

Chapin Drip Tape

**More
Crop
per
Drop**

 **JAIN**
www.JAINSUSA.com

Chapin Drip Tape

More Crop Per Drop™

Growers are increasingly challenged to deliver high quality, uniform crops, while obtaining the greatest return on investments in water, labor, management and materials. Chapin tape has helped lead the way to achieve these goals.

Chapin Tape leads the industry in providing the largest flow path, best Cv's and greatest strength in any wall thickness of tape. As the pioneer in drip irrigation, with 50 years experience making the highest quality drip irrigation tape, Chapin has the widest selection of flow rates, wall thicknesses and inlet filtration options available today. The extraordinary reliability and performance of Chapin Tape is attested to by long term Chapin Tape users world-wide.

So when every drop counts, you can count on Chapin Drip Tape.



Product Features

- Largest selection of flow rates on the market from 0.10 gpm/100 feet to 1.8 gpm/100 feet — Allowing the grower to utilize the precise amount of water for their application.
- Largest selection of wall thickness on the market from 15 mil to 25 mil — Allowing the grower to select the durability level they need for their toughest growing environment.
- Longest length of run 7/8 Twinwall will cover 1/4 mile runs — Saving installation time and money by reducing the number of submains to properly deliver water.
- Best engineered flow path design. Larger internal dimensions provide extraordinary resistance to clogging.
- Unmatched uniformity — Chapin Tape consistently supplies the lowest manufacturer's variations (Cv) in the industry.
- Right choice for your water conditions — BTF model features multiple inlet filters. Deluxe models feature continuous inlet filtration for superior resistance to clogging.
- Engineered extruded profile — Extra thickness, where it counts. The unique film profile with extra strength and MIL or wall thickness along with the rounded tape edges increase resistance to abrasion and insect damage.
- Unmatched variety of fittings and accessories — Jain offers the complete tape irrigation system.
- Targeted drip irrigation provides the most environmentally responsible and productive means for precise irrigation.



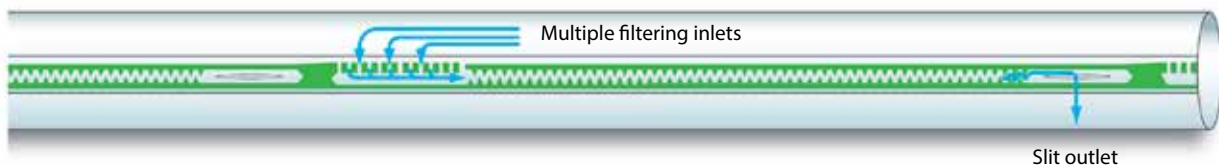
Turbulent Flow – BTF

Features and Benefits

- Due to extruded profile, it is easier to retrieve from the field once the season is completed

Specifications

- Multiple inlet orifices ensure a continuous water flow to each dripper.
- Turbulent flow path design provides larger internal dimensions offering higher resistance to clogging.
- Largest selection of flow rates
- Available in 5/8" and 7/8" diameters
- Available wall thickness 4, 5, 6, 8, 10, 12, 13, and 15mil.
- Engineered extruded high quality polyethylene film ensures round sides providing higher resistance to insect bites and field abrasion.
- Slit design outlet will help prevent root intrusion and soil ingestion.
- Longer flow path ensures true drip flow — no squirts.
- A low emitter exponent will ensure less flow and pressure variation on steep slopes to help increase emission uniformity.
- Lower winding tension to ensure less retraction in the field and avoid kinking and snaking during installation.
- Stringent quality checks at every stage of production will help ensure a high quality product.
- Reinforced packaging to ensure smooth handling in the field and during transportation.



BTF Specifications & Ordering Guide

Chapin 5/8" BTF Specifications

Mil	Coils Per Pallet	Coil Length (feet)	Coil Weight (lbs)	Recommended Operating Pressure (psi)	Maximum Operating Pressure (psi)	Maximum Flushing Pressure (psi)
4	16	13,000	67	6	12	12
5	16	12,000	70	10	13	13
6	16	10,000	68	10	14	14
8	16	7,500	68	10	18	18
10	16	6,000	65	10	23	23
12	16	5,000	63	10	25	25
15	16	4,000	63	10	35	35

Filtration Requirements: 0.30 gpm/100 feet (223 lph/100m) or less: 200 mesh
0.40 gpm/100 feet (298 lph/100m) or more: 150 mesh

Chapin 7/8" BTF Specifications

Mil	Coils Per Pallet	Coil Length (feet)	Coil Weight (lbs)	Recommended Operating Pressure (psi)	Maximum Operating Pressure (psi)	Maximum Flushing Pressure (psi)
6	16	7,500	63	10	12	12
8	16	5,500	60	10	16	16
10	16	4,500	63	10	23	23
13	16	3,500	60	10	28	28
15	16	3,000	57	10	36	36

Filtration Requirements: 0.30 gpm/100 feet (223 lph/100m) or less: 200 mesh
0.40 gpm/100 feet (298 lph/100m) or more: 150 mesh

Chapin BTF Tape Options Guide

Product Model	Size (inches)	Thickness (mil)	Spacing (inches)	Flow (gpm @ 10 psi)		
					5/8"	7/8"
BTF	xx	xx	xx	xx	xxx	xxx
BTF	5/8 7/8	04		0.25		
		05	04	0.30	040	
		06	06	0.40	050	030
		08	08	0.65	060	035
		10	12	0.85	075	045
		12	16	1.00	100	055
		13	24	1.33	120	075
		15		1.50	130	
				1.80		



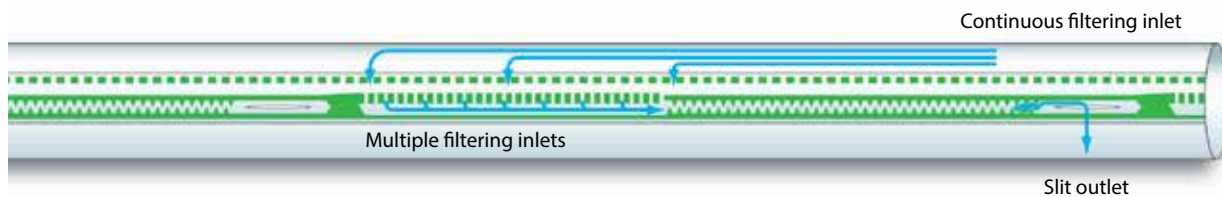
Turbulent Flow – Deluxe

Features and Benefits

- Due to extruded profile, it is easier to retrieve from the field once the season is completed

Specifications

- Exclusive continuous filtration channel keeps the debris away from the flow path and allows it to purge by flushing, ensuring high performance and extends the life of the tape.
- Turbulent flow path design provides larger internal dimensions offering higher resistance to clogging.
- Exclusive continuous inlet filter (10,000 filters per 100 feet) channel offers extremely high resistance to clogging.
- Multiple inlet orifices ensure continuous water flow to each dripper.
- Slit design outlet will help prevent root intrusion and soil ingestion.
- Largest selection of Flow rates
- Available in 5/8" and 7/8" diameters
- Available wall thicknesses 6, 8, 10, 12, 13, 15 mil.
- Engineered extruded high quality polyethylene film ensures round sides providing higher resistance to insect bites and field abrasion.
- Longer flow path ensures true drip flow — no squirts.
- A low emitter exponent will reduce the variation in flow as the pressure increases on steep slopes.
- Stringent quality checks at every stage of production and for each coil ensure a high quality product.
- Reinforced packaging to ensure smooth handling in the field and during transportation.



Deluxe Specifications & Ordering Guide

Chapin 5/8" Deluxe Specifications

Mil	Coils Per Pallet	Coil Length (feet)	Coil Weight (lbs)	Recommended Operating Pressure (psi)	Maximum Operating Pressure (psi)	Maximum Flushing Pressure (psi)
6	12	10,000	77	10	14	14
8	12	7,500	73	10	18	18
10	12	6,000	69	10	23	23
12	12	5,000	68	10	25	25
15	12	4,000	68	10	35	35

Filtration Requirements: 0.30 gpm/100 feet (223 lph/100m) or less: 200 mesh
0.40 gpm/100 feet (298 lph/100m) or more: 120 mesh

Chapin 7/8" Deluxe Specifications

Mil	Coils Per Pallet	Coil Length (feet)	Coil Weight (lbs)	Recommended Operating Pressure (psi)	Maximum Operating Pressure (psi)	Maximum Flushing Pressure (psi)
6	12	7,500	56	10	12	12
8	12	5,500	54	10	16	16
10	12	4,500	54	10	23	23
13	12	3,500	53	10	28	28
15	12	3,000	53	10	36	36

Filtration Requirements: 0.30 gpm/100 feet (223 lph/100m) or less: 200 mesh
0.40 gpm/100 feet (298 lph/100m) or more: 120 mesh

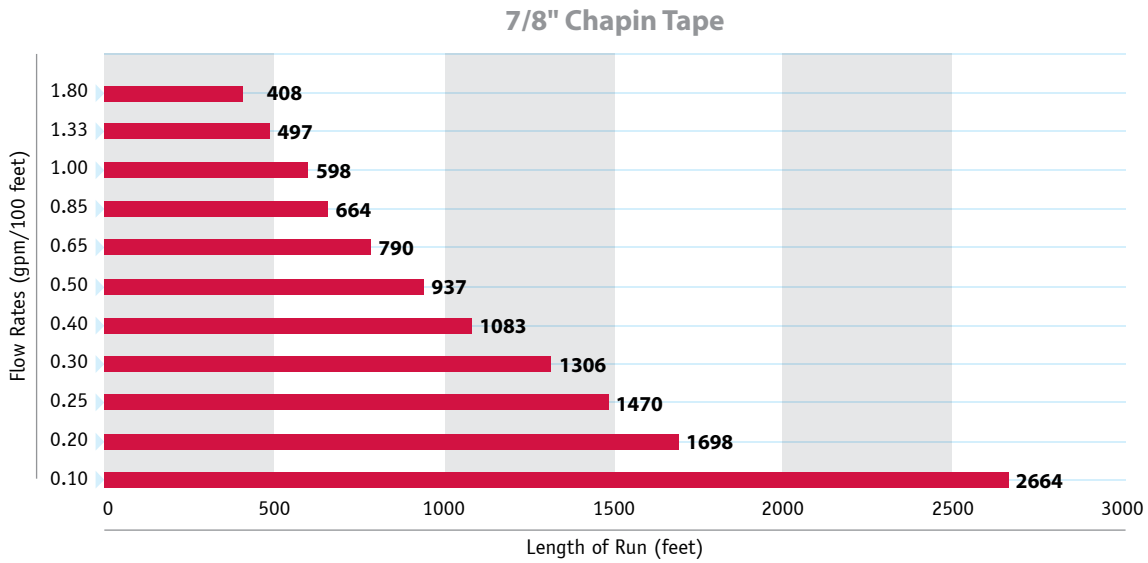
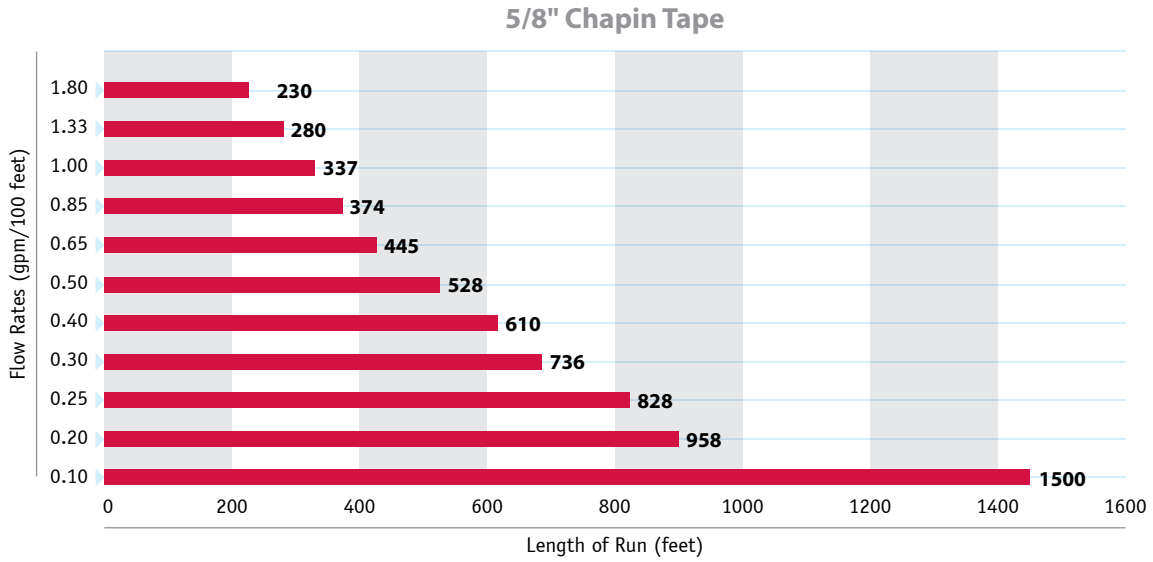
Chapin Deluxe Tape Options Guide

Product Model	Size (inches)	Thickness (mil)	Spacing (inches)	Flow (gpm @ 10 psi)	Length (100s feet)	
					5/8"	7/8"
DLX	xx	xx	xx	xx	xxx	xxx
DLX	5/8	10	09	0.15	060	045
				0.20		
				0.25		
				0.30		
				0.40		
				0.50		
				0.65		
				0.85		
				1.00		
				1.33		
				1.50		
				1.80		
DLX	7/8	12	12	0.15	050	035
				0.20		
				0.25		
				0.30		
				0.40		
				0.50		
				0.65		
				0.85		
				1.00		
				1.33		
				1.50		
				1.80		



Maximum Length of Run

for 90% Uniformity – 0% Slope



For more Run Length Options, please use our Run Length Calculator at www.jainsusa.com



Spacing and Flow Rates

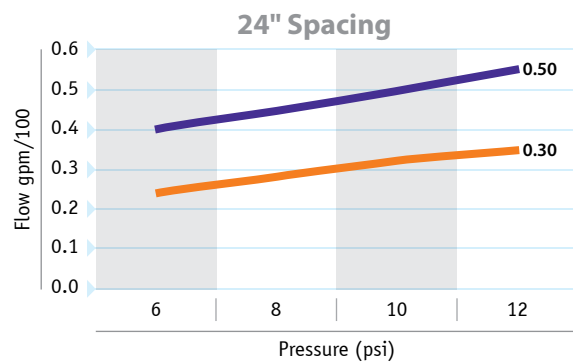
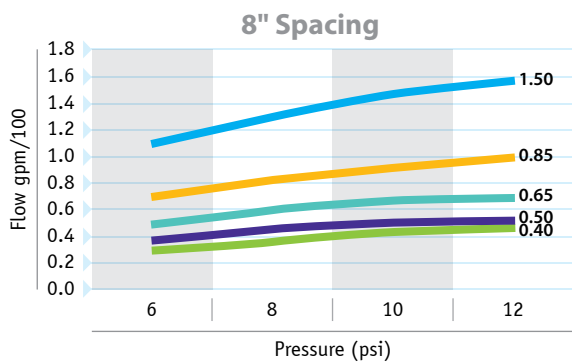
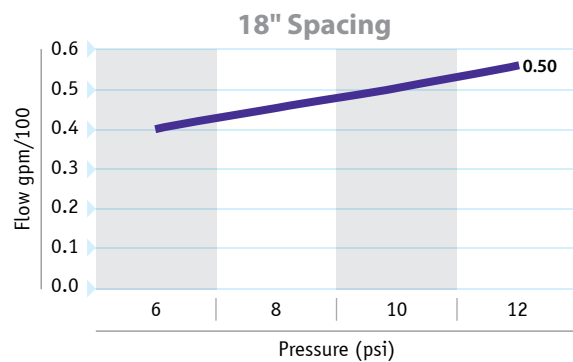
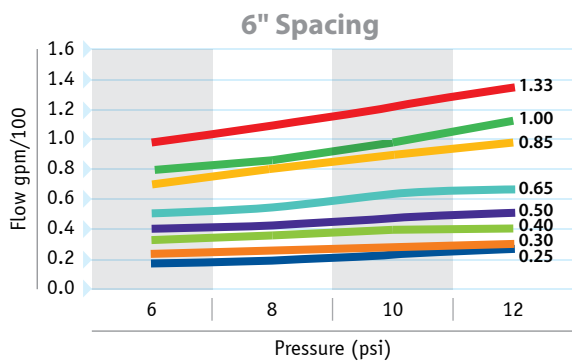
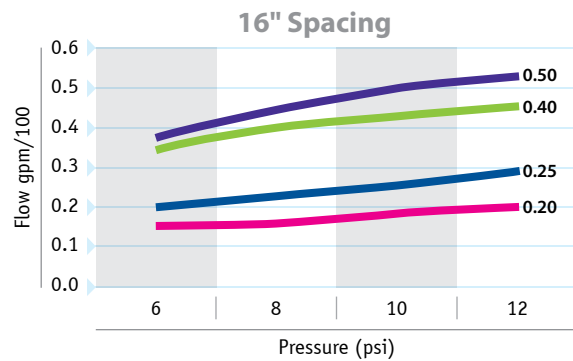
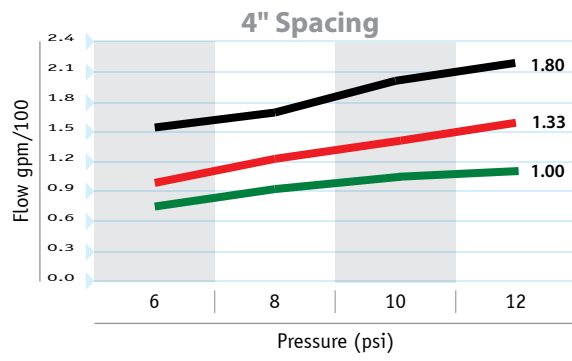
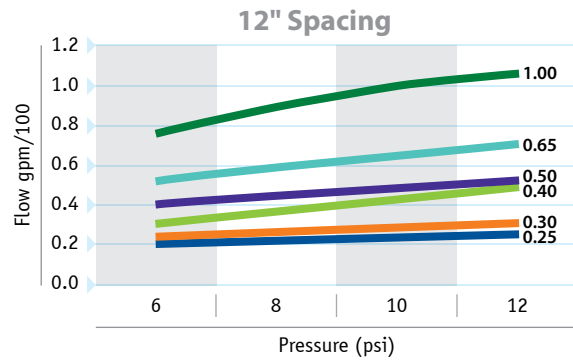
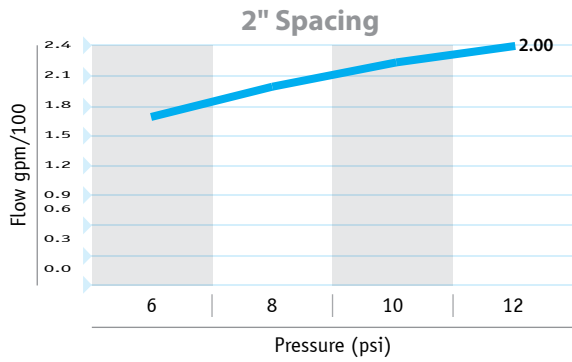
Spacing and Flow Rates

Spacing		Outlets/ 100 ft	Flow Rates at 10 psi				Flow Rates at 8 psi				CV	K	X
inch	cms		gpm/100ft	lph/100m	gph/outlet	lph/outlet	gpm/100ft	lph/100m	gph/outlet	lph/outlet			
2	5	600	2.00	1,488	0.20	0.76	1.60	1,190	0.16	0.60	1.79	0.073	0.42
4	10	300	1.00	744	0.20	0.76	0.80	595	0.16	0.60	2.40	0.070	0.53
4	10	300	1.33	989	0.27	1.01	1.06	792	0.21	0.80	1.30	0.083	0.47
4	10	300	1.80	1,339	0.36	1.36	1.44	1,071	0.29	1.09	2.50	0.001	0.54
6	15	200	0.25	186	0.08	0.28	0.20	149	0.06	0.23	4.60	0.023	0.60
6	15	200	0.30	223	0.09	0.34	0.24	179	0.07	0.27	3.50	0.032	0.53
6	15	200	0.40	298	0.12	0.45	0.32	238	0.10	0.36	2.04	0.030	0.61
6	15	200	0.50	372	0.15	0.57	0.40	298	0.12	0.45	3.40	0.052	0.47
6	15	200	0.65	484	0.20	0.74	0.52	387	0.16	0.59	3.00	0.071	0.47
6	15	200	0.85	632	0.26	0.96	0.68	506	0.20	0.77	1.72	0.090	0.42
6	15	200	1.00	744	0.30	1.13	0.80	595	0.24	0.91	4.40	0.017	0.49
6	15	200	1.33	989	0.40	1.51	1.06	792	0.32	1.21	2.00	0.117	0.50
8	20	150	0.40	298	0.16	0.60	0.32	238	0.13	0.48	3.70	0.111	0.45
8	20	150	0.50	372	0.20	0.76	0.40	298	0.16	0.60	1.60	0.064	0.49
8	20	150	0.65	484	0.26	0.98	0.52	387	0.21	0.79	2.10	0.081	0.51
8	20	150	0.85	632	0.34	1.29	0.68	506	0.27	1.03	1.60	0.064	0.49
8	20	150	1.50	1,116	0.60	2.27	1.20	893	0.48	1.81	1.50	0.182	0.50
12	30	100	0.25	186	0.15	0.57	0.20	149	0.12	0.45	2.60	0.044	0.53
12	30	100	0.30	223	0.18	0.68	0.24	179	0.14	0.54	2.00	0.068	0.43
12	30	100	0.40	298	0.24	0.91	0.32	238	0.19	0.73	1.40	0.075	0.54
12	30	100	0.50	372	0.30	1.13	0.40	298	0.24	0.91	1.70	0.101	0.48
12	30	100	0.65	484	0.39	1.47	0.52	387	0.31	1.18	2.70	0.138	0.46
12	30	100	1.00	744	0.60	2.27	0.80	595	0.48	1.81	3.00	0.202	0.47
16	41	75	0.20	149	0.16	0.60	0.16	119	0.13	0.48	2.70	0.056	0.43
16	41	75	0.25	186	0.20	0.76	0.20	149	0.16	0.60	1.90	0.061	0.53
16	41	75	0.40	298	0.32	1.21	0.32	238	0.26	0.97	2.20	0.121	0.46
16	41	75	0.50	372	0.40	1.51	0.40	298	0.32	1.21	2.20	0.118	0.52
18	46	67	0.50	372	0.45	1.70	0.40	298	0.36	1.36	2.90	0.150	0.49
24	61	50	0.15	112	0.18	0.68	0.12	89	0.14	0.54	2.20	0.027	0.72
24	61	50	0.20	149	0.24	0.91	0.16	119	0.19	0.73	2.00	0.001	0.60
24	61	50	0.30	223	0.36	1.36	0.24	179	0.29	1.09	1.90	0.094	0.61
24	61	50	0.50	372	0.60	2.27	0.40	298	0.48	1.81	1.80	0.193	0.50

Note: K value calculation based on Manufacturing Specification of 3% Cv and .5 Exponent.



Performance Charts – Flow vs. Pressure



Installations

Storage and handling

- Protect Chapin Tape rolls from environmental conditions until installation.
- Do not remove packaging or protective film until installation.
- Do not drop or throw Chapin Tape rolls.
- Do not drag or push Chapin Tape rolls over rough surfaces.
- Do not cut through cardboard when removing protective film.

Surface Installation

- Place tape on the windward side of the row.
- Install with emitters facing upward.
- Anchor Chapin Tape every 20 feet with wire staple or with dirt.
- Leave extra tape on the ends for proper connection.
- Leave end of tape open for initial flushing.
- Surface drip tape should be held at both ends with end holders.



Mechanical Sub-Surface Installation

- Support both sides of roll with metal, plastic, or wooden backers.
- Install outlets facing upwards.
- Use adjustable braking mechanism to provide uniform tension on the roll.
- Support the roll core with an insert plug.
- Do not allow tape to rub against sharp objects or the side of the shank.
- The shaft, reel and backers should all turn simultaneously.
- Position the bottom of the roll 35 inches away from the funneled injection shank opening.
- Avoid all possible damage to tape from bolts, worn-out or rusty metal parts, kinks and stretching.
- Allow extra tape at the beginning and end of the row for proper connections.
- Do not walk on top of the drip tape in order to avoid compacting dirt.
- Leave end of tape open for initial flushing.
- Flush main, sub-main, and manifold before connecting the lateral drip line.

Clear Plastic Mulch Installation

- When using clear plastic mulch Chapin tape must be buried to prevent sunburn caused by the magnifying glass effect.



Maintenance and Troubleshooting

Maintenance

- To prevent insect damage spray insecticide prior to and during installation.
- Flush sub-main and lateral lines regularly in order to prevent plugging.
- Filter water as recommended. Use sand media filters for pond water. Use 150 or 200 mesh screen filters for clean water sources. Filter must be maintained and cleaned regularly.
- Always flush the lateral lines after fertilizer injection.
- Schedule your irrigation time and frequency correctly. Root intrusion may occur when plants are stressed or when fertilizer remains in the lateral lines.
- Analyze water supply on a regular basis to help forecast potential problems.

Chapin 5/8" Deluxe Specifications

Problem	Description	Possible Solution
Dirt plugging in the turbulent channel	Sucking dirt into the tape when the water is shut off. As water drains after shut-off, a vacuum is formed.	Install air relief valve(s).
Root intrusion in buried tape	Will occur when a plant is starved for water. Hairline roots will seek water and enter the turbulent channel.	Schedule your irrigation time correctly/ increase hours of water per day.
Dirt in buried tape	Evidence of dirt throughout supply hose, inlet, outlet, turbulent channel.	Adequate filtration.
Ant/insect damage to drip wall tape	Small pin holes chewed in sides of drip tape and/or enlargement of outlet orifice. Most likely to occur with tapes below 15 mil.	Spray and/or injection of appropriate insecticides; release of Beneficial's.
Mechanical damage during installation	Punctures, tears, scratch marks.	Flushing mains, sub mains before connecting drip tape. Use of acid to clean system. Check for line breakage.
Clogging due to foreign materials after the filter system	Accumulated in mains and sub mains from prior season breakage of likes.	Flushing mains, sub mains before connecting drip tape, use of acid to clean system. Check for line breakage.
No water is flowing	Water is not being emitted.	Check the connections to the submain. Check for adequate water pressure. Check for kinks or twists in the tape line. Check water supply.
Precipitates	Discoloration at outlets.	Check for possible build up of minerals, fertilizer, and/or bacterial slime.
Reduced Flow	Reduction of water over time.	Check that filter is properly cleaned and free of debris.

Water Quality Management

Precipitates	None	Increasing	Severe	Possible Solutions
Iron (ppm)	0.0 - 0.1	0.1 - 0.4	0.4+	Use chlorine in proper solution to pH of 7 or lower
Manganese (ppm)	0.0 - 0.2	0.2 - 0.4	0.4+	Use chlorine in proper solution
Sulfides (ppm)	0.0 - 0.1	0.1 - 0.2	0.2+	Use acid in proper solution
Calcium Carbonate (ppm)	No Levels Established			Use acid in proper solution
Organic material	Slime, colored, deposits on emitter, odiferous			Use chlorine in proper solution

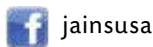


Rolls of Tape Required Per Acre

5/8"		4 mil	5 mil	6 mil	8 mil	10 mil		12 mil		15 mil			
7/8"					6 mil			8 mil		10 mil		13 mil	15 mil
Avg. tape spacing inches	Feet of tape per acre	15,000	12,000	10,000	7,500	6,000	5,500	5,000	4,500	4,000	3,500	3,000	
30	17,424	1.16	1.45	1.74	2.32	2.90	3.17	3.48	3.87	4.36	4.98	5.81	
32	16,335	1.09	1.36	1.63	2.18	2.72	2.97	3.27	3.63	4.08	4.67	5.45	
34	15,374	1.02	1.28	1.54	2.05	2.56	2.80	3.07	3.42	3.84	4.39	5.12	
36	14,520	0.97	1.21	1.45	1.94	2.42	2.64	2.90	3.23	3.63	4.15	4.84	
38	13,756	0.92	1.15	1.38	1.83	2.29	2.50	2.75	3.06	3.44	3.93	4.59	
40	13,068	0.87	1.09	1.31	1.74	2.18	2.38	2.61	2.90	3.27	3.73	4.36	
42	12,446	0.83	1.04	1.24	1.66	2.07	2.26	2.49	2.77	3.11	3.56	4.15	
44	11,880	0.79	0.99	1.19	1.58	1.98	2.16	2.38	2.64	2.97	3.39	3.96	
46	11,363	0.76	0.95	1.14	1.52	1.89	2.07	2.27	2.53	2.84	3.25	3.79	
48	10,890	0.73	0.91	1.09	1.45	1.82	1.98	2.18	2.42	2.72	3.11	3.63	
50	10,454	0.70	0.87	1.05	1.39	1.74	1.90	2.09	2.32	2.61	2.99	3.48	
52	10,052	0.67	0.84	1.01	1.34	1.68	1.83	2.01	2.23	2.51	2.87	3.35	
54	9,680	0.65	0.81	0.97	1.29	1.61	1.76	1.94	2.15	2.42	2.77	3.23	
56	9,334	0.62	0.78	0.93	1.24	1.56	1.70	1.87	2.07	2.33	2.67	3.11	
58	9,012	0.60	0.75	0.90	1.20	1.50	1.64	1.80	2.00	2.25	2.57	3.00	
60	8,712	0.58	0.73	0.87	1.16	1.45	1.58	1.74	1.94	2.18	2.49	2.90	
62	8,431	0.56	0.70	0.84	1.12	1.41	1.53	1.69	1.87	2.11	2.41	2.81	
64	8,168	0.54	0.68	0.82	1.09	1.36	1.49	1.63	1.82	2.04	2.33	2.72	
66	7,920	0.53	0.66	0.79	1.06	1.32	1.44	1.58	1.76	1.98	2.26	2.64	
68	7,687	0.51	0.64	0.77	1.02	1.28	1.40	1.54	1.71	1.92	2.20	2.56	
70	7,467	0.50	0.62	0.75	1.00	1.24	1.36	1.49	1.66	1.87	2.13	2.49	
72	7,260	0.48	0.61	0.73	0.97	1.21	1.32	1.45	1.61	1.82	2.07	2.42	
74	7,064	0.47	0.59	0.71	0.94	1.18	1.28	1.41	1.57	1.77	2.02	2.35	
76	6,878	0.46	0.57	0.69	0.92	1.15	1.25	1.38	1.53	1.72	1.97	2.29	
78	6,702	0.45	0.56	0.67	0.89	1.12	1.22	1.34	1.49	1.68	1.91	2.23	
80	6,534	0.44	0.54	0.65	0.87	1.09	1.19	1.31	1.45	1.63	1.87	2.18	
82	6,375	0.42	0.53	0.64	0.85	1.06	1.16	1.27	1.42	1.59	1.82	2.12	
84	6,223	0.41	0.52	0.62	0.83	1.04	1.13	1.24	1.38	1.56	1.78	2.07	
86	6,078	0.41	0.51	0.61	0.81	1.01	1.11	1.22	1.35	1.52	1.74	2.03	
88	5,940	0.40	0.50	0.59	0.79	0.99	1.08	1.19	1.32	1.49	1.70	1.98	
90	5,808	0.39	0.48	0.58	0.77	0.97	1.06	1.16	1.29	1.45	1.66	1.94	
92	5,682	0.38	0.47	0.57	0.76	0.95	1.03	1.14	1.26	1.42	1.62	1.89	
94	5,561	0.37	0.46	0.56	0.74	0.93	1.01	1.11	1.24	1.39	1.59	1.85	
96	5,445	0.36	0.45	0.54	0.73	0.91	0.99	1.09	1.21	1.36	1.56	1.82	
98	5,334	0.36	0.44	0.53	0.71	0.89	0.97	1.07	1.19	1.33	1.52	1.78	
100	5,227	0.35	0.44	0.52	0.70	0.87	0.95	1.05	1.16	1.31	1.49	1.74	

Common Tape Selection and Flows

Spacing (inch)	Flow (gpm/100 feet)	Applications
12	0.25	Cotton, Pineapple
8	0.30	Strawberries, Cauliflower
8	0.50	Tomatoes, Peppers
8	0.65	Melons, Cauliflower
12	0.50	Cane Berries, Broccoli
2	1.50	Cut Flowers
4	1.00	Vines, Landscape
24	0.30	Sugarcane, Cotton



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