

TORO

Count on it.

Neptune

Flat Emitter Dripline

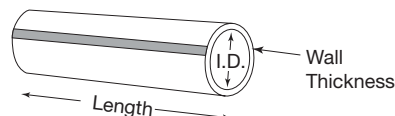
Micro-Irrigation



Neptune is ideal for use in demanding applications where thicker walled products can provide greater durability such as subsurface drip irrigation (SDI). The exceptional durability of the materials selected for this product makes installation and retrieval easier and extends the useful life of the Neptune. The discrete emitter in the flat emitter dripline resists plugging and is a good choice for applications expected to last. Neptune can stand up to rocky and abrasive soils that require a thicker tube, and it is ideal for semi-permanent applications in which the tubing needs to withstand pruning and harvest damage.

FEATURES & BENEFITS

- Highly resistant to plugging – Discrete emitters stand up to challenging water and organic fertilizers
- Ultra-high strength and durability – Strength and flexibility make for easy installation and removal, saving on time and labor, and significantly reducing chances of damage
- Blue Stripe of Toro quality – Blue stripe installed up insures proper outlet placement
- Precision performance – Excellent $C_v \leq 3\%$
- Five different flow rates available – Nominal 0.16, 0.25, 0.30, 0.47, and 0.75 GPH
- Available in 8, 10, 13, 15 and 18 mil wall thicknesses
- Available in popular 5/8" and 7/8" internal diameters
- Compatible with all Toro Pro Loc™ tape fittings
- Operating pressure between 6-30 PSI, depending on ID and wall thickness
- 120 mesh filtration required



Neptune part numbering system

Example: TW 5 10 12 16 - 620

- Neptune product
- Internal diameter in inches, 5/8"
- Wall thickness in mil
- Emitter Spacing in inches
- Emitter flow rate in GPH
- Reel length in 10 ft

Note: Install Neptune with blue stripe up.

Flow Rates

Available in 8, 10, 13, 15 and 18 mil wall thickness

NEPTUNE
FLAT EMITTER DRIPLINE

Emitter Flow Part Number	Outlet		Individual Emitter Flow Rate					Q-100				
	Spacing		gph		lph			gpm / 100 ft		lph / 1 meter		
	in	cm	@ 8 PSI	@ 10 PSI	@ 0.55 bar	@ 0.7 bar	@ 1 bar	@ 8 PSI	@ 10 PSI	@ 0.55 bar	@ 0.7 bar	@ 1 bar
0.16 GPH @ 8 PSI												
TWXxx0816	8"	20	0.16	0.18	0.60	0.67	0.80	0.40	0.44	2.94	3.30	3.94
TWXxx1216	12"	30	0.16	0.18	0.60	0.67	0.80	0.26	0.29	1.96	2.20	2.62
TWXxx1416	14"	35	0.16	0.18	0.60	0.67	0.80	0.23	0.25	1.68	1.88	2.25
TWXxx1616	16"	40	0.16	0.18	0.60	0.67	0.80	0.20	0.22	1.47	1.65	1.97
TWXxx1816	18"	45	0.16	0.18	0.60	0.67	0.80	0.18	0.20	1.31	1.47	1.75
TWXxx2016	20"	50	0.16	0.18	0.60	0.67	0.80	0.16	0.18	1.18	1.32	1.57
TWXxx2416	24"	60	0.16	0.18	0.60	0.67	0.80	0.13	0.15	0.98	1.10	1.31
0.25 GPH @ 8 PSI												
TWXxx0825	8"	20	0.25	0.29	0.95	1.08	1.30	0.64	0.71	4.66	5.31	6.40
TWXxx1225	12"	30	0.25	0.29	0.95	1.08	1.30	0.42	0.47	3.10	3.54	4.27
TWXxx1425	14"	35	0.25	0.29	0.95	1.08	1.30	0.36	0.41	2.66	3.03	3.66
TWXxx1625	16"	40	0.25	0.29	0.95	1.08	1.30	0.32	0.36	2.33	2.65	3.20
TWXxx1825	18"	45	0.25	0.29	0.95	1.08	1.30	0.28	0.32	2.07	2.36	2.84
TWXxx2025	20"	50	0.25	0.29	0.95	1.08	1.30	0.25	0.28	1.86	2.12	2.56
TWXxx2425	24"	60	0.25	0.29	0.95	1.08	1.30	0.21	0.24	1.55	1.77	2.13
0.30 GPH @ 8 PSI												
TWXxx0830	8"	20	0.30	0.34	1.14	1.27	1.56	0.75	0.85	5.59	6.24	7.68
TWXxx1230	12"	30	0.30	0.34	1.14	1.27	1.56	0.50	0.57	3.73	4.16	5.12
TWXxx1430	14"	35	0.30	0.34	1.14	1.27	1.56	0.43	0.49	3.19	3.57	4.39
TWXxx1630	16"	40	0.30	0.34	1.14	1.27	1.56	0.38	0.43	2.79	3.12	3.84
TWXxx1830	18"	45	0.30	0.34	1.14	1.27	1.56	0.33	0.38	2.48	2.77	3.41
TWXxx2030	20"	50	0.30	0.34	1.14	1.27	1.56	0.30	0.34	2.24	2.50	3.07
TWXxx2430	24"	60	0.30	0.34	1.14	1.27	1.56	0.25	0.28	1.86	2.08	2.56
0.47 GPH @ 8 PSI												
TWXxx0847	8"	20	0.47	0.53	1.78	1.99	2.40	1.17	1.31	8.76	9.78	11.81
TWXxx1247	12"	30	0.47	0.53	1.78	1.99	2.40	0.78	0.87	5.84	6.52	7.87
TWXxx1447	14"	35	0.47	0.53	1.78	1.99	2.40	0.67	0.75	5.00	5.59	6.75
TWXxx1647	16"	40	0.47	0.53	1.78	1.99	2.40	0.59	0.66	4.38	4.89	5.91
TWXxx1847	18"	45	0.47	0.53	1.78	1.99	2.40	0.52	0.58	3.89	4.35	5.25
TWXxx2047	20"	50	0.47	0.53	1.78	1.99	2.40	0.47	0.52	3.50	3.91	4.72
TWXxx2447	24"	60	0.47	0.53	1.78	1.99	2.40	0.39	0.44	2.92	3.26	3.94
0.75 GPH @ 8 PSI												
TWXxx0875	8"	20	0.75	0.84	2.83	3.16	3.80	1.87	2.09	13.92	15.56	18.70
TWXxx1275	12"	30	0.75	0.84	2.83	3.16	3.80	1.24	1.39	9.28	10.37	12.47
TWXxx1475	14"	35	0.75	0.84	2.83	3.16	3.80	1.07	1.19	7.95	8.89	10.69
TWXxx1675	16"	40	0.75	0.84	2.83	3.16	3.80	0.93	1.04	6.96	7.78	9.35
TWXxx1875	18"	45	0.75	0.84	2.83	3.16	3.80	0.83	0.93	6.18	6.91	8.31
TWXxx2075	20"	50	0.75	0.84	2.83	3.16	3.80	0.75	0.83	5.57	6.22	7.48
TWXxx2475	24"	60	0.75	0.84	2.83	3.16	3.80	0.62	0.70	4.64	5.19	6.23

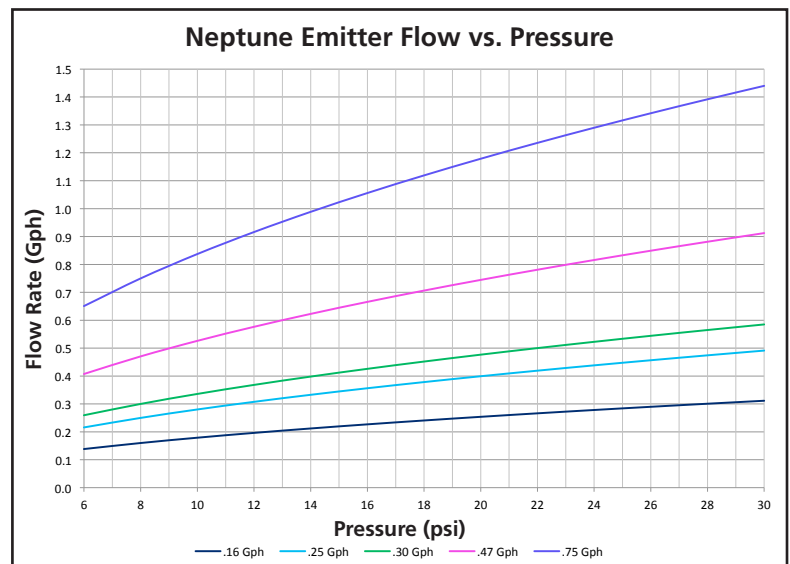
X - denotes 5 for 5/8" diameter, 7 for 7/8" diameter
 xx - denotes mil thickness
 Nominal flow per emitter at 8 PSI

Specifications

Internal Diameter	Wall Thickness (Mil, .000")	Operating Pressure				Reel Length*	
		Psi		bar		Feet	Meters
		Min	Max	Min	Max		
5/8" (0.635 inches) (16 mm)	8	6	15	0.41	1.03	7,200	2,195
	10	6	20	0.41	1.38	6,200	1,890
	13	6	25	0.41	1.72	4,700	1,433
	15	6	30	0.41	2.07	4,200	1,280
	18	6	30	0.41	2.07	3,100	945
7/8" (0.880 inches) (22 mm)	8	6	12	0.41	0.83	5,200	1,585
	10	6	15	0.41	1.03	4,900	1,494
	13	6	20	0.41	1.38	4,000	1,220
	15	6	25	0.41	1.72	2,700	823
		18	6	30	0.41	2,100	640

* For emitter spacing 12 inches/30 centimeters and above

Flow rate nominal GPH at 8 PSI	Coefficient of Variation (Cv)	Barb loss factor (Kd) for 5/8" tubing	Barb loss factor (Kd) for 7/8" tubing	Emitter Exponent	K Value	Filtration
0.16	≤ 3%	.10	.05	0.50	0.0561	120 mesh
0.25	≤ 3%	.10	.05	0.51	0.0864	120 mesh
0.30	≤ 3%	.10	.05	0.51	0.1050	120 mesh
0.47	≤ 3%	.10	.05	0.50	0.1660	120 mesh
0.75	≤ 3%	.10	.05	0.49	0.2687	120 mesh



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