



# T-LINER® FAQ

**Q: What is a T-Liner®?**

**A:** A T-Liner® is a one-piece, cured in-place, main and lateral connection liner. The T-Liner® is 100% compliant with ASTM F2561-11. The T-Liner® rehabilitates the main/lateral junction of the pipe where significant inflow & infiltration (I&I) occurs. In conjunction with the Insignia™ Connection Hat and the Insignia™ O-Rings, the T-Liner® is an integral part of structurally sealing a faulty sewer system.

**Q: What length of the lateral can the T-Liner® rehabilitate?**

**A:** The T-Liner® has been used to renew laterals up to 200 feet from the mainline in one continuous, inverted liner.

**Q: Will the T-Liner® stop roots?**

**A:** Yes. The T-Liner® provides watertight main/lateral lining, which blocks roots and also stops infiltration and inflow (I&I) and the negative effects of I&I on a collection system.

**Q: What is the average cost of a T-Liner®?**

**A:** LMK manufactures customized T-Liners® specifically for your repair. The cost of the T-Liner® therefore depends upon the type of project being undertaken.

**Q: Will the T-Liner® stop infiltration?**

**A:** In conjunction with Insignia™ Seals, the T-Liner® creates a structural, watertight, main to lateral lining connection, which will eliminate infiltration at the main to lateral junction.

**Q: What size laterals will the T-Liner® work in?**

**A:** T-Liner® works with lateral pipes ranging in diameter from 3 to 8 inches.

**Q: How is a T-Liner® installed?**

**A:** The T-Liner® is remotely installed from the mainline by robotic positioning using a lateral camera. Depending on the length of the repair, a cleanout may be needed. LMK offers a totally trenchless cleanout installation system called the VAC-A-TEE®, which is easy to install and allows the installer to gain the benefits of having a clean-out without using the conventional methods of excavation. For further explanation of the VAC-A-TEE® process, please see the LMK VAC-A-TEE® Brochure & FAQ.



# T-LINER<sup>®</sup> FAQ

**Q: How much will the T-Liner<sup>®</sup> reduce the pipe diameter?**

**A:** The liner wall thickness is  $\frac{1}{8}$ <sup>th</sup> of an inch (3 mm) for a 4 inch pipe, leaving a pipe diameter of 3.75 inches, and the liner wall thickness is  $\frac{3}{16}$ <sup>th</sup> of an inch (4.5 mm) for a 6 inch pipe, leaving a pipe diameter of 5.625 inches.

**Q: Will a T-Liner<sup>®</sup> work in a Wye shaped connection?**

**A:** Yes, the T-Liner<sup>®</sup> can be manufactured in either a Tee or a Wye shape.

**Q: Will the liner wrinkle at bends?**

**A:** Wrinkling at bends is common for cured in-place pipe. However, new flexible lining materials with superior elasticity allow liners to negotiate bends and reduce wrinkling. If the bend is a sweeping fitting, minimal or no wrinkling may be achieved. If the fitting is a hard bend, the liner will most likely produce wrinkling on the inside curve of the bend. Inversion pressures and the type of lining materials used, will affect wrinkling in bends.

**Q: What size main pipes will the T-Liner<sup>®</sup> work in?**

**A:** The T-Liner<sup>®</sup> works with main pipe sizes ranging from 5.5 to 24 inches.

**Q: How many T-Liners<sup>®</sup> can be installed in a day?**

**A:** Typically 4 to 6 T-Liners<sup>®</sup> can be installed in one day by a knowledgeable crew.



**Q: What is the difference between a T-Liner<sup>®</sup> and a Hat Design?**

**A:** A T-Liner<sup>®</sup> provides a structural renewal of the pipe, as well as a watertight seal at the main/lateral junction. Hat style liners are first generation lateral repairs that rely on adhesion to the pipe. Research confirms that this is an outdated and ineffective method of repair. Further, it has been proven that cured in-place pipe without a compression gasket seal will not create a sealed system and thus will be unable to stop water infiltration/ex-filtration.

(For more details please see Hydrophilic Gasket Sealing Technology: A Solution to Deficiencies in Cured in-Place Pipe). In addition, hat style liners are not compliant with ASTM F2561-11 Standard Practice for Rehabilitation of a Sewer Service Lateral and its Connection.

**Q: What is the method of resin saturation?**

**A:** We use a patented vacuum impregnation system. The bladder is translucent, and the liner is inside of the bladder when the resin is added to the liner during the vacuum impregnation process. Since the bladder is translucent, our workers and the project inspector can visually verify the liner is thoroughly saturated with no dry spots.