 2.0, 2.2, 3.8 l/h

AmnonDrip PC AS



0.5, 1.1, 1.6, 2.0, 2.2, 3.8 l/h



TECHNICAL DATA

- Flow rates: 0.5, 1.1, 1.6, 2.0, 2.2, 3.8 l/h
- CNL: Opening pressure - 1 bar
Closing pressure - 0.2 bar
- AS: Opening pressure - 0.5 bar
- Pressure regulating range:
PC & AS models - 0.5-4.0 bar
PC CNL - 1.0-4.0 bar
- Recommended filtration: 130 micron (120 mesh)

THICK-WALLED PC FLAT DRIPLINE

AmnonDrip PC, CNL & PC AS

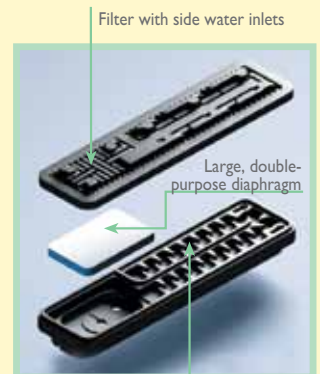
TECHNICAL DATA

Nominal diameter (mm)	Wall thickness		OD (mm)	ID (mm)	Maximum Pressure (bar)	KD	Connector type	
	(mm)	(mil)					Barb	Tape
16	0.65	25	15.16	13.9	2.5	0.92	●	
16	0.90	35	15.70	13.9	3.0	0.92	●	
16	1.00	39	15.90	13.9	3.5	0.92	●	
16	1.15	45	16.20	13.9	3.5	0.92	●	
17	0.65	25	16.90	15.6	2.5	0.75		●
17	0.90	35	16.20	14.4	3.0	0.75	●	
17	1.00	39	16.40	14.4	3.0	0.75	●	
17	1.20	47	17.00	14.4	3.5	0.75	●	
20	1.00	39	19.70	17.70	3.0	0.65	●	
20	1.20	47	20.10	17.70	3.5	0.65	●	
23	1.00	39	22.80	20.8	3.0	0.14		●

TOP VIEW



BOTTOM VIEW



AMNONDRIP PACKAGING AND SHIPPING

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	600	320	640	720
16	0.90	400	320	640	720
16	1.00	400	320	640	720
17	0.65	600	320	640	720
17	0.90	400	320	640	720
17	1.00	400	320	640	720
20	0.90	300	320	640	720
20	1.00	300	320	640	720
23	1.00	300	320	640	720



Coils

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	0.90	500	150	320	360
16	1.00	500	150	320	360
16	1.15	500	150	320	360
17	0.90	500	150	320	360
17	1.00	500	150	320	360
17	1.20	500	150	320	360
20	1.00	300	150	345	365
20	1.20	300	150	345	365



* Dripper spacing can affect coil length.

Available also in brown, white, purple or any other color for a minimum order of 40K m

THICK-WALLED PC FLAT DRIPLINE

TopDripHD PC & PC AS



Innovative, cost effective, heavy duty pressure-compensating (PC) and anti-siphon (PC AS) thick-walled dripline models based on the cascade labyrinth

APPLICATIONS

- Row crops and vegetables
- For orchards and other multi-seasonal applications
- 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
- 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

TECHNICAL DATA

- Flow rate: 0.6, 1.0, 1.6, 2.0, 2.2, 3.5 l/h
- Pressure regulating range: 0.4-4.0 bar
- Operating pressure: 0.4-4.0 bar, according to wall thickness
- Wall thickness: 0.9-1.2 mm
- Recommended filtration: 130 micron (120 mesh)

TopDrip PC



0.6, 1.0, 1.6, 2.0, 2.2, 3.5 l/h

TopDrip PC AS



0.6, 1.0, 1.6, 2.0, 2.2, 3.5 l/h

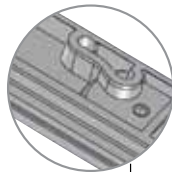


3 PARTS-UPPER VIEW

Shallow profile reduces head losses
Raised water inlet reduces clogging

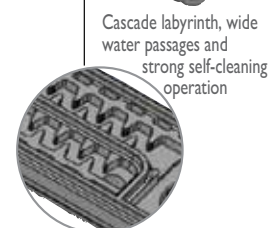
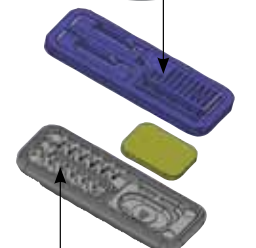
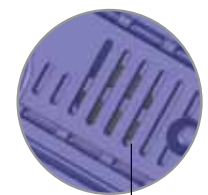


Weir design prevents root intrusion and sand suction



3 PARTS-BOTTOM VIEW

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



Cascade labyrinth, wide water passages and strong self-cleaning operation

THICK-WALLED PC FLAT DRIPLINE

TopDripHD PC & PC AS

TECHNICAL DATA

Nominal diameter (mm)	Wall thickness		OD (mm)	ID (mm)	Maximum Pressure (bar)	KD	Connector type
	(mm)	(mil)					Dentados
16	0.90	35	15.70	13.9	4.0	0.575	●
16	1.00	39	15.90	13.9	4.0	0.575	●
16	1.15	45	16.20	13.9	4.0	0.575	●
17	0.90	35	16.20	14.4	4.0	0.48	●
17	1.00	39	16.40	14.4	4.0	0.48	●
17	1.20	47	17.00	14.4	4.0	0.48	●
20	1.00	39	19.70	17.70	4.0	0.35	●
20	1.20	47	20.10	17.70	4.0	0.35	●



TOPDRIP HD PACKAGING AND SHIPPING

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	0.90	400	320	640	720
16	1.00	400	320	640	720
17	0.65	600	320	640	720
17	0.90	400	320	640	720
17	1.00	400	320	640	720
20	0.90	300	320	640	720
20	1.00	300	320	640	720



Coils

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	0.90	500	150	320	360
16	1.00	500	150	320	360
16	1.15	500	150	320	360
17	0.90	500	150	320	360
17	1.00	500	150	320	360
17	1.20	500	150	320	360
20	1.00	300	150	345	365
20	1.20	300	150	345	365



* Dropper spacing can affect coil length.

THICK-WALLED PRESSURE COMPENSATING DRIPPERS

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 and where long laterals are required
- For accurate irrigation of orchards, open field crops and greenhouses

STRUCTURE AND FEATURES

- 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

16 mm



1.1 l/h



1.6 l/h



2.2 l/h



3.5 l/h

20 mm



0.95 l/h



1.6 l/h

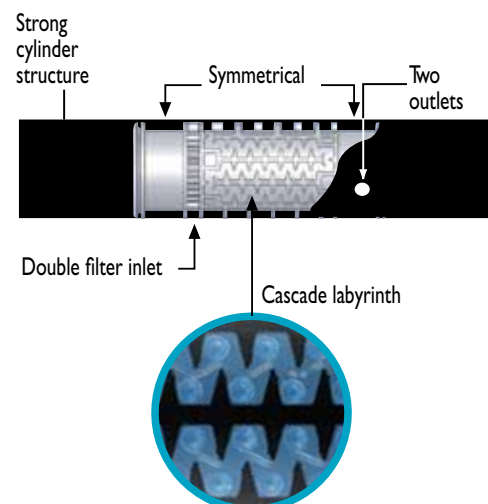


2.2 l/h



3.8 l/h

Naan PC dripper structure



THICK & MEDIUM WALLED PC CYLINDRICAL DRIPLINE

NaanPC

TECHNICAL DATA

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

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	0.90	400	165	350	395
16	1.00	400	165	350	395
16	1.15	400	165	350	395
20	1.00	300	125	270	300
20	1.20	300	134	290	320



THIN TO MEDIUM-WALLED PC FLAT DRIPLINE

TopDrip



Innovative, cost effective, pressure-compensating (PC) and anti-syphon (PC AS) thin to medium-walled dripline models based on the cascade labyrinth



TopDrip PC

0.6, 1.0, 1.6, 2.0, 2.2, 3.5 l/h



TopDrip PC AS

0.6, 1.0, 1.6, 2.0, 2.2, 3.5 l/h

APPLICATIONS

- Row crops like Sugercane, vegetables etc.
- 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

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
12	13	1250	16	320	640	720
	15	1250	16	320	640	720
	18	1000	16	320	640	720
	25	700	16	320	640	720
16	13	1250	16	320	640	720
	15	1250	16	320	640	720
	18	1150	16	320	640	720
	25	600	16	320	640	720
22	13	550	16	320	640	720
	15	500	16	320	640	720
	18	450	16	320	640	720
	25	375	16	320	640	720

* Dripper spacing can affect coil length.

TECHNICAL DATA

Nominal diameter	Wall thickness		ID (mm)	OD (mm)	Max. Pressure (bar)	KD	Connectors
	mil	mm					Tape
12	13	0.33	12.46	11.8	1.5	1.03	●
	15	0.38	12.56	11.8	2.0	1.03	●
	18	0.45	12.70	11.8	2.2	1.03	●
	25	0.65	13.06	11.8	3.0	1.03	●
16	13	0.33	16.2	16.86	1.4	0.4	●
	15	0.38	16.2	16.96	1.8	0.4	●
	18	0.45	15.8	16.70	2.0	0.4	●
	25	0.65	15.6	16.86	2.5	0.4	●
22	13	0.33	22.2	22.86	1.2	0.3	●
	15	0.38	22.2	22.96	1.4	0.3	●
	18	0.45	22.2	23.10	1.7	0.3	●
	25	0.65	22.2	23.46	2.0	0.3	●

SPECIAL MODEL

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

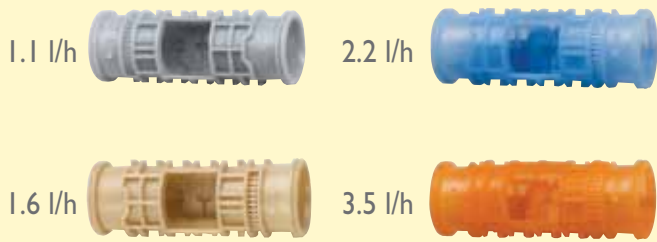
TECHNICAL DATA

- Flow rate: 0.6, 1.0, 1.6, 2.0, 2.2 et 3.5 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, 0.33-0.65 mm
- Recommended filtration: 130 micron (120 mesh)



NaanPC Light 16mm

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



TECHNICAL DATA

Product name	Wall thickness (mm)	OD (mm)	ID (mm)	Nominal flow rate (l/h)	Pressure regulating range (bar)	Max pressure (bar)	KD	Connector Type
NaanPC light 16/1.25	0.65	15.2	13.9	1.25	0.5-2.5	2.5	0.7	Barb 16
NaanPC light 16/1.7	0.65	15.2	13.9	1.7	0.5-2.5	2.5	0.7	
NaanPC light 16/2.5	0.65	15.2	13.9	2.5	0.5-2.5	2.5	0.7	
NaanPC light 16/3.5	0.65	15.2	13.9	3.5	0.7-2.5	2.5	0.7	

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	140	260	290



THICK & MEDIUM WALLED NON-PC CYLINDRICAL DRIPLINE

TifDrip



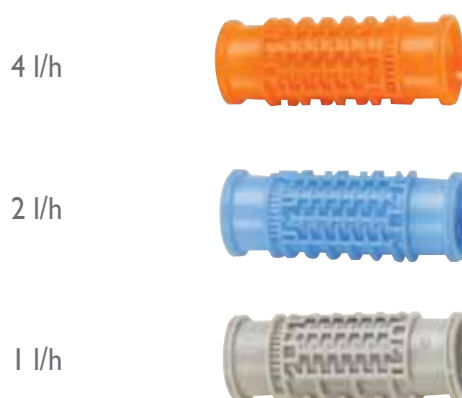
High-performance, long-lasting cylindrical 16 mm dripper incorporates the unique advantages of the Cascade labyrinth

APPLICATIONS

- All-purpose dripline
- Suitable for greenhouses, vegetables, flower fields, orchards and field crops

STRUCTURE AND FEATURES

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

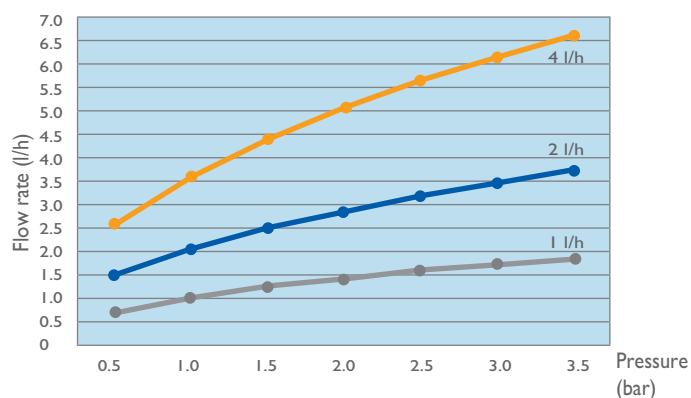


FLOW RATE VS. PRESSURE

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		1.20	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

Flow rate vs. Pressure



THICK & MEDIUM WALLED NON-PC CYLINDRICAL DRIPLINE

TifDrip

TECHNICAL DATA

Nominal diameter (mm)	Wall thickness		ID (mm)	OD (mm)	Maximum working pressure (bar)	KD	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	0.55	•	500	140	260	290
	0.90	35	13.9	15.70	3.0	0.55	•	400	165	350	395
	1.00	39	13.9	15.90	3.5	0.55	•	400	165	350	395
	1.15	45	13.9	16.20	3.5	0.55	•	400	165	350	395



THIN & MEDIUM WALLED NON-PC FLAT DRIPLINE

TalDrip



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

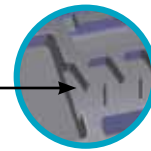
APPLICATIONS

- 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 15 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:
 - 1.0, 1.7 & 4.0 l/h 130 micron (120 mesh)
 - 0.6 l/h 100 micron (150 mesh)

Protection from sand and root



4.0 l/h



1.7 l/h



1.0 l/h



0.6 l/h*



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

* Requires 100 micron filtration



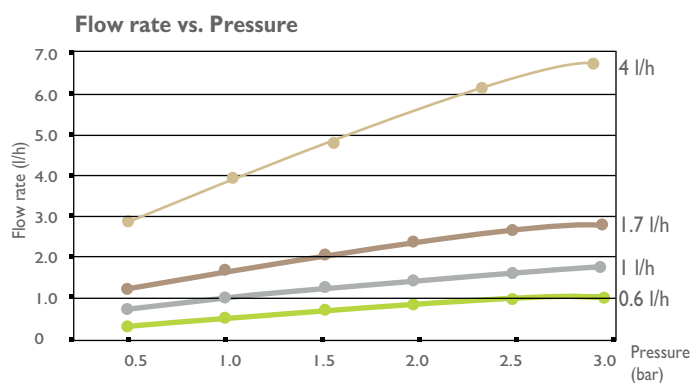
THIN & MEDIUM WALLED NON-PC FLAT DRIPLINE

TalDrip

TECHNICAL DATA

Nominal diameter	Wall thickness		OD	ID	Max. pressure	KD	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
12	0.33	13	12.46	11.80	1.5	0.22		•	2500	16	320	640	720
12	0.38	15	12.56	11.80	2.0	0.22		•	2000	16	320	640	720
12	0.45	18	12.70	11.80	2.2	0.22		•	1500	16	320	640	720
12	0.65	25	13.06	11.80	3.0	0.22		•	800	16	320	640	720
16	0.90	35	15.70	13.9	3.0	0.11	•		400	16	320	640	720
17	0.15	6	16.30	16.0	0.7	0.1		•	3500	16	320	640	720
17	0.20	8	16.40	16.0	0.9	0.1		•	3000	16	320	640	720
17	0.25	10	16.30	15.8	1.0	0.1		•	2000	16	320	640	720
17	0.33	13	16.46	15.8	1.4	0.1		•	2000	16	320	640	720
17	0.38	15	16.56	15.8	1.8	0.1		•	1500	16	320	640	720
17	0.45	18	16.70	15.8	2.0	0.1		•	1250	16	320	640	720
17	0.65	25	16.86	15.6	2.5	0.1		•	900	16	320	640	720
17	0.90	35	16.2	15.4	3.0	0.105	•		400	16	320	640	720
20	0.90	35	19.6	17.7	3.0	0.1	•		400	16	320	640	720
22	0.20	8	22.60	22.2	0.7	0.095		•	2000	16	320	640	720
22	0.25	10	22.70	22.2	0.8	0.095		•	1500	16	320	640	720
22	0.33	13	22.86	22.2	1.2	0.095		•	1250	16	320	640	720
22	0.38	15	22.96	22.2	1.4	0.095		•	1000	16	320	640	720
22	0.45	18	23.10	22.2	1.7	0.095		•	900	16	320	640	720
22	0.65	25	23.46	22.2	2.0	0.095		•	700	16	320	640	720

for any other diameter and wall thickness combinations please contact us



FLOW RATE VS. PRESSURE

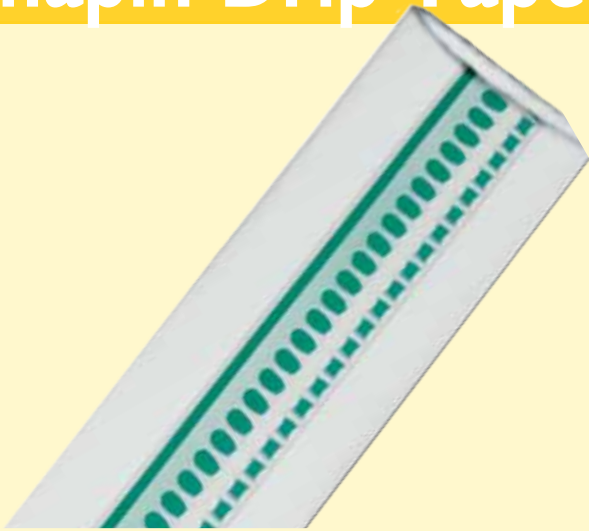
p (bar)	Nominal flow rate (l/h)									
	0.6		1.0			1.7			4.0	
	6-15 mil	6-18 mil	25 mil	35 mil	6-18 mil	25 mil	35 mil	6-18 mil	25 mil	35 mil
0.5	0.47	0.75	0.77	0.80	1.27	1.25	1.30	2.55	2.70	2.90
1.0	0.60	1.00	1.05	1.10	1.60	1.70	1.80	3.50	3.70	4.00
1.5	0.80	1.20	1.25	1.30	1.90	2.05	2.15	4.20	4.45	4.80
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



THIN WALLED DRIP TAPE

Chapin-Drip Tape



Uniquely designed 16 mm and 22 mm tape for increased durability and clog resistance with 50 years of world wide experience

APPLICATIONS

- Irrigation of row crops, vegetables, flowers and landscape
- For sub-surface and surface drip irrigation

STRUCTURE AND FEATURES

BTF

- Extruded high quality polyethylene film ensures round sides, providing higher resistance to field abrasion and insect bites
- Multiple inlet orifices ensure a continuous water flow to each dripper
- Turbulent flow path design provides larger internal dimensions offering higher resistance to clogging
- Largest selection of flow rates, wall thicknesses, fittings and accessories in the market
- Slit design outlets resist root intrusion and soil ingestion
- Available in 16mm (5/8") and 22 mm (7/8") diameters
- Available wall thickness 4, 5, 6, 8, 10, 12, 13 and 15 mil
- A low emitter exponent ensures less flow and pressure variation on steep slopes to help increase emission uniformity.

Deluxe

- In addition to the BTF features the Deluxe model has: continuous filtration channel (328 inlets per 1 m) keeps the debris away from the flow path and allows it to purge by flushing, ensuring high performance and extends the life of the tape.
- Available wall thickness 5, 8, 10, 12, 13, 15 and 25 mil.



BTF



Deluxe



THIN WALLED DRIP TAPE

Chapin-Drip Tape



BTF Flow rates and spacing, 16 & 22 mm, 5-15 mil

Spacing		Flow rates at 0.7 bar (10 PSI)				Flow rates at 0.6 bar (8 PSI)				Filtration mesh
inch	cm	gpm/100ft	lph/100 m	gph/outlet	lph/outlet	gpm/100ft	lph/100m	gph/outlet	lph/outlet	
4	10	0.65	484	0.13	0.49	0.52	387	0.10	0.39	200
4	10	1.00	744	0.20	0.76	0.80	595	0.16	0.60	200
4	10	1.33	989	0.27	1.01	1.06	792	0.21	0.80	150
4	10	1.80	1,339	0.36	1.36	1.44	1,071	0.29	1.09	150
6	15	0.50	372	0.15	0.57	0.40	298	0.12	0.45	200
6	15	0.65	484	0.20	0.74	0.52	387	0.16	0.59	150
6	15	1.33	989	0.40	1.51	1.06	792	0.32	1.21	150
8	20	0.25	186	0.10	0.38	0.20	149	0.08	0.30	200
8	20	0.30	223	0.12	0.45	0.24	179	0.10	0.36	200
8	20	0.40	298	0.16	0.60	0.32	238	0.13	0.48	200
8	20	0.50	372	0.20	0.76	0.40	298	0.16	0.60	200
8	20	0.65	484	0.26	0.98	0.52	387	0.21	0.79	150
8	20	0.85	632	0.34	1.29	0.68	506	0.27	1.03	150
8	20	1.50	1,116	0.60	2.27	1.20	893	0.48	1.81	150
12	30	0.25	186	0.15	0.57	0.20	149	0.12	0.45	200
12	30	0.30	223	0.18	0.68	0.24	179	0.14	0.54	200
12	30	0.40	298	0.24	0.91	0.32	238	0.19	0.73	150
12	30	0.50	372	0.30	1.13	0.40	298	0.24	0.91	150
12	30	0.65	484	0.39	1.47	0.52	387	0.31	1.18	150
12	30	1.00	744	0.60	2.27	0.80	595	0.48	1.81	150
24	61	0.10	74	0.12	0.45	0.08	60	0.10	0.36	200

1. The above flow rates are available in 16 mm and 22 mm diameter, from 5 Mil to 15 Mil
2. Recommended operating pressure is 0.7 bar (10 PSI). Equivalent flow rates at 0.6 bar (8 PSI) are also included in this table
3. Install with emitters facing up

THIN WALLED DRIP TAPE

Chapin-Drip Tape



TECHNICAL DATA

DELUXE Flow rates and spacing, 16 & 22 mm, 5-15 mil

Spacing		Outlets /100ft	Flow rates at 0.7 bar (10 PSI)				Flow rates at 0.6 bar (8 PSI)				Filtration mesh
inch	cm		gpm/100ft	lph/100m	gph/outlet	lph/outlet	gpm/100ft	lph/100m	gph/outlet	lph/outlet	
6	15	200	1.00	744	0.30	1.13	0.80	595	0.24	0.91	120
6	15	200	1.33	989	0.40	1.51	1.06	792	0.32	1.21	120
8	20	150	0.40	298	0.16	0.60	0.32	238	0.13	0.48	150
8	20	150	0.50	372	0.20	0.76	0.40	298	0.16	0.60	150
8	20	150	0.65	484	0.26	0.98	0.52	387	0.21	0.79	120
8	20	150	0.85	632	0.34	1.29	0.68	506	0.27	1.03	120
8	20	150	1.50	1,116	0.60	2.27	1.20	893	0.48	1.81	120
12	30	100	0.25	186	0.15	0.57	0.20	149	0.12	0.45	200
12	30	100	0.30	223	0.18	0.68	0.24	179	0.14	0.54	200
12	30	100	0.40	298	0.24	0.91	0.32	238	0.19	0.73	120
12	30	100	0.50	372	0.30	1.13	0.40	298	0.24	0.91	120
12	30	100	0.65	484	0.39	1.47	0.52	387	0.31	1.18	120
12	30	100	1.00	744	0.60	2.27	0.80	595	0.48	1.81	120
16	41	75	0.20	149	0.16	0.60	0.16	119	0.13	0.48	200
16	41	75	0.25	186	0.20	0.76	0.20	149	0.16	0.60	200
16	41	75	0.30	223	0.24	0.91	0.24	179	0.19	0.73	200
16	41	75	0.40	298	0.32	1.21	0.32	238	0.26	0.97	120
16	41	75	0.50	372	0.40	1.51	0.40	298	0.32	1.21	120
18	46	67	0.50	372	0.45	1.70	0.40	298	0.36	1.36	120
24	61	50	0.15	112	0.18	0.68	0.12	89	0.14	0.54	200
24	61	50	0.20	149	0.24	0.91	0.16	119	0.19	0.73	200
24	61	50	0.30	223	0.36	1.36	0.24	179	0.29	1.09	200
24	61	50	0.50	372	0.60	2.27	0.40	298	0.48	1.81	120

1. The above flow rates are available in 16 mm and 22 mm diameter, from 5 Mil to 15 Mil
2. Recommended operating pressure is 0.7 bar (10 PSI). Equivalent flow rates at 0.6 bar (8 PSI) are also included in this table
3. Install with emitters facing up

THIN WALLED DRIP TAPE

Chapin-Drip Tape

CHAPIN PACKAGING AND SHIPPING

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

BTF 16 mm (5/8")

4	4,573	12	20	240	39	468
5	3,659	12	20	240	40	480
6	3,049	16	20	320	38	608
7	2,561	16	20	320	40	640
8	2,287	16	20	320	40	640
10	1,829	16	20	320	40	640
12	1,524	16	20	320	40	640
15	1,200	16	20	320	40	640

BTF 22 mm (7/8")

6	2,287	16	20	320	40	640
7	1,982	16	20	320	40	640
8	1,677	16	20	320	40	640
10	1,372	16	20	320	40	640
13	1,067	16	20	320	40	640
15	915	16	20	320	40	640

DELUXE 16 mm (5/8")

6	3,049	28	10	280	20	560
8	2,287	28	10	280	20	560
10	1,829	28	10	280	20	560
12	1,524	28	10	280	20	560
15	1,220	28	10	280	20	560

DELUXE 22 mm (7/8")

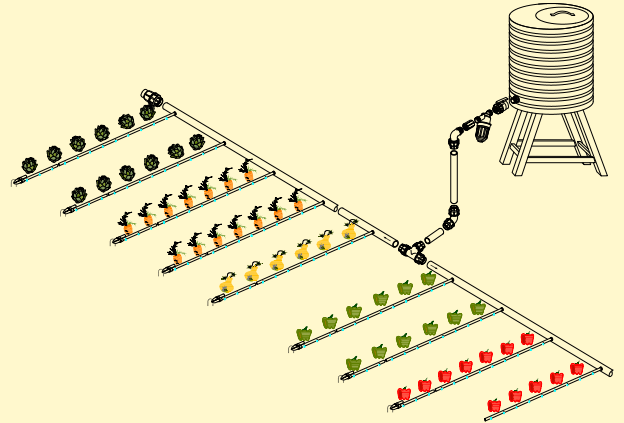
6	2,287	12	20	240	40	480
8	1,677	12	20	240	40	480
10	1,372	12	20	240	40	480
13	1,067	12	20	240	40	480
15	915	12	20	240	40	480



NDJ DripKit



Gravity-Powered Drip irrigation System



NDJ DripKit is the ideal solution for the irrigation and fertigation of small plots. This comprehensive kit allows small holders to achieve better yields, using their existing resources.

BENEFITS

- Increased yields
- Increases water use efficiency
- Improves water and fertilizer distribution
- Reduces manual labor
- Reduces evaporation and run-off
- Reduces weed growth
- Eliminates wetting of the foliage, reducing fungal diseases

APPLICATIONS

- Irrigation and fertigation of small plots up to 500 m²
- Adequate for all crops, such as vegetables, cereals, pulses, fruit trees, and herbs
- For open field or greenhouse installation

FEATURES

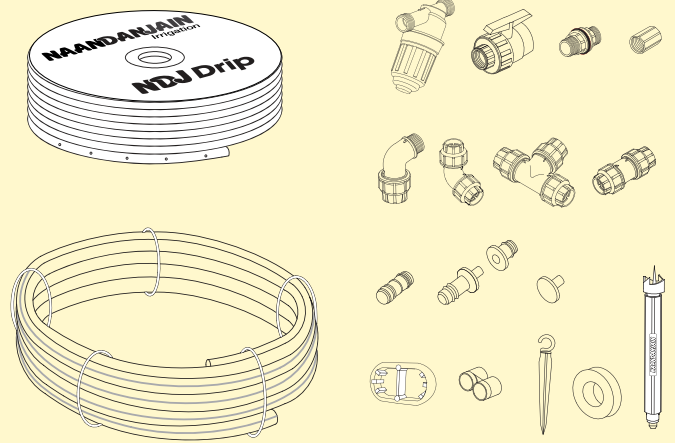
- Two different models: 250 m² & 500 m²
- Fully gravity-powered - no need for pump or power source
- Full kit supplied in one box
- Easy assembly and operation - no need for previous experience
- Fully modular - can be easily disassembled and stored
- High quality NDJ accessories & 12 mm dripline
- Resistant materials for application of soluble fertilizers
- Suits any plot shape within the size range
- Special male/female take-off for easy lateral plugging when only partial irrigation is required



NDJ DripKit

EACH DRIPKIT INCLUDES:

- Dripline coil for lateral spacing of 1.0 m with 30 cm dripper spacing
- 25 mm polyethylene submain
- Filter
- Valve
- All necessary fittings, punching tools and teflon tape
- Spare fittings for damage repair and for multiple choice of installation forms
- Picture instruction manual - suits speakers of all languages



TECHNICAL DATA AND INSTALLATION RECOMMENDATIONS:

- Recommended water tank volume (supplied upon order):
 - For 250 m² plot: 200-300 liters
 - For 500 m² plot: 400-600 liters
- Water tank must be at least 1.5 m above the plot level
- Maximum lateral length: 25 m

Product	Cat. #	Weight per kit	Kits per 20 ft container*	Kits per 40 ft container*
DripKit 500m ²	J67002J0010	20 kg	189	399
DripKit 250m ²	J67002J0000	14 kg	297	600

* Not Palletized

* Palletized shipment = 15% less units



TurboDrip



Available with spike 34 red

High flow PC dripper

APPLICATIONS

- Irrigation in desert condition where high daily quantities are required. Common for large tree gravity irrigated

STRUCTURE AND FEATURES

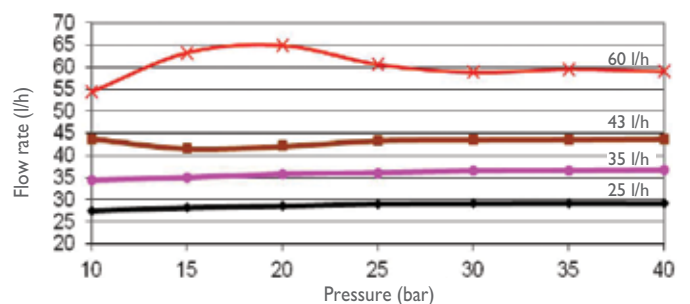
- High flow rate self-compensated dripper
- Constant flow between 1.0 - 4.0 bar pressure
- Uniform irrigation and fertigation in all topographical conditions
- High resistance to clogging due to big and wide water passages
- Low maintenance emitter
- Easy for assembling and dismantling for maintenance purposes
- Made from Chemical resistant material
- High resistance against clogging

TECHNICAL DATA

- Recommended working pressure: 1.0 - 4.0 bar
- Flow rate: 27 - 60 l/h
- Filtration requirement: up to 35 l/h - 130 micron
up to 43 l/h - 200 micron



27 l/h	35 l/h	43 l/h	60 l/h	27 l/h	35 l/h	43 l/h	60 l/h
775058	775054	775050	775057	774058	774054	774050	774057



ON-LINE PC BUTTON DRIPPERS

ClickTif HD



Heavy Duty Pressure-Compensating (PC) & Compensating Non-Leakage (CNL) on-line Button Dripper

APPLICATIONS

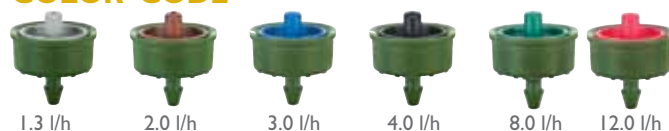
- Greenhouses, nurseries, orchards, Vineyards, landscapes and garden plots
- Pulse irrigation and irrigation in soilless conditions
- Prevents surplus drainage in low places (CNL model)

STRUCTURE AND FEATURES

- Heavy Duty range of drippers and accessories in various configurations
- Four dripper design elements minimize clogging:
 1. Protected water inlet
 2. Flushing mechanism of regulating diaphragm
 3. Strong turbulent flow in labyrinth enables continual cleaning and flushing
 4. Large water passages
- Color-coded for identification of discharge and model
- Standard 5 mm tapered outlet for working with connectors or barb outlet for 3/5 tube
- Chemical-resistant, high-grade plastic for precision and durability
- Two models available: PC and CNL (Compensating Non-Leakage)
- Unique “sharp edge” CNL design prevents dirt accumulation and ensures reliable operation under difficult conditions
- 6 different flow rates



COLOR CODE



TECHNICAL DATA

- Nominal discharge: 1.3, 2.0, 3.0, 4.0, 8.0, 12.0 l/h
- Regulating pressure range: 0.5-4.0 bar
- Very low CV
- Minimum recommended working pressure 1.0 Bar
- Non-Leakage (CNL): - Opening pressure: 8.0 m
- Closing pressure: 3.0 m
- Filtration Recommendation: 130 micron (120 mesh)

ClickTif HD Accessories

Drop guide



Catalog no.
802870

Straight labyrinth stake

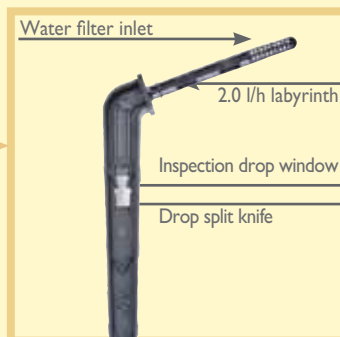


Catalog no.
802800

Elbow labyrinth stake



Catalog no.
802850



3/5 PVC or PE extension tube stabilizer stake



Stabilizer stake

Catalog no.
6466040000

DROP GUIDE

Use as single outlet for drop guide

LABYRINTH STAKES

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

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

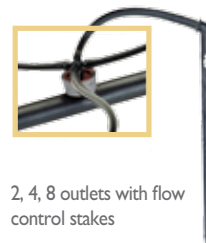
3/5 outlet connectors



Catalog no.
802908

Catalog no.
802920

Catalog no.
802940



2, 4, 8 outlets with flow control stakes

Multi-level connectors



Catalog no.
802928

Catalog no.
802948

2.5 mm Punch

Special design for comfortable punching and inserting of ClickTif drippers



Catalog no.
897284



FLOW RATE VS. PRESSURE

Pressure (m)	Flow rate (l/h)	
	Elbow labyrinth stake Catalog no. 802850	Straight labyrinth stake Catalog no. 802800
5	1.5	1.6
10	2.0	2.3
15	2.5	2.8
20	3.5	3.2

ON-LINE PC BUTTON DRIPPERS

J-SC-PC-Plus



Openable Pressure-compensating (PC) on-line button dripper

APPLICATIONS

- Recommended for orchards, fruit crops, vegetables, nurseries & flowers
- 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

TECHNICAL DATA

- CV ≤ 5%
- Regulating pressure range: 1.0-3.0 bar
- Filtration requirement: 130 micron, (120 mesh)
- Required punch diameter: 2.9 mm

TECHNICAL DATA

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

ON-LINE NON-PC BUTTON DRIPPERS

J-Turbo KeyPlus



Openable on-line 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 act as a filter
- Colored cap facilitates easy identification of flow rate

TECHNICAL DATA

- CV ≤ 3%
- Recommended operating pressure: 0.5-2.5 bar
- Filtration requirement: 100 micron, (150 mesh)
- Required punch diameter: 2.9 mm

TECHNICAL DATA AND COLOR CODE

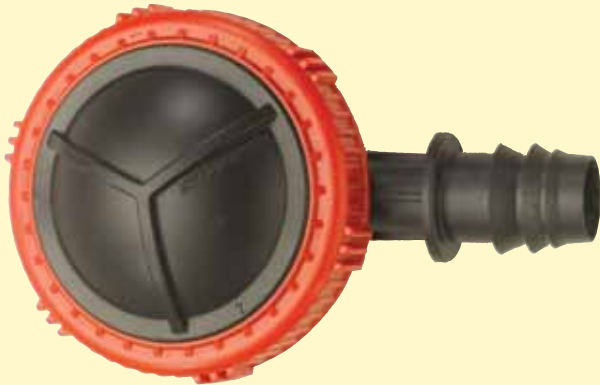
Cap color and insert	Discharge* (l/h)	Emitter exponent (x)	Flow coefficient (k)
Yellow	2	0.48	2.0
Black	4	0.48	4.0
Blue	8	0.48	8.0
Green	14	0.48	14.0

* At operating pressure of 1 bar

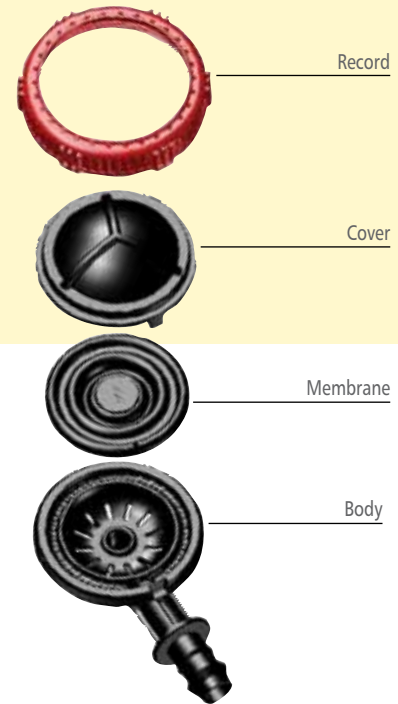
FLOW VS. PRESSURE

Pressure (bar)	Flow rate (l/h)			
	2 (l/h)	4 (l/h)	8 (l/h)	14 (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

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 end connections to suit all dripline types (see table)
- Red ring for easy identification and inspection
- Possible to open and clean

TECHNICAL DATA

- Operating pressure: 0.5-3.0 bar
- Flushing time: 15-25 seconds
- Flush volume: 2-3 liters

Installation: Please install flush valve at the same level or above the last dripper, with the red cap facing up.

PRODUCT RANGE

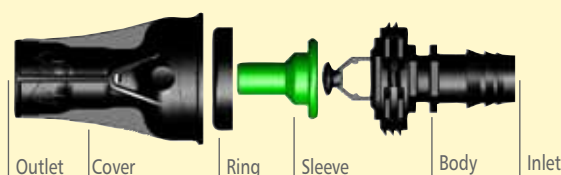
Description	Catalog No.
Thread 1/2" male	790701
Thread 3/4" male	790702
Barb 16 mm (for W.T 0.9-1.2mm, ID 13.9)*	790716
Barb 17 mm (for W.T 0.9-1.2mm, ID 14.4)*	790717
Barb 20 mm (for W.T 0.9-1.2mm, ID 17.7)*	790720
Tape 17 mm (5/8") (for W.T 10-18mil, ID 15.4-16mm) black ring	790727
Tape 17 mm (5/8") (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

*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 time
- 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 end connections
- Outlet is 1/2" female-threaded NPT in all options
- Low head loss
- Recommended working pressure 1.4-4 bar

OPERATING PRESSURE

- Opening pressure - 14 m
- Closing pressure - 6 m

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)	790616	1/2" male x barb 16 mm	6424040610
Barb 17 mm (for W.T 0.9-1.2 mm ID 14.4 mm)	790617	1/2" male x barb 17 mm	6424040620
Barb 20 mm (for W.T 0.9-1.2 mm ID 17.7 mm)	790610	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	790627	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	790628	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	790629	1/2" male x tape 17 mm	6425041003
Thread 1/2" male	790601		
Thread 3/4" male	790602		
Hose Thread 3/4" USA Version	790630		

*All outlets are thread NPT 1/2" female

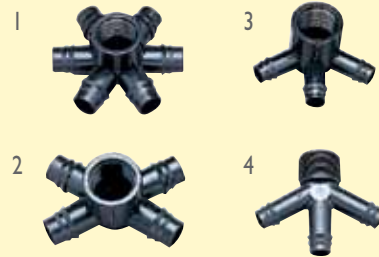


Connectors

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	Item # 12 mm	Qty/Bag
1	Tee barb 3/4" female	6424040230	6424040210	6424040205	50
2	Tee barb 3/4" male	6424040050	6424040040	6424040010	
3	Y connector 3/4" male	6416040600	6416040200	6416040000	
4	Barbed connector 3/4" male	6424040635	6424040615	6424040605	100
4	Barbed connector 1/2" male	6424040630	6424040610	6424040005	
5	Elbow barb 3/4" male	6424040450	6424040445	6424040410	



Barbed Connectors

	Description	Item #	Item # 12 mm	Qty/Bag
1	Barbed connector silver ring 20 x 20	483222		100
2	Barbed connector 12 x 12		483121	
2	Barbed connector 16 x 16	483161		
2	Barbed connector 17 x 17	6423040620		
3	Barbed connector 12 x 16		6423040800	
3	Barbed connector 20 x 12		6423040840	
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	6423040007
5	Tee reducer barbed 12x16x12			6423040200
5	Tee reducer barbed 16x12x16			6423040210
5	Tee reducer barbed 20x16x20	6423040250		
6	Elbow barb	6423040440	6423040410	6423040415
7	Star 3-way	-	6423049900	



Start Connectors & Accessories

	Description	Item # 20 mm	Item # 16 mm	Item # 12 mm	Qty/Bag
1	Quick start for PE & PVC	6431041000	6431040400	6431040240	100
2	Grommet for quick start for PVC	6431999900	6431999900		
3	End line	6419300420	6419300410	6419040415	
4	Snap clip	6720150825	6720150815		
5	Vine drip clip	809000			
6	Dripper plug for AmnonDrip & TopDrip*	J67202J9901	J67202J9900		

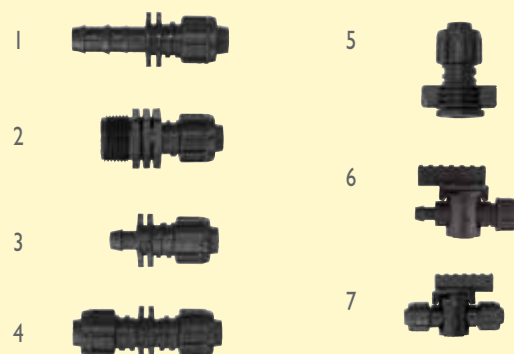


* Installation must be done under water pressure
For above 0.63 mm wall thicknesses
Fits a hole with a 1.6-1.9 mm hole size (in the narrow part of the hole)

Connectors

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

	Description	Item #	Qty/Bag
1	Drip Tape adaptor 12 x 12 barb	J64252J0003	1000
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 12x 12	J64252J0004	1000
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 x 16/17 valve	6425040015	250

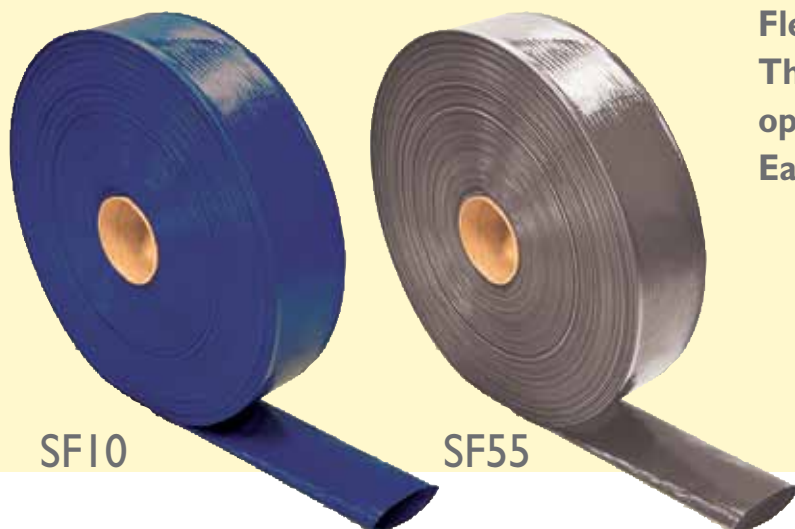


RING CONNECTORS: THIN-WALLED 16; 17MM, 10-35MIL FOR TALDRIP & TOPDRIP

Description	Item # Black 6-18 mil	Item # Brown 25 mil	Item # Red 35 mil	Qty/ Bag
1 Start connector 16/17	6431301505	6431302005	6431303005	100
2 Connector 16/17 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: 6-18 mil Brown: 25 mil Red: 35 mi	6425300600	6425300602	6425300604	
7 Grommet for quick start for PVC	6431999900	6431999900	6431999900	100 / 1000



Lay Flat



Flexible PVC Hose

The perfect water delivery solution for open field crops

Easy to handle portable irrigation system

APPLICATIONS:

- For Irrigation as water supply main pipe or as a submain with start connectors
- Also for, Mines, mine leaching systems

FEATURES AND ADVANTAGES

- Can be used in extremely high (up to 10 Bar) working pressure (According to pipe diameter and selected connectors)
- Robust and durable reinforced 3-ply Polyester Yarns
- Low expansion and zero axial elongation
- Reduced freight and storage costs - due to flat and compact coil design
- Reduced head losses - due to enlarged internal diameters
- Easy to layout, retrieve and move from one installation to another
- Enables tractors activity and crossing over the hose (when drained)
- Full package solution - Pipes, Couplings, Tightening clamps, Punchers, Start connectors, Valves
- Lay Flats with pre assembled outlets at required spacings, can also be supplied

SPECIFICATIONS:

- Available - in 1.5", 2", 3", 4", 6", 8"
- Coil length - 100 meters (special order for other length)
- Temp use range- -20°C to 76°C (-5°F to 170°F). When Temperature is -15°C and colder, please DO NOT handle or transport hoses.
- If temperature exceeds 43°C (110°F) the maximal working pressure will decrease















TECHNICAL DATA

Code	Nominal size (inch)	Max. Working pressure (BAR) as supply line without start conn.	Max. Working pressure (BAR) as sub main with start conn.	Wall thickness (mm)	Internal diameter (mm*)	Meter/roll	Kg/roll
Grey - SF55							
6599600209	1.5"	10	4.0	1.60	38.1	100	29.8
6599600204	2"	10	4.0	2.21	50.8	100	53.6
6599600206	3"	10	2.5	2.54	76.2	100	96.2
6599600228	4"	6.9	2.5	2.89	101.6	100	138.9
6599600229	6"	6.9	*	3.71	152.4	100	248

Blue - SF10							
6599600212	1.5"	5.5	1.5	1.50	38.1	100	27.8
6599600211	2"	5.5	1.5	1.50	50.8	100	36.2
6599600207	3"	5.5	1.5	1.60	76.2	100	53.6
6599600208	4"	4.8	1.0	1.70	101.6	100	78.4
6599600231	6"	4.1	*	1.90	152.4	100	128.5
6599600232	8"	2.4	*	2.21	203.2	100	193.5





*Not recommended for sub main


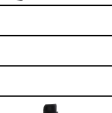
Lay Flat



Quick Couplings		
Description	Item #	Picture
CamLock Female 2" X 2" M thread BSP	6405600836	
CamLock Female 3" X 3" M thread BSP	6405600852	
CamLock Female 2" X 2" Hose	6405600838	
CamLock Female 3" X 3" Hose	6405600854	
CamLock Male 2" X 2" Hose	6405600842	
CamLock Male 3" X 3" Hose	6405600021	
CamLock Male 2" X 2" M thread BSP	6405600844	
CamLock Male 3" X 3" M thread BSP	6405600845	
CamLock Female 2" X 2" M thread BSP	6405600836	
CamLock Female 3" X 3" M thread BSP	6405600852	
CamLock Male 2" X Plug	6405600848	
CamLock Male 3" X Plug	6405600864	
CamLock Female 2" X Plug	6405600846	
CamLock Female 3" X Plug	6405600862	

Barb Connectors		
Description	Item #	Picture
Straight connector 2" X 2"	6405600019	
Straight connector 3" X 3"	6405600018	
Straight connector 4" X 4"	6405600017	
Reducer 3" X 2"	6411999901	
Reducer 4" X 3"	6411999900	
Adaptor 2" M thread BSP X 2" Hose	6405600062	
Adaptor 3" M thread BSP X 3" Hose	6405600063	
Adaptor 4" M thread BSP X 4" Hose	6405600065	
Adaptor 3" M thread BSP X 4" Hose	6405600064	
Adaptor 2" M thread BSP X 3" Hose	6405600066	
Plug 2"	6419590030	
Plug 3"	6419590031	
Plug 4"	6419590032	
Connector LF 3"x3" Saddle 75	6405600046	
Adaptor LF 3"x2" male thread	6405600028	
Adaptor LF 3" to Alum.3" Hook	6405600038	
Saddle 2 bolts 75 x 3/4"	6430020070	
Double saddle 4 bolts 75 x 1.5"	6430020810	



Tightening clamps		
Description	Item #	Picture
2" steel tightening clamp	6405600056	
3" steel tightening clamp	6405600000	
4" steel tightening clamp	6405600002	
2"- 4" wide steel tightening clamp		
Available upon request		

Punchers		
Description	Item #	Picture
14 mm puncher for 16;17 mm start connectors	6130210432	
19 mm puncher for 22;23 mm start connectors	6130210430	

Start connectors		
Description	Item #	Picture
Start connector 3/4" (14 mm)	6431049920	
Start connector 16, 17 mm for thin walled drip lines	6431040403	



LANDSCAPE - THICK WALLED NON-PC CYLINDRICAL DRIPLINE

Jardiline



Heavy-duty 16 mm dripline for landscape irrigation



APPLICATIONS

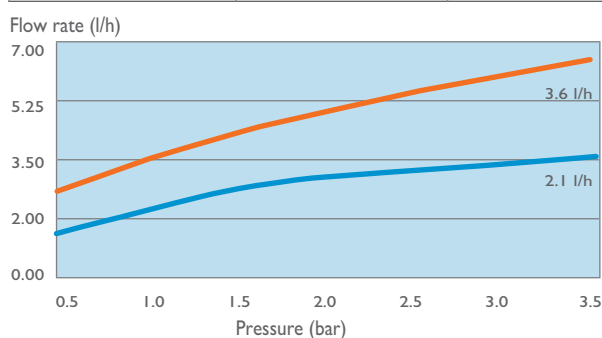
- On the surface or under mulch installations
- Shrubs, trees and flower beds
- For flat surfaces and narrow planting areas

STRUCTURE AND FEATURES

- Strong yet flexible pipe structure with heavy-duty cylindrical drippers
- Cascade labyrinth with wide water passages and a self-cleaning effect
- Double water inlets and outlets for extra clogging resistance
- Brown, UV-protected color - blends with the ground or mulch colors
- Also available in purple for marking the use of non-potable water

FLOW RATE VS. PRESSURE

P (bar)	Dripper	
	2.1	3.6
0.5	1.50	2.58
1.0	2.10	3.60
1.5	2.55	4.37
2.0	2.93	5.02
2.5	3.26	5.59
3.0	3.56	6.10
3.5	3.83	6.57
a	0.695	1.192
x	0.48	0.48



Available also in purple for a minimum order of 40K m. And add Purple dripline picture

TECHNICAL DATA

- Dripper flow rates: 2.1 & 3.6 l/h (at 1.0 bar pressure)
- Dripper spacing: 33, 40, 50 cm (other spacing available on request)
- Maximum operation pressure: 3.5 bar
- Internal diameter (ID): 13.9 mm (suitable for all standard 16 mm barb fittings)
- Wall thickness: 1.0 mm
- Coil lengths: 50, 100, 200 and 400 m

PACKAGING AND SHIPPING

Coil length	Coils per pallet	Pallets per 20ft container	Coils per 20ft container	Total meters 20 ft container	Pallets per 40 ft. HC container	Coils per 40 ft. HC container	Total meters 40 ft. HC container
50	36	20	720	36000	40	1440	72000
100	40	10	400	40000	20	800	80000
200	Non Palletized	—	264	52000	—	558	111600
400		—	165	66000	—	350	14000



LANDSCAPE - THICK WALLED PC CYLINDRICAL DRIPLINE

Super Jardiline



Pressure-compensating, 16 mm heavy-duty dripline for landscaping applications



APPLICATIONS

- On surface or under mulch installations
- Shrubs, trees, turf and flower beds
- Irrigation in slopes and variable topography
- For high uniformity of water distribution in large areas

STRUCTURE AND FEATURES

- Accurate pressure-compensation results in uniform dripper flow rate under all pressures within 0.5-3.5 bar
- Strong yet flexible pipe structure with heavy-duty cylindrical drippers
- Cascade labyrinth with wide water passage and a self-cleaning effect
- Double water inlets and outlets for extra clogging resistance
- Brown, UV-protected color - blends with the ground or mulch colors
- Also available in purple for marking the use of non-potable water

Available also in purple for a minimum order of 40K m. And add Purple dripline picture

TECHNICAL DATA

- Dripper flow rates: 1.6 and 2.2 l/h
- Pressure - compensating range: 0.5-3.5 bar
- Dripper spacing 33, 40, 50 cm (other spacing available on request)
- Maximum operation pressure: 3.5 bar
- Internal diameter (ID): 13.9 mm (suitable for all standard 16 mm barb fittings)
- Wall thickness 1.0 mm
- Coil lengths: 50, 100, 200 and 400 m

PACKAGING AND SHIPPING

Coil length	Coils per pallet	Pallets per 20 ft container	Coils per 20 ft container	Total meters 20 ft container	Pallets per 40 ft. HC container	Coils per 40 ft. HC container	Total meters 40 ft. HC container
50	36	20	720	36000	40	1440	72000
100	40	10	400	40000	20	800	80000
200	Non Palletized	—	264	52000	—	558	111600
400		—	165	66000	—	350	14000



Drip Irrigation System Maintenance

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 2.0, 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.

IMPORTANT

While preparing the acid solution Always add the acid to the water and not vice versa.

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 2.0). 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 (2.0) 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)

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.



Drip Irrigation System Maintenance

CHLORINATION

Chlorine is a biocide that kills micro organism: bacteria, algae etc. Chlorine injection will reduce clogging and help keeping the irrigation lines clean. 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 duration. Refer to the chart below:

Application method	Residual free chlorine concentration (ppm)		Treatment frequency	Duration (hr)
	At point of injection	At end of lateral		
Continuous	3-5	1.0	Every irrigation	Through all the irrigation time or at the last hour of the irrigation
Intermittent	5-10	1.0	Whenever needed, according to water quality	1.0 hour

Water at pH above 7.5 reduce the chlorination effectiveness. Acidified to a pH of 6.5 will maximize the effectiveness of the chlorine treatment

Contact Time:

A minimum contact time of 30 min. is required for the effective chlorine treatment in order to kill the microorganism. 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
- Chlorine quantity required: 10ppm*30 m³/hr/10%/10= 3.0 liter
- Injector discharge = 200 l/h
- Solution preparation: Mix the 3.0 liter with 197 liter of water. This volume will be injected now in 1.0 hr at 10ppm of chlorine

Warning:

Active Chlorine is dangerous. Follow the manufacture instruction.

Storage:

Sodium hypochlorite should be stored under a shaded area in a clean dark tank, without any fertilizers residues. Concentration will degrade over time.



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