



## ARIES™

### INTEGRAL DRIPPER



12010 - 16009 - 16010 - 16012 - 20010 - 20012

### TECHNICAL INFORMATION

- Deciduous and tree irrigation.
- On-surface multi seasonal row crops.

### SPECIFICATIONS

- Maximum system pressure: according to dripperlines wall thickness.
- Recommended filtration: 130 micron / 120 mesh.  
Filtration method is to be selected based on the kind and concentration of the dirt particles existing in the water.  
Wherever sand exceeding 2 ppm exists in the water, a Hydrocyclon filter is to be installed before the main filter.  
When sand / silt / clay solids exceed 100ppm, pre treatment will be applied according to Netafim™ expert team's instructions.
- TurbuNext™ labyrinth with superior performance.
- To be "welded" into thick-walled dripperlines (0.9, 1.0 and 1.2 mm).
- Injected dripper, very low CV.
- UV resistant.
- Resistant to standard nutrients used in agricultural.
- Aries™ drippers meet ISO 9261 Standards with production certified by the Israel Standards Institute (SII).

### FEATURES AND BENEFITS

- Largest filter in each dripper. Wide filtration area to ensure optimal performance even under harsh water conditions.
- TurbuNext™ labyrinth assures wide water passages, large deep and wide cross section improves clogging resistance. Widest water passages within the dripper.
- The water is drawn in to the dripper from the stream center, preventing the entrance of sediments in to the drippers.
- Injection molded dripper construction , ensuring uniform drippers and very low CV.

## DRIPPERS TECHNICAL DATA

12010, 16009, 16010, 20010 - 0.9 and 1.0 mm wall thickness dripperlines

FLOW RATE* (L/H)	MAXIMUM WORKING PRESSURE** (BAR)	WATER PASSAGES DIMENSIONS WIDTH-DEPTH-LENGTH (MM)	FILTRATION AREA (MM <sup>2</sup> )	CONSTANT K	EXPONENT X	RECOMMENDED FILTRATION (MICRON)/(MESH)
1.00	2.9/3.0	0.60 x 0.75 x 65	49	0.347	0.46	130/120
2.00	2.9/3.0	0.76 x 1.03 x 65	54	0.693	0.46	130/120
3.00	2.9/3.0	0.90 x 1.20 x 65	54	1.040	0.46	130/120

\*Flow rate at 1.0 bar pressure \*\*According to dripperlines wall thickness

## FLOW RATE (L/H) VS. PRESSURE (BAR)

12010, 16009, 16010, 20010 – 0.9 and 1.0 mm wall thickness dripperlines

FLOW RATE* (L/H)	0.2	0.4	0.6	0.8	1.0	1.5	2.0	2.5	3.0
1.0	0.46	0.64	0.78	0.90	1.00	1.21	1.39	1.55	1.69
2.0	0.92	1.29	1.57	1.80	2.00	2.43	2.79	3.11	3.39
3.0	1.39	1.94	2.35	2.70	3.00	3.65	4.19	4.66	5.09

\*Nominal flow rate at 1.0 bar pressure

## DRIPPERS TECHNICAL DATA

16012, 20012 - 1.2 mm wall thickness dripperlines

FLOW RATE* (L/H)	MAXIMUM WORKING PRESSURE (BAR)	WATER PASSAGES DIMENSIONS WIDTH-DEPTH-LENGTH (MM)	FILTRATION AREA (MM <sup>2</sup> )	CONSTANT K	EXPONENT X	RECOMMENDED FILTRATION (MICRON)/(MESH)
1.05	3.5	0.60 x 0.75 x 65	49	0.364	0.46	130/120
2.10	3.5	0.76 x 1.03 x 65	54	0.728	0.46	130/120
3.15	3.5	0.90 x 1.20 x 65	54	1.092	0.46	130/120

\*Flow rate at 1.0 bar pressure

## FLOW RATE (L/H) VS. PRESSURE (BAR)

16012, 20012 – 1.2 mm wall thickness dripperlines

FLOW RATE* (L/H)	0.2	0.4	0.6	0.8	1.0	1.5	2.0	2.5	3.0
1.05	0.49	0.68	0.82	0.94	1.05	1.28	1.47	1.63	1.78
2.10	0.97	1.35	1.64	1.89	2.10	2.55	2.93	3.26	3.56
3.15	1.45	2.03	2.46	2.83	3.15	3.83	4.39	4.89	5.34

\*Nominal flow rate at 1.0 bar pressure

## DRIPPERLINES TECHNICAL DATA

MODEL	INSIDE DIAMETER (MM)	WALL THICKNESS (MM)	OUTSIDE DIAMETER (MM)	MAX. WORKING PRESSURE (BAR)	MAXIMUM FLUSHING PRESSURE (BAR)	KD
12010	10.3	1.0	12.3	3.5	4.6	0.70
16009	14.2	0.9	16.0	2.9	3.8	0.40
16010	14.2	1.0	16.2	3.0	3.9	0.40
16012	14.2	1.2	16.6	3.5	4.6	0.40
20010	17.5	1.0	19.5	3.0	3.9	0.10
20012	17.5	1.2	19.9	3.5	4.6	0.10

## DRIPPERLINES PACKAGE DATA (ON BUNDLED COILS)

MODEL	WALL THICKNESS (MM)	COIL LENGTH (M)	DISTANCE BETWEEN DRIPPERS (M)	AVERAGE* COIL WEIGHT (KG)	COILS IN A 40 FEET CONTAINER (UNITS)	TOTAL IN A 40 FEET CONTAINER (M)
12010	1.0	600	0.2 to 1.0	21.0	370	222000
16009	0.9	500	0.2 to 1.0	18.3	330	165000
16010	1.0	500	0.2 to 1.0	20.2	330	165000
16012	1.2	400	0.2 to 1.0	19.2	352	140800
20010	1.0	300	0.2 to 1.0	16.2	330	99000
20012	1.2	300	0.2 to 1.0	18.9	330	99000

\*According to drippers spacing

## MAX. LATERAL LENGTH (METERS) AT DIFFERENT SLOPES - 10% FLOW VARIATION

ARIES™ • 12010 • ID 10.3 MM • KD 0.7 • FLOW RATE 1.0 L/H • INLET PRESSURE 1.5 BAR

		DISTANCE BETWEEN DRIPPERS (METER)								
	SLOPE	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
UPHILL	2%	38	50	60	69	76	83	88	93	97
	1%	40	54	67	78	87	96	104	112	118
FLAT TERRAIN	0	42	59	73	87	99	111	122	132	143
	-1%	44	62	79	95	110	125	139	153	166
DOWNHILL	-2%	46	66	85	103	121	139	155	172	189

## MAX. LATERAL LENGTH (METERS) AT DIFFERENT SLOPES - 10% FLOW VARIATION

ARIES™ • 12010 • ID 10.3 MM • KD 0.7 • FLOW RATE 2.0 L/H • INLET PRESSURE 1.5 BAR

		DISTANCE BETWEEN DRIPPERS (METER)								
	SLOPE	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
UPHILL	2%	25	34	42	48	54	59	64	68	72
	1%	26	36	44	52	59	65	71	77	82
FLAT TERRAIN	0	27	37	47	56	64	71	78	86	92
	-1%	28	39	50	59	68	77	86	94	102
DOWNHILL	-2%	28	41	52	63	73	83	92	102	111

## MAX. LATERAL LENGTH (METERS) AT DIFFERENT SLOPES - 10% FLOW VARIATION

ARIES™ • 12010 • ID 10.3 MM • KD 0.7 • FLOW RATE 3.0 L/H • INLET PRESSURE 1.5 BAR

		DISTANCE BETWEEN DRIPPERS (METER)								
	SLOPE	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
UPHILL	2%	20	27	33	39	43	48	52	56	59
	1%	20	28	34	41	46	51	56	60	65
FLAT TERRAIN	0	21	29	36	43	49	55	61	66	71
	-1%	21	30	38	45	52	59	65	71	77
DOWNHILL	-2%	22	31	39	47	55	62	69	76	82

## MAX. LATERAL LENGTH (METERS) AT DIFFERENT SLOPES - 10% FLOW VARIATION

ARIES™ • 16009 / 16010 • ID 14.2 MM • KD 0.4 • FLOW RATE 1.0 L/H • INLET PRESSURE 1.5 BAR

		DISTANCE BETWEEN DRIPPERS (METER)								
	SLOPE	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
UPHILL	2%	62	79	91	101	108	114	118	122	126
	1%	68	91	109	125	139	150	161	170	178
FLAT TERRAIN	0	75	104	130	153	175	195	214	232	250
	-1%	82	116	148	179	209	238	266	293	321
DOWNHILL	-2%	88	128	167	205	244	281	319	358	396

## MAX. LATERAL LENGTH (METERS) AT DIFFERENT SLOPES - 10% FLOW VARIATION

ARIES™ • 16009 / 16010 • ID 14.2 MM • KD 0.4 • FLOW RATE 2.0 L/H • INLET PRESSURE 1.5 BAR

		DISTANCE BETWEEN DRIPPERS (METER)								
	SLOPE	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
UPHILL	2%	42	56	66	76	83	89	94	99	103
	1%	45	61	74	86	97	106	114	122	130
FLAT TERRAIN	0	48	66	83	98	112	125	138	149	161
	-1%	51	71	91	109	126	143	158	175	190
DOWNHILL	-2%	53	76	98	119	140	160	180	200	219

## MAX. LATERAL LENGTH (METERS) AT DIFFERENT SLOPES - 10% FLOW VARIATION

ARIES™ • 16009 / 16010 • ID 14.2 MM • KD 0.4 • FLOW RATE 3.0 L/H • INLET PRESSURE 1.5 BAR

		DISTANCE BETWEEN DRIPPERS (METER)								
	SLOPE	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
UPHILL	2%	34	45	54	62	68	74	80	85	89
	1%	35	48	59	69	77	85	92	99	105
FLAT TERRAIN	0	37	51	64	76	86	97	106	115	124
	-1%	39	54	68	82	95	107	119	131	142
DOWNHILL	-2%	40	57	73	88	103	117	131	145	159

## MAX. LATERAL LENGTH (METERS) AT DIFFERENT SLOPES - 10% FLOW VARIATION

ARIES™ • 16012 • ID 14.2 MM • KD 0.4 • FLOW RATE 1.05 L/H • INLET PRESSURE 1.5 BAR

		DISTANCE BETWEEN DRIPPERS (METER)								
	SLOPE	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
UPHILL	2%	60	77	90	99	106	112	117	121	124
	1%	66	89	106	122	135	146	157	167	174
FLAT TERRAIN	0	73	101	126	148	169	189	207	225	242
	-1%	79	112	143	173	201	229	256	283	309
DOWNHILL	-2%	85	123	160	197	233	270	306	342	379

## MAX. LATERAL LENGTH (METERS) AT DIFFERENT SLOPES - 10% FLOW VARIATION

ARIES™ • 16012 • ID 14.2 MM • KD 0.4 • FLOW RATE 2.10 L/H • INLET PRESSURE 1.5 BAR

		DISTANCE BETWEEN DRIPPERS (METER)								
	SLOPE	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
UPHILL	2%	41	55	65	74	81	88	93	97	102
	1%	44	59	72	84	94	104	112	120	127
FLAT TERRAIN	0	47	65	80	95	109	121	134	145	156
	-1%	49	69	88	105	122	138	154	168	183
DOWNHILL	-2%	51	74	95	115	135	154	173	192	211

## MAX. LATERAL LENGTH (METERS) AT DIFFERENT SLOPES - 10% FLOW VARIATION

ARIES™ • 16012 • ID 14.2 MM • KD 0.4 • FLOW RATE 3.15 L/H • INLET PRESSURE 1.5 BAR

		DISTANCE BETWEEN DRIPPERS (METER)								
	SLOPE	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
UPHILL	2%	33	44	53	61	67	73	78	83	87
	1%	34	47	57	67	75	83	90	96	103
FLAT TERRAIN	0	36	50	62	73	83	93	102	112	120
	-1%	37	53	66	80	92	104	115	126	137
DOWNHILL	-2%	39	55	70	85	99	113	126	140	153

## MAX. LATERAL LENGTH (METERS) AT DIFFERENT SLOPES - 10% FLOW VARIATION

ARIES™ • 20010 • ID 17.5 MM • KD 0.1 • FLOW RATE 1.00 L/H • INLET PRESSURE 1.5 BAR

		DISTANCE BETWEEN DRIPPERS (METER)								
	SLOPE	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
UPHILL	2%	88	105	115	123	127	131	134	136	138
	1%	105	132	153	170	184	196	206	214	222
FLAT TERRAIN	0	123	165	201	234	265	293	320	346	371
	-1%	141	196	247	297	344	392	438	485	531
DOWNHILL	-2%	158	227	294	362	430	218	181	170	164

## MAX. LATERAL LENGTH (METERS) AT DIFFERENT SLOPES - 10% FLOW VARIATION

ARIES™ • 20010 • ID 17.5 MM • KD 0.1 • FLOW RATE 2.00 L/H • INLET PRESSURE 1.5 BAR

		DISTANCE BETWEEN DRIPPERS (METER)								
	SLOPE	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
UPHILL	2%	64	80	91	100	106	112	116	121	123
	1%	71	92	109	123	135	146	156	165	172
FLAT TERRAIN	0	79	106	129	150	170	188	206	222	238
	-1%	86	119	148	176	203	229	254	279	304
DOWNHILL	-2%	93	131	167	202	236	270	304	338	372

## MAX. LATERAL LENGTH (METERS) AT DIFFERENT SLOPES - 10% FLOW VARIATION

ARIES™ • 20010 • ID 17.5 MM • KD 0.1 • FLOW RATE 3.00 L/H • INLET PRESSURE 1.5 BAR

		DISTANCE BETWEEN DRIPPERS (METER)								
	SLOPE	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
UPHILL	2%	52	65	76	85	92	97	102	107	111
	1%	56	73	87	100	110	120	129	137	144
FLAT TERRAIN	0	61	81	99	116	131	145	158	172	184
	-1%	65	89	111	132	151	169	188	205	223
DOWNHILL	-2%	69	96	122	147	170	194	217	239	262

## MAX. LATERAL LENGTH (METERS) AT DIFFERENT SLOPES - 10% FLOW VARIATION

ARIES™ • 20012 • ID 17.5 MM • KD 0.1 • FLOW RATE 1.05 L/H • INLET PRESSURE 1.5 BAR

		DISTANCE BETWEEN DRIPPERS (METER)								
	SLOPE	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
UPHILL	2%	86	103	114	121	126	130	133	135	137
	1%	102	129	150	167	181	193	202	211	219
FLAT TERRAIN	0	120	160	194	227	256	284	310	335	359
	-1%	136	188	238	285	331	377	421	465	509
DOWNHILL	-2%	152	218	282	347	411	477	187	174	167

## MAX. LATERAL LENGTH (METERS) AT DIFFERENT SLOPES - 10% FLOW VARIATION

ARIES™ • 20012 • ID 17.5 MM • KD 0.1 • FLOW RATE 2.10 L/H • INLET PRESSURE 1.5 BAR

		DISTANCE BETWEEN DRIPPERS (METER)								
	SLOPE	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
UPHILL	2%	63	78	89	98	104	110	115	119	122
	1%	69	89	106	120	132	143	153	161	169
FLAT TERRAIN	0	77	102	125	146	164	183	199	216	231
	-1%	84	115	143	170	196	221	246	269	293
DOWNHILL	-2%	90	126	160	194	227	260	292	324	357

## MAX. LATERAL LENGTH (METERS) AT DIFFERENT SLOPES - 10% FLOW VARIATION

ARIES™ • 20012 • ID 17.5 MM • KD 0.1 • FLOW RATE 3.15 L/H • INLET PRESSURE 1.5 BAR

		DISTANCE BETWEEN DRIPPERS (METER)								
	SLOPE	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
UPHILL	2%	51	64	74	83	90	96	101	105	109
	1%	55	71	85	97	107	117	126	133	141
FLAT TERRAIN	0	59	79	96	113	127	141	154	167	179
	-1%	63	86	107	127	146	164	182	199	215
DOWNHILL	-2%	67	93	118	141	164	186	209	230	252