Drip-In™ PC Drip Tubing

Application

- Vineyards
- Orchards
- Row Crops

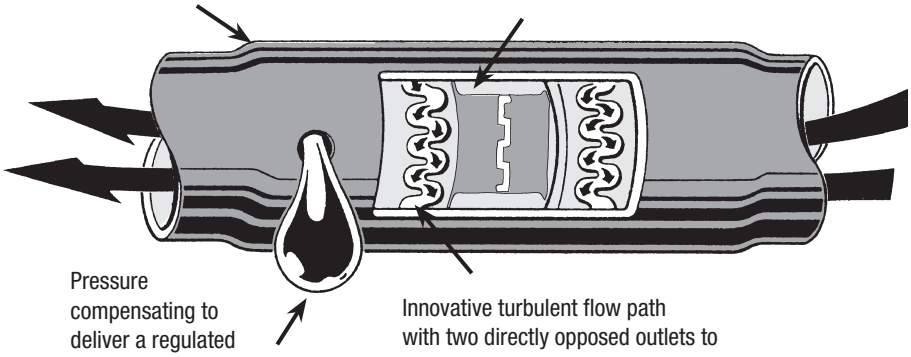
Pressure compensating dripline for irrigation in difficult terrain or where long run lengths are required.

Features

- Featuring an innovative turbulent flow path and chemically inert self-flushing silicon diaphragm.
- Available in 1.6, 2.0, 2.4 and 4.0 L/ h flow rates.
- Wide pressure regulating range from 100 kPa to 400 kPa.
- Turbulent flow path ensures there is no flow spike or prolonged flushing mode.
- Two outlet holes and large exit chamber reduces risk of exit hole clogging.
- Tubing sizes of 16, and 20 mm OD.
- Durable, tough wall thickness of at least 1 mm.
- Emitter cannot be dislodged or move inside the pipe.
- Available in factory spaced intervals or custom made to your spacing requirements.

Standard spacings or can be custom made to grower specifications.

Self-cleaning diaphragm chamber increases blockage resistance and facilitates flushing at the end of each watering cycle. Chemical resistant diaphragm for longer life.

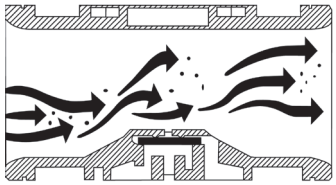


Pressure compensating to deliver a regulated rate of water at varying pressures.

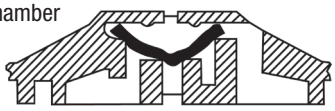
Innovative turbulent flow path with two directly opposed outlets to reduce risk of exit hole clogging.

Self-flushing diaphragm flushes in three stages, being start-up, during irrigation if clogging occurs and on shut down. The flushing occurs where there is low pressure on the diaphragm and it is relaxed allowing particles to be passed out through the emitter.

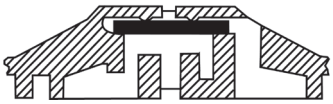
Raised inlet deflects particles



Contents
During the irrigation cycle, the diaphragm is depressed across the compensating chamber



Flushing Cycle



As the dripper begins to clog there is a reduction of flow, and pressure on both sides of the diaphragm begins to equalise.
The diaphragm returns to its relaxed position and particles are flushed out.
The dripper then returns to normal performance

Emitter Flow Equation

$Q = k_p P^x$

Q = Flow in Lph
P = Pressure in metres
x - emitter exponent
k_p = emitter constant

Emitter Barb Pressure Loss Equation

$$H_b = \frac{k_b v^2}{2g}$$

g = gravitation acceleration m/sec^2
v = velocity (m/sec)
H_b = emitter pressure loss (m)

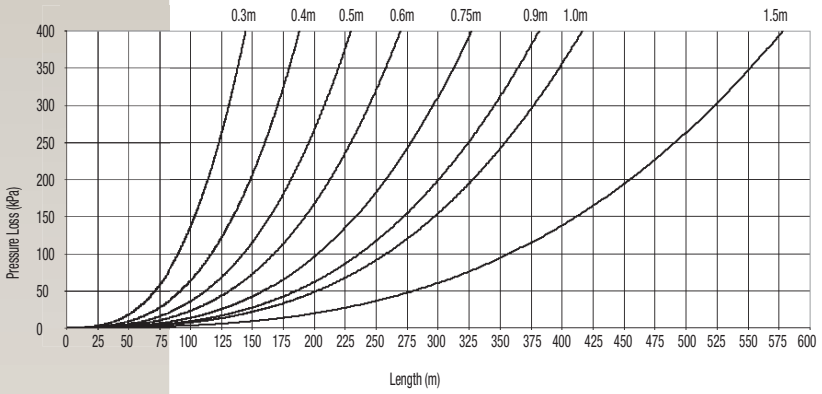
16mm Drip-In PC Emitter				
Nom. Flow (Lph)	1.6	2.0	2.4	4.0
Exponent *, x	0	0	0	0
Constant, k_p	1.56	1.82	2.25	3.67
Barb factor, k_b	2.07	2.07	2.07	2.07

20mm Drip-In PC Emitter				
Nom. Flow (Lph)	1.6	2.0	2.4	4.0
Exponent *, x	0.088	0.05	0	0.0256
Constant, k_p	1.1432	1.6255	2.426	3.7638
Barb factor, k_b	0.75	0.75	0.75	0.75

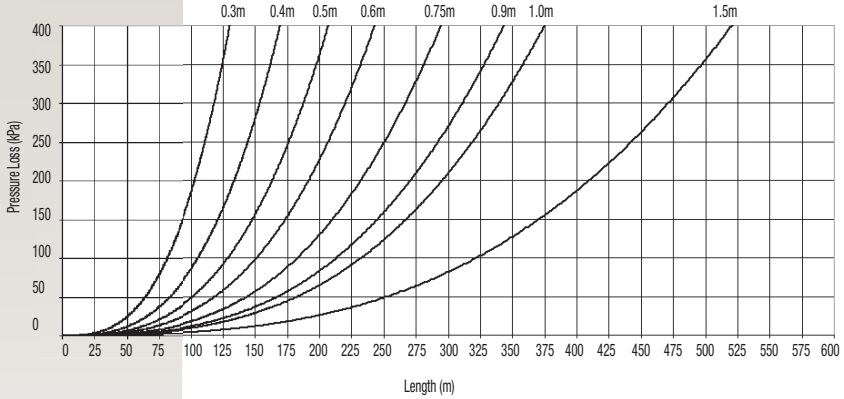
* Exponent determined within 100-400 kPa

Tube Dimensions				
Nom. Diam (mm)	ID (mm)	OD (mm)	Coil Length (m)	Max^m Pressure (kPa)
16	14	16	450	350
20	18	20	300	350

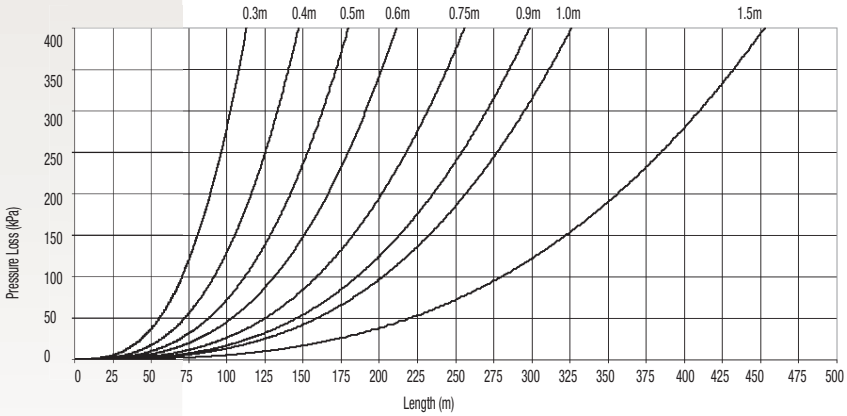
16 mm Drip-In PC 1.6 L/h Run Length (m) vs Pressure Loss (kPa)



16 mm Drip-In PC 2.0 L/h Run Length (m) vs Pressure Loss (kPa)

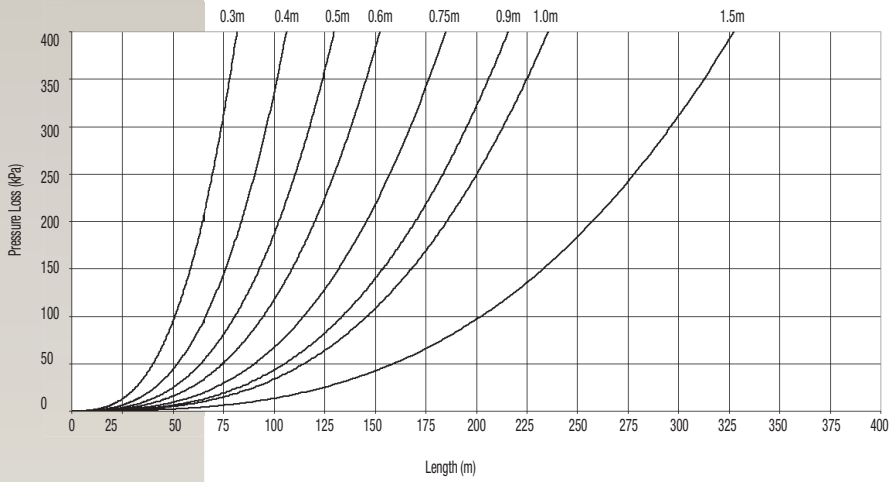


16 mm Drip-In PC 2.4 L/h Run Length (m) vs Pressure Loss (kPa)



16mm Drip-In™ PC Drip Tubing

16 mm Drip-In PC 4.0 L/h Run Length (m) vs Pressure Loss (kPa)



Maximum Recommended Run Length

Inlet Pressure (kPa)	Spacing (m)																													
	0.3				0.4				0.5				0.6				0.75				0.9				1.0				1.5			
	Length (m)																													
150	72	64	56	40	93	84	73	52	113	102	89	64	133	121	104	75	160	145	126	91	187	169	147	106	204	185	161	116	283	255	222	160
200	90	81	71	51	118	106	92	66	144	129	113	81	168	151	132	95	204	184	161	115	237	214	187	135	260	234	203	147	359	324	282	204
250	104	93	81	58	135	122	106	76	165	148	129	93	193	174	151	109	234	211	183	132	273	246	214	154	298	269	234	169	413	373	324	234
300	114	103	90	64	149	134	116	84	182	164	142	103	214	192	167	121	258	233	203	146	301	271	236	171	329	297	258	186	456	411	358	258
350	123	111	96	70	160	145	126	90	196	177	154	111	230	208	180	130	279	252	219	158	326	293	255	184	355	321	279	201	493	445	387	280
400	131	118	103	74	171	154	134	96	209	188	163	118	245	221	192	139	297	267	233	168	346	312	271	196	379	341	296	214	525	474	412	297
Nom. Flow L/h	1.6	2.0	2.4	4.0	1.6	2.0	2.4	4.0	1.6	2.0	2.4	4.0	1.6	2.0	2.4	4.0	1.6	2.0	2.4	4.0	1.6	2.0	2.4	4.0	1.6	2.0	2.4	4.0	1.6	2.0	2.4	4.0

Based on minimum pressure of 100 kPa. All run lengths calculated on flat ground.

Ordering Information

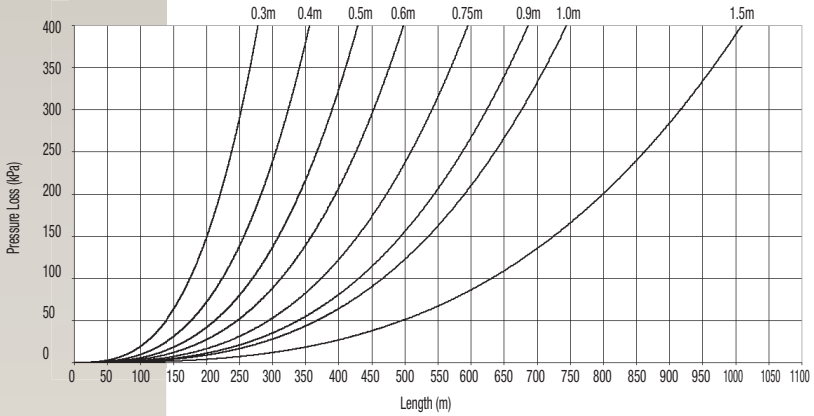
16mm Drip In PC Tubing - Coil Length 450 metres

Flow rate	0.3 m	0.4 m	0.5 m	0.6 m	0.75 m	0.9 m	1.0 m	1.5 m
1.6 L/ h	DDC1616030	DDC1616040	DDC1616050	DDC1616060	DDC1616075	DDC1616090	DDC1616100	DDC1616150
2.0 L/ h	DDC1620030	DDC1620040	DDC1620050	DDC1620060	DDC1620075	DDC1620090	DDC1620100	DDC1620150
2.4 L/ h	1015583	1015584	1015585	1015586	1015587	1015589	1015590	1015592
4.0 L/ h	1015603	1015604	1015605	1015606	1015607	1015609	1015610	1015612

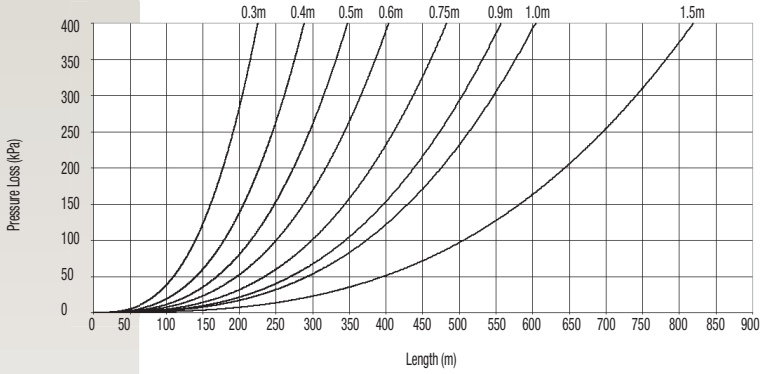
* Customised spacings are available on request.

20mm Drip-In™ PC Drip Tubing

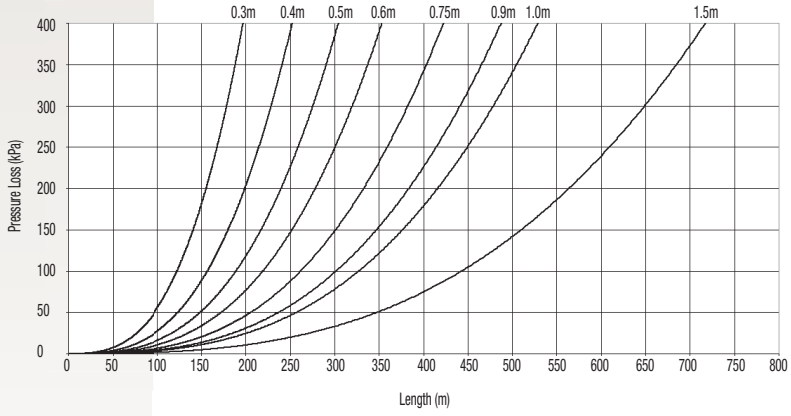
20mm Drip-In PC 1.6 L/h Run Length (m) vs Pressure Loss (kPa)



20 mm Drip-In PC 2.0 L/h Run Length (m) vs Pressure Loss (kPa)

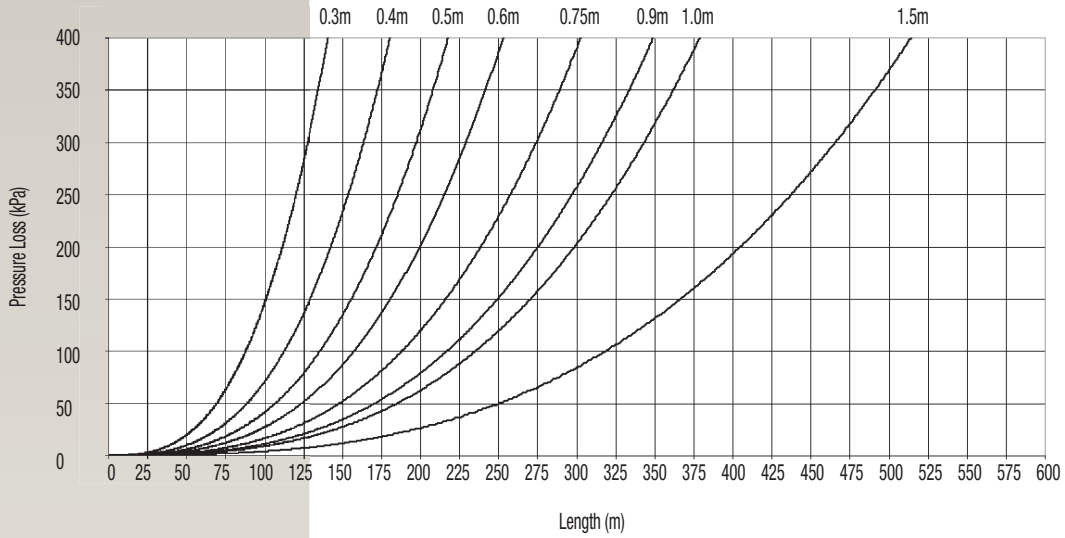


20 mm Drip-In PC 2.4 L/h Run Length (m) vs Pressure Loss (kPa)



20mm Drip-In™ PC Drip Tubing

20 mm Drip-In PC 4.0 L/h Run Length (m) vs Pressure Loss (kPa)



Maximum Recommended Run Length

Inlet Pressure (kPa)	Spacing (m)																													
	0.3				0.4				0.5				0.6				0.75				0.9				1.0				1.5			
	Length (m)																													
150	139	111	97	69	178	142	124	89	214	171	149	107	248	198	173	124	296	236	207	148	341	272	238	171	369	295	259	186	499	399	349	252
200	176	141	123	88	224	180	158	113	270	217	189	136	313	251	220	158	375	300	262	189	432	346	302	217	468	375	328	236	631	507	444	321
250	201	161	141	101	257	206	180	130	310	249	218	156	360	289	252	181	429	345	302	216	495	397	348	250	537	432	378	271	727	584	511	368
300	222	178	156	111	283	228	199	143	341	275	240	172	396	319	279	200	473	381	333	239	545	439	384	276	592	477	417	300	801	645	565	406
350	238	192	168	120	305	246	215	154	368	297	259	186	426	344	301	216	510	411	360	258	587	474	415	298	638	515	450	323	864	697	610	439
400	253	204	179	128	324	262	229	164	391	316	276	198	453	366	321	229	542	438	383	275	624	505	442	317	678	548	480	344	918	744	651	467
Nom. Flow L/h	1.6	2.0	2.4	4.0	1.6	2.0	2.4	4.0	1.6	2.0	2.4	4.0	1.6	2.0	2.4	4.0	1.6	2.0	2.4	4.0	1.6	2.0	2.4	4.0	1.6	2.0	2.4	4.0	1.6	2.0	2.4	4.0

Based on minimum pressure of 100 kPa. All run lengths calculated on flat ground.

Ordering Information

20 mm Drip In PC Tubing - Coil Length 300 metres

Flow rate	0.3 m	0.4 m	0.5 m	0.6 m	0.75 m	0.9 m	1.0 m	1.5 m
1.6 L/ h	DDC2016030	DDC2016040	DDC2016050	DDC2016060	DDC2016075	DDC2016090	DDC2016100	DDC2016150
2.0 L/ h	DDC2020030	DDC2020040	DDC2020050	DDC2020060	DDC2020075	DDC2020090	DDC2020100	DDC2020150
2.4 L/ h	1015635	1015636	1015637	1015638	1015639	1015640	1015641	1015642
4.0 L/ h	1015732	1015733	1015734	1015735	1015736	1015737	1015738	1015739

* Customised spacings are available on request.