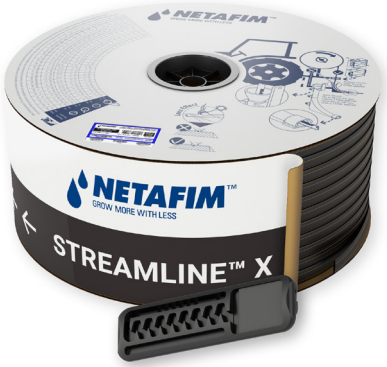
Streamline™ X

Integral non-pressure-compensated high clogging-resistance dripper, for single season applications.

→ 12060 - 12080 - 16050 - 16060 - 16070 - 16080
16100 - 22050 - 22060 - 22070 - 22080 - 22100



Tough

High clogging resistance

Wide filtration area

Benefits & Features

→ Toughness

Streamline™ X 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*)

The industry's first dripline with ReGen™, the highest quality recycled dripline ever made, successfully addressing the supply chain sustainability needs of today's growers.

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NETAFIM™

Specifications

- Streamline™ X driplines are available with hole or flap outlet. .
- 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 (0.13, 0.15, 0.18, 0.20, 0.25 mm).
- Injected dripper, very low CV.
- High UV resistant. Resistant to standard nutrients used in agriculture.
- Compliance ISO 9261 international standards.
- Streamline™ X 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

12060, 16050, 16060, 16070, 22050, 22060, 22070 - 0.13, 0.15, 0.18 mm wall thickness driplines

Flow rate* (l/h)	Max. working pressure (bar)**	Water passages dimensions width-depth-length (mm)	Filtration area (mm²)	Constant K	Exponent X	Recommended filtration (micron)/(mesh)
0.35	0.75 up to 1.60	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	0.389	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 and wall thickness

→ Drippers technical data

12080, 16080, 16100, 22080, 22100 - 0.20, 0.25 mm wall thickness driplines

Flow rate* (l/h)	Max. working pressure (bar)**	Water passages dimensions width-depth-length (mm)	Filtration area (mm²)	Constant K	Exponent X	Recommended filtration (micron)/(mesh)
0.35	1.0 up to 1.90	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
1.05		0.51 x 0.51 x 13	16	0.373	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 **According to driplines diameter and wall thickness

→ Driplines technical data

Model	Inside diameter (mm)	Wall thickness (mm)	Outside diameter (mm)	Max. working pressure (bar)	Max. flushing pressure (bar)	KD
12060	11.80	0.15	12.10	1.60	1.8	0.15
12080	11.80	0.20	12.20	1.90	2.2	0.15
16050	16.20	0.13	16.46	0.80	0.9	0.10
16060	16.20	0.15	16.50	1.00	1.2	0.10
16070	16.20	0.18	16.56	1.10	1.3	0.10
16080	16.20	0.20	16.60	1.20	1.4	0.10
16100	16.20	0.25	16.70	1.40	1.6	0.10
22050	22.20	0.13	22.46	0.75	0.9	0.01
22060	22.20	0.15	22.50	0.80	0.9	0.01
22070	22.20	0.18	22.56	0.90	1.0	0.01
22080	22.20	0.20	22.60	1.00	1.2	0.01
22100	22.20	0.25	22.70	1.10	1.3	0.01

→ Driplines package data (on carton coil)

Model	Wall thickness (mm)	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)
12060	0.15	0.15 to 0.25	3500	22.1	16	640	2240000
		0.30 to 1.00	3500	21.2			2240000
12080	0.20	0.15	2800	24.0	16	640	1792000
		0.20 to 1.00	3000	24.2			1920000
16050	0.13	0.15 to 0.25	3200	24.5	16	640	2048000
		0.30 to 1.00	3600	25.6			2304000
16060	0.15	0.15 to 0.25	2600	21.5	16	640	1664000
		0.30 to 1.00	3000	24.0			1920000
16070	0.18	0.15 to 0.25	2500	22.5	16	640	1600000
		0.30 to 1.00	2800	26.5			1792000
16080	0.20	0.15 to 0.25	2200	23.7	16	640	1408000
		0.30 to 1.00	2500	26.3			1600000
16100	0.25	0.15 to 0.25	1800	23.6	16	640	1152000
		0.30 to 1.00	2000	25.9			1280000
22050	0.13	0.15 to 0.25	2800	26.0	16	640	1792000
		0.30 to 1.00	3000	27.9			1920000
22060	0.15	0.15 to 0.25	2200	23.5	16	640	1728000
		0.30 to 1.00	2400	26.0			1536000
22070	0.18	0.15 to 0.25	1800	23.7	16	640	1152000
		0.30 to 1.00	2000	25.8			1280000
22080	0.20	0.15 to 0.25	1600	23.6	16	640	1024000
		0.30 to 1.00	1800	25.6			1152000
22100	0.25	0.15 to 0.25	1200	22.0	16	640	768000
		0.30 to 1.00	1500	26.6			960000

* Calculated weight average. For further details see “Average Coil Weight Disclaimer”.

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)

12060/16050/16060/16070/22050/22060/22070 - 0.13, 0.15, 0.18 mm wall thickness driplines

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

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

12080/16080/22080 - 0.20 mm wall thickness driplines

Flow rate* (l/h)	Pressure (bar)										
	0.3	0.4	0.5	0.6	0.7	0.8	1.0	1.1	1.3	1.5	1.7
0.35	0.20	0.22	0.25	0.27	0.29	0.31	0.35	0.37	0.40	0.42	0.45
0.75	0.42	0.48	0.54	0.59	0.63	0.67	0.75	0.78	0.85	0.91	0.97
1.05	0.61	0.70	0.77	0.84	0.90	0.95	1.05	1.10	1.18	1.26	1.33
1.60	0.93	1.06	1.17	1.27	1.36	1.45	1.60	1.67	1.80	1.92	2.03
2.20	1.28	1.46	1.61	1.75	1.87	1.99	2.20	2.29	2.47	2.64	2.79
2.80	1.85	2.05	2.22	2.38	2.53	2.67	2.80	2.92	3.15	3.36	3.55

*Nominal flow rate at 1.0 bar pressure

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

16100/22100 - 0.25 mm wall thicness driplines

Flow rate* (l/h)	Pressure (bar)								
	0.3	0.4	0.5	0.6	0.7	0.8	1.0	1.2	1.4
0.35	0.20	0.22	0.22	0.27	0.29	0.31	0.35	0.38	0.41
0.75	0.42	0.48	0.48	0.59	0.63	0.67	0.75	0.82	0.88
1.05	0.61	0.70	0.70	0.84	0.90	0.95	1.05	1.14	1.22
1.60	0.93	1.06	1.06	1.27	1.36	1.45	1.60	1.74	1.86
2.10	1.22	1.46	1.39	1.67	1.79	1.90	2.10	2.28	2.44
2.80	1.63	2.05	1.85	2.22	2.38	2.53	2.80	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 • 12060 • 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
	2%	80	93	100	105	108	110	112
Uphill	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 • 12060 • 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
	2%	57	69	78	85	90	95	98
Uphill	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 • 12060 • 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
	2%	51	65	74	82	89	95	98
Uphill	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 • 12060 • 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
	2%	42	54	63	70	76	82	86
Uphill	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 • 12060 • 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
	2%	35	45	54	60	66	71	76
Uphill	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 • 12060 • 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
	2%	28	37	44	50	55	60	63
Uphill	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 • 12080 • 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
	2%	80	93	100	105	108	110	112
Uphill	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 • 12080 • 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
	2%	59	72	81	88	93	97	100
Uphill	1%	68	86	101	114	124	134	142
Flat terrain	0	77	102	125	145	164	182	198
Downhill	-1%	86	118	147	176	203	229	255
	-2%	94	132	170	206	242	279	315

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

Streamline™ X • 12080 • ID 11.8 mm • Kd 0.15 • Flow rate 1.05 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
	2%	53	66	76	84	90	96	100
Uphill	1%	58	75	89	101	111	120	130
Flat terrain	0	63	84	103	120	136	151	165
Downhill	-1%	67	92	114	136	156	176	195
	-2%	72	101	128	154	179	205	230

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

Streamline™ X • 12080 • 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
	2%	42	54	63	70	76	82	86
Uphill	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 • 12080 • 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
	2%	35	45	54	60	66	71	76
Uphill	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 • 12080 • 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
	2%	28	37	44	50	55	60	63
Uphill	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 • 16050 • ID 16.2 mm • Kd 0.10 • 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
	2%	82	85	87	88	88	88	89
Uphill	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 • 16050 • ID 16.2 mm • Kd 0.10 • 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
	2%	65	71	74	75	76	77	78
Uphill	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 • 16050 • ID 16.2 mm • Kd 0.10 • 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
	2%	65	74	79	82	84	85	86
Uphill	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 • 16050 • IID 16.2 mm • Kd 0.10 • 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
	2%	57	66	72	77	80	81	83
Uphill	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 • 16050 • ID 16.2 mm • Kd 0.10 • 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
	2%	50	59	66	72	74	78	79
Uphill	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 • 16050 • ID 16.2 mm • Kd 0.10 • 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
	2%	44	55	62	68	73	76	80
Uphill	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 • 16060/16070 • ID 16.2 mm • Kd 0.10 • Flow rate 0.35 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	89	93	96	97	97	98	99
Uphill	1%	136	156	168	176	181	184	187
Flat terrain	0	209	278	338	393	444	491	536
Downhill	-1%	265	372	470	310	297	261	248
	-2%	165	122	116	114	113	112	112

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

Streamline™ X • 16060/16070 • ID 16.2 mm • Kd 0.10 • Flow rate 0.75 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	65	71	74	75	76	77	78
Uphill	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 • 16060/16070 • ID 16.2 mm • Kd 0.10 • Flow rate 1.10 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	65	74	79	82	84	85	86
Uphill	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 • 16060/16070 • IID 16.2 mm • Kd 0.10 • Flow rate 1.60 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	57	66	72	77	80	81	83
Uphill	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 • 16060/16070 • ID 16.2 mm • Kd 0.10 • Flow rate 2.20 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	50	59	66	72	74	78	79
Uphill	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 • 16060/16070 • ID 16.2 mm • Kd 0.10 • Flow rate 2.80 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	44	55	62	68	73	76	80
Uphill	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 • 16080 • ID 16.2 mm • Kd 0.10 • Flow rate 0.35 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	89	93	96	97	97	98	99
Uphill	1%	136	156	168	176	181	184	187
Flat terrain	0	209	278	338	393	444	491	536
Downhill	-1%	265	372	470	310	297	261	248
	-2%	165	122	116	114	113	112	112

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

Streamline™ X • 16080 • ID 16.2 mm • Kd 0.10 • Flow rate 0.75 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	76	85	89	92	94	95	95
Uphill	1%	101	122	137	148	157	163	168
Flat terrain	0	132	176	214	248	280	311	339
Downhill	-1%	162	228	292	356	418	481	544
	-2%	192	284	120	110	106	104	102

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

Streamline™ X • 16080 • ID 16.2 mm • Kd 0.10 • Flow rate 1.05 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	73	85	93	98	101	104	105
Uphill	1%	90	112	128	142	152	161	168
Flat terrain	0	108	144	176	205	231	256	279
Downhill	-1%	124	173	219	264	308	351	394
	-2%	142	205	268	333	128	119	114

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

Streamline™ X • 16080 • ID 16.2 mm • Kd 0.10 • Flow rate 1.60 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	62	74	82	89	93	97	98
Uphill	1%	72	91	106	119	129	138	146
Flat terrain	0	83	110	134	156	176	195	214
Downhill	-1%	91	126	159	190	220	250	279
	-2%	102	145	187	229	271	313	150

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

Streamline™ X • 16080 • ID 16.2 mm • Kd 0.10 • Flow rate 2.20 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	53	65	74	81	85	90	93
Uphill	1%	60	77	90	102	112	120	128
Flat terrain	0	68	90	110	128	144	160	174
Downhill	-1%	73	101	126	150	173	195	218
	-2%	80	113	144	175	205	236	266

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

Streamline™ X • 16080 • ID 16.2 mm • Kd 0.10 • Flow rate 2.80 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	44	55	62	68	73	76	80
Uphill	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 • 16100 • ID 16.2 mm • KD 0.10 • Flow Rate 0.35 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	89	94	96	97	98	99	99
Uphill	1%	136	157	168	176	181	185	187
Flat terrain	0	210	278	338	393	444	491	537
Downhill	-1%	266	372	471	311	298	262	249
	-2%	166	122	116	115	113	113	113

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

Streamline™ X • 16100 • ID 16.2 mm • KD 0.10 • Flow Rate 0.75 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	76	85	90	93	94	95	97
Uphill	1%	99	121	136	147	155	162	167
Flat terrain	0	129	171	208	242	273	302	330
Downhill	-1%	152	210	264	316	365	412	458
	-2%	169	238	165	133	124	120	118

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

Streamline™ X • 16100 • ID 16.2 mm • KD 0.10 • Flow Rate 1.05 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	68	78	84	88	91	92	94
Uphill	1%	84	104	119	131	140	148	154
Flat terrain	0	103	137	168	195	220	244	266
Downhill	-1%	119	164	205	245	283	319	354
	-2%	131	183	232	154	154	132	126

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

Streamline™ X • 16100 • ID 16.2 mm • KD 0.10 • Flow Rate 1.60 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	57	68	76	81	85	88	90
Uphill	1%	68	85	99	111	119	127	134
Flat terrain	0	79	105	128	149	168	186	204
Downhill	-1%	88	121	151	180	206	232	258
	-2%	96	134	168	202	234	265	162

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

Streamline™ X • 16100 • ID 16.2 mm • KD 0.10 • Flow Rate 2.10 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	51	62	69	75	79	83	85
Uphill	1%	58	74	87	98	107	114	121
Flat terrain	0	66	88	108	125	142	157	171
Downhill	-1%	73	100	124	148	169	190	211
	-2%	78	109	137	165	190	215	239

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

Streamline™ X • 16100 • ID 16.2 mm • KD 0.10 • Flow Rate 2.80 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	44	55	62	68	73	76	80
Uphill	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 • 22050/22060/22070 • 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
	2%	78	78	79	79	79	79	80
Uphill	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 • 22050/22060/22070 • 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
	2%	75	77	78	78	78	78	78
Uphill	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 • 22050/22060/22070 • 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
	2%	81	85	87	88	89	89	90
Uphill	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 • 22050/22060/22070 • 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
	2%	76	82	84	87	87	88	89
Uphill	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 • 22050/22060/22070 • 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
	2%	70	77	82	84	85	86	87
Uphill	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 • 22050/22060/22070 • 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
	2%	60	67	70	73	74	76	77
Uphill	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

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

Streamline™ X • 22080 • ID 22.2 mm • Kd 0.01 • Flow rate 0.35 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	96	97.8	98	99	99	99	99
Uphill	1%	174	184	189	192	193	194	195
Flat terrain	0	383	498	600	693	779	860	937
Downhill	-1%	303	258	238	231	228	226	225
	-2%	114	112	111	111	111	111	111

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 • 22080 • ID 22.2 mm • Kd 0.01 • Flow rate 0.75 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	75	77	78	78	79	78	78
Uphill	1%	128	140	145	149	151	153	154
Flat terrain	0	239	311	375	433	487	538	586
Downhill	-1%	367	243	180	171	166	164	162
	-2%	83	81	80	80	79	79	78

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

Streamline™ X • 22080 • ID 22.2 mm • Kd 0.01 • Flow rate 1.05 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	82	86	87	88	89	90	90
Uphill	1%	126	142	152	160	164	167	170
Flat terrain	0	196	255	308	355	399	440	481
Downhill	-1%	267	379	491	218	193	185	180
	-2%	98	89	86	85	85	84	84

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

Streamline™ X • 22080 • ID 22.2 mm • Kd 0.01 • Flow rate 1.60 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	76	82	84	87	87	88	89
Uphill	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 • 22080 • ID 22.2 mm • Kd 0.01 • Flow rate 2.20 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	70	77	82	84	85	86	87
Uphill	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 • 22080 • ID 22.2 mm • Kd 0.01 • Flow rate 2.80 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	60	67	70	73	74	76	77
Uphill	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

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

Streamline™ X • 22100 • ID 22.2 mm • KD 0.01 • Flow Rate 0.35 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	97	98	98	99	99	99	99
Uphill	1%	174	185	189	192	194	195	195
Flat terrain	0	384	499	600	694	779	860	938
Downhill	-1%	303	258	238	232	229	227	226
	-2%	114	112	112	112	112	111	111

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 • 22100 • ID 22.2 mm • KD 0.01 • Flow Rate 0.75 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	91	95	97	98	98	99	99
Uphill	1%	145	163	173	180	184	187	189
Flat terrain	0	236	307	370	427	480	530	578
Downhill	-1%	308	421	526	344	266	250	242
	-2%	135	119	115	114	113	113	112

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

Streamline™ X • 22100 • ID 22.2 mm • KD 0.01 • Flow Rate 1.05 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	87	92	95	97	97	98	98
Uphill	1%	129	148	161	169	175	179	183
Flat terrain	0	190	248	298	344	387	427	466
Downhill	-1%	239	325	406	483	306	344	276
	-2%	150	130	120	117	115	114	114

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

Streamline™ X • 22100 • ID 22.2 mm • KD 0.01 • Flow Rate 1.60 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
	2%	80	87	91	94	95	96	97
Uphill	1%	108	128	142	153	160	167	171
Flat terrain	0	145	189	228	264	296	327	356
Downhill	-1%	175	237	295	350	403	454	502
	-2%	197	149	142	126	121	118	117

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

Streamline™ X • 22100 • ID 22.2 mm • KD 0.01 • Flow Rate 2.10 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Uphill	2%	74	83	88	91	93	95	95
	1%	96	115	130	141	149	156	162
Flat terrain	0	122	159	192	222	249	275	300
Downhill	-1%	144	194	241	286	328	369	409
	-2%	160	220	152	151	130	124	121

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

Streamline™ X • 22100 • ID 22.2 mm • KD 0.01 • Flow Rate 2.80 l/h • Inlet pressure 1.0 Bar

	Distance between drippers (meter)							
	Slope	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Uphill	2%	67	77	83	87	89	92	93
	1%	83	101	116	127	136	143	150
Flat terrain	0	102	133	160	185	208	229	250
Downhill	-1%	117	158	195	230	264	297	328
	-2%	129	176	220	262	164	142	130