



ARIES™ HWD

INTEGRAL DRIPPER

12010 - 16009 - 16010 - 16012 - 20010 - 20012 - 23009

TECHNICAL INFORMATION

- Maximum system pressure: according to dripperlines wall thickness.
- Recommended filtration: according to drippers flow rates.
Filtration method is to be selected based on the kind and concentration of the dirt particles existing in the water.
Whenever sand exceeding 2 ppm exists in the water, a Hydrocyclone is to be installed before the main filter.
When sand/ silt/ clay solids exceed 100 ppm, pre treatment will be applied according to Netafim™ expert team's instructions.
- TurbuNext™ labyrinth with superior performance.
- To be "welded" into thick-walled dripperlines (0.90, 1.00, 1.20 mm).
- Injected dripper, very low CV.
- High UV resistant.
- Resistant to standard nutrients used in agricultural.
- Aries™ dripperlines meet ISO 9261 Standards with production certified by the Israel Standards Institute (SII).

DRIPPERS TECHNICAL DATA

12010, 16009, 16010, 20010, 23009 - 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 ²)	CONSTANT K	EXPONENT X	RECOMMENDED FILTRATION (MICRON)/(MESH)
0.55	3.0 up to 3.5	0.47	0.53	65	36	0.191	0.46	130/120
0.80		0.54	0.69	65	43	0.277	0.46	130/120
1.00		0.60	0.74	65	49	0.347	0.46	200/80
1.50		0.71	0.85	65	53	0.520	0.46	200/80
2.00		0.76	1.03	65	54	0.693	0.46	200/80
3.00		0.90	1.20	65	54	1.040	0.46	200/80
4.00		0.94	1.28	33	54	1.387	0.46	200/80
8.00		1.52	1.28	28	50	2.773	0.46	200/80

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

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

12010, 16009, 16010, 20010, 23009 - 0.9 and 1.0 mm wall thickness dripperlines

FLOW RATE*	PRESSURE (BAR)								
	0.2	0.4	0.6	0.8	1.0	1.5	2.0	2.5	3.0
0.55	0.26	0.36	0.44	0.50	0.55	0.66	0.76	0.84	0.91
0.80	0.38	0.52	0.63	0.72	0.80	0.96	1.10	1.22	1.32
1.00	0.48	0.66	0.79	0.90	1.00	1.21	1.38	1.53	1.66
1.50	0.72	0.98	1.19	1.35	1.50	1.81	2.06	2.29	2.49
2.00	0.95	1.31	1.58	1.80	2.00	2.41	2.75	3.05	3.31
3.00	1.43	1.97	2.37	2.71	3.00	3.61	4.13	4.57	4.97
4.00	1.91	2.62	3.16	3.61	4.00	4.82	5.50	6.10	6.63
8.00	3.81	5.25	6.32	7.22	8.00	9.64	11.00	12.19	13.26

*Flow rate at 1.0 bar pressure

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 ²)	CONSTANT K	EXPONENT X	RECOMMENDED FILTRATION (MICRON)/(MESH)
0.55	4.00	0.47	0.53	65	36	0.191	0.46	130/120
0.85		0.54	0.69	65	43	0.295	0.46	130/120
1.05		0.60	0.74	65	49	0.364	0.46	200/80
1.60		0.71	0.85	65	53	0.554	0.46	200/80
2.10		0.76	1.03	65	54	0.728	0.46	200/80
3.15		0.90	1.20	65	54	1.092	0.46	200/80
4.20		0.94	1.28	33	54	1.455	0.46	200/80
8.40		1.52	1.28	28	50	2.912	0.46	200/80

*Flow rate at 1.0 bar pressure*Flow rate at 1.0 bar pressure

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

16012, 20012 - 1.2 mm wall thickness dripperlines

FLOW RATE*	PRESSURE (BAR)								
	0.2	0.4	0.6	0.8	1.0	1.5	2.0	2.5	3.0
0.55	0.26	0.36	0.44	0.50	0.55	0.66	0.76	0.84	0.91
0.85	0.41	0.56	0.67	0.77	0.85	1.03	1.17	1.30	1.41
1.05	0.50	0.69	0.83	0.95	1.05	1.27	1.44	1.60	1.74
1.60	0.76	1.05	1.26	1.44	1.60	1.93	2.20	2.44	2.65
2.10	1.00	1.38	1.66	1.89	2.10	2.53	2.89	3.20	3.48
3.15	1.50	2.07	2.49	2.84	3.15	3.80	4.33	4.80	5.22
4.20	2.00	2.75	3.32	3.79	4.20	5.06	5.77	6.40	6.96
8.40	4.01	5.51	6.64	7.58	8.40	10.12	11.55	12.80	13.92

*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	10.30	1.0	12.30	4.0	5.2	0.70
16009	14.20	0.9	16.00	3.0	3.9	0.40
16010	14.20	1.0	16.20	3.5	4.6	0.40
16012	14.20	1.2	16.60	4.0	5.2	0.40
20010	17.50	1.0	19.50	3.5	4.6	0.10
20012	17.50	1.2	19.90	4.0	5.2	0.10
23009	20.80	0.9	22.60	3.0	3.9	0.07

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	500	0.15 to 1.00	21.0	370	222000
16009	0.9	500	0.15 to 1.00	20.7	330	165000
16010	1.0	500	0.15 to 1.00	23.0	330	165000
16012	1.2	400	0.15 to 1.00	22.3	352	140800
20010	1.0	300	0.15 to 1.00	16.7	330	99000
20012	1.2	300	0.15 to 1.00	20.2	330	99000
23009 (on carton coils)	0.9	300	0.15 to 0.25	17.6	480	144000
		400	0.30 to 1.00	22.4		192000

*According to drippers spacing

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

ARIES™ HWD • 12010 • ID 10.2 MM • KD 0.70 • FLOW RATE 0.55 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%	54	70	83	93	101	108	113	118	122	
	1%	59	79	96	110	123	134	145	154	162	
FLAT TERRAIN	0	63	88	110	130	148	165	182	198	213	
	-1%	67	95	121	145	169	190	212	233	253	
DOWNHILL	-2%	70	101	130	158	184	210	235	259	283	

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

ARIES™ HWD • 12010 • ID 10.2 MM • KD 0.70 • FLOW RATE 0.80 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%	44	59	70	80	88	95	102	106	111	
	1%	47	64	78	91	102	112	122	131	138	
FLAT TERRAIN	0	50	69	86	103	117	131	145	157	168	
	-1%	52	73	93	112	130	147	163	180	196	
DOWNHILL	-2%	54	78	100	122	143	165	185	205	225	

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

ARIES™ HWD • 12010 • ID 10.2 MM • KD 0.70 • 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%	39	52	63	72	79	86	92	97	102	
	1%	41	56	69	80	90	99	107	115	123	
FLAT TERRAIN	0	43	60	75	89	101	113	125	136	146	
	-1%	44	63	80	96	110	125	139	153	166	
DOWNHILL	-2%	46	66	85	103	121	138	155	172	188	

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

ARIES™ HWD • 12010 • ID 10.2 MM • KD 0.70 • FLOW RATE 1.50 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%	31	41	50	58	65	71	77	82	86	
	1%	32	44	54	63	71	79	86	93	99	
FLAT TERRAIN	0	33	46	58	69	79	88	97	105	113	
	-1%	34	48	60	72	83	95	105	114	124	
DOWNHILL	-2%	35	50	64	77	89	102	114	126	137	

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

ARIES™ HWD • 12010 • ID 10.2 MM • KD 0.70 • 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%	27	36	44	51	57	62	68	72	77	
	1%	27	38	47	55	62	69	75	81	86	
FLAT TERRAIN	0	28	40	50	59	67	75	82	90	97	
	-1%	29	41	51	61	71	80	89	97	105	
DOWNHILL	-2%	30	42	54	65	75	85	95	105	114	

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

ARIES™ HWD • 12010 • ID 10.2 MM • KD 0.70 • 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%	21	28	35	41	46	50	55	59	63
	1%	21	29	36	43	49	55	59	65	69
FLAT TERRAIN	0	22	30	38	45	52	58	64	70	75
	-1%	22	31	39	47	54	61	67	74	80
DOWNHILL	-2%	22	32	40	49	56	64	71	78	85

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

ARIES™ HWD • 12010 • ID 10.2 MM • KD 0.70 • FLOW RATE 4.00 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%	17	23	29	34	38	43	46	50	53
	1%	17	24	30	36	40	45	50	53	57
FLAT TERRAIN	0	18	25	31	37	42	48	52	57	61
	-1%	18	25	31	38	43	48	54	59	64
DOWNHILL	-2%	18	26	32	39	45	50	56	62	67

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

ARIES™ HWD • 12010 • ID 10.2 MM • KD 0.70 • FLOW RATE 8.00 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%	11	15	19	23	25	28	31	33	36
	1%	11	15	19	23	26	29	32	35	38
FLAT TERRAIN	0	11	16	20	24	27	30	34	37	39
	-1%	11	16	20	24	28	31	34	37	40
DOWNHILL	-2%	11	16	20	25	28	32	35	39	42

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

ARIES™ HWD • 16009/16010 • ID 14.2 MM • KD 0.40 • FLOW RATE 0.55 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%	85	104	116	125	131	136	139	142	144
	1%	98	128	152	171	186	199	210	220	228
FLAT TERRAIN	0	113	156	194	229	261	291	320	347	373
	-1%	125	178	227	274	319	362	404	445	485
DOWNHILL	-2%	135	195	252	307	360	410	453	503	553

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

ARIES™ HWD • 16009/16010 • ID 14.2 MM • KD 0.40 • FLOW RATE 0.80 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%	73	92	106	116	124	130	134	139	141
	1%	81	108	129	147	162	176	186	197	207
FLAT TERRAIN	0	90	125	155	184	209	234	257	279	300
	-1%	98	139	178	216	251	287	322	356	390
DOWNHILL	-2%	106	155	203	251	298	346	394	443	492

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

ARIES™ HWD • 16009/16010 • ID 14.2 MM • KD 0.40 • 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%	65	83	97	107	115	122	127	131	135
	1%	71	95	114	131	145	158	170	179	188
FLAT TERRAIN	0	78	108	134	159	181	203	222	241	260
	-1%	83	118	151	183	212	242	270	299	326
DOWNHILL	-2%	89	130	169	208	247	285	324	362	401

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

ARIES™ HWD • 16009/16010 • ID 14.2 MM • KD 0.40 • FLOW RATE 1.50 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	68	80	91	99	106	112	117	121
	1%	56	75	92	106	118	130	139	149	157
FLAT TERRAIN	0	60	83	104	123	140	156	171	186	201
	-1%	63	89	113	136	158	179	200	220	240
DOWNHILL	-2%	66	96	124	151	178	204	230	257	282

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

ARIES™ HWD • 16009/16010 • ID 14.2 MM • KD 0.40 • 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%	44	59	70	80	88	95	101	106	110
	1%	47	64	78	90	101	111	121	130	136
FLAT TERRAIN	0	50	69	86	102	116	130	143	155	167
	-1%	52	73	93	111	128	146	162	178	194
DOWNHILL	-2%	54	78	100	122	142	163	183	203	223

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

ARIES™ • 16009/16010 • ID 14.2 MM • KD 0.40 • 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%	35	47	56	65	72	78	85	90	94
	1%	37	50	61	72	81	89	97	104	111
FLAT TERRAIN	0	38	53	66	79	90	100	110	121	129
	-1%	39	56	70	84	97	109	122	133	144
DOWNHILL	-2%	41	58	74	90	105	119	134	148	161

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

ARIES™ HWD • 16009/16010 • ID 14.2 MM • KD 0.40 • FLOW RATE 4.00 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%	30	40	48	56	63	69	74	78	83
	1%	31	42	52	61	68	76	82	88	94
FLAT TERRAIN	0	32	44	55	66	75	84	91	100	107
	-1%	32	46	58	69	79	90	99	109	118
DOWNHILL	-2%	33	47	60	73	85	97	108	119	129

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

ARIES™ HWD • 16009/16010 • ID 14.2 MM • KD 0.40 • FLOW RATE 8.00 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%	19	26	33	38	43	48	52	56	59
	1%	20	27	34	40	46	51	55	60	64
FLAT TERRAIN	0	20	28	36	42	48	54	59	65	70
	-1%	21	29	36	43	50	56	62	68	73
DOWNHILL	-2%	21	29	38	45	52	59	66	72	78

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

ARIES™ HWD • 16012 • ID 14.2 MM • KD 0.40 • FLOW RATE 0.55 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%	85	104	116	125	131	136	139	142	144
	1%	98	128	152	171	186	199	210	220	228
FLAT TERRAIN	0	113	156	194	229	261	291	320	347	373
	-1%	125	178	227	274	319	362	404	445	485
DOWNHILL	-2%	135	195	252	307	360	410	253	233	210

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

ARIES™ HWD • 16012 • ID 14.2 MM • KD 0.40 • FLOW RATE 0.85 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%	71	89	103	114	121	127	133	136	140
	1%	78	104	125	143	157	170	182	193	202
FLAT TERRAIN	0	87	120	149	177	201	225	247	268	289
	-1%	93	133	170	206	240	274	306	338	371
DOWNHILL	-2%	101	147	193	238	283	328	373	419	464

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

ARIES™ HWD • 16012 • ID 14.2 MM • KD 0.40 • 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%	63	81	94	105	113	120	126	130	134
	1%	69	93	112	128	142	155	166	176	185
FLAT TERRAIN	0	76	105	130	154	176	196	215	234	252
	-1%	81	114	146	176	205	233	261	288	314
DOWNHILL	-2%	86	125	163	201	237	274	310	347	384

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

ARIES™ HWD • 16012 • ID 14.2 MM • KD 0.40 • FLOW RATE 1.60 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%	50	66	78	89	97	103	110	114	119
	1%	54	73	88	103	114	125	135	144	153
FLAT TERRAIN	0	58	80	100	118	134	150	165	179	193
	-1%	60	85	108	130	151	171	190	210	228
DOWNHILL	-2%	64	92	118	144	169	194	219	243	268

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

ARIES™ HWD • 16012 • ID 14.2 MM • KD 0.40 • 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%	43	57	68	78	86	92	99	104	108	
	1%	46	62	76	88	99	109	118	125	133	
FLAT TERRAIN	0	48	67	84	99	113	126	138	150	162	
	-1%	50	71	90	108	124	141	156	172	187	
DOWNHILL	-2%	52	75	96	117	137	157	176	195	214	

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

ARIES™ HWD • 16012 • ID 14.2 MM • KD 0.40 • 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%	34	46	55	64	71	77	82	88	93	
	1%	36	48	60	70	79	87	94	102	108	
FLAT TERRAIN	0	37	51	64	76	87	97	107	117	126	
	-1%	38	54	68	81	94	106	118	129	139	
DOWNHILL	-2%	39	56	72	87	101	115	129	142	155	

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

ARIES™ HWD • 16012 • ID 14.2 MM • KD 0.40 • FLOW RATE 4.20 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%	29	39	47	55	61	67	72	77	81	
	1%	30	41	50	59	67	74	80	86	92	
FLAT TERRAIN	0	31	43	54	64	73	81	89	96	104	
	-1%	31	44	56	67	77	87	96	105	114	
DOWNHILL	-2%	32	46	58	71	82	93	104	114	125	

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

ARIES™ HWD • 16012 • ID 14.2 MM • KD 0.40 • FLOW RATE 8.40 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%	19	26	32	37	42	46	50	54	58	
	1%	19	27	33	39	44	49	54	59	63	
FLAT TERRAIN	0	20	27	34	41	47	53	58	63	68	
	-1%	20	28	35	42	48	54	60	66	71	
DOWNHILL	-2%	20	29	36	44	50	57	63	69	75	

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

ARIES™ HWD • 20010 • ID 17.5 MM • KD 0.10 • FLOW RATE 0.55 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%	113	128	136	142	145	147	149	149	151	
	1%	146	179	202	220	234	244	254	260	266	
FLAT TERRAIN	0	185	246	300	349	394	437	478	516	553	
	-1%	215	299	376	449	519	587	653	716	778	
DOWNHILL	-2%	239	337	436	529	619	701	776	844	907	

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

ARIES™ HWD • 20010 • ID 17.5 MM • KD 0.10 • FLOW RATE 0.80 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%	102	120	131	139	143	147	150	152	153
	1%	124	155	178	198	213	225	236	246	253
FLAT TERRAIN	0	148	197	241	280	317	351	384	415	444
	-1%	169	236	298	359	419	477	536	594	652
DOWNHILL	-2%	191	277	362	448	208	182	173	167	164

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

ARIES™ HWD • 20010 • ID 17.5 MM • KD 0.10 • 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%	93	111	123	132	137	141	146	148	150
	1%	110	139	161	180	195	207	219	229	236
FLAT TERRAIN	0	128	171	209	243	275	304	333	360	385
	-1%	143	199	251	302	350	398	445	491	538
DOWNHILL	-2%	160	230	298	367	435	505	192	179	172

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

ARIES™ HWD • 20010 • ID 17.5 MM • KD 0.10 • FLOW RATE 1.50 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%	78	95	108	117	124	130	134	138	141
	1%	88	113	132	149	163	176	186	196	205
FLAT TERRAIN	0	99	132	161	188	212	235	257	278	298
	-1%	108	148	186	222	256	290	322	356	387
DOWNHILL	-2%	117	166	213	260	305	351	397	443	489

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

ARIES™ HWD • 20010 • ID 17.5 MM • KD 0.10 • 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%	67	84	96	106	113	119	125	130	133
	1%	75	96	114	129	142	154	164	174	182
FLAT TERRAIN	0	82	110	134	156	177	195	214	231	248
	-1%	88	121	151	180	207	233	259	284	309
DOWNHILL	-2%	95	133	170	205	240	274	309	343	377

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

ARIES™ HWD • 20010 • ID 17.5 MM • KD 0.10 • 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%	54	69	80	90	97	104	110	114	119
	1%	59	77	91	105	116	125	135	144	152
FLAT TERRAIN	0	63	85	104	121	136	151	166	179	192
	-1%	67	91	113	134	154	173	191	210	227
DOWNHILL	-2%	71	98	124	149	173	197	221	244	267

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

ARIES™ HWD • 20010 • ID 17.5 MM • KD 0.10 • FLOW RATE 4.00 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%	46	59	70	79	86	92	98	103	107
	1%	49	65	78	89	99	109	117	124	131
FLAT TERRAIN	0	53	71	86	101	113	126	138	149	159
	-1%	55	75	93	110	125	141	155	170	184
DOWNHILL	-2%	58	80	100	120	139	157	175	194	211

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

ARIES™ HWD • 20010 • ID 17.5 MM • KD 0.10 • FLOW RATE 8.00 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%	31	41	48	56	62	67	71	76	80
	1%	32	43	52	60	67	74	80	86	91
FLAT TERRAIN	0	34	45	56	65	73	81	89	95	103
	-1%	35	47	58	68	78	87	96	104	113
DOWNHILL	-2%	36	49	61	73	83	94	104	113	123

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

ARIES™ HWD • 20012 • ID 17.5 MM • KD 0.10 • FLOW RATE 0.55 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%	113	128	136	142	145	147	149	149	151
	1%	146	179	202	220	234	244	254	260	266
FLAT TERRAIN	0	185	246	300	349	394	437	478	516	553
	-1%	215	299	376	449	519	587	653	716	778
DOWNHILL	-2%	239	337	426	509	591	669	746	824	882

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

ARIES™ HWD • 20012 • ID 17.5 MM • KD 0.10 • FLOW RATE 0.85 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%	100	118	129	136	142	146	148	151	152
	1%	120	150	174	193	208	221	232	240	249
FLAT TERRAIN	0	142	190	232	270	304	337	369	398	427
	-1%	161	225	284	342	398	454	508	563	617
DOWNHILL	-2%	182	263	343	424	505	586	667	748	829

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

ARIES™ HWD • 20012 • ID 17.5 MM • KD 0.10 • 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%	91	109	121	130	136	140	144	147	149
	1%	107	135	158	176	191	204	215	224	233
FLAT TERRAIN	0	124	166	202	236	266	295	322	348	373
	-1%	139	192	242	291	337	383	428	473	517
DOWNHILL	-2%	154	221	286	352	416	482	548	613	679

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

ARIES™ HWD • 20012 • ID 17.5 MM • KD 0.10 • FLOW RATE 1.60 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%	75	92	105	115	122	127	133	136	139
	1%	85	109	128	145	159	171	182	192	200
FLAT TERRAIN	0	95	127	154	180	203	225	246	267	286
	-1%	103	142	178	212	244	276	307	338	368
DOWNHILL	-2%	112	158	202	246	289	332	375	418	461

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

ARIES™ HWD • 20012 • ID 17.5 MM • KD 0.10 • 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%	66	82	94	104	112	118	123	128	131
	1%	73	94	111	126	139	150	161	170	179
FLAT TERRAIN	0	79	107	130	152	171	190	207	224	241
	-1%	85	117	146	173	199	225	250	274	298
DOWNHILL	-2%	91	128	163	197	230	263	296	329	361

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

ARIES™ HWD • 20012 • ID 17.5 MM • KD 0.10 • 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%	53	67	78	88	95	102	107	113	117
	1%	57	74	89	102	112	123	132	140	148
FLAT TERRAIN	0	61	82	100	117	132	146	160	174	186
	-1%	65	88	110	130	149	167	185	203	219
DOWNHILL	-2%	68	95	120	144	167	190	212	234	256

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

ARIES™ HWD • 20012 • ID 17.5 MM • KD 0.10 • FLOW RATE 4.20 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%	45	58	68	77	84	91	96	101	105
	1%	48	63	76	87	97	106	114	122	128
FLAT TERRAIN	0	51	68	84	98	110	123	134	144	155
	-1%	53	72	90	106	121	136	150	164	178
DOWNHILL	-2%	56	77	97	116	134	151	169	186	203

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

ARIES™ HWD • 20012 • ID 17.5 MM • KD 0.10 • FLOW RATE 8.40 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%	30	40	47	54	60	65	70	74	78
	1%	31	42	50	59	65	71	78	83	89
FLAT TERRAIN	0	33	44	54	63	71	78	86	93	100
	-1%	33	45	56	66	75	84	93	101	109
DOWNHILL	-2%	34	47	59	70	80	90	100	110	119

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

ARIES™ HWD • 23009 • ID 20.8 MM • KD 0.07 • FLOW RATE 0.55 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%	129	140	145	148	150	151	152	152	153
	1%	181	215	237	252	263	271	278	283	286
FLAT TERRAIN	0	251	334	406	472	533	590	645	697	746
	-1%	306	425	537	643	744	846	945	1041	1139
DOWNHILL	-2%	345	268	197	187	182	180	178	177	177

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

ARIES™ HWD • 23009 • ID 20.8 MM • KD 0.07 • FLOW RATE 0.80 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%	120	135	144	149	152	154	156	157	158
	1%	154	189	215	234	248	259	268	275	281
FLAT TERRAIN	0	196	263	321	375	424	470	514	555	596
	-1%	233	331	425	518	610	702	794	887	981
DOWNHILL	-2%	273	407	201	175	166	162	160	158	157

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

ARIES™ HWD • 23009 • ID 20.8 MM • KD 0.07 • 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%	112	129	138	145	148	151	154	155	156
	1%	141	174	198	217	232	244	254	263	269
FLAT TERRAIN	0	174	232	282	329	371	411	449	485	520
	-1%	204	285	362	438	512	587	660	734	808
DOWNHILL	-2%	236	344	453	195	176	168	164	162	160

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

ARIES™ HWD • 23009 • ID 20.8 MM • KD 0.07 • FLOW RATE 1.50 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%	96	114	126	134	139	144	146	149	151
	1%	114	144	166	185	200	214	224	233	242
FLAT TERRAIN	0	134	179	218	254	287	317	346	375	402
	-1%	152	210	265	318	369	420	470	519	569
DOWNHILL	-2%	170	244	317	390	463	207	184	175	169

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

ARIES™ HWD • 23009 • ID 20.8 MM • KD 0.07 • 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%	85	103	115	124	130	136	139	143	146
	1%	98	124	146	163	178	190	202	212	220
FLAT TERRAIN	0	112	149	181	211	238	264	289	312	334
	-1%	123	170	214	255	295	335	373	411	449
DOWNHILL	-2%	136	193	249	304	358	413	468	221	190

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

ARIES™ HWD • 23009 • ID 20.8 MM • KD 0.07 • 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%	70	86	99	108	116	123	126	131	135
	1%	86	115	140	163	184	204	222	241	258
FLAT TERRAIN	0	86	115	140	163	184	204	222	241	258
	-1%	93	127	159	189	217	245	272	299	325
DOWNHILL	-2%	100	141	179	217	253	290	326	363	400

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

ARIES™ HWD • 23009 • ID 20.8 MM • KD 0.07 • FLOW RATE 4.00 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%	60	76	88	97	104	111	117	121	125
	1%	66	85	102	115	127	139	148	157	165
FLAT TERRAIN	0	72	95	117	136	154	170	186	201	215
	-1%	76	104	129	153	176	198	219	240	261
DOWNHILL	-2%	81	113	143	172	200	228	256	284	311

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

ARIES™ HWD • 23009 • ID 20.8 MM • KD 0.07 • FLOW RATE 8.00 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%	40	52	62	70	77	83	89	94	98
	1%	42	56	68	78	86	95	102	110	117
FLAT TERRAIN	0	44	60	74	86	97	109	118	129	138
	-1%	46	63	78	93	106	119	131	144	155
DOWNHILL	-2%	48	67	84	100	116	131	146	160	175