

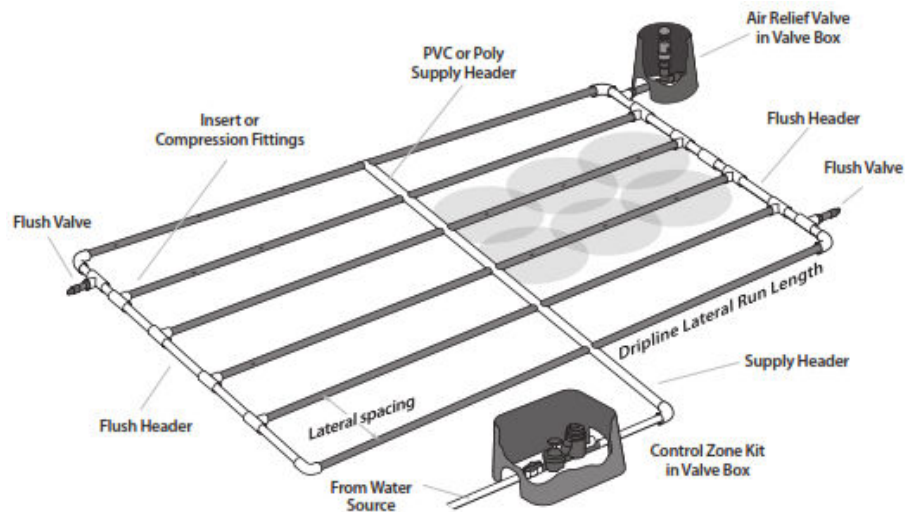
Drip Tip: Determine the Dripline Layout for Sub- and On-Surface Drip Irrigation

The objective of a well-designed dripline system is to create an even wetting pattern in the soil throughout the planting zone. In this Drip Tip, we will cover dripline layouts for sub- and on-surface drip irrigation. This information, plus other recommendations and helpful information can be found in the [XF Series Dripline: Design, Installation and Maintenance Guide](#).

Sub-Surface XFS Dripline Layout

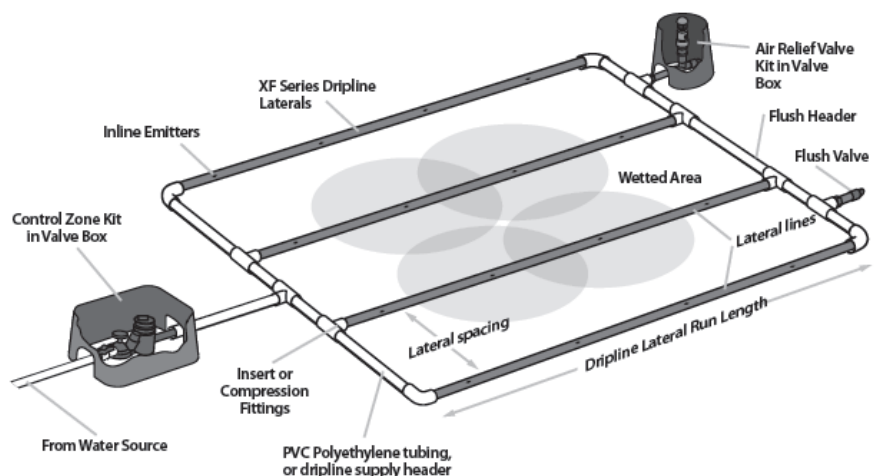
Center Feed Layout

Where layout flexibility exists, it is recommended that Center Feed layouts be used. This allows for the most even flow of water through the zone. Center Feed layouts also potentially allow you to increase the size of the zone by providing lateral runs on both sides of the supply header. Center Feed layouts are an excellent option for median strips, roadsides, and other homogenous planting zones.



End Feed Layout

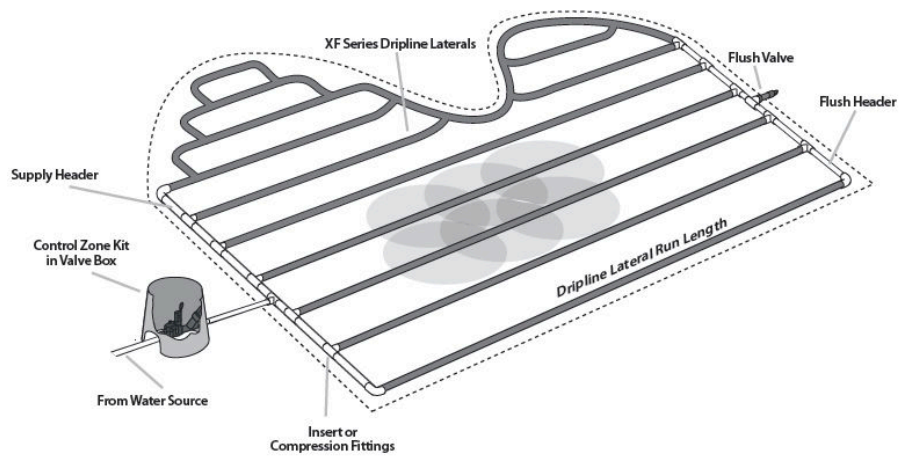
This grid layout is primarily used for dense plantings. The layout uses supply headers and flush headers with rows of dripline connected at each end. The supply header and flush header form a continuous loop where all rows of dripline are being supplied from both ends.



On-Surface XF Dripline Layouts

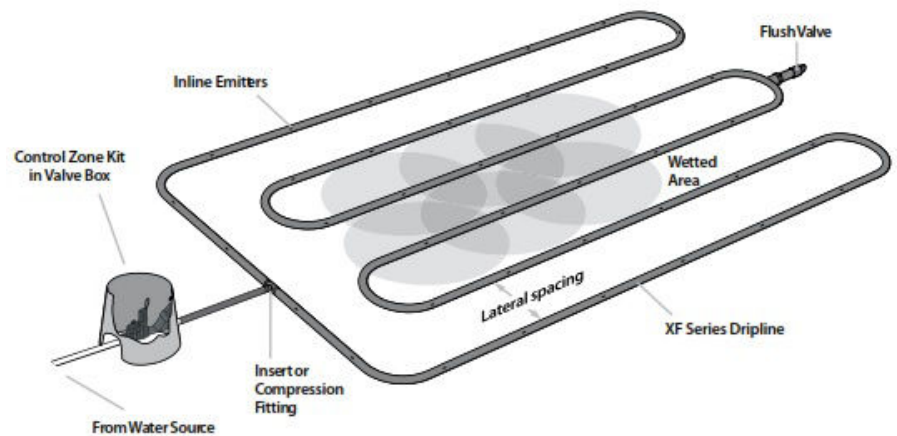
Curved Edge Layout

The Curved Edge layout is primarily used for dense planting areas. This layout uses supply and flush headers with rows of dripline connected at the end. The supply and flush header form a continuous loop and the dripline can be attached to the adjacent dripline with “tee” fittings to accommodate curved applications.



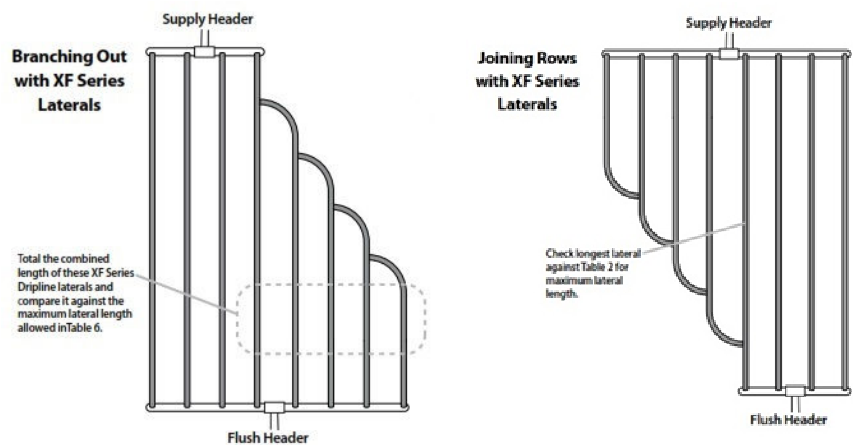
Quick Loop Layout

The Loop layout is one continuous loop that weaves back and forth throughout the zone in evenly spaced laterals (rows).



Branching Out or Joining Row Layouts

When branching out from a supply header with XF Series dripline, the maximum lateral run length should be considered. Add up all the “branched out” dripline and check it against the maximum lateral run length listed in Table 6 (pg. 21) in the guide.



When joining lateral rows from a supply header, check only the longest lateral against the maximum lateral run length listed in Table 6 (pg. 21) in the guide.

Overall Design Considerations

Page numbers listed below are for the [XF Series Dripline: Design, Installation and Maintenance Guide](#).

- Header should be spaced 2"-4" (5 cm-10.2 cm) from hardscape or other planting areas.
- Headers may be PVC, blank poly tubing or the QF Header. The [QF Header](#) is a flexible option that has rotating barbs already installed at either 12" or 18" spacing.
- Lateral spacing is a design consideration and can be calculated as shown on page 14 in "How to Calculate Equal Lateral (Row) Spacing."
- The lateral run length should not exceed the maximum lateral run length shown in Table 6 on page 21.
- When using "Center Feed Layout" the run length should be measured from the supply header to the flush header and should not exceed the maximum run length shown in Table 6 on page 21.
- When using "Loop Layout", because water is split into two separate paths that meet in the middle, the total continuous loop length of dripline should not exceed twice the maximum lateral length.
- In sub-surface applications, an [air vacuum relief valve](#) should be installed at the highest point in the system to avoid back siphoning debris into the emitter.
- Flush valves should be installed at the low point in the flush header or at the mid-point of the loop layout.
- Consider installing an [Operation Indicator](#) to easily see when the system is operating.