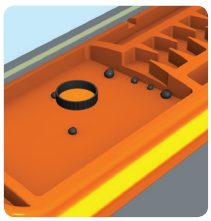
Jain Turbo Slim® - TE

Beyond The Best

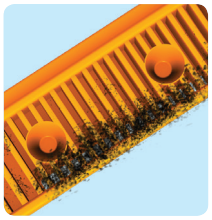
Features & Benefits

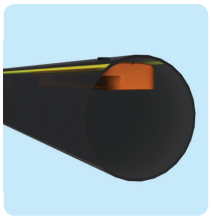
Innovative Cascade Labyrinth
Hydrodynamically designed tooth structure helps to create double flow regime viz. central curving flow and turbulent cyclone in the dripper. This helps in continuous flushing of particles.



Prevention of sand suction
Weir structure to prevent entry of sand particles in flow path

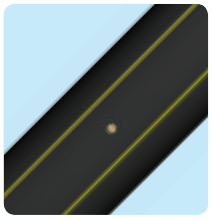
Three Dimensional Inlet Filter
Unique 3-D filtration surface (having length, width and depth) enable clog free operation even under high clog risk conditions.

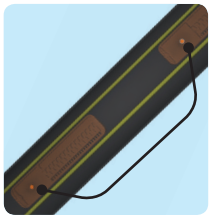




Light Weight and Compact
Light weight and compact dripper welds perfectly to thin wall thickness of the tubing without leaving stress marks.

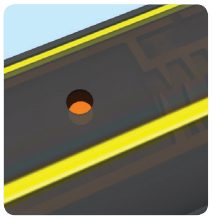
Marked with two parallel yellow stripes 'Twin- Line®,
Symbol of quality. It also helps to ensure upright positioning of the dripper.





Quality Come First
Each batch is tested for stringent quality parameter. Conforming to international standard ISO 9261:2004

Laser drilled outlet hole
Precision laser drilled outlet gives uniform and clear opening.



Freight Saver
Longer coil lengths reduces the volume and saves freight and storage cost.

Jain Turbo Slim® - TE

Additional Features

Manufactured from special grade virgin plastic material

Makes the tubing durable and gives best environmental stress crack resistance (ESCR). Manufactured with UV stabilized material to with stand environmental stress.

Manufactured with most modern, state-of-the-art equipment.

It's computerised continuous online quality control monitors emitter spacing and precision in outlet drilling. Thus ensures reliable quality and consistent performance.

Excellent CV_m, manufacturer's coefficient of variation

Maintains close dimensional tolerances to ensure best field emission uniformity. (CV ≤ 2.5%)

Resistance to chemical and fertilizer

Jain Turbo Slim can stand chemicals and fertilizer used in agriculture

Applications

- Jain Turbo Slim TE is ideal for irrigation of closely spaced row crops like sugarcane, potato, cotton, banana, strawberry, lettuce, cabbage, tomatoes, chillies, pepper, melons, cucumber, floriculture, vegetables and spices.
- Recommended to use in greenhouses and nurseries.
- Suitable for surface as well as sub surface installations.

Specifications

Nominal Discharge

Nominal Discharge, lph		Nominal Discharge, gph	
1.0 kg/cm²	0.7 kg/cm²	15 psi	10 psi
0.8	0.65	0.21	0.17
1.3	1.00	0.32	0.26
1.5	1.25	0.40	0.33
2.1	1.72	0.55	0.46
4.0	3.39	1.06	0.90

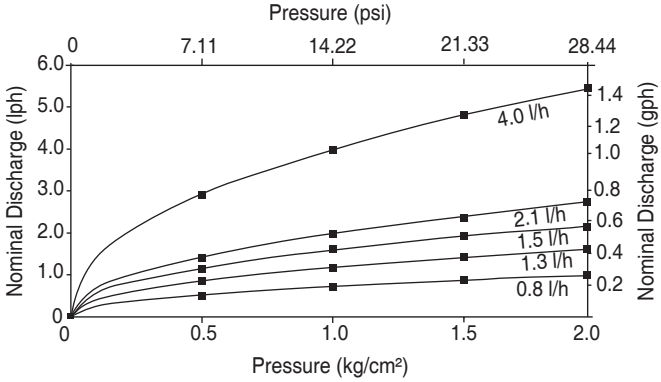
- **Sizes :** 12, 16, 17, 18, 19, 22 and 25 mm nominal diameter as per Metric Standard.

  1/2", 5/8", 7/8", 9/8", 1-3/8" nominal diameter as per US standard.
- **Wall Thickness :** 5, 6, 8, 10, 12, 13, 15, 18, 20 mil (0.15, 0.2, 0.25, 0.30, 0.32, 0.38. 0.45, 0.50 mm) Any other wall thickness can be supplied on demand.
- **Emitter Spacing :** Standard emitter spacing - 15, 20, 30, 40, 50, 60, 75, 90, 100, 120 and 150 cm. Other emitter spacing and group spacing can be supplied on demand.

Operating Specifications

- Nominal operating pressure 0.7 kg/cm² for wall thickness up to 10 mil, 1.0 kg/cm² for wall thickness more than 10 mil.
- Recommended to use specially designed Tape Lock fittings.
- Always keep the dripper in upright position to minimise blockage due to sedimentation and precipitation.
- For subsurface application, install vacuum breaker valves on the submain as well as on the collective drain to avoid soil suction during system shutdown.

Performance Graph- Jain Turbo Slim - TE



Drip Tape

Jain Irrigation Systems Ltd.

Jain Turbo Slim® - TE

Technical Specifications for Emitter - Metric

Nominal Discharge (lph)	Emitter Exponent	Flow Coefficient	Coeff. of mfg. Variation,	Flow Path Dimensions, mm			Inlet Filter Area	Size of Filter Openings	Filtration requirement
	x	k	CVm	Length	Width	Depth	(mm^2)	(mm x mm)	(micron)
0.8	0.47	0.75	2.0	16.5	0.47	0.40	3.00	0.30 x 0.40	100
1.3	0.46	1.20	2.0	16.1	0.62	0.64	3.44	0.27 x 0.51	130
1.5	0.47	1.50	2.0	17.1	0.68	0.75	5.35	0.33 x 0.60	130
2.1	0.48	2.10	2.5	17.4	0.80	0.84	6.28	0.31 x 0.75	130
4.0	0.45	4.00	2.5	18.0	1.04	1.05	5.52	0.30 x 0.60	130

Flow equation $q = kH^x$, q = Nominal Discharge, lph, H = Pressure head, kg/cm^2, x = Emitter exponent

Technical Specifications for Emitter - US

Nominal Discharge (gph)	Emitter Exponent	Flow Coefficient	Coeff. of mfg. Variation,	Flow Path Dimensions, inch			Inlet Filter Area	Size of Filter Openings	Filtration requirement
	x	k	CVm	Length	Width	Depth	($inch^2$)	(inch x inch)	(micron)
0.21	0.47	0.062	2	0.65	0.018	0.016	0.005	0.016x0.012	100
0.32	0.46	0.094	2	0.63	0.024	0.025	0.005	0.020x0.011	130
0.40	0.47	0.117	2	0.67	0.027	0.029	0.008	0.023x0.013	130
0.55	0.48	0.164	2.5	0.68	0.031	0.033	0.010	0.029x0.012	130
1.06	0.45	0.312	2.5	0.70	0.041	0.041	0.008	0.024x0.013	130

Flow equation $q = kH^x$, q = Nominal Discharge, gph, H = Pressure head, psi, x = Emitter exponent

Coil Lengths

Emitter spacing				Nominal Diameter of 16 mm, 17 mm and 5/8”															
		5 mil		6 mil		8 mil		10 mil		12 mil		13 mil		15 mil		18 mil		20 mil	
(cm)	(inch)	(m)	(ft.)	(m)	(ft.)	(m)	(ft.)	(m)	(ft.)	(m)	(ft.)	(m)	(ft.)	(m)	(ft.)	(m)	(ft.)	(m)	(ft.)
15	6	2100	6800	2100	6888	2100	6888	2000	6560	1600	5248	1500	4920	1200	3936	1000	3280	900	2952
20	8	2300	7544	2700	8856	2300	7544	2100	6888	1700	5576	1600	5248	1300	4264	1050	3444	950	3116
25	10	2500	8200	2700	8856	2400	7872	2150	7052	1750	5740	1650	5412	1350	4428	1100	3608	1000	3280
30+	12+	3000	9840	3200	10496	2500	8200	2250	7380	1800	5904	1700	5576	1400	4592	1150	3772	1000	3280
Nominal Diameter of 7/8”																			
15	6	-	-	1300	4264	1100	3608	800	2624	900	2552	-	-	750	2460	650	2132	600	1968
20	8	-	-	1500	4920	1300	4264	1000	3280	1000	3280	-	-	800	2624	700	2296	650	2132
25	10	-	-	1600	5248	1400	4592	1100	3608	1050	3444	-	-	850	2788	750	2460	700	2296
30+	12+	-	-	1800	5904	1500	4920	1200	3936	1100	3608	-	-	900	2952	800	2624	700	2296

Note : *1 mil = 1/1000th part of an inch = 0.0254 mm*

** Coil lengths are for coil size 560 x 280 mm (22” x 11”). Other coil sizes such as 350x160 mm (13.8” x 6.3”) and 350x280 mm (22” x 6.3”) are also available. Please contact for coil lengths of Jain Turbo Excel 12, 18, 19, 22, 25 mm and 1/2”, 9/8”, 1–3/8”.*

Ordering Specifications

TE	XXX	XX	XXX	XX	XXXX	N
	Inside diameter	Nominal Discharge in lph x 10	Dripper Spacing in cm	Wall thickness in mil	Standard Coil Length in meter	N - Non pressure compensating
	11.8-12mm 15.9-16mm 16.1-17mm 18-18mm 19-19mm 20-20mm 22.2-22mm 58-5/8” 98-9/8” 78-7/8” 138-1-3/8”			06 - 6 mil (0.15mm) 08 - 8mil (0.2 mm) 10 - 10mil (0.25mm) 12 -12 mil (0.3mm) 13 - 13 mil (0.32mm) 15 - 15 mil (0.38 mm) 20 - 20 mil (0.5mm) 24 -24 mil (0.6mm)		

Example : *TE15916030062300N - This code refers to JainTurbo Slim TE - Thin Wall of 15.9 mm inside diameter having nominal discharge of 1.6 lph, emitter spaced at 30 cm, wall thickness of 6 mil (0.15mm), standard coil length of 2300 m non pressure compensating driptape.*

Jain Turbo Slim® - TE

Technical Data for Tubing - Metric

Nominal Dia	Wall thickness		Inside dia.	Outside Dia	Maximum operating pressure	Maximum Flushing Pressure
(mm)	(mil)	(mm)	(mm)	(mm)	(kg/cm²)	(kg/cm²)
Jain Turbo Slim® - TE 12 mm Nominal Diameter						
12	6	0.15	11.8	12.1	1.1	1.5
12	8	0.20	11.8	12.2	1.5	2.3
12	10	0.25	11.8	12.3	1.8	2.7
12	12	0.30	11.8	12.4	2.2	3.3
12	15	0.38	11.8	12.6	2.7	4.1
12	18	0.45	11.8	12.7	3.3	5.0
12	20	0.50	11.8	12.8	3.6	5.4
12	24	0.60	11.8	13.0	4.5	6.8
Jain Turbo Slim® - TE 16 mm Nominal Diameter						
16	5	0.13	15.9	16.15	0.6	1.0
16	6	0.15	15.9	16.2	0.8	1.2
16	8	0.20	15.9	16.3	1.1	1.7
16	10	0.25	15.9	16.4	1.4	2.1
16	12	0.30	15.9	16.5	1.6	2.4
16	15	0.38	15.9	16.7	2	3.0
16	18	0.45	15.9	16.8	2.4	3.6
16	20	0.50	15.9	16.9	2.7	4.1
16	24	0.60	15.9	17.1	3.4	5.1
Jain Turbo Slim® - TE 17 mm Nominal Diameter						
17	5	0.13	16.1	16.35	0.6	1.0
17	6	0.15	16.1	16.4	0.8	1.2
17	8	0.20	16.1	16.5	1.1	1.7
17	10	0.25	16.1	16.6	1.4	2.1
17	12	0.30	16.1	16.7	1.6	2.4
17	15	0.38	16.1	16.9	2	3.0
17	18	0.45	16.1	17.0	2.4	3.6
17	20	0.50	16.1	17.1	2.7	4.1
17	24	0.60	16.1	17.3	3.4	5.1
Jain Turbo Slim® - TE 22 mm Nominal Diameter						
22	6	0.15	22.2	22.50	0.6	0.9
22	8	0.20	22.2	22.80	0.8	1.2
22	10	0.25	22.2	22.70	1.0	1.5
22	12	0.30	22.2	22.80	1.2	1.8
22	15	0.38	22.2	22.96	1.5	2.3
22	18	0.45	22.2	23.10	1.8	2.7
22	20	0.50	22.2	23.20	2.0	3.0
22	24	0.60	22.2	23.40	2.4	3.6
Jain Turbo Slim® - TE 25 mm Nominal Diameter						
25	8	0.20	25.0	25.4	0.6	0.8
25	10	0.25	25.0	25.5	0.8	1.0
25	12	0.30	25.0	25.6	1.0	1.2
25	15	0.38	25.0	25.8	1.2	1.4
25	18	0.46	25.0	25.9	1.4	1.6
25	20	0.51	25.0	26.0	1.6	1.8
25	24	0.61	25.0	26.2	1.8	2.0

Note: 1 mil = 1/1000th part of an inch = 0.0254 mm.

Technical Specifications for Tubing - US

Nominal dia.	Wall thickness		Inside dia.	Outside dia.	Maximum operating pressure	Maximum Flushing Pressure
(inch)	(mil)	(mm)	(inch)	(inch)	(psi)	(psi)
Jain Turbo Slim® - TE 5/8" Nominal Diameter						
5/8	6	0.15	0.625	0.637	11	17
5/8	8	0.20	0.625	0.641	15	23
5/8	10	0.25	0.625	0.645	20	30
5/8	12	0.30	0.625	0.649	22	34
5/8	15	0.38	0.625	0.655	28	43
5/8	18	0.45	0.625	0.661	34	51
5/8	20	0.50	0.625	0.665	38	58
5/8	24	0.60	0.625	0.675	48	73
Jain Turbo Slim® - TE 7/8" Nominal Diameter						
7/8	6	0.15	0.875	0.887	8	13
7/8	8	0.20	0.875	0.891	11	17
7/8	10	0.25	0.875	0.895	14	21
7/8	12	0.30	0.875	0.899	17	26
7/8	15	0.38	0.875	0.905	21	32
7/8	18	0.45	0.875	0.911	25	38
7/8	20	0.50	0.875	0.915	28	43
7/8	24	0.60	0.875	0.925	34	51
Jain Turbo Slim® - TE 9/8" Nominal Diameter						
9/8	6	0.15	1.125	1.137	7	10
9/8	8	0.20	1.125	1.141	9	12
9/8	10	0.25	1.125	1.145	11	15
9/8	12	0.30	1.125	1.149	13	20
9/8	15	0.38	1.125	1.155	16	24
9/8	18	0.45	1.125	1.160	20	29
9/8	20	0.50	1.125	1.164	22	33
9/8	24	0.60	1.125	1.174	27	41
Jain Turbo Slim® - TE 1-3/8" Nominal Diameter						
1-3/8	6	0.15	1.375	1.887	5	9
1-3/8	8	0.20	1.375	1.391	7	11
1-3/8	10	0.25	1.375	1.395	8	13
1-3/8	12	0.30	1.375	1.399	10	15
1-3/8	15	0.38	1.375	1.405	12	19
1-3/8	18	0.45	1.375	1.410	15	23
1-3/8	20	0.50	1.375	4.414	17	26
1-3/8	24	0.60	1.375	1.422	21	32

Note: 1 mil = 1/1000th part of an inch = 0.0254 mm.

Turbo Slim® TE

12 mm (11.8 mm ID)

Dripper Spacing	Slope, %	15 cm	20 cm	30 cm	40 cm	50 cm	60 cm	75 cm	90 cm	100 cm
		Length (m)								
0.8 lph										
10 % discharge variation	2	49.5	56.4	65.8	72.4	76.5	79.8	82.5	84.6	85.0
	1	57.0	67.2	83.2	96.8	107.5	116.4	126.8	135.0	139.0
	0	64.8	78.8	102.7	126.0	146.5	166.8	192.8	216.9	232.0
	-1	72.6	90.2	121.6	154.4	185.0	216.0	257.3	297.9	325.0
	-2	80.0	101.0	139.3	179.6	218.5	256.8	309.8	123.3	117.0
7.5 % discharge variation	2	42.3	47.6	54.4	58.8	61.5	63.0	64.5	65.7	66.0
	1	50.2	58.8	72.1	82.8	91.0	97.8	105.0	110.7	114.0
	0	58.6	71.4	92.8	114.0	132.5	150.6	174.0	196.2	210.0
	-1	67.0	83.8	113.5	144.8	174.5	204.0	244.5	284.4	310.0
	-2	75.2	95.4	132.7	172.0	210.0	98.4	85.5	81.9	81.0
1.3 lph										
10 % discharge variation	2	38.8	45.2	54.4	61.6	67.0	70.8	75.0	78.3	80.0
	1	42.9	51.0	64.0	75.6	85.5	94.2	104.3	112.5	117.0
	0	46.9	57.2	74.5	91.2	106.5	120.6	139.5	156.6	168.0
	-1	51.1	63.2	84.7	106.4	127.0	147.0	174.8	200.7	218.0
	-2	55.0	69.0	94.3	120.4	145.5	171.0	204.8	238.5	260.0
7.5 % discharge variation	2	33.7	38.8	46.0	51.2	55.0	57.6	60.8	62.1	63.0
	1	38.1	45.2	56.2	66.0	74.0	80.4	88.5	94.5	98.0
	0	42.6	51.8	67.3	82.4	96.0	109.2	126.0	142.2	152.0
	-1	46.9	58.2	78.4	99.2	118.5	138.0	164.3	189.9	207.0
	-2	51.3	64.6	88.9	114.4	139.0	163.2	197.3	229.5	98.0
1.5 lph										
10 % discharge variation	2	34.2	39.8	48.4	55.2	60.5	65.4	69.8	73.8	76.0
	1	37.2	44.0	55.6	65.6	74.0	82.2	92.3	99.9	106.0
	0	40.2	48.4	63.1	76.4	88.5	101.4	117.8	132.3	143.0
	-1	43.2	52.8	70.3	87.2	103.0	120.0	142.5	163.8	180.0
	-2	46.2	57.0	77.5	97.2	116.5	136.8	165.0	191.7	211.0
7.5 % discharge variation	2	29.8	34.4	41.5	46.8	50.5	54.0	57.0	59.4	61.0
	1	33.1	39.0	49.0	57.2	64.5	71.4	78.8	85.5	90.0
	0	36.4	43.8	57.1	69.2	80.0	91.8	106.5	119.7	129.0
	-1	39.6	48.6	64.9	80.8	96.0	111.6	133.5	153.9	169.0
	-2	42.9	53.2	72.7	91.6	110.5	130.2	157.5	183.6	203.0
2.1 lph										
10 % discharge variation	2	29.8	35.0	43.3	50.0	55.0	60.0	64.5	68.4	71.0
	1	32.1	38.0	48.4	57.6	65.5	72.6	81.0	89.1	94.0
	0	34.2	41.2	54.1	66.0	76.5	87.0	99.8	112.5	121.0
	-1	36.4	44.4	59.2	74.0	87.0	100.8	117.8	135.0	147.0
	-2	38.5	47.6	64.6	81.6	97.5	113.4	135.0	155.7	171.0
7.5 % discharge variation	2	26.2	30.6	37.3	42.8	46.5	49.8	53.3	56.7	58.0
	1	28.6	33.8	43.0	50.8	57.5	63.6	70.5	76.5	81.0
	0	30.9	37.4	48.7	59.6	69.0	78.6	90.0	101.7	109.0
	-1	33.3	40.8	54.7	68.4	81.0	93.6	110.3	126.9	138.0
	-2	35.7	44.2	60.4	76.4	92.0	107.4	128.3	148.5	163.0
4.0 lph										
10 % discharge variation	2	19.5	23.2	29.2	34.4	39.0	43.2	48.0	52.2	55.0
	1	20.4	24.4	31.3	37.2	43.0	48.0	54.8	60.3	65.0
	0	21.2	25.6	33.4	40.4	47.0	53.4	61.5	70.2	75.0
	-1	22.1	26.8	35.2	43.6	51.0	58.8	69.0	79.2	86.0
	-2	23.0	28.0	37.3	46.4	55.5	64.2	75.8	87.3	95.0
7.5 % discharge variation	2	17.4	20.4	25.6	30.0	33.5	37.2	41.3	44.1	46.0
	1	18.3	21.8	28.0	33.2	38.0	42.6	48.0	53.1	57.0
	0	19.2	23.0	30.1	36.4	42.5	48.6	55.5	63.0	68.0
	-1	20.1	24.4	32.2	40.0	47.0	54.0	63.8	72.9	79.0
	-2	21.0	25.8	34.6	43.2	51.5	60.0	71.3	81.9	90.0

Note: + slope : Uphill, - slope : Downhill

Maximum Running Length for Turbo Slim® TE

16 mm (15.9 mm ID)

Dripper Spacing	Slope, %	15 cm	20 cm	30 cm	40 cm	50 cm	60 cm	75 cm	90 cm	100 cm
		Length (m)								
0.8 lph										
10 % discharge variation	2	67.8	73.8	80.5	83.6	85.5	87.0	87.8	88.2	89.0
	1	87.2	100.4	119.5	132.4	142.0	148.8	156.8	162.0	164.0
	0	109.2	132.4	172.9	208.4	241.0	271.2	313.5	352.8	378.0
	-1	130.8	163.8	225.7	284.0	340.5	395.4	475.5	554.4	605.0
	-2	150.5	191.6	269.5	127.6	114.0	109.8	106.5	105.3	105.0
7.5 % discharge variation	2	55.6	59.6	63.7	65.6	66.5	67.2	67.5	68.4	68.0
	1	75.3	85.6	100.0	109.2	115.5	120.0	124.5	127.8	129.0
	0	98.9	119.8	156.4	188.8	218.0	245.4	283.5	319.5	342.0
	-1	122.4	154.0	214.0	270.8	326.0	379.8	459.0	180.9	172.0
	-2	143.6	183.8	92.2	82.4	79.5	78.0	77.3	76.5	77.0
1.3 lph										
10 % discharge variation	2	56.5	63.4	72.1	77.2	80.5	82.8	84.8	86.4	87.0
	1	67.5	79.0	96.7	109.6	120.0	128.4	138.0	145.8	149.0
	0	79.2	96.0	125.5	151.2	175.0	196.8	227.3	256.5	274.0
	-1	90.8	112.8	154.0	192.0	229.0	264.6	316.5	367.2	401.0
	-2	101.6	128.4	179.2	227.2	273.5	319.2	117.8	111.6	110.0
7.5 % discharge variation	2	47.7	52.6	58.6	61.6	63.5	64.8	66.0	66.6	67.0
	1	59.1	68.6	82.9	92.8	100.5	106.2	113.3	117.9	120.0
	0	71.7	86.8	113.5	136.8	158.0	178.2	205.5	231.3	248.0
	-1	84.2	105.2	144.4	181.2	217.0	252.0	302.3	351.9	385.0
	-2	96.0	122.0	171.7	218.8	91.5	84.6	81.0	79.2	79.0
1.5 lph										
10 % discharge variation	2	52.2	59.0	68.5	74.0	78.0	80.4	83.3	84.6	86.0
	1	61.0	71.6	88.3	101.2	111.5	120.0	129.8	137.7	142.0
	0	70.2	85.0	111.1	134.0	155.0	174.0	201.8	226.8	243.0
	-1	79.2	98.2	133.6	166.0	197.5	228.0	272.3	315.0	344.0
	-2	87.8	110.6	153.7	194.4	234.0	272.4	137.3	118.8	114.0
7.5 % discharge variation	2	44.4	49.6	56.2	59.6	62.0	63.6	65.3	66.6	67.0
	1	53.5	62.4	76.3	86.4	94.0	100.2	107.3	112.5	116.0
	0	63.4	77.0	100.6	121.2	140.0	157.8	182.3	205.2	220.0
	-1	73.3	91.4	124.9	156.4	186.5	216.0	258.8	301.5	329.0
	-2	82.7	104.8	146.8	186.8	225.5	91.8	84.0	81.0	80.0
2.1 lph										
10 % discharge variation	2	45.4	52.2	61.6	68.0	72.5	76.2	79.5	81.9	83.0
	1	51.6	60.8	76.0	88.0	97.5	106.2	116.3	125.1	129.0
	0	57.7	70.0	91.6	110.4	127.5	143.4	165.8	186.3	200.0
	-1	63.9	79.0	106.9	132.4	157.0	180.6	214.5	247.5	270.0
	-2	69.9	87.6	121.0	152.4	182.5	212.4	255.8	297.9	143.0
7.5 % discharge variation	2	39.1	44.4	51.4	56.0	59.0	61.2	63.0	64.8	65.0
	1	45.4	53.4	66.1	75.6	83.5	90.0	97.5	103.5	107.0
	0	52.2	63.4	82.9	99.6	115.5	129.6	150.0	168.3	181.0
	-1	58.9	73.2	99.4	123.6	147.0	169.8	203.3	234.9	256.0
	-2	65.4	82.4	114.7	145.2	175.0	204.0	99.8	87.3	85.0
4 lph										
10 % discharge variation	2	32.8	38.4	47.8	55.2	59.5	63.6	68.3	72.0	74.0
	1	35.5	42.4	54.7	65.2	72.5	79.2	88.5	97.2	102.0
	0	38.2	46.6	61.9	76.0	86.0	96.6	111.8	126.0	135.0
	-1	40.9	50.6	68.8	86.8	99.5	114.0	135.0	154.8	168.0
	-2	43.6	54.4	75.7	96.8	112.5	129.6	155.3	180.0	196.0
7.5 % discharge variation	2	28.8	33.4	40.9	46.4	50.0	52.8	56.3	58.5	60.0
	1	31.6	37.8	48.4	57.2	63.0	69.0	76.5	82.8	86.0
	0	34.6	42.0	55.9	68.8	78.0	87.6	101.3	113.4	122.0
	-1	37.6	46.4	63.7	80.4	92.5	106.2	126.0	144.9	157.0
	-2	40.5	50.6	70.9	91.2	106.5	123.0	148.5	172.8	188.0

Note: + slope : Uphill, - slope : Downhill

Maximum Running Length for Turbo Slim® TE

17 mm (16.1 mm ID)

Dripper Spacing	Slope, %	15 cm	20 cm	30 cm	40 cm	50 cm	60 cm	75 cm	90 cm	100 cm
		Length (m)								
0.8 lph										
10% discharge variation	2	68.4	74.4	80.8	84.0	86.0	87.0	87.8	89.1	89.0
	1	88.7	101.8	121.0	134.0	143.0	150.0	157.5	162.9	165.0
	0	111.6	135.2	176.8	213.2	246.5	277.2	320.3	360.9	386.0
	-1	134.1	168.0	231.7	292.0	350.0	406.2	489.0	569.7	622.0
	-2	154.5	196.8	277.3	124.0	113.0	109.2	106.5	105.3	105.0
7.5% discharge variation	2	56.1	60.0	64.0	65.6	66.5	67.2	67.5	68.4	68.0
	1	76.4	86.8	101.2	110.0	116.5	120.6	125.3	127.8	130.0
	0	101.0	122.4	160.0	192.8	223.0	250.8	290.3	326.7	349.0
	-1	125.6	158.0	219.7	278.0	335.0	390.6	471.8	177.3	170.0
	-2	147.5	189.0	90.4	82.0	79.5	78.0	77.3	76.5	77.0
1.3 lph										
10% discharge variation	2	57.3	64.2	73.0	78.0	81.0	83.4	85.5	86.4	87.0
	1	68.7	80.2	98.2	111.2	121.5	130.2	139.5	146.7	151.0
	0	81.0	98.2	128.2	154.4	178.5	201.0	232.5	261.9	280.0
	-1	93.0	115.6	157.9	197.2	235.0	271.8	325.5	378.0	412.0
	-2	104.3	131.8	184.0	233.6	281.5	137.4	116.3	111.6	109.0
7.5% discharge variation	2	48.3	53.2	58.9	62.0	64.0	65.4	66.0	66.6	67.0
	1	60.1	69.6	83.8	94.0	101.5	107.4	114.0	118.8	121.0
	0	73.2	88.8	115.9	140.0	161.5	181.8	210.0	236.7	253.0
	-1	86.3	107.8	148.3	186.0	223.0	258.6	311.3	361.8	396.0
	-2	98.6	125.4	176.5	224.8	89.5	84.0	80.3	79.2	78.0
1.5 lph										
10 % discharge variation	2	50.5	57.6	67.0	75.2	78.5	81.6	84.8	87.3	88.0
	1	58.2	68.8	85.0	102.0	111.5	120.6	131.3	144.9	145.0
	0	66.3	80.6	105.1	134.4	153.0	173.4	201.8	245.7	249.0
	-1	74.3	92.4	124.6	166.4	194.5	225.6	272.3	346.5	353.0
	-2	81.8	103.4	142.6	194.4	229.5	268.8	328.5	117.9	117.0
7.5 % discharge variation	2	43.2	48.6	55.3	60.8	63.0	64.8	66.8	67.5	68.0
	1	51.3	60.2	73.6	87.2	94.5	100.8	108.8	117.9	118.0
	0	60.0	73.0	94.9	121.6	138.5	156.6	183.0	222.3	225.0
	-1	68.5	85.8	116.5	156.4	183.5	213.6	258.8	332.1	338.0
	-2	76.8	97.6	135.7	186.4	221.0	97.8	87.0	81.9	82.0
2.1 lph										
10 % discharge variation	2	46.2	53.0	63.4	68.0	74.5	78.6	81.8	83.7	85.0
	1	52.3	61.8	78.1	87.2	101.0	111.0	120.0	127.8	133.0
	0	58.6	71.0	94.3	108.4	133.0	153.0	172.5	191.7	208.0
	-1	64.9	80.2	109.9	129.2	164.0	193.8	224.3	255.6	282.0
	-2	70.9	88.8	124.6	148.0	191.5	228.6	267.8	306.9	138.0
7.5 % discharge variation	2	39.7	45.0	52.6	56.0	60.5	63.0	64.5	65.7	67.0
	1	46.3	54.4	67.9	75.2	86.5	94.2	100.5	106.2	110.0
	0	53.1	64.2	85.3	98.0	120.0	138.0	156.0	173.7	188.0
	-1	59.8	74.2	102.4	120.8	154.0	182.4	212.3	242.1	269.0
	-2	66.4	83.6	118.3	141.2	183.5	220.2	98.3	89.1	86.0
4 lph										
10 % discharge variation	2	32.8	38.4	47.2	53.6	59.0	63.0	68.3	72.0	74.0
	1	35.5	42.4	53.8	63.2	71.0	78.6	87.8	95.4	100.0
	0	38.4	46.4	60.7	73.2	84.5	95.4	110.3	123.3	132.0
	-1	41.1	50.4	67.6	82.8	97.5	111.6	132.0	151.2	164.0
	-2	43.8	54.4	73.9	92.4	110.0	127.2	152.3	176.4	192.0
7.5 % discharge variation	2	28.8	33.4	40.6	45.6	49.5	52.2	55.5	58.5	60.0
	1	31.6	37.6	47.5	55.2	62.0	67.8	75.8	81.9	86.0
	0	34.6	42.0	55.0	66.0	76.5	85.8	99.8	111.6	120.0
	-1	37.6	46.4	62.2	76.8	90.5	103.8	123.0	142.2	154.0
	-2	40.5	50.6	69.4	86.8	104.0	120.6	144.8	168.3	184.0

Note: + slope : Uphill, - slope : Downhill

Maximum Running length for Turbo Slim® TE

22 mm (22.2 mm ID)

Dripper Spacing	Slope, %	15 cm	20 cm	30 cm	40 cm	50 cm	60 cm	75 cm	90 cm	100 cm
		Length (m)								
0.8 lph										
10 % discharge variation	2	82.4	85.2	87.7	88.8	89.0	89.4	90.0	90.0	90.0
	1	126.6	139.6	154.9	162.8	168.0	171.0	174.0	175.5	176.0
	0	191.7	232.4	303.7	366.4	423.5	476.4	551.3	620.1	664.0
	-1	256.1	325.2	456.1	580.4	249.5	228.6	218.3	213.3	211.0
	-2	307.9	115.8	106.9	104.4	103.5	103.2	102.8	102.6	103.0
7.5 % discharge variation	2	64.6	66.2	67.6	68.0	68.5	68.4	68.3	68.4	69.0
	1	105.2	114.0	123.7	128.4	131.0	132.6	134.3	135.0	136.0
	0	173.6	210.4	274.9	331.2	383.0	431.4	498.8	561.6	601.0
	-1	243.3	310.8	439.3	174.8	164.0	159.0	156.0	153.9	154.0
	-2	85.1	80.0	77.2	76.4	76.0	75.6	75.8	75.6	76.0
1.3 lph										
10 % discharge variation	2	77.1	81.6	85.6	87.2	88.0	88.8	89.3	90.0	90.0
	1	109.2	123.6	141.1	152.8	158.5	163.2	168.0	171.0	173.0
	0	150.0	183.8	238.3	291.6	327.5	369.0	426.0	479.7	514.0
	-1	190.2	243.2	335.2	433.2	503.0	586.2	248.3	228.6	223.0
	-2	224.6	291.6	114.7	107.6	106.0	104.4	103.5	103.5	103.0
7.5 % discharge variation	2	61.6	64.2	66.4	67.2	68.0	67.8	68.3	68.4	69.0
	1	92.4	103.0	115.0	122.4	126.0	128.4	131.3	133.2	134.0
	0	135.8	166.2	215.5	264.0	296.5	333.6	385.5	433.8	465.0
	-1	179.4	230.8	320.5	416.8	201.5	174.6	163.5	159.3	158.0
	-2	216.3	87.2	79.6	77.6	77.0	76.2	76.5	76.5	76.0
1.5 lph										
10 % discharge variation	2	72.9	78.4	83.5	85.6	87.0	88.2	88.5	89.1	89.0
	1	98.3	113.0	130.6	142.4	151.0	156.6	162.8	167.4	169.0
	0	128.4	158.2	203.2	243.6	282.0	315.6	365.3	410.4	440.0
	-1	158.3	202.6	275.2	345.2	415.0	480.0	578.3	261.0	241.0
	-2	184.5	240.2	133.3	113.6	108.5	106.2	105.0	104.4	104.0
7.5 % discharge variation	2	58.9	62.4	65.2	66.4	67.5	67.8	68.3	68.4	68.0
	1	84.0	95.2	108.1	116.0	121.5	124.8	128.3	130.5	132.0
	0	116.3	143.0	184.0	220.8	255.0	285.6	330.0	371.7	398.0
	-1	148.5	191.4	262.0	330.4	398.5	462.6	176.3	165.6	163.0
	-2	176.9	231.8	83.2	79.2	78.0	77.4	76.5	76.5	76.0
2.1 lph										
10 % discharge variation	2	65.4	71.4	78.7	82.8	85.0	86.4	87.8	88.2	89.0
	1	82.5	95.0	113.8	129.2	138.5	145.8	153.8	159.3	162.0
	0	101.7	122.6	160.3	199.2	229.0	258.0	297.8	335.7	359.0
	-1	120.5	149.6	205.9	268.4	319.5	370.8	445.5	518.4	566.0
	-2	137.7	173.8	244.3	142.0	117.0	111.6	107.3	106.2	105.0
7.5 % discharge variation	2	54.0	58.0	62.8	65.2	66.0	66.6	67.5	67.5	68.0
	1	71.5	81.4	96.1	106.8	113.5	118.2	123.0	126.0	128.0
	0	92.0	110.8	145.0	180.0	207.0	233.4	269.3	303.3	325.0
	-1	112.5	140.4	194.5	255.2	305.0	355.2	429.0	193.5	179.0
	-2	131.1	166.4	235.6	84.0	80.5	78.6	78.0	77.4	77.0
4 lph										
10 % discharge variation	2	51.6	58.4	67.9	73.6	77.5	80.4	83.3	84.6	86.0
	1	60.1	70.6	87.4	100.0	110.0	118.8	129.0	137.7	141.0
	0	69.0	83.6	109.6	131.6	152.0	171.0	198.0	225.0	238.0
	-1	77.9	96.4	131.5	162.8	193.5	223.2	266.3	313.2	336.0
	-2	86.3	108.4	151.3	190.0	228.5	266.4	321.0	118.8	115.0
7.5 % discharge variation	2	43.9	49.0	55.9	59.6	62.0	63.6	65.3	66.6	67.0
	1	52.9	61.6	75.4	85.2	93.0	99.6	106.5	112.5	115.0
	0	62.5	75.6	99.4	119.2	137.5	154.8	179.3	203.4	216.0
	-1	72.0	89.6	123.1	152.8	182.5	211.2	253.5	298.8	321.0
	-2	81.2	102.6	144.4	182.4	220.0	94.2	84.8	81.0	80.0

Note: + slope : Uphill, - slope : Downhill