50 Foot Heavy Duty Telescoping Fiberglass Tubing Kit

DXE-FTK50A-HD

The DXE-FTK50A-HD Fiberglass Tubing Kit is constructed of seven pieces of high quality pultruded fiberglass tubing. Each section of the fiberglass tubing is 96" long. The kit comes with five custom designed UV resistant clamshell type clamps and fifteen stainless steel band clamps. When fully assembled, the overall suggested maximum length is up to 50 feet. Depending on your application, the length can easily be made shorter by telescoping the fiberglass tubing sections inward, or removing fiberglass tubing sections.

The Fiberglass Tubing Kit is used to make various vertical antennas, or may be used to support simple, light-duty wire antennas. Amateur Radio Operators love to experiment and this fiberglass stack is an ideal starting point. The telescoping fiberglass tubing sizes allow adjustment by the addition or removal of tubing sections as length requirements dictate. The fiberglass tubing kit is not designed to support other antennas, nor should it be treated as if it were a tower support and when installed the fiberglass kit should always be properly guyed.

There are parts made from fiberglass in this kit. Take normal precautions when handling any fiberglass material. There may be fiberglass dust, slivers or particles present when the fiberglass parts were manufactured. The use of typical fiberglass handling safety gear (gloves, dust mask, eye shield, clothing, etc.) when handling and working with fiberglass is recommended. Use a damp rag to wipe the parts. Do not use compressed air to clean fiberglass parts. Measures can be taken to reduce exposure after a person has come in contact with fiberglass. Eyes should be flushed with water and any area of exposed skin should be washed with soap and warm water to remove fibers. Clothing worn while working with fiberglass should be removed and washed separately from other clothing. The washing machine should be rinsed thoroughly after the exposed clothing has been washed. Check with your local or state safety and/or environmental agencies for more detailed precautions.

Parts Included:

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DXE-FT1500-8</td>
<td>Telescoping Fiberglass Tube, 1.50&quot; OD, 96&quot; long</td>
</tr>
<tr>
<td>1</td>
<td>DXE-FT1750-8</td>
<td>Telescoping Fiberglass Tube, 1.75&quot; OD, 96&quot; long</td>
</tr>
<tr>
<td>1</td>
<td>DXE-FT2000-8</td>
<td>Telescoping Fiberglass Tube, 2.00&quot; OD, 96&quot; long</td>
</tr>
<tr>
<td>1</td>
<td>DXE-FT2250-8</td>
<td>Telescoping Fiberglass Tube, 2.25&quot; OD, 96&quot; long</td>
</tr>
<tr>
<td>1</td>
<td>DXE-FT2500-8</td>
<td>Telescoping Fiberglass Tube, 2.50&quot; OD, 96&quot; long</td>
</tr>
<tr>
<td>1</td>
<td>DXE-FT2750-8</td>
<td>Telescoping Fiberglass Tube, 2.75&quot; OD, 96&quot; long</td>
</tr>
<tr>
<td>1</td>
<td>DXE-FT3000-8S</td>
<td>Telescoping Fiberglass Tube, 3.00&quot; OD, 96&quot; long, Slit</td>
</tr>
<tr>
<td>1</td>
<td>DXE-ECL-1750</td>
<td>Band Clamp for 1.75&quot; OD (use 5/16&quot; Nut Driver)</td>
</tr>
<tr>
<td>2</td>
<td>DXE-ECL-2000</td>
<td>Band Clamp for 2.00&quot; OD (use 5/16&quot; Nut Driver)</td>
</tr>
<tr>
<td>2</td>
<td>DXE-ECL-2250</td>
<td>Band Clamp for 2.25&quot; OD (use 5/16&quot; Nut Driver)</td>
</tr>
<tr>
<td>2</td>
<td>DXE-ECL-2500</td>
<td>Band Clamp for 2.50&quot; OD (use 5/16&quot; Nut Driver)</td>
</tr>
<tr>
<td>3</td>
<td>DXE-ECL-2750</td>
<td>Band Clamp for 2.75&quot; OD (use 5/16&quot; Nut Driver)</td>
</tr>
<tr>
<td>3</td>
<td>DXE-ECL-3000</td>
<td>Band Clamp for 3.00&quot; OD (use 5/16&quot; Nut Driver)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1*</td>
<td>Telescoping compression clamp 1.50&quot;-1.75&quot;</td>
</tr>
<tr>
<td>1*</td>
<td>Telescoping compression clamp 1.75&quot;-2.00&quot;</td>
</tr>
<tr>
<td>1*</td>
<td>Telescoping compression clamp 2.00&quot;-2.25&quot;</td>
</tr>
<tr>
<td>1*</td>
<td>Telescoping compression clamp 2.25&quot;-2.50&quot;</td>
</tr>
<tr>
<td>1*</td>
<td>Telescoping compression clamp 2.50&quot;-2.75&quot;</td>
</tr>
</tbody>
</table>

* Each compression clamp is made from 2 parts

DX Engineering has additional kits which include the Telescoping Clamps and Band Clamps described in this manual for other projects you may have.

The DXE-TCC-KIT1 is available for tubes from 2" to 0.5".

The DXE-TCC-KIT2 is available for tubes from 2.75" to 2".

Individual 8 foot long Fiberglass Tubes ranging in size from 3" to 0.75" (slit or no slits) and 0.5" no slit are also available from DX Engineering.
INSTALLATION OF ANY TUBING NEAR POWER LINES IS DANGEROUS. Do not locate any of the tubing near overhead power lines or other electric light or power circuits, or where it can come into contact with such circuits. When installing tubing, take extreme care not to come into contact with such circuits, because they may cause serious injury or death.

Assembly
For a full 50 foot length, the fiberglass tubing sections are assembled starting at the bottom and working upward with a 12 inch overlap on each section of tubing.

Assemble the fiberglass tubing sections in an area that is flat and has sufficient room for the length of the assembly. Lay the fiberglass tubing out in the order shown in Figure 1.

Each fiberglass tubing section is inserted into the next section as shown in Figure 1. Assembly is easier if the overlaps in the tubing sections are pre-marked. A dark color felt-tip marker works well.

Mark each fiberglass section as shown in Figure 1 from the end of each fiberglass section using a marker so it will be clearly visible. To include the inside of the compression clamps, make your marks at 13.25”. For the 2.7” tube make the mark at 12”. The suggested overlap is 12” or more depending on use. The more overlap, the stronger the completed assembly.

Locate the hardware pack containing the ten compression clamp halves and ten stainless steel band clamps. Match the compression clamp halves with the appropriate tubing sizes. Loosen the 10 band clamps and slide them in place over the compression clamp halves as shown in Figure 2. Just snug them slightly so they won’t fall off, they will be adjusted and tightened after the clamp halves are properly in place. Two band clamps per compression clamp assembly are used. Align the clamp screws on each section to face the same direction. At final assembly, the body of the element clamp should be positioned between the slits in the compression clamp halves as shown in Figure 3.

Make sure dirt or grass does not adhere to the fiberglass tubing to be joined. Insert the marked end of the tube into the next tube allowing for the overlap as shown in Figure 1 and position the telescoping compression clamp over the joint as shown in Figure 2.

Make sure the body of the band clamps are positioned between the slits as shown in Figure 3 and tighten securely. Continue mating tubes as shown in Figure 4.

Figure 1

Figure 2 - positioning the telescoping clamp assemblies on the fiberglass tubing

Figure 3 - Positioning the metal Band Clamp on the Telescoping Clamp Halves
Where the 3” OD and 2.75” OD tubes join, use three element clamps. Two on the 3” tube to compress the slits and one on the 2.75” tube where it meets the 3” tube as shown in Figure 4.

Figure 4 - Clamp Size and Locations.

You may elect to have the tubing in a shorter length. The fiberglass tubing may be telescoped inward, outward, or removed depending on your application. Keep in mind you want a minimum of 12 inches or more of overlap between tubing sections dependant on location and overall strength required.

Guying

Guying of vertical tubing is strongly recommended for stability. A four level, four point guying scheme provides the best mechanical advantage to prevent wind stress, regardless of direction. The guy lines should also be used during raising or lowering to minimize stress on the lower tube sections.

The **DXE-GUY1000-KIT** has been designed to be used with the **DXE-FTK50A-HD**. This guy kit is ideal for fixed or portable installations.

Figure 5 shows the suggested guying scheme for the **DXE-FTK50A-HD** assembly. The guy ropes are tied to the tubing just above the clamps using a no-slip knot.

Your results may vary since it depends on the length (height) of your particular installation. Guying of vertical tubing is strongly recommended for stability.

Figure 5
Optional Items

**DXE-GUY1000-KIT Guy Kit**

Some vertical masts indicate their antennas do not need guyying. During times of high winds or ice loading however, some of these verticals may sustain damage or fail altogether. With the small amount of effort needed to install a four point guying system, the risk hardly seems worth taking. A four-point guying scheme provides the best mechanical advantage to prevent wind stress, regardless of direction. The guying is intended for stability, and should never be depended on for primary support. The guying kit can also be used for other ground mounted tubing kits, masts or antennas. The guying kits are ideal for fixed or portable installations. Synthetic Textile Industries Double-braided Dacron/Polyester ropes are not weakened by decay or mildew and provide excellent resistance to abrasion. The color sealed black polyester yarn used in the braided jacket also protects the cord from damage due to ultra-violet light.

- 1000' spool
- 3/32" diameter rope
- Double-braided Dacron/Polyester rope
- Excellent resistance to abrasion
- NOT weakened by decay or mildew
- UV-Resistant
- Rated for a load of 260 lbs
- 4 Earth Anchors - 15" long with 3" Diameter Earth Screws

**STI Double-braided Polyester ropes are not intended and should not be used to guy towers.**

**Technical Support**

If you have questions about this product, or if you experience difficulties during the installation, contact DX Engineering at (330) 572-3200. You can also e-mail us at: DXEngineering@DXEngineering.com

For best service, please take a few minutes to review this manual before you call.

**Warranty**

All products manufactured by DX Engineering are warranted to be free from defects in material and workmanship for a period of one (1) year from date of shipment. DX Engineering’s sole obligation under these warranties shall be to issue credit, repair or replace any item or part thereof which is proved to be other than as warranted; no allowance shall be made for any labor charges of Buyer for replacement of parts, adjustment or repairs, or any other work, unless such charges are authorized in advance by DX Engineering. If DX Engineering’s products are claimed to be defective in material or workmanship, DX Engineering shall, upon prompt notice thereof, issue shipping instructions for return to DX Engineering (transportation-charges prepaid by Buyer). Every such claim for breach of these warranties shall be deemed to be waived by Buyer unless made in writing. The above warranties shall not extend to any products or parts thereof which have been subjected to any misuse or neglect, damaged by accident, rendered defective by reason of improper installation, damaged from severe weather including floods, or abnormal environmental conditions such as prolonged exposure to corrosives or power surges, or by the performance of repairs or alterations outside of our plant, and shall not apply to any goods or parts thereof furnished by Buyer or acquired from others at Buyer’s specifications. In addition, DX Engineering’s warranties do not extend to other equipment and parts manufactured by others except to the extent of the original manufacturer’s warranty to DX Engineering. The obligations under the foregoing warranties are limited to the precise terms thereof. These warranties provide exclusive remedies, expressly in lieu of all other remedies including claims for special or consequential damages. SELLER NEITHER MAKES NOR ASSUMES ANY OTHER WARRANTY WHATSOEVER, WHETHER EXPRESS, STATUTORY, OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS, AND NO PERSON IS AUTHORIZED TO ASSUME FOR DX ENGINEERING ANY OBLIGATION OR LIABILITY NOT STRICTLY IN ACCORDANCE WITH THE FOREGOING.

©DX Engineering 2017

DX Engineering®, DXE®, DX Engineering, Inc.®, Hot Rodz®, Maxi-Core®, DX Engineering THUNDERBOLT®, DX Engineering Yagi Mechanical®, EZ-BUILD®, TELREX®, Gorilla Grip®, Stainless Steel Boom Clamps, Butternut®, SkyHawk™, SkyLark™, SecureMount™, OMNI-TILT™, RF-PRO-1B®, AFHD-4® are trademarks of PDS Electronics, Inc. No license to use or reproduce any of these trademarks or other trademarks is given or implied. All other brands and product names are the trademarks of their respective owners.

Specifications subject to change without notice.

DX Engineering - 1200 Southeast Ave. - Tallmadge, OH 44278 USA
Phone: (800) 777-0703 - Tech Support and International: (330) 572-3200
Fax: (330) 572-3279 - E-mail: DXEngineering@DXEngineering.com