



UNIRAM™ CNL

**INTEGRAL PRESSURE-COMPENSATING, CONTINUOUSLY
SELF-CLEANING, ANTI-SIPHON MECHANISM DRIPPER**

16010 - 20012 - 23010

APPLICATIONS

- Pulse irrigation
- Sloped areas
- Greenhouse, deciduous and tree irrigation
- Sub-surface multi seasonal row crops

SPECIFICATIONS

- Pressure-compensating range: 1.0-4.0 bar
- Anti-siphon and Anti-drain mechanism
- Recommended filtration: 130 micron/120 mesh
- Double TurboNet™ labyrinth with large water passage
- To be "welded" into thick walled dripperlines (0.9, 1.0 and 1.2mm)
- Injected silicon diaphragm
- Resistant to standard nutrients used in agriculture
- UniRam™ drippers meet ISO 9261 Standards with production certified by the Israel Standards Institute (SII)

FEATURES AND BENEFITS

- Pressure compensated: Precise and equal amounts of water are delivered over a broad pressure range. High uniformity of water and nutrient distribution along the laterals.
- Anti-siphon mechanism: Prevents contaminants from being drawn into the dripper.
- Anti-drain (CNL) system: Eliminates drainage and refill effect and improves efficiency in pulse irrigation.
- Continuously self flushing: Flushes debris as it is detected ensuring uninterrupted dripper operation.
- Self-flushing system with wide filtration area improves resistance to clogging thus making UniRam™ highly resistant when using low quality water.
- Physical root barrier: Better protection against root intrusion without reliance on chemicals.
- TurboNet™ labyrinth assures wide water passages, large deep and wide cross section improves clogging resistance.
- The water is drawn in to the dripper from the stream center, reducing the entrance of sediments in to the drippers.

DRIPPERS TECHNICAL DATA

FLOW RATE (L/H.)	WORKING PRESSURE RANGE (BAR)	WATER PASSAGE DIMENSIONS WIDTH-DEPTH-LENGTH (MM.)	FILTRATION AREA (MM ²)	CONSTANT K	EXPONENT* X	RECOMMENDED FILTRATION (MICRON)/(MESH)
1.0	1.0 - 4.0	0.83 x 0.74 x 40	130	1.0	0	130/120
1.6	1.0 - 4.0	1.26 x 0.70 x 40	130	1.6	0	130/120
2.3	1.0 - 4.0	1.26 x 1.00 x 40	130	2.3	0	130/120
3.5	1.0 - 4.0	1.59 x 1.15 x 40	150	3.5	0	130/120

*Within working pressure range

DRIPPERLINE TECHNICAL DATA

MODEL	INSIDE DIAMETER (MM)	WALL THICKNESS (MM)	OUTSIDE DIAMETER (MM)	MAX. WORKING PRESSURE (BAR)	MAX. FLUSHING PRESSURE (BAR)	KD	COIL LENGTH (M)
16010	14.2	1.0	16.2	3.5	4.6	1.3	400
20012	17.5	1.2	19.9	4.0	5.2	0.4	300
23010	20.8	1.0	22.8	3.0	3.9	0.3	300

*Maximum working pressure is defined by the dripper and not by the dripperline wall thickness

MAX. LATERAL LENGTH (METRE) AT DIFFERENT INLET PRESSURE

UNIRAM™ CNL 16010 - I.D. 14.2MM - KD 1.3 - FLOW RATE 1.0 L/H

FLAT TERRAIN	INLET PRESSURE (BAR)	DISTANCE BETWEEN DRIPPERS (METRE)								
		0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
	1.5	76	109	140	169	196	222	246	270	293
	2.0	96	138	177	214	249	282	314	345	374
	2.5	110	158	204	246	286	325	362	397	431
	3.0	121	175	225	272	317	359	400	439	477
	3.5	131	189	243	294	342	388	432	474	515
	4.0	139	201	258	313	364	414	461	506	549

Minimum considered pressure: 0.1 bar

Max working pressure according the dripperline wall thickness definition

UNIRAM™ CNL 16010 - I.D. 14.2MM - KD 1.3 - FLOW RATE 1.6 L/H

FLAT TERRAIN	INLET PRESSURE (BAR)	DISTANCE BETWEEN DRIPPERS (METRE)								
		0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
	1.5	56	80	103	124	144	163	182	200	216
	2.0	70	101	130	158	184	208	231	254	276
	2.5	81	116	150	181	211	239	266	293	318
	3.0	89	128	165	200	233	265	294	324	352
	3.5	96	139	178	216	252	286	318	350	380
	4.0	102	147	190	230	268	305	339	373	405

Minimum considered pressure: 0.1 bar

Max working pressure according the dripperline wall thickness definition

UNIRAM™ CNL 16010 - I.D. 14.2MM - KD 1.3 - FLOW RATE 2.3 L/H

FLAT TERRAIN	INLET PRESSURE (BAR)	DISTANCE BETWEEN DRIPPERS (METRE)								
		0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
	1.5	44	63	81	98	114	130	144	158	171
	2.0	55	80	103	125	145	165	183	201	218
	2.5	64	92	118	143	167	189	210	231	251
	3.0	70	101	130	158	184	209	233	256	278
	3.5	76	109	141	171	199	226	252	276	301
	4.0	80	116	150	182	212	241	268	294	320

Minimum considered pressure: 0.1 bar

Max working pressure according the dripperline wall thickness definition

UNIRAM™ CNL 16010 - I.D. 14.2MM - KD 1.3 - FLOW RATE 3.5 L/H

FLAT TERRAIN	INLET PRESSURE (BAR)	DISTANCE BETWEEN DRIPPERS (METRE)								
		0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
	1.5	33	48	62	75	87	99	110	121	131
	2.0	42	61	78	95	110	125	139	153	166
	2.5	48	70	90	109	127	144	161	176	192
	3.0	53	77	99	120	140	159	178	195	212
	3.5	57	83	107	130	151	172	192	211	229
	4.0	61	88	114	138	161	183	204	224	244

Minimum considered pressure: 0.1 bar

Max working pressure according the dripperline wall thickness definition

MAX. LATERAL LENGTH (METRE) AT DIFFERENT INLET PRESSURE

UNIRAM™ CNL 20012 - I.D. 17.5MM - KD 0.4 - FLOW RATE 1.0 L/H

FLAT TERRAIN	INLET PRESSURE (BAR)	DISTANCE BETWEEN DRIPPERS (METRE)								
		0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
	1.5	133	185	232	276	316	353	389	423	456
	2.0	169	236	296	352	403	452	498	542	583
	2.5	194	272	341	406	465	522	574	626	674
	3.0	215	300	378	449	515	577	636	693	747
	3.5	232	325	408	485	557	624	689	750	809
	4.0	247	346	435	518	594	666	734	800	863

Minimum considered pressure: 0.1 bar

Max working pressure according the dripperline wall thickness definition

UNIRAM™ CNL 20012 - I.D. 17.5MM - KD 0.4 - FLOW RATE 1.6 L/H

FLAT TERRAIN	INLET PRESSURE (BAR)	DISTANCE BETWEEN DRIPPERS (METRE)								
		0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
	1.5	98	137	171	203	233	261	287	313	337
	2.0	124	174	218	260	298	333	368	401	431
	2.5	143	200	252	309	343	385	425	463	498
	3.0	158	221	278	331	380	426	470	512	552
	3.5	170	239	301	358	411	461	509	554	598
	4.0	181	255	321	382	439	492	542	591	638

Minimum considered pressure: 0.1 bar

Max working pressure according the dripperline wall thickness definition

UNIRAM™ CNL 20012 - I.D. 17.5MM - KD 0.4 - FLOW RATE 2.3 L/H

FLAT TERRAIN	INLET PRESSURE (BAR)	DISTANCE BETWEEN DRIPPERS (METRE)								
		0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
	1.5	77	108	136	161	184	207	228	248	267
	2.0	98	137	173	205	235	264	291	317	342
	2.5	113	158	199	237	272	305	336	366	395
	3.0	124	175	220	262	301	337	372	405	437
	3.5	134	189	238	283	325	365	402	439	473
	4.0	143	201	254	302	347	389	430	468	505

Minimum considered pressure: 0.1 bar

Max working pressure according the dripperline wall thickness definition

UNIRAM™ CNL 20012 - I.D. 17.5MM - KD 0.4 - FLOW RATE 3.5 L/H

FLAT TERRAIN	INLET PRESSURE (BAR)	DISTANCE BETWEEN DRIPPERS (METRE)								
		0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
	1.5	59	82	103	123	141	158	174	189	204
	2.0	75	104	132	157	179	202	222	242	261
	2.5	86	120	152	181	207	232	257	280	302
	3.0	95	133	168	200	229	258	284	310	334
	3.5	102	144	181	216	248	279	307	335	361
	4.0	109	153	193	230	265	297	328	357	386

Minimum considered pressure: 0.1 bar

Max working pressure according the dripperline wall thickness definition

MAX. LATERAL LENGTH (METRE) AT DIFFERENT INLET PRESSURE

UNIRAM™ CNL 23010 - I.D. 20.8MM - KD 0.3 - FLOW RATE 1.0 L/H

FLAT TERRAIN	INLET PRESSURE (BAR)	DISTANCE BETWEEN DRIPPERS (METRE)								
		0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
	1.5	182	252	316	374	428	479	527	572	617
	2.0	231	322	403	478	547	613	674	734	790
	2.5	266	371	465	551	631	707	778	847	913
	3.0	294	410	514	610	699	783	862	939	1011

All dripperline lengths based on one line operating at a min. pressure of 5m

UNIRAM™ CNL 23010 - I.D. 20.8MM - KD 0.3 - FLOW RATE 1.6 L/H

FLAT TERRAIN	INLET PRESSURE (BAR)	DISTANCE BETWEEN DRIPPERS (METRE)								
		0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
	1.5	134	186	233	276	316	354	390	424	456
	2.0	170	237	297	353	404	452	498	542	584
	2.5	196	273	343	407	466	522	575	626	675
	3.0	216	302	379	450	516	578	638	694	748

All dripperline lengths based on one line operating at a min. pressure of 5m

UNIRAM™ CNL 23010 - I.D. 20.8MM - KD 0.3 - FLOW RATE 2.3 L/H

FLAT TERRAIN	INLET PRESSURE (BAR)	DISTANCE BETWEEN DRIPPERS (METRE)								
		0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
	1.5	106	147	184	219	250	280	309	336	361
	2.0	134	187	235	279	320	358	394	429	463
	2.5	154	216	271	322	369	414	456	496	535
	3.0	170	238	300	356	409	458	505	549	592

All dripperline lengths based on one line operating at a min. pressure of 5m

UNIRAM™ CNL 23010 - I.D. 20.8MM - KD 0.3 - FLOW RATE 3.5 L/H

FLAT TERRAIN	INLET PRESSURE (BAR)	DISTANCE BETWEEN DRIPPERS (METRE)								
		0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
	1.5	80	112	140	167	191	214	235	357	276
	2.0	102	143	179	213	244	273	302	328	353
	2.5	117	164	206	245	281	316	348	379	408
	3.0	129	182	228	272	311	349	385	419	452

All dripperline lengths based on one line operating at a min. pressure of 5m

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