Typical Netafim USA Techline Subsurface Layout

Tips and Recommendations

Techline can be installed on-surface, under mulch, or buried evenly up to 6". Use guidelines on the back to select which Techline to use, and how to apply properly.

Estimating How Much Techline to Use
Multiply the square footage of the area x 12, divide that number by the minimum recommended row of spacing from the General Guidelines Chart. (See back of sheet for more information.)

Netafim USA Techfilter
Provides a Limited Lifetime Warranty against root intrusion. See Netafim USA Product Catalog for application information.

Fittings
- Techline fittings are recommended. They are the fastest to install, most economical fittings to use, and do not require clamps at pressures less than 45 psi.
- 1/2" Poly insert fittings with clamps can be used.
- 700 Series compression fittings can be used.

Low Volume Control Zone
Pre-assembled valve, filter and low-flow regulator (up to 4.4 GPM) is more convenient to use than separate components.

Pressure Regulating Valve (PRV)
Install after the zone valve and filter.
- Use PRV075LF20V2K from .25 - 4.4 GPM
- Use PRV075HF45V2K from 3.5 - 17.6 GPM
- Use PRV15045V2K from 7 - 35 GPM

Supply & Exhaust Headers
Most often used in subsurface systems. They may not be necessary if Techline is laid on-surface. Use Techline or Techline Blank Tubing as supply and exhaust headers on zones under 5 GPM.

A/VRV (Air/Vacuum Relief Valve)
- Use on subsurface zones.
- Place A/VRV at high point(s) in the zone.
- Place on a row of Techline or Techline blank tubing that is perpendicular to Techline rows to connect all Techline laterals to

Line Flushing Valves
Use one Line Flushing Valve for every 15 GPM of zone flow.
- TLSOV or TLFIG8 may be substituted.
- Normally placed along exhaust header or at the point farthest away from the source.
- Install in a valve box with a gravel sump able to drain about 1 gallon of water.

Filters
Placed before or after the zone valve.
- 3/4" filter - up to 13 GPM
- 1" filter - up to 26 GPM
- 1 1/2" Filter - up to 35 GPM
- Use 120 or 140 mesh
- Netafim USA sells a large variety of filters - up to 3,600 GPM - call Netafim USA for more information.

Staples - Use 1 TLS6 staple for:
- Every 3' of Techline in sand, every 4' in loam and every 5’ in clay.
- Use 2-staples over each tee, elbow or cross.

Caution - Landscape fabric staples and other non-stainless steel staples rust away quickly and are not recommended.
### TECHLINE General Guidelines

<table>
<thead>
<tr>
<th>TURF</th>
<th>SHRUB and GROUND COVER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dripper Flow</td>
<td>0.4 GPH</td>
</tr>
<tr>
<td>Dripper Interval</td>
<td>18”</td>
</tr>
<tr>
<td>Techline Lateral Spacing</td>
<td>18” - 22”</td>
</tr>
<tr>
<td>Burial Depth</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bury evenly throughout the zone to a max. of 6 inches</td>
</tr>
<tr>
<td>Application Rate (in./hr.)</td>
<td>.29 - .23</td>
</tr>
<tr>
<td>Time to Apply 1/4” of Water (in minutes)</td>
<td>52 - 65</td>
</tr>
</tbody>
</table>

### MAXIMUM LENGTH of a Single Techline Lateral

<table>
<thead>
<tr>
<th>INLET PRESSURE (psi)</th>
<th>12”</th>
<th>18”</th>
<th>24”</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>292</td>
<td>322</td>
<td>247</td>
</tr>
<tr>
<td>25</td>
<td>397</td>
<td>438</td>
<td>353</td>
</tr>
<tr>
<td>35</td>
<td>466</td>
<td>514</td>
<td>394</td>
</tr>
<tr>
<td>45</td>
<td>520</td>
<td>574</td>
<td>439</td>
</tr>
<tr>
<td>Dripper Flow Rate (GPH)</td>
<td>0.4</td>
<td>0.6</td>
<td>0.9</td>
</tr>
</tbody>
</table>

### TECHLINE Flow per 100 Feet

<table>
<thead>
<tr>
<th>DRIPPER SPACING</th>
<th>0.4 GPH Dripper</th>
<th>0.6 GPH Dripper</th>
<th>0.9 GPH Dripper</th>
</tr>
</thead>
<tbody>
<tr>
<td>12”</td>
<td>40.00 GPH</td>
<td>61.00 GPH</td>
<td>92.00 GPH</td>
</tr>
<tr>
<td>18”</td>
<td>26.67 GPH</td>
<td>41.00 GPH</td>
<td>61.00 GPH</td>
</tr>
<tr>
<td>24”</td>
<td></td>
<td>31.00 GPH</td>
<td>46.00 GPH</td>
</tr>
</tbody>
</table>

---

### Steps to Choosing and Applying Netafim USA Techline

To determine the proper Techline to use on your project, you will need to know the following:

1. What are you irrigating - shrubs and ground cover or turf areas?
2. What type of soil do you have - clay, loam or sand?
3. How many square feet are going to be irrigated?

Use this simple formula for calculating approximately how much Techline to use in the area:

- Multiply the square footage of the area x 12.
- Divide that number by the minimum number of inches apart the rows should be (also called Techline Lateral Spacing).

This number is found on the Techline General Guidelines Chart. While this quick formula is not meant to replace an actual design and take-off, you will have a fairly accurate idea of how many feet of dripperline you will need.

Refer to the Techline General Guidelines Chart.

For example, when irrigating shrubs with loam soil, choose Techline with 0.6 GPH (gallons per hour) drippers and 18” dripper spacings (drippers are spaced 18” apart inside the tubing). Note the box on the general guidelines chart highlighting the .6/18” column.

This chart gives you important information including:

- How many inches apart the rows will go (18” - 24”)
- To what depth you can bury the Techline (a maximum of 6”)
- What the application rate is (.42 in/hour with rows 18” apart and .35 in/hour with rows 24” apart)
- How long to run the zone to apply 1/4” of water (36 minutes for rows spaced 18” apart and 43 minutes for rows spaced 24” apart)

Refer to the Techline Maximum Length of Laterals Chart.

Based on the Techline you choose (for our continuing example we will use .6/18” Techline) this chart will tell you how far you can run a length of Techline.

**Note:** The maximum length of each lateral is dependent on the pressure at the beginning of the lateral. If the pressure is 45 psi, you can safely run a .6/18” Techline lateral up to 574’. If the pressure is 15 psi, the maximum length of the run is 322’.

**The Techline Flow per 100’ Chart** tells you how many GPM the Techline will use.

**Note:** .6/18 example - every 100’ will use 41 GPH or 0.68 GPM.