TORO

NEPTUNE® PC

MULTI-SEASON ROW CROPS AND PERMANENT DRIP IRRIGATION SYSTEMS

From multi-season row crops to permanent irrigation systems, Neptune PC provides a highly accurate, durable and cost-effective drip irrigation solution. The Pressure Compensating mechanism provides uniformity over long runs and changing topographies. The wide cross-section labyrinth creates maximum turbulence in the water to keep debris in suspension and the self-flushing diaphragm prevents debris build-up. Neptune is also available in Non-Drain, to improve irrigation efficiency for short and frequent irrigation cycles particularly on undulating terrains.

FEATURES & BENEFITS

Heavy Wall Dripline

Extruded in Australia for Australian conditions, Neptune heavy wall dripline is manufactured with UV stabilised LDPE tube for multi-season application. The easy-to-identify black tube with light blue stripe is built with high quality materials for added resistance to chemicals used in agriculture.

Pressure Compensating

Highly accurate and uniform distribution of water and nutrients over long run lengths or changing topographies.

Self-flushing Diaphragm

The wide cross-section labyrinth creates maximum turbulence in the water to keep debris in suspension and the self-flushing diaphragm allows them to pass through the emitter harmlessly, reducing the risk of blockages and maintenance costs.

Non-Drain (Optional)

Particularly suited to pulse irrigation and in systems installed on sloping terrain. Water is retained within the dripline as pressure drops on system shut down and then allows irrigation to commence immediately as pressure increases when the system starts up again. This reduces the time taken to pressurise the line, resulting in lower water usage and energy costs.

Additional Features

- Wide emitter labyrinth
- Silicon diaphragm for best performance and longevity
- Low CV for uniform discharge over wide pressure range
- Durable and chemical resistant polyethylene emitter
- Tested to ISO 9261 Standards

OPERATING SPECIFICATIONS

- Operating Pressure Range:
  - 15.4 and 19.0 mm I.D.: 100 - 350 kPa
  - 20.8 mm I.D.: 100 - 325 kPa
  - 25 mm I.D.: 100 - 300 kPa
- Emitter Flow: 1.2, 1.5 & 2.4 Lph
- Emitter Spacing: 0.3 - 1.0 m
- Tube I.D.: 15.4, 19.0, 20.8 & 25.0 mm
- Wall Thickness: 0.63, 0.9 & 1.0 mm
- Recommended Filtration:
  - 1.2 Lph: 150 mesh / 100 micron
  - 1.5 & 2.4 Lph: 120 mesh / 130 micron
- Non-Drain (ND) Emitter Operating Pressure:
  - ND Emitters open at 50 kPa (5.0 m)
  - ND Emitters close at 17 kPa (2.0 m)

I.D. 15.4 MM - FLOW RATE 1.2 Lph

Operating Pressure (kPa)	Emitter Spacing (m)						
	0.3	0.4	0.5	0.6	0.75	0.9	1.0
150	123	154	182	208	246	279	302
200	156	196	232	266	313	356	383
250	180	225	267	306	360	410	442
300	198	249	295	338	398	454	489
350	214	269	318	365	429	490	528

I.D. 19 MM - FLOW RATE 1.2 Lph

Operating Pressure (kPa)	Emitter Spacing (m)						
	0.3	0.4	0.5	0.6	0.75	0.9	1.0
150	188	233	274	312	365	414	446
200	239	296	349	397	465	527	568
250	275	341	401	457	535	607	653
300	304	377	443	505	592	672	723
350	328	407	479	546	640	727	781

I.D. 15.4 MM - FLOW RATE 1.5 Lph

Operating Pressure (kPa)	Emitter Spacing (m)						
	0.3	0.4	0.5	0.6	0.75	0.9	1.0
150	106	133	158	180	212	241	260
200	135	169	200	229	270	308	331
250	155	194	230	264	311	355	382
300	171	215	255	292	344	392	422
350	185	232	275	315	371	424	456

I.D. 19 MM - FLOW RATE 1.5 Lph

Operating Pressure (kPa)	Emitter Spacing (m)						
	0.3	0.4	0.5	0.6	0.75	0.9	1.0
150	161	199	234	267	312	354	381
200	204	253	298	340	398	451	485
250	235	292	343	391	458	520	559
300	260	322	379	432	506	574	618
350	281	348	410	467	547	621	668

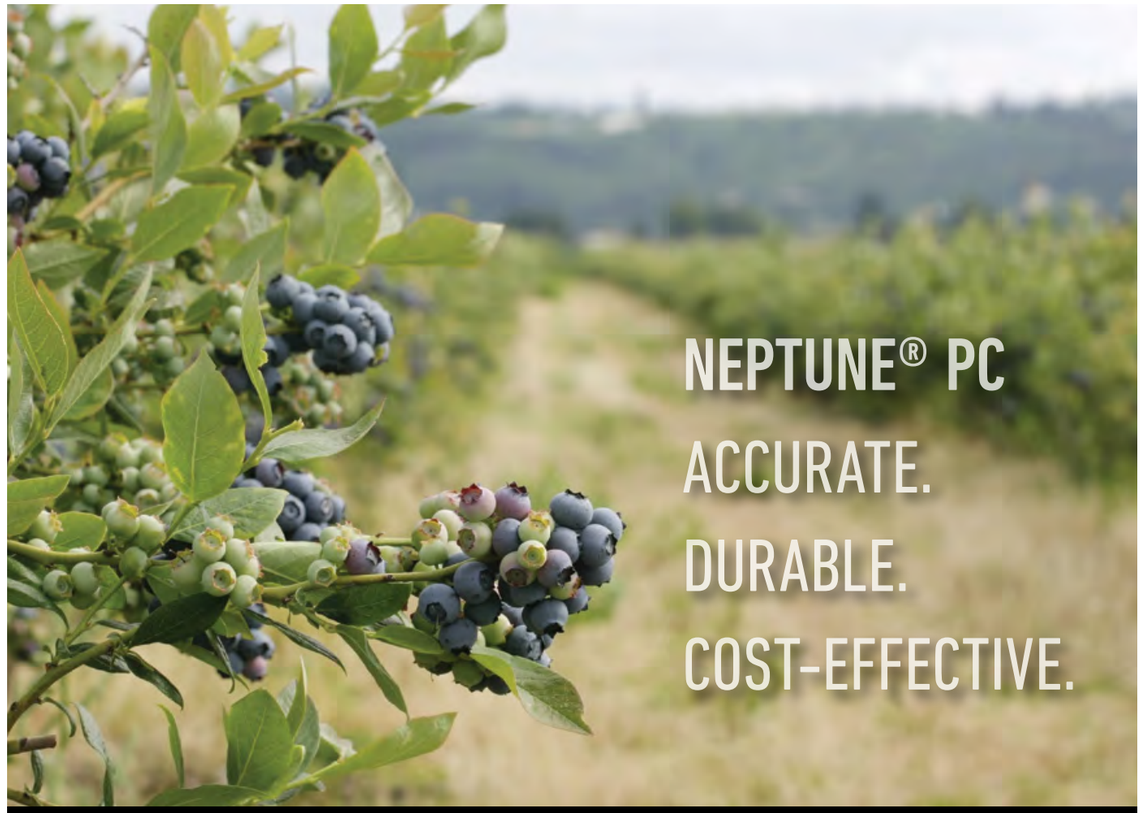
I.D. 15.4 MM - FLOW RATE 2.4 Lph

Operating Pressure (kPa)	Emitter Spacing (m)						
	0.3	0.4	0.5	0.6	0.75	0.9	1.0
150	78	98	116	132	156	177	192
200	99	124	147	168	198	226	244
250	114	143	169	194	229	261	281
300	126	158	187	214	252	288	311
350	136	170	202	232	273	311	336

I.D. 19 MM - FLOW RATE 2.4 Lph

Operating Pressure (kPa)	Emitter Spacing (m)						
	0.3	0.4	0.5	0.6	0.75	0.9	1.0
150	118	147	172	196	230	261	280
200	150	186	219	249	292	332	357
250	173	214	252	288	337	382	411
300	191	237	279	318	373	423	455
350	206	256	301	343	402	457	491

The Performance Data above is based on minimum 100 kPa operating pressure, single lateral and no elevation change.



NEPTUNE®PC AND NON-DRAIN PC – MAXIMUM RUN LENGTHS (M) AT DIFFERENT INPUT PRESSURE (kPa)

I.D. 20.8 MM - FLOW RATE 1.2 Lph

Operating Pressure (kPa)	Emitter Spacing (m)						
	0.3	0.4	0.5	0.6	0.75	0.9	1.0
150	221	273	320	364	425	482	518
200	281	347	408	464	541	614	660
250	324	400	469	534	624	707	761
300	358	442	519	590	690	782	841
350	387	478	561	638	746	846	909

I.D. 25 MM - FLOW RATE 1.2 Lph

Operating Pressure (kPa)	Emitter Spacing (m)						
	0.3	0.4	0.5	0.6	0.75	0.9	1.0
150	311	382	446	506	589	667	716
200	396	486	568	645	751	850	912
250	456	560	655	743	865	979	1051
300	504	619	724	821	956	1083	1163
350	545	669	782	888	1034	1170	1256

I.D. 20.8 MM - FLOW RATE 1.5 Lph

Operating Pressure (kPa)	Emitter Spacing (m)						
	0.3	0.4	0.5	0.6	0.75	0.9	1.0
150	191	236	277	315	368	416	447
200	243	300	352	401	468	531	571
250	280	346	406	462	539	612	657
300	309	382	449	510	596	676	727
350	334	413	485	551	645	731	786

I.D. 25 MM - FLOW RATE 1.5 Lph

Operating Pressure (kPa)	Emitter Spacing (m)						
	0.3	0.4	0.5	0.6	0.75	0.9	1.0
150	269	330	386	437	510	577	619
200	342	420	491	557	649	735	788
250	394	484	566	642	748	846	909
300	436	535	626	710	827	936	1005
350	471	578	676	767	894	1012	1087

I.D. 20.8 MM - FLOW RATE 2.4 Lph

Operating Pressure (kPa)	Emitter Spacing (m)						
	0.3	0.4	0.5	0.6	0.75	0.9	1.0
150	141	174	203	232	271	306	329
200	179	221	259	295	344	390	420
250	206	254	298	340	397	450	484
300	227	281	330	375	439	497	535
350	245	303	356	406	475	538	579

I.D. 25 MM - FLOW RATE 2.4 Lph

Operating Pressure (kPa)	Emitter Spacing (m)						
	0.3	0.4	0.5	0.6	0.75	0.9	1.0
150	198	243	284	322	375	424	455
200	252	309	362	410	478	541	581
250	290	356	417	473	551	624	670
300	320	393	460	523	609	689	740
350	346	426	498	565	658	745	800

The Performance Data above is based on minimum 100 kPa operating pressure, single lateral and no elevation change.

Specifying Information—Neptune PC

NXXXXXXXXXXXX

Product (Tube Type)	*Emitter Type*	*Tube I.D.*	*Wall Thickness*	*Emitter Flow Rate*	*Emitter Spacing*
N	**XX**	**XX**	**XX**	**XX**	**XXX**
Neptune dripline	**PC** = PC **ND** = Non-drain, PC	**15** = 15.4 mm **19** = 19.0 mm **21** = 20.8 mm **25** = 25.0 mm	**06** = 0.63 mm **09** = 0.9 mm **10** = 1.0 mm	**12** = 1.2 Lph **15** = 1.5 Lph **24** = 2.4 Lph	**030** = 0.3 m **040** = 0.4 m **050** = 0.5 m **060** = 0.6 m **075** = 0.75 m **090** = 0.9 m **100** = 1.0 m

Example: Neptune PC 20.8 mm, 0.9 mm wall thickness, 2.4 Lph emitter every 0.3 metres would be specified as: **NPC210924030**

Standard Coil Length
15.4 mm: 400 m
19.0 & 20.8 mm: 350 m
25.0 mm: 300 m

Standard emitter spacing is 0.3 m to 1.0 m. Different configurations are available on request subject to availability and minimum order quantities. Please refer to Customer Service for details.