

NEW!

# D1000 Drip Line

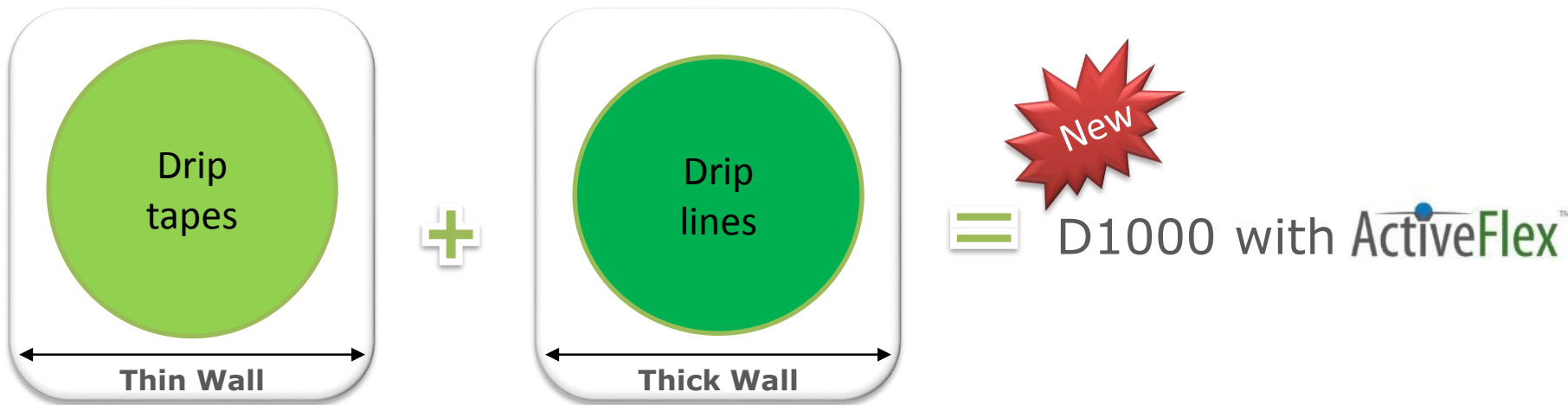
Thin Wall Drip Line with **ActiveFlex™** Technology



 **Rivulis**  
Irrigation

# Enhancing Rivulis' Solutions Portfolio

While the underlying science is quite complex, the formula is quite simple. We combined the best of our drip tape & drip line products to create Rivulis' 1<sup>st</sup> thin wall drip line with molded drippers:



# Introducing the D1000 with ActiveFlex™

- Given our deep understanding & years of hands-on experience in both the Drip tape + Drip line categories, we succeeded in innovating:

ActiveFlex™: the next generation in thin wall drip line

- We did not simply paste a dripper into a thin wall tube. We took the best of our T-tape & RO-Drip tape products & our Rivulis Plastro drip lines
- ActiveFlex™ is the state-of-the-art, best-in-class application of:



# Drip Lines

## Non Regulated

**D1000**

Hydrodrip

Hydrogol

D2000

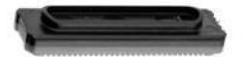
## Flow Regulated

Hydro PC

Hydro PCND

D5000

D5000 SD



# The D1000 with ActiveFlex™ Opportunity

- Enables Rivulis to:
  - Combine our years of expertise & experience in drip tape & drip lines to create a best-in-class, state-of-the-art thin wall drip line with our **New ActiveFlex™** technology
  - Extend our product portfolio into a new category: thin wall drip line with molded dripper
  - Emphasize our commitment to our growers & dealers to continuously innovate & to provide a full end-to-end solution offering, from thin wall drip tape to thick wall drip line



The D1000 is an extension of our current offering & an addition to our tape products. The goal is to increase overall sales without cannibalizing our current tape sales.

# D1000 with ActiveFlex™ Technology Description

The next generation in thin wall driplines

ActiveFlex™ represents a significant innovation, containing many advantages never seen before in other thin wall driplines with drippers

Given its unique design, ActiveFlex™ **optimizes performance & clogging resistance:**

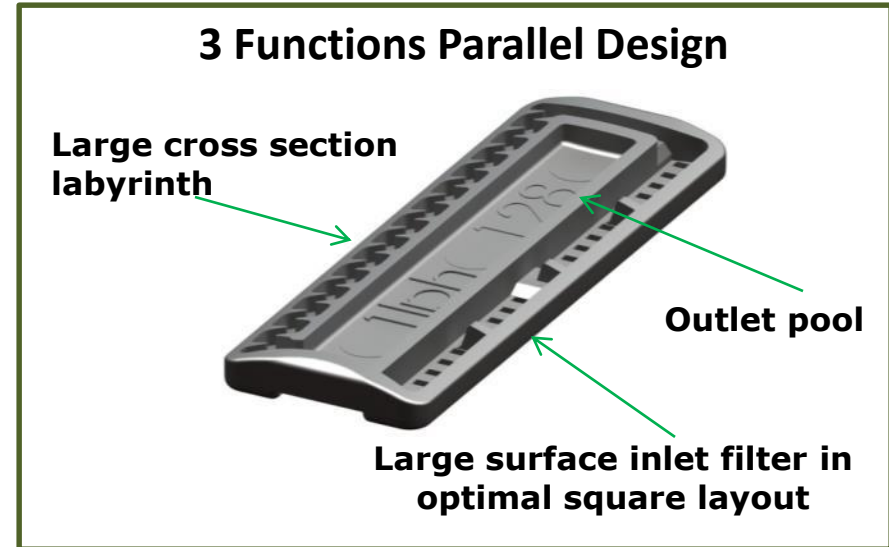
1) With **just the right amount of flexibility**, the compact, molded dripper **ideally integrates** with the slit outlet, **creating an optimal open-close outlet mechanism:**

- The slit outlet opens when pressurized and closes when depressurized
- Increases resistance to particle ingestion during installation, irrigation system shutdown & retrieval, increasing reusability
- Minimizes mineral deposit build up around slit outlet

# D1000 with ActiveFlex™ Technology Description

The next generation in thin wall driplines

- 2) The leading-edge dripper (patent pending) **cleverly combines** the key dripper elements (filtration, labyrinth and outlet) into **3 parallel functions design** resulting in both the ideal layout & dimensions



- 3) **Provides all the benefits found in molded drippers with thick wall driplines:**

- Clog resistance
- Consistency & accuracy of watering, low CV
- Durability & minimal bursting



# D1000 with ActiveFlex™ Technology Description

The next generation in thin wall driplines

The **flexibility of the dripper** in combination with a slit outlet provides many advantages never seen before in a compact dripper. The slit outlet opens when pressurized and closes when depressurized



The **slit outlet** is closed without pressure so the dripper resists the ingestion of particles as the irrigation system shuts down and is better protected during installation & retrieval, increasing reusability





# Applications

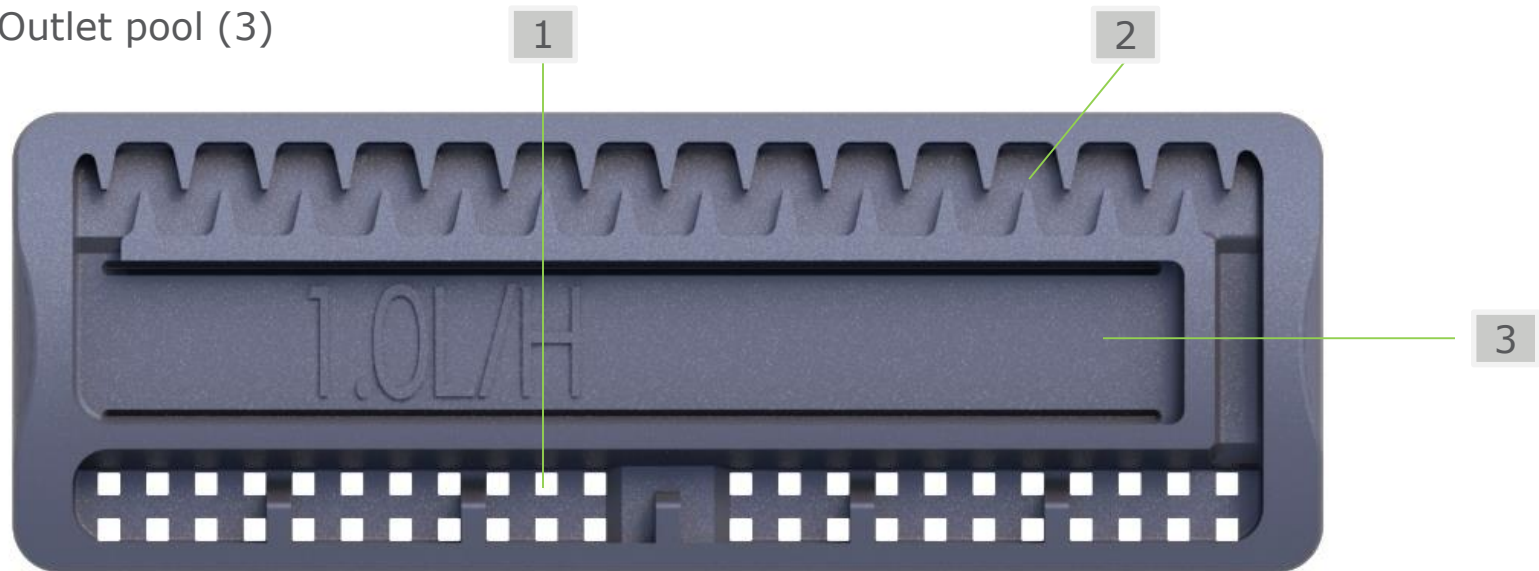
- Numerous crops using wide dripper spacings including vegetables and field crops such as tomato, carrot, broccoli, corn, and melon
- Above ground or embedded 5-10 cm below the surface
- Advantage in applications with smaller spacing requirements from >15 cm and above

The **ActiveFlex**<sup>™</sup> Dripper is an ideal choice for subsurface drip irrigation applications and on surface application with difficult sandy soil.



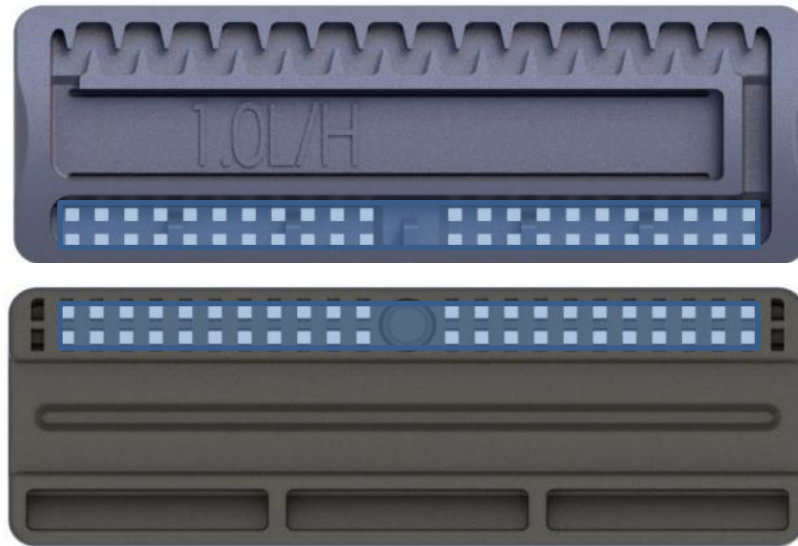
# Product Details: The Dripper

- The D1000 compact, molded dripper has an unique 3 functions parallel design with 3 lines:
  - Inlet filter (1)
  - Labyrinth (2)
  - Outlet pool (3)



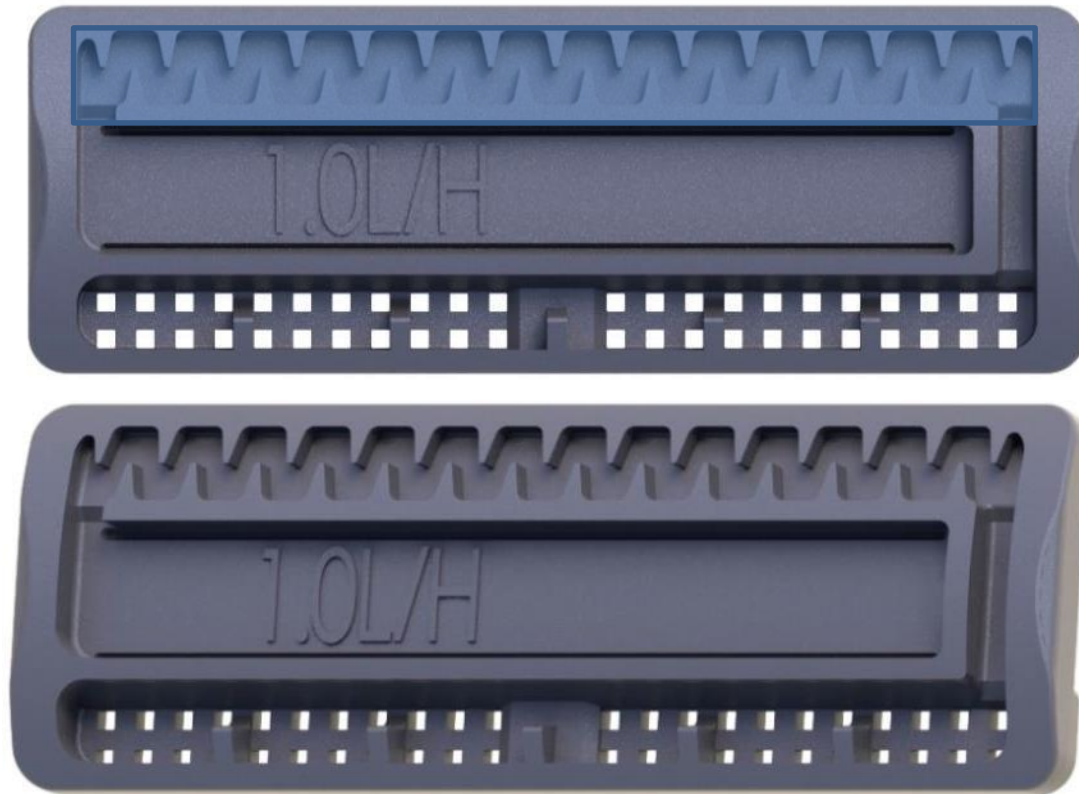
# Product Details: The Inlet Filter

- Fully utilized, large surface inlet filter - Significant clogging reduction
- Square inlets for efficient filtration. Square design is an advantage over competitions' rectangular shape as fewer particles are able to pass
- Smooth inlet surface reduces collection of dirt. Dirt is carried away by the flow of water in the pipe



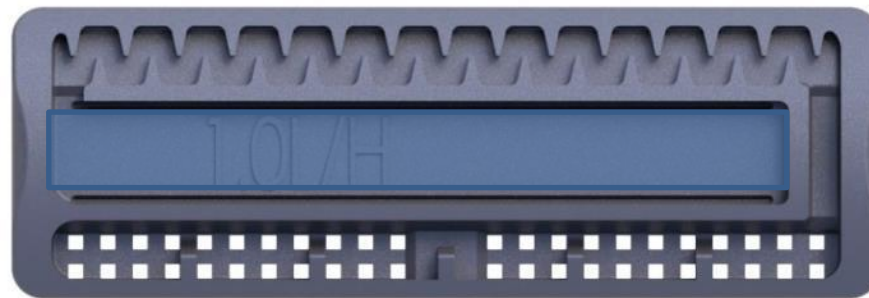
# Product Details: The Labyrinth

- Labyrinth creates turbulence, reducing the water energy
- Large cross section of the labyrinth



# Product Details: The Outlet pool

- The big outlet pool
  - Almost as long as the length of the dripper
  - Enables slit outlet design
- The combination of the ActiveFlex dripper and slit outlet provides:
  - An optimal open-close outlet mechanism: the outlet opens when pressurized & closes when depressurized
  - Resistance to particle ingestion as the irrigation system shuts down
  - Better protection during installation & retrieval
  - Reduction of the mineral deposit buildup around the outlet



# D1000 with ActiveFlex™ - Features and Benefits

Features	Benefits
Optimized 3 parallel functions design (inlet filter, labyrinth and outlet pool)	Maximized each function's performance: Consistency & accuracy of watering, low CV
Large surface inlet filter with square inlets	Significant clogging reduction
Large cross section labyrinth	Significant clogging reduction
Flexibility of the dripper in combination with slit	Soil Ingestion protection and helping to reduce the buildup of mineral deposits around the outlet
Compact packaging	Efficient shipment and storage, longer reels for easier installation/fewer fittings
Manufactured from superior durable materials and tools & at ISO 9001 plant	Ensuring longevity and low CV, minimal bursting
Easy manual or mechanized layout	Easy-to-use (installation & retrieval)

# D1000 Specifications (first phase)

Nominal Diameter	Model	ID	Wall thickness		OD	Max working pressure	Connector	Reel Dimensions	
(mm)		(mm)	mil	mm	(mm)	(bar)		Length (m)	Weight (kg)
16	16/6	16.4	6	0.15	16.70	1.0	Pro Grip T5	3000	28.0
16	16/8	16.4	8	0.20	16.80	1.2	Pro Grip T5	2500	28.5
22	22/8	22.2	8	0.20	22.60	0.9	Pro Grip T7	1800	25.5

- Flow rates – 1.0 lph and 1.5 lph at 10 m pressure (~1 bar)
- Standard spacings – 15, 20, 25, 30 and 40 cm
- Other - TBD
- Green color strip – standard
- Burst pressures (based on lab tests)
  - 16/8: 3.0 bar (23° C), 2.66 bar (60 ° C)
  - 22/8: 2.5 bar (23° C), 2.16 bar (60 ° C)





# D1000 SKUs

## 16/6 – 9 SKUs

D1000 16/6/1.0/0.15 3000M BLACK
D1000 16/6/1.0/0.20 3000M BLACK
D1000 16/6/1.0/0.25 3000M BLACK
D1000 16/6/1.0/0.30 3000M BLACK
D1000 16/6/1.0/0.40 3000M BLACK
D1000 16/6/1.5/0.20 3000M BLACK
D1000 16/6/1.5/0.25 3000M BLACK
D1000 16/6/1.5/0.30 3000M BLACK
D1000 16/6/1.5/0.40 3000M BLACK

## 16/8 – 9 SKUs

D1000 16/8/1.0/0.15 2500M BLACK
D1000 16/8/1.0/0.20 2500M BLACK
D1000 16/8/1.0/0.25 2500M BLACK
D1000 16/8/1.0/0.30 2500M BLACK
D1000 16/8/1.0/0.40 2500M BLACK
D1000 16/8/1.5/0.20 2500M BLACK
D1000 16/8/1.5/0.25 2500M BLACK
D1000 16/8/1.5/0.30 2500M BLACK
D1000 16/8/1.5/0.40 2500M BLACK

## 22/8 – 9 SKUs

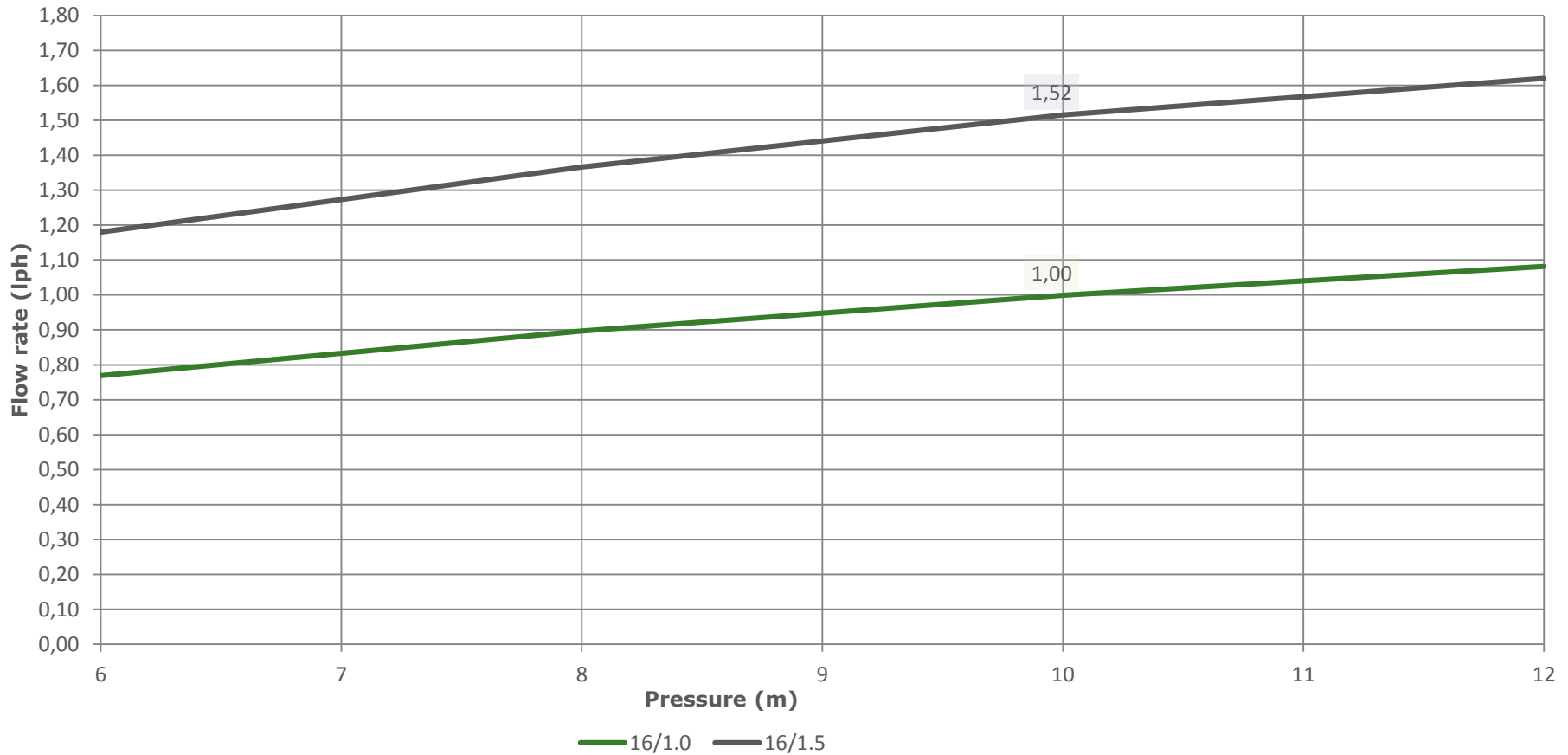
D1000 22/8/1.0/0.15 1800M BLACK
D1000 22/8/1.0/0.20 1800M BLACK
D1000 22/8/1.0/0.25 1800M BLACK
D1000 22/8/1.0/0.30 1800M BLACK
D1000 22/8/1.0/0.40 1800M BLACK
D1000 22/8/1.5/0.20 1800M BLACK
D1000 22/8/1.5/0.25 1800M BLACK
D1000 22/8/1.5/0.30 1800M BLACK
D1000 22/8/1.5/0.40 1800M BLACK

## Transparent samples – 2 SKUs

Description
D1000 16/8/1.0/0.3 2500M TRANSPARENT
D1000 22/8/1.0/0.3 1800M TRANSPARENT



# D1000 Flow Vs. Pressure



# Field Test

- Product shipped to target market as part of the BETA stage, to receive feedback from dealers and users
- Over 2.4 MM meters tested in different areas, crops & seasons



# Field Test, Israel – Installation 01/2014





# First Field Test, Israel – Onion Germination 02/2014





# First Field Test, Israel – Onion Crop 04/2014



# Field Test, Morocco – Operation 02/2015

- Crop – Melon





# Field Test, Morocco – Operation 03/2015

- Crop – Melon



# Field Test, Morocco – Operation 02/2015

- Crop – Water Melon



# Field Test, Morocco – Operation 03/2015

- Crop – Watermelon





# Field Test, Portugal – Operation 04/2015

- Crop – Tomato



# Field Test, Portugal – Operation 04/2015

- Crop – Tomato
- **After one month** – 25.05.2015





# Field Test, Spain – Operation 04/2015

- Crop – Tomato



# Field Test, Italy – Operation 05/2015

- Crop – Squash (zucchini), Pepper





# Field Test, Italy – Operation 05/2015

- Crop – Squash (zucchini), Pepper
- **After 3 weeks**– 16.05.2015



# Field Test, Italy – Operation 06/2015

- Crop – Processing Tomato



# Packaging



Disc – Diameter 540mm



Belly band with ActiveFlex sticker



Reel label

# Packaging

## Package components

Type	Core length (mm)	Disk diameter (mm)
Coil	250	540

4 reels up on a pallet, one pallet on the other - 16 reels on pallet

Container type	Pallets no.	No. of reels	Remarks
20	20	334	Including 14 reels placed freely
40	44	704	
40HC	44	792	Including 88 reels placed freely









## Total Quantity in container (m)


Container type	16/6	16/8	22/8
20	334 x 3000 = <b>1,002,000</b>	334 x 2500 = <b>835,000</b>	334 x 1600 = <b>601,200</b>
40	704 x 3000 = <b>2,112,000</b>	704 x 2500 = <b>1,760,000</b>	704 x 1600 = <b>1,267,200</b>
40HC	792 x 3000 = <b>2,376,000</b>	792 x 2500 = <b>1,980,000</b>	792 x 1600 = <b>1,425,600</b>



# Connectors – 16 mm

Model	Type	Image
PG-T5-B450	<b>PE or PVC Start connector</b>	
	• In PE pipes- drill 7.5mm holes	
	• In PVC pipes - drill 16mm holes and use start connector grommets	
PG-T5-LF19	<b>Lay Flat start connector</b>	
	• Punch 19mm holes with LFC 19 Lay Flat Cutter	
PG-T5-B540	<b>Barb adaptor</b>	
	• The barb fits to PELD pipes with I.D 13.6-13.8 mm	
PG-T5-T5	<b>Coupling</b>	
PG-T5-PMT500	<b>Male Threaded adaptor 16 x 1/2"</b>	
PG-T5-T5-VLV	<b>Valve</b>	

# Connectors – 22 mm

Model	Type	Image
PG-T7-B700	<b>Start connector</b>	
	• In PE and PVC pipes- drill 19mm holes with DR-19	
	• Use 19mm grommet (SAP 101001106)	
PG-LF19-FHT750 + PG-T7-MPT750	• To install into thin wall LDPE use 700 Barb Inserter	
	<b>LayFlat start connector</b>	
	* Punch 19mm hole with LFC19 Lay Flat Cutter	
20mm Barb x 22mm Ring Lock	* Use PG Lay Flat x 3/4 FPT Swivel w/ washer	
	* Use Pro Grip, 7/8 Tape x 3/4 MPT in order to connect to the LayFlat start connector	
	<b>Barb adaptor to 20mm PE</b>	
PG-T7-T7	<b>Coupling</b>	
PG-T7-PMT750	<b>Male Threaded adaptor 22 x 3/4"</b>	

# Punch and Insert Tools

Inserter



Start connectors punches

For PVC



For PE



LayFlat cutter





# D1000 Maximum Drip Line Length

**10% flow difference (Qmin./Qmax.), Flat Area (0% Slope)**

Product	Spacing Between Drippers (cm)					
	15	20	25	30	40	50
	(m)					
16/6/1.0	89	108	126	142	172	199
16/6/1.5	68	84	98	111	134	155
16/8/1.0	91	111	130	147	178	207
16/8/1.5	71	86	100	113	138	159
22/8/1.0	158	190	220	248	298	345
22/8/1.5	121	147	170	191	230	266

**EU 90% (Qmin./Qavr.), Flat Area (0% Slope)**

Product	Spacing Between Drippers (cm)					
	15	20	25	30	40	50
	(m)					
16/6/1.0	121	147	171	193	234	271
16/6/1.5	93	114	132	149	181	210
16/8/1.0	122	149	173	196	237	275
16/8/1.5	94	115	134	151	183	212
22/8/1.0	212	256	296	333	401	463
22/8/1.5	163	197	228	257	309	357

# D1000 Drip Line with ActiveFlex™ Technology

The D1000 is the best-in-class, state-of-the-art thin wall drip line with the ActiveFlex™ technology

ActiveFlex™ offers superior performance & clogging resistance:

- Increases resistance to particles ingestion as the irrigation system shuts down
- Better protection during installation & retrieval, increasing reusability
- Minimizes reduction of mineral deposit buildup around the outlet
- Consistency & accuracy of watering, low CV
- Durability & minimal bursting

