



Amnon

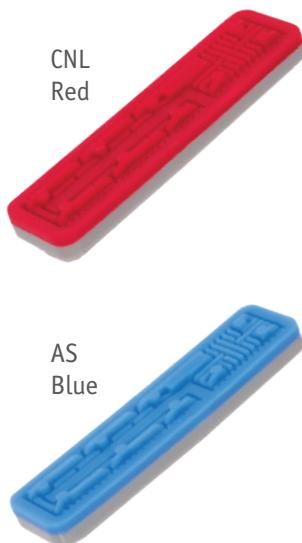
Heavy-Wall Emitterline

More
Crop
per
Drop™

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Amnon Emitterline

Amnon PC: CNL & AS



Amnon is an innovative, pressure compensating dripline utilizing the Cascade Labyrinth and includes special anti-siphon and compensating non-leak models. Amnon CNL (Pressure Compensated Non-Leak) is ideal for pulse irrigation and systems you prefer not to drain during irrigation cycles. Amnon AS (Pressure Compensated Anti-Siphon) is ideal for on-ground or buried applications. Amnon emitterline is the choice for greenhouses, vegetables, vineyards and orchards.

Product Features

- Pressure-Compensating(PC) for maximum accuracy at variable topography and long laterals
- Cascade Labyrinth provides strong self-cleaning turbulence
- Hydrodynamic dripper design ensures continuous flushing of sediments and small dirt particles
- Low Cv for maximum uniformity
- 3D inlet weir structure prevents root intrusion and sand ingestion separation
- Side water inlet structure improves clog resistance
- High-quality diaphragm
- Slight oval shape prevents rolling of tubing which speeds installation
- Dual yellow stripes indicates emitters
- Produced only with the highest quality virgin resin materials

Applications

- Versatile, all-purpose dripline for greenhouses, vegetables, vineyards and orchards
- Pulse irrigation
- Subsurface Drip Irrigation (SDI)
- Variable Topography

Special Models

- CNL: Pressure Compensated Check Non-Leak design reduces lateral filling time and facilitates pulse irrigation.
- AS: Pressure Compensated Anti-Siphon design prevents suction at draining stage. Suitable for subsurface drip irrigation.



The Cascade Labyrinth

The Cascade Labyrinth signifies a breakthrough in low-volume dripline systems. The unique structure of the dripper facilitates intensified self-cleaning, preventing clogging and vastly improving durability.

Advantages

- Reliable use of low-volume drippers
- Unique self-cleaning operation
- Wide flow passages
- Very high resistance to clogging
- Long-term flow accuracy and uniformity
- Longer laterals
- Lower costs per area
- Extended product life



Double Flow System

The Cascade Labyrinth teeth create a double-flow regime that combines rapid central flow with cyclone turbulence, facilitating constant cleaning and flushing. This prevents clogging and improves dripper durability.

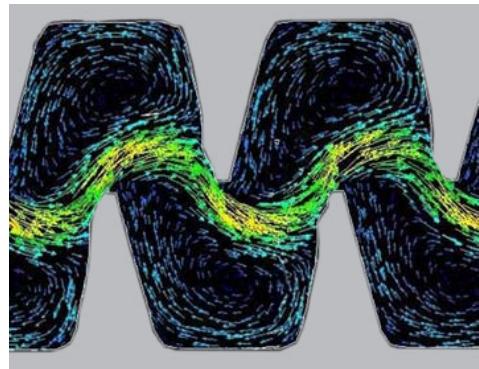
Efficient Self-Cleaning

During the self-cleaning process, dirt and sand particles that penetrate the filtration system are washed away, preventing sedimentation and clogging.

Hydraulic Characteristic of the Labyrinth

The regulating ratio of the Cascade Labyrinth is 1:2.2 - while the pressure is doubled, the flow rate changes by only 45%.

Velocity Vectors in the Cascade Labyrinth



Fast Central Flow
Cyclone Turbulence



Amnon Emitterline

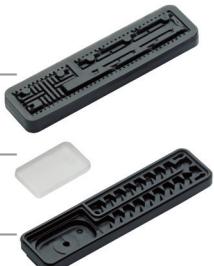
Top View

- Weir design prevents root intrusion and sand suction
- Non-drainage and anti-syphon
- Color coded to identify emitter flow rate



Bottom View

- Filter with side water inlets
- Large, double-purpose diaphragm
- Cascade Labyrinth wide water passage and strong self-cleaning operation
- Color coded to identify emitter function



Color Codes

Flow Rates	0.29 gph	0.42 gph	0.53 gph	0.61 gph	1.06 gph
Function	Grey	Brown	Yellow	Light Blue	Tan
CNL: Red					
AS: Blue					

Ordering Guide

Size	Wall Thickness	Flow	Spacing*	Indicator
AP17	35	29	12	AS
			18	
AP18	40	42	24	CNL
			30	
AP20	45	53	36	
			42	
AP22	50	61	48	
			60	

* Other emitter spacings are available upon request. Please contact Jain Customer Service for further details.

Example | Model#: AP18-45-53-30AS
Description: Amnon AS 18 mm 0.53 gph @ 30" spacing



Packaging Data

	17mm	18mm	20mm	22mm
Roll Length	1000	1000	1000	1000
Roll I.D.	16	16	16	16
Roll O.D.	32	32	32	36
Roll Width	9	9	18	20
Rolls/Pallet	24	24	20	20
Pallet Size	60x60	60x60	60x60	60x60
Rolls/Truck (Hand Stacked)	711	711	474	227



Technical Data

Flow rates	0.29 gph	0.42 gph	0.53 gph	0.61 gph	1.06 gph
Cv	<5%	<5%	<5%	<5%	<5%
K	0.29	0.42	0.53	0.6	1.06
x	0	0	0	0	0
Filtration	120 Mesh				
Anti-Siphon	7 - 58 PSI				
CNL	14 - 58 PSI				
CNL Opening	14 PSI				
CNL Closing	3.6 PSI				

Filtration Requirements

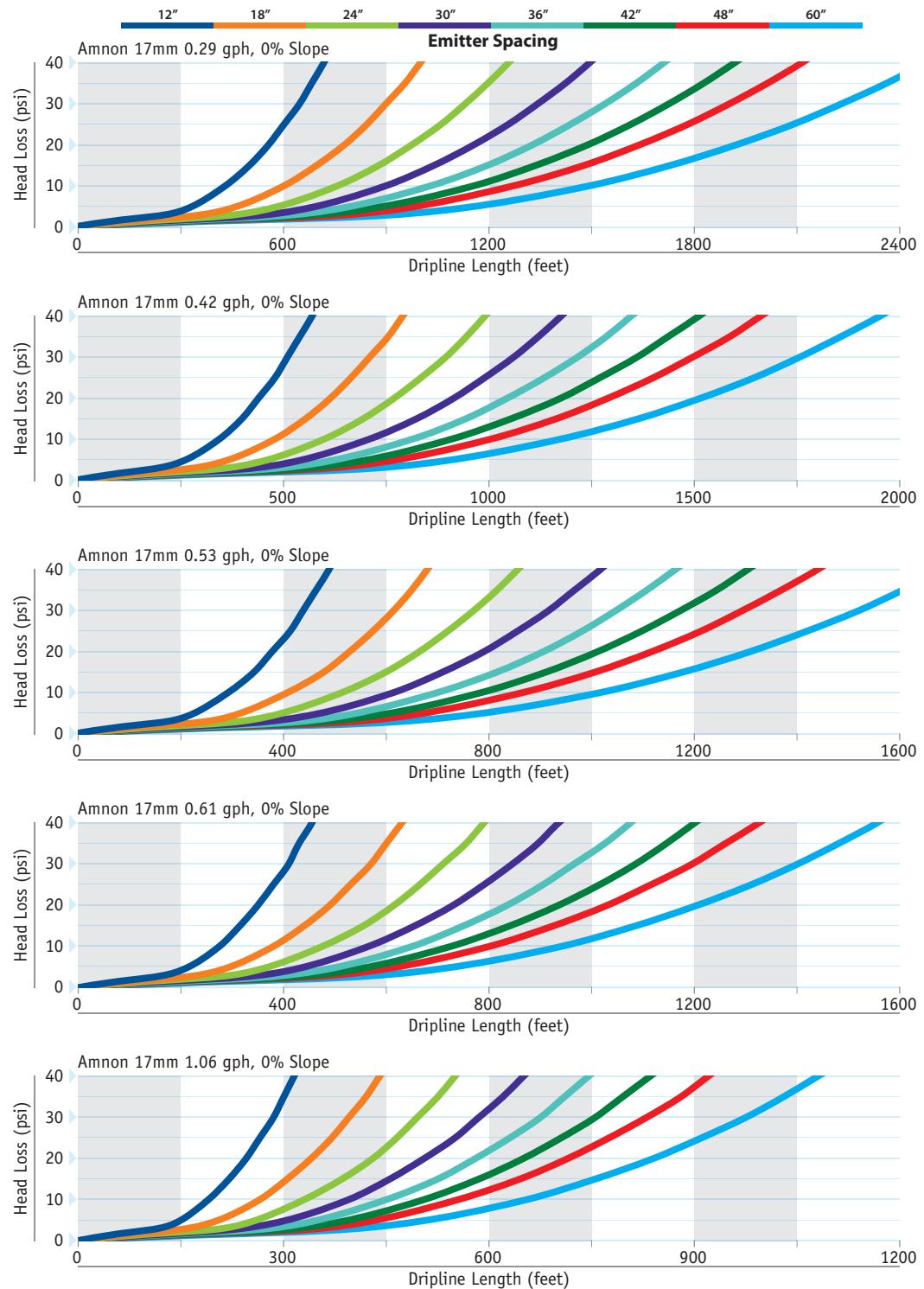
Minimum filtration requirement is 120 Mesh (130 Micron). In addition to filtration, control of algae and bacterial slime growth and control of chemical precipitates should be taken into consideration.

Tubing Specifications

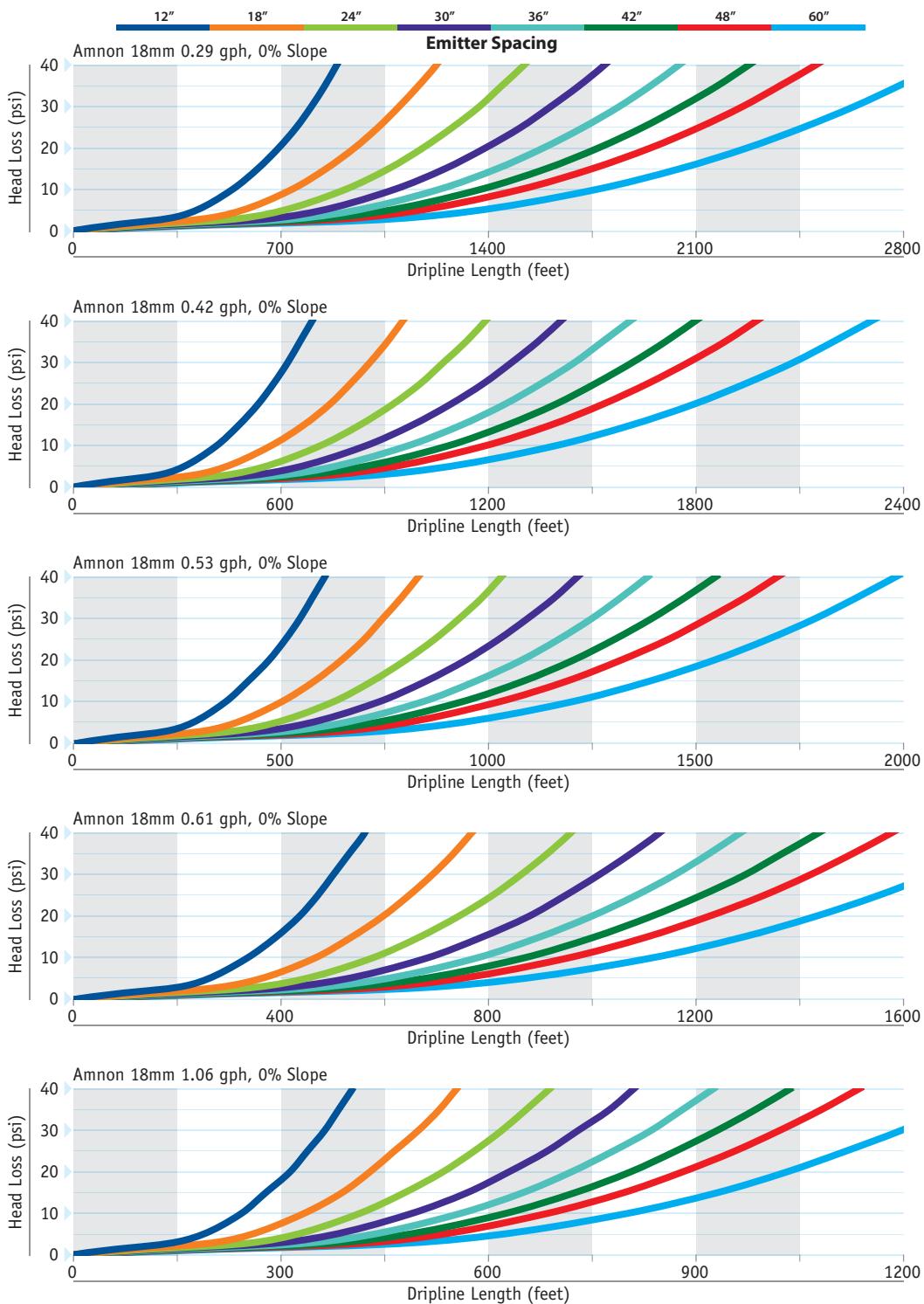
Nominal diameter :	17mm	18 mm	20 mm	22 mm
Outside diameter :	0.660 in	0.710 in	0.800 in	0.920 in
Inside diameter :	0.570 in	0.620 in	0.710 in	0.820 in
Wall thickness:	0.045 in	0.045 in	0.045 in	0.050 in
Barb Factor (Kd)	1.2	0.85	0.4	0.3
Roll Lengths	1000	1000	1000	1000
Available flow rates :	0.29 gph (1.1 lph)			
	0.42 gph (1.6 lph)			
	0.53 gph (2.0 lph)			
	0.61 gph (2.3 lph)			
	1.06 gph (4.0 lph)			



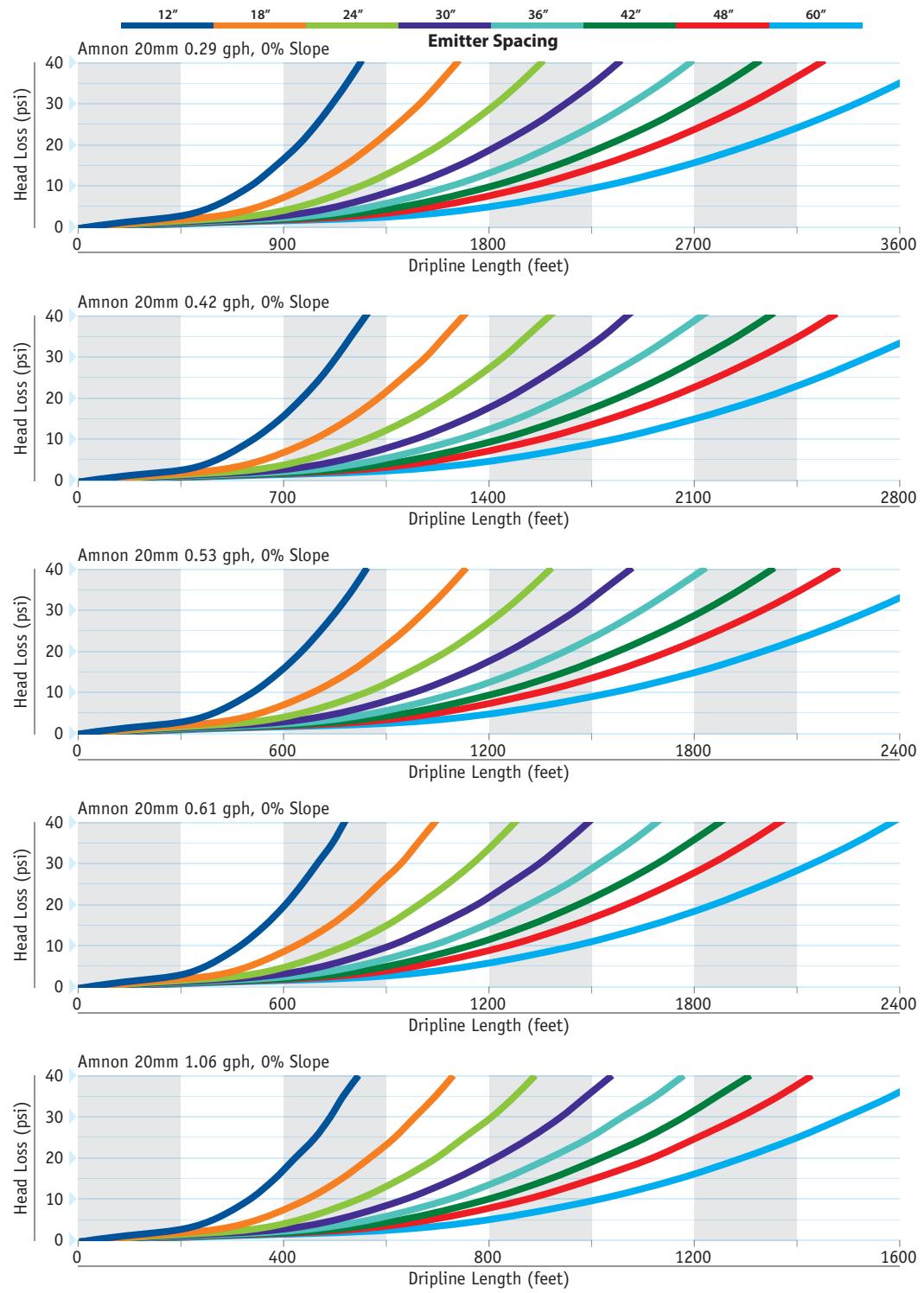
Head Loss v. Dripline Length - Amnon



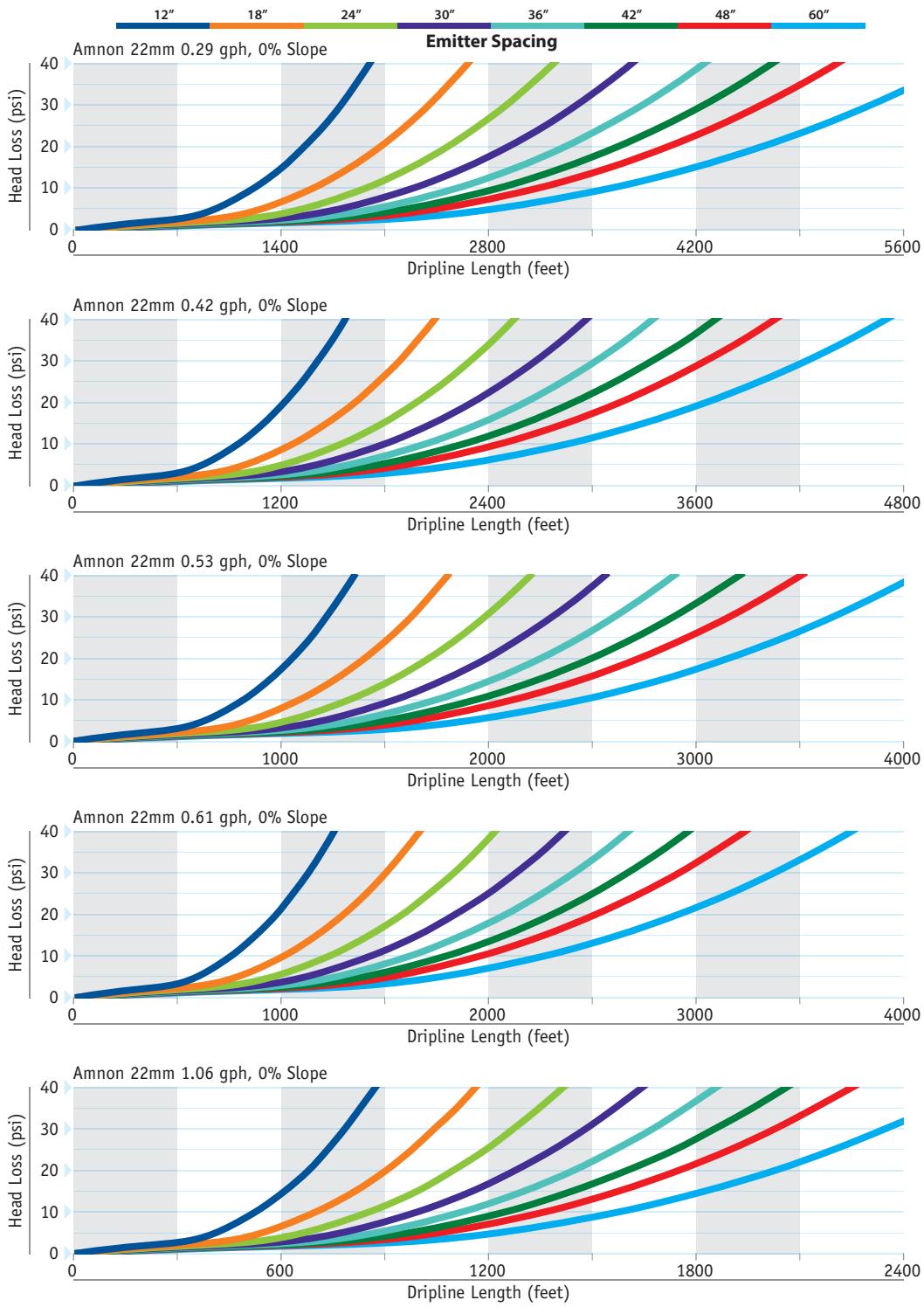
Head Loss v. Dripline Length - Amnon



Head Loss v. Dripline Length - Amnon



Head Loss v. Dripline Length - Amnon



Amnon Maximum Lateral Lengths (0% Slope)
17 mm (0.660 x 0.570)

GPH	PSI Inlet	Emitter Spacing (inches)							
		12	18	24	30	36	42	48	60
0.29	25	505	700	880	1040	1195	1335	1475	1725
	35	605	845	1060	1255	1435	1610	1775	2080
	45	685	955	1195	1420	1625	1820	2005	2350
	55	750	1045	1310	1555	1780	1995	2195	2575
0.42	25	400	555	695	825	945	1055	1165	1365
	35	480	665	835	990	1135	1270	1400	1645
	45	540	755	945	1120	1285	1435	1585	1855
	55	595	825	1035	1225	1405	1575	1735	2035
0.53	25	345	480	600	710	815	910	1005	1175
	35	415	575	720	855	980	1095	1210	1415
	45	465	650	815	965	1105	1240	1365	1600
	55	510	710	895	1060	1215	1360	1495	1755
0.61	25	315	440	555	655	750	840	925	1085
	35	380	530	665	790	905	1015	1115	1310
	45	430	600	755	895	1025	1145	1260	1480
	55	475	660	825	980	1120	1255	1385	1620
1.06	25	220	305	385	455	525	585	645	755
	35	265	370	465	550	630	705	775	910
	45	300	420	525	620	710	795	880	1030
	55	330	460	575	680	780	875	960	1130

Amnon Maximum Lateral Lengths (0% Slope)
18 mm (0.710 x 0.620)

GPH	PSI Inlet	Emitter Spacing (inches)							
		12	18	24	30	36	42	48	60
0.29	25	620	850	1060	1250	1425	1590	1745	2040
	35	750	1025	1275	1505	1715	1915	2105	2455
	45	845	1160	1440	1700	1940	2165	2375	2775
	55	925	1270	1580	1860	2125	2370	2605	3040
0.42	25	490	675	835	985	1125	1255	1380	1610
	35	590	810	1010	1190	1355	1510	1660	1940
	45	665	915	1140	1345	1530	1710	1880	2190
	55	730	1005	1250	1470	1680	1875	2055	2400
0.53	25	420	580	720	850	970	1085	1190	1390
	35	510	700	870	1025	1170	1305	1435	1675
	45	575	790	985	1160	1320	1475	1620	1890
	55	630	865	1075	1270	1445	1615	1775	2070
0.61	25	390	535	665	785	895	1000	1100	1285
	35	470	645	805	945	1080	1205	1325	1545
	45	530	730	910	1070	1220	1360	1495	1750
	55	580	800	995	1170	1340	1495	1640	1915
1.06	25	280	390	480	570	650	725	795	930
	35	340	465	580	685	780	870	955	1115
	45	385	530	655	775	880	985	1080	1265
	55	420	580	720	845	965	1080	1185	1385

*Minimum of 10 psi at the end of the lateral

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



Ammon Maximum Lateral Lengths (0% Slope)

20 mm (0.800 x 0.710)

GPH	PSI Inlet	Emitter Spacing (inches)							
		12	18	24	30	36	42	48	60
0.29	25	865	1165	1425	1665	1885	2090	2285	2655
	35	1045	1400	1715	2005	2270	2520	2755	3195
	45	1180	1585	1940	2265	2565	2845	3110	3610
	55	1295	1735	2125	2480	2810	3120	3410	3955
0.42	25	685	920	1125	1315	1490	1650	1805	2095
	35	825	1105	1355	1580	1790	1990	2175	2525
	45	930	1250	1530	1790	2025	2250	2460	2855
	55	1020	1370	1680	1960	2220	2465	2695	3125
0.58	25	590	795	970	1135	1285	1425	1560	1810
	35	710	955	1170	1365	1545	1715	1875	2175
	45	805	1080	1320	1540	1745	1940	2120	2460
	55	880	1180	1450	1690	1915	2125	2325	2695
0.61	25	545	735	900	1045	1185	1315	1440	1670
	35	655	880	1080	1260	1430	1585	1735	2010
	45	745	995	1220	1425	1615	1790	1960	2275
	55	815	1095	1340	1560	1770	1965	2145	2490
1.0	25	380	510	625	730	825	915	1000	1165
	35	460	615	750	880	995	1105	1205	1400
	45	515	695	850	990	1125	1245	1365	1585
	55	565	760	930	1085	1230	1365	1495	1735

Ammon Maximum Lateral Lengths (0% Slope)

22 mm (0.920 x 0.820)

GPH	PSI Inlet	Emitter Spacing (inches)							
		12	18	24	30	36	42	48	60
0.29	25	1395	1855	2265	2635	2980	3300	3610	4180
	35	1680	2235	2725	3175	3585	3975	4345	5035
	45	1895	2525	3080	3585	4055	4495	4910	5690
	55	2080	2770	3375	3930	4440	4925	5380	6230
0.42	25	1100	1465	1790	2080	2355	2610	2850	3300
	35	1325	1765	2155	2505	2835	3140	3430	3975
	45	1500	1995	2435	2835	3205	3555	3880	4495
	55	1640	2185	2670	3105	3510	3890	4250	4925
0.58	25	950	1265	1545	1795	2030	2250	2460	2850
	35	1145	1525	1860	2160	2445	2710	2960	3430
	45	1290	1720	2100	2445	2760	3060	3345	3875
	55	1415	1885	2300	2680	3025	3355	3665	4245
0.61	25	875	1170	1425	1660	1875	2080	2270	2630
	35	1055	1410	1715	2000	2260	2505	2735	3170
	45	1195	1590	1940	2260	2555	2830	3090	3580
	55	1310	1745	2125	2475	2795	3100	3385	3925
1.0	25	610	815	995	1155	1305	1445	1580	1830
	35	735	980	1195	1390	1570	1745	1905	2205
	45	830	1110	1350	1570	1775	1970	2150	2495
	55	910	1215	1480	1725	1945	2160	2360	2730

*Minimum of 10 psi at the end of the lateral

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



Installation

Maintenance & Troubleshooting Guide

Water quality is a factor in maintaining micro-irrigation systems. A water quality test will measure silt or sand; algae; bacteria; dissolved solids such as iron, sulphur, salts, and calcium; and the pH of the water. For more information on micro-irrigation system maintenance, contact your extension agent or micro-irrigation manufacturer.

Maintenance Tasks

- Annually treat system with acid to neutralize calcium carbonates if the water is "hard." Consult equipment manufacturer for type of acid and treatment interval.

At Season Shutdown

- Treat entire system with 40 ppm residual chlorine concentration for at least four hours, and completely flush the system.
- Drain water from all pipelines. The system may have to be blown out lateral by lateral with an air compressor to accomplish this. Don't exceed 15 to 20 psi of air pressure, or you'll blow off the emitters. Polyethylene pipes can withstand some freezing without breaking, so it isn't critical that all water be removed. In cases where remaining water may be a problem, however, add a gallon of non-toxic antifreeze (type used in RV's) to the piping system and distribute it throughout with compressed air. More antifreeze may be necessary for larger systems.

* Referenced from the "Washington Irrigators Pocket Guide"*

Regularly

- Irrigation system evaluation by trained professional is highly recommended
- Check for leaks, rodent damage, and mechanical damage
- Inspect pressure-regulating valves and pressure gauges for correct operation and pressure readings. Liquid-filled pressure gauges are recommended.
- Flush lateral lines. Depending on water quality and filtration system, flushing should be done bi-weekly after fertilizer or chemical injection or chlorination.
- Regularly check for and clean or replace clogged emitters
- Check emitters for correct flow. Take precise measurements at least twice each year by catching the flow from several emitters in a calibrated cylinder (such as rain gauge) during carefully timed intervals.
- Backwash filters either manually or using automatic cycle, depending on system design and type of filter
- Replace cartridge filters
- If media (such as sand) cakes, replace media. For sand filters, periodically supplement with additional media.
- Chlorinate system with 10 ppm if water has high organic load
- If clogging due to organic matter continues to be problem, inject 50-100 ppm of chlorine and allow to sit for 24 hours
- If clogging due to precipitates (such as calcium carbonate) persists, inject system with acid to lower pH to about 5.0, allow to sit for 24 hours. Contact equipment manufacturer before undertaking this task to determine the minimum pH allowable for system type.



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