

# Streamline™ X EZ

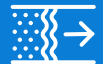
Integral non-pressure-compensated high clogging-resistance dripper, for single season applications.  
Easy to install and to retrieve.



Tough




High clogging resistance



Wide filtration area

## / Benefits & Features

- **Easy** Streamline™ X EZ dripline is easy to install and easy to retrieve.
- **Toughness** Streamline™ X EZ is the toughest thin wall dripline ever made, incorporating a unique ribbed surface that acts as a barrier between the ground and the dripline, making deployment and retrieval smoother than ever before.
- **High clogging resistance** Even with challenging water quality, with self-cleaning labyrinth that flushes debris throughout operation.
- **Wide filtration area** Ensures optimal performance even under harsh water conditions, preventing the entrance of sediment into the labyrinths.
- **Wide water passages** TurboNet™ labyrinth ensures wide water passages, large deep and wide cross-section that improves clogging resistance.
- **ReGen™ (optional\*)**  ReGen™ (optional\*), the highest quality recycled dripline ever made, successfully addressing the supply chain sustainability needs of today's growers.

# Specifications

- Streamline™ X EZ driplines are available with hole or flap outlet. The 0.35 l/h has a sand barrier so only a hole is possible with this flow.
- Recommended filtration: depending on dripper flow rate. Filtration method selected based on the kind and concentration of dirt particles contained in the water. Wherever sand exceeding 2 ppm exists in the water, a Hydrocyclone should be installed before the main filter. Where sand/silt/clay solids exceed 100 ppm, pre treatment it should be applied following Netafim™ expert instructions.
- TurboNet™ labyrinth with large water passage.
- Weldable into thin wall driplines.
- Injected dripper, very low CV.
- High UV resistant. Resistant to standard nutrients used in agriculture.
- Compliance ISO 9261 international standards.
- Streamline™ X EZ ReGen™ products are put through a full quality inspection process, delivering to the market the toughest driplines without compromising on quality.

\*ReGen™ is currently available in few markets, and we are in the process of making it available in all the markets. Please consult your local Netafim™ representative for availability.

## → Drippers technical data

12 X EZ, 16 X EZ, 22 X EZ

Flow rate* (l/h)	Max. working pressure (bar)**	Water passages dimensions width-depth-length (mm)	Filtration area (mm <sup>2</sup> )	Constant K	Exponent X	Recommended filtration (micron)/(mesh)
0.35	0.75 / 0.80 / 1.20	0.35 x 0.34 x 23	11	0.116	0.48	130/120
0.75		0.48 X 0.53 x 25	15	0.248	0.48	130/120
1.10		0.51 x 0.51 x 13	16	0.392	0.45	130/120
1.60		0.64 X 0.60 x 13	14	0.568	0.45	130/120
2.20		0.75 X 0.70 x 13	14	0.780	0.45	130/120
2.80		0.84 x 0.75 x 13	15	0.993	0.45	200/80

\*Flow rate at 1.0 bar pressure. \*\*According to driplines diameter

## → Driplines technical data

Model	Inside diameter (mm)	Max. working pressure (bar)	Max. flushing pressure (bar)	KD
12 X EZ	11.80	1.20	1.40	0.15
16 X EZ	16.20	0.80	0.90	0.10
22 X EZ	22.20	0.75	0.90	0.01

## → Driplines package data (on carton coil)

Model	Distance between drippers (m)	Coil length (m)	Average* coil weight (kg)	Coils per pallet (units)	Coils in a 40 feet container (units)	Total in a 40 feet container (m)
12 X EZ	0.15 to 0.25	3500	21.40	16	640	2240000
	0.30 to 1.00	3500	21.80			2240000
16 X EZ	0.15 to 0.25	3200	24.50	16	640	2048000
	0.30 to 1.00	3600	25.60			2304000
22 X EZ	0.15 to 0.25	2800	26.00	16	640	1792000
	0.30 to 1.00	3000	27.90			1920000

\*The average coil weight declared in the above table is based on average calculated weight.

# / Drippers flow rate vs working pressure

In order to calculate the right flow rate of each dripper, under different working pressures, we use the following formula:

$$Q = K * P^X$$

Where:

Q = Dripper flow rate (liters/hour)

K = Constant (each dripper has his singular constant and must be defined by the dripper producer)

P = Real working pressure (meter)

X = Exponent (each dripper has its singular exponent and must be declared and defined by the dripper producer)

\*ISO 9261 require from the manufacturer to declare the constant K and dripper exponent

Non-pressure-compensated drippers provide flow adequate to the pressure it is exposed to, according to the formula presented above. In order to simplify the calculations and understandings of the linkage between the flow and the pressure, a table with the flow rates at different working pressures is presented here for each of the drippers presented in this document.

## Flow rate (l/h) vs pressure (bar)

In all driplines models

Flow rate* (l/h)	Pressure (bar)										
	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.4
0.35	0.20	0.22	0.25	0.27	0.29	0.31	0.33	0.35	0.37	0.38	0.41
0.75	0.42	0.48	0.54	0.59	0.63	0.67	0.71	0.75	0.78	0.82	0.88
1.10	0.64	0.73	0.81	0.88	0.94	1.00	1.05	1.10	1.15	1.20	1.29
1.60	0.93	1.06	1.17	1.27	1.36	1.45	1.53	1.60	1.67	1.74	1.86
2.20	1.28	1.46	1.61	1.75	1.87	1.99	2.10	2.20	2.29	2.39	2.56
2.80	1.85	2.05	2.22	2.38	2.53	2.67	2.10	2.80	2.92	3.04	3.26

\*Nominal flow rate at 1.0 bar pressure

# / Max. lateral length

Flow Variation (FV) expresses the flow variation between the dripper "sensing" the highest pressure and the one "sensing" the lowest pressure in an irrigation block (zone).

These drippers will not always be the first and last drippers on the dripline.

$$FV \% = (Q_{max} - Q_{min}) / Q_{max} * 100$$

\*International standards define 10% flow variation to be considered as uniform irrigation.

In order to calculate the maximum run lengths that can be planned for specific dripline (considering all the hydraulic factors influencing the flow within the same dripline), we use a calculation software that was developed by Netafim™ based on Darcy-Waisbach formulas + years of design experience and cooperation with academic institutes.

All the tables presented in this document are for initial reference only; the exact run length of the driplines is obtained from design software that considers various hydraulic factors in the entire system.

There might be small variance between the different software's in the market due to the calculation method and assumptions each software is using. For an initial estimate of the dripline length, the data that is presented in this document (within the tables shown) is sufficiently accurate.

Non-pressure-compensated drippers of Netafim™ will provide different flow according to the real working pressure, therefore, the influencing factors will be: the pressure that each dripper in the dripline is exposed to, and the allowed flow variation the dripline is designed to, which in most cases is defined as 10% difference in flow, according to the international standards, and / or any other limitation that the customer / planner will prefer to design while considering the crop needs and area topography.

The following tables are only displayed at one inlet pressure for each dripline, since in non-pressure-compensated drippers the flow varies according to the pressure. There might be differences in run lengths with different inlet pressures; however for an initial estimate of the dripline length, the data that is presented in this document (within the tables shown) is sufficiently accurate.

### Max. lateral length (meters) at different slopes - 10% flow variation

Streamline™ X EZ • 12 X EZ • ID 11.8 mm • Kd 0.15 • Flow rate 0.35 l/h • Inlet pressure 1.2 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Uphill	2%	80	93	100	105	108	110	112
	1%	99	123	141	155	166	175	183
Flat terrain	0	122	162	197	229	259	287	313
Downhill	-1%	140	192	241	288	331	374	416
	-2%	154	216	273	181	205	161	152

### Max. lateral length (meters) at different slopes - 10% flow variation

Streamline™ X EZ • 12 X EZ • ID 11.8 mm • Kd 0.15 • Flow rate 0.75 l/h • Inlet pressure 1.2 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Uphill	2%	57	69	78	85	90	95	98
	1%	64	82	96	108	118	127	135
Flat terrain	0	72	96	116	136	153	169	186
Downhill	-1%	79	109	136	162	187	211	234
	-2%	86	122	155	189	221	253	286

### Max. lateral length (meters) at different slopes - 10% flow variation

Streamline™ X EZ • 12 X EZ • ID 11.8 mm • Kd 0.15 • Flow rate 1.10 l/h • Inlet pressure 1.2 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Uphill	2%	51	65	74	82	89	95	98
	1%	56	73	86	98	109	118	126
Flat terrain	0	61	82	100	116	131	146	158
Downhill	-1%	65	89	110	131	151	169	188
	-2%	70	97	123	148	172	197	221

### Max. lateral length (meters) at different slopes - 10% flow variation

Streamline™ X EZ • 12 X EZ • ID 11.8 mm • Kd 0.15 • Flow rate 1.60 l/h • Inlet pressure 1.2 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Uphill	2%	42	54	63	70	76	82	86
	1%	45	59	70	81	89	98	105
Flat terrain	0	48	65	79	92	104	116	126
Downhill	-1%	51	69	85	101	115	130	143
	-2%	53	74	93	111	129	146	163

### Max. lateral length (meters) at different slopes - 10% flow variation

Streamline™ X EZ • 12 X EZ • ID 11.8 mm • Kd 0.15 • Flow rate 2.20 l/h • Inlet pressure 1.2 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Uphill	2%	35	45	54	60	66	71	76
	1%	37	49	59	68	75	83	89
Flat terrain	0	40	53	64	75	85	95	103
Downhill	-1%	41	56	68	81	92	104	114
	-2%	43	59	74	88	101	114	127

### Max. lateral length (meters) at different slopes - 10% flow variation

Streamline™ X EZ • 12 X EZ • ID 11.8 mm • Kd 0.15 • Flow rate 2.80 l/h • Inlet pressure 1.2 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Uphill	2%	28	37	44	50	55	60	63
	1%	30	40	48	55	61	67	73
Flat terrain	0	31	42	52	61	68	76	83
Downhill	-1%	33	45	55	65	74	83	92
	-2%	34	47	58	69	80	90	99

### Max. lateral length (meters) at different slopes - 10% flow variation

Streamline™ X EZ • 16 X EZ • ID 16.2 mm • Kd 0.10 • Flow rate 0.35 l/h • Inlet pressure 0.9 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Uphill	2%	82	85	87	88	88	88	89
	1%	129	146	156	162	166	168	170
Flat terrain	0	208	276	336	391	441	488	533
Downhill	-1%	269	377	476	288	235	222	216
	-2%	123	106	103	102	101	101	100

### Max. lateral length (meters) at different slopes - 10% flow variation

Streamline™ X EZ • 16 X EZ • ID 16.2 mm • Kd 0.10 • Flow rate 0.75 l/h • Inlet pressure 0.9 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Uphill	2%	65	71	74	75	76	77	78
	1%	89	107	118	127	132	137	140
Flat terrain	0	122	162	197	229	259	286	313
Downhill	-1%	153	218	281	344	407	470	231
	-2%	186	103	88	84	82	81	81

### Max. lateral length (meters) at different slopes - 10% flow variation

Streamline™ X EZ • 16 X EZ • ID 16.2 mm • Kd 0.10 • Flow rate 1.10 l/h • Inlet pressure 0.9 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Uphill	2%	65	74	79	82	84	85	86
	1%	82	101	115	125	134	140	146
Flat terrain	0	103	138	168	195	220	244	266
Downhill	-1%	121	170	218	264	309	354	399
	-2%	142	208	276	98	92	90	88

### Max. lateral length (meters) at different slopes - 10% flow variation

Streamline™ X EZ • 16 X EZ • ID 16.2 mm • Kd 0.10 • Flow rate 1.60 l/h • Inlet pressure 0.9 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Uphill	2%	57	66	72	77	80	81	83
	1%	68	86	98	109	118	125	130
Flat terrain	0	82	108	132	154	174	193	210
Downhill	-1%	92	128	162	196	228	260	291
	-2%	105	151	197	244	113	99	94

### Max. lateral length (meters) at different slopes - 10% flow variation

Streamline™ X EZ • 16 X EZ • ID 16.2 mm • Kd 0.10 • Flow rate 2.20 l/h • Inlet pressure 0.9 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Uphill	2%	50	59	66	72	74	78	79
	1%	58	73	85	95	104	111	117
Flat terrain	0	67	89	108	126	142	158	172
Downhill	-1%	74	102	128	153	177	201	225
	-2%	82	116	150	184	218	252	118

### Max. lateral length (meters) at different slopes - 10% flow variation

Streamline™ X EZ • 16 X EZ • ID 16.2 mm • Kd 0.10 • Flow rate 2.80 l/h • Inlet pressure 0.9 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Uphill	2%	44	55	62	68	73	76	80
	1%	50	64	75	85	93	101	107
Flat terrain	0	55	74	90	104	118	131	142
Downhill	-1%	60	82	102	120	137	155	171
	-2%	64	88	111	133	153	173	192

### Max. lateral length (meters) at different slopes - 10% flow variation

Streamline™ X EZ • 22 X EZ • ID 22.2 mm • Kd 0.01 • Flow rate 0.35 l/h • Inlet pressure 0.8 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Uphill	2%	78	78	79	79	79	79	80
	1%	146	151	154	155	156	157	157
Flat terrain	0	379	492	593	684	769	849	925
Downhill	-1%	215	189	183	181	180	179	179
	-2%	89	89	88	89	88	88	89

Due to lateral filling time and flushing effectiveness it is not recommended to exceed 800 meters lateral length

### Max. lateral length (meters) at different slopes - 10% flow variation

Streamline™ X EZ • 22 X EZ • ID 22.2 mm • Kd 0.01 • Flow rate 0.75 l/h • Inlet pressure 0.8 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Uphill	2%	75	77	78	78	78	78	78
	1%	125	137	144	148	150	151	153
Flat terrain	0	224	291	350	405	455	502	546
Downhill	-1%	334	482	189	175	169	165	163
	-2%	85	81	80	80	79	79	79

### Max. lateral length (meters) at different slopes - 10% flow variation

Streamline™ X EZ • 22 X EZ • ID 22.2 mm • Kd 0.01 • Flow rate 1.10 l/h • Inlet pressure 0.8 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Uphill	2%	81	85	87	88	89	89	90
	1%	123	141	151	158	163	167	169
Flat terrain	0	190	247	298	344	387	427	465
Downhill	-1%	256	363	469	235	197	187	182
	-2%	100	89	86	86	85	84	84

### Max. lateral length (meters) at different slopes - 10% flow variation

Streamline™ X EZ • 22 X EZ • ID 22.2 mm • Kd 0.01 • Flow rate 1.60 l/h • Inlet pressure 0.8 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Uphill	2%	76	82	84	87	87	88	89
	1%	107	125	138	146	152	157	161
Flat terrain	0	150	195	235	272	305	337	367
Downhill	-1%	190	266	339	412	486	561	207
	-2%	237	98	90	88	86	85	85

### Max. lateral length (meters) at different slopes - 10% flow variation

Streamline™ X EZ • 22 X EZ • ID 22.2 mm • Kd 0.01 • Flow rate 2.20 l/h • Inlet pressure 0.8 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Uphill	2%	70	77	82	84	85	86	87
	1%	93	111	124	134	142	147	152
Flat terrain	0	123	160	192	222	250	275	301
Downhill	-1%	149	206	260	314	367	420	474
	-2%	179	259	99	92	89	88	86

### Max. lateral length (meters) at different slopes - 10% flow variation

Streamline™ X EZ • 22 X EZ • ID 22.2 mm • Kd 0.01 • Flow rate 2.80 l/h • Inlet pressure 0.8 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Uphill	2%	60	67	70	73	74	76	77
	1%	77	93	105	114	121	126	130
Flat terrain	0	99	130	157	181	204	225	246
Downhill	-1%	117	159	198	234	269	304	337
	-2%	130	180	124	116	103	99	96