



## PERFORMANCE LINER® LATERAL FAQ

### Can the liner be inserted from only one access point?

Yes. The liner can be inserted through a cleanout or from a small excavation and the end of the liner is open so there is no need to access the other end of the liner.



### When inserted through a cleanout how is the liner directed either upstream or downstream?

Our patented soft shoe, allows us to direct the liner either upstream or downstream.



### How do you know the liner is fully saturated with resin?

A vacuum source is attached at the end of the bladder evacuating all air from the liner tube and drawing the thermo-set resin through the liner as it passes through LMK's resin calibration roller. The translucent bladder allows technicians and inspectors to visually verify that the liner is completely impregnated with resin and that there are no resin shy areas.



### What if the cleanout is in the basement?

LMK's Launch tank is portable and easily transported to basements and other hard to reach areas by simply lifting the tank from the pneumatic wheeled cart.

### Do you need a lateral push camera?

Yes, for supplying pre and post video. Also the LMK launch tank includes a pressurized camera port which allows for the insertion of the lateral camera. The camera will travel through the translucent bladder for visual verification of successful placement of the inverted liner prior to curing. The camera port cap closes around the camera's push rod allowing for minimal air loss which can be added back into the inversion tank therefore air pressure is never comprised during inspection of the liner. This is an important feature that allows LMK's Performance Liner® to be visually inspected by CCTV before the





liner is cured and since air pressure is never compromised, the thermo-set resin that was forced into cracks remains in place until the resin is cured.

**How do you know the liner is fully inverted so the end is open and be assured that the liner is not protruding into the main pipe?**

Again, the pressurized camera port allows you to view the liner through the translucent bladder ensuring that the liner has been placed in the proper location which is typically 2 -inches from the mainline pipe. Furthermore, LMK's ISG-Liner™ (Inverted Structural Glass Liner) allows easy inversion but does not stretch in length, so the liner does not protrude into the main pipe during installation like other less precise lining systems. The use of LMK's camera port, proper measurement and advance lining tubes ensure proper placement every time.

**Is it possible start and stop the liner anywhere in the pipe?**

Yes. Once the pipe data is collected, the appropriate sized bladder and liner tubes are cut to length. Then the liner is inserted into LMK's translucent inversion bladder. The liner will be placed in the pipe at a specific location by simply measuring and then positioning the liner in a specific location within the translucent bladder. The liner is then connected to the inversion bladder which allows the liner to be inverted at any give point within the lateral pipe.



**How are side connections in small diameter laterals reinstated without excavating?**

LMK offers a variety of robotic reinstatement cutters available for purchase or available through LMK's rental program



**How does the liner cure?**

Ambient, Steam, Hot Water or Hot Air is used to cure the liner. At ambient temperatures the liner can be cured in 2 -hours or less. Using LMK's steam cure system the liner can be cured as fast as 30 minutes.

**Is inflation pressure ever dropped?**

The liner can be installed where the inflation pressure is never compromised because both the liner and bladder invert together as an assembly. This is an important feature as resin migrates into pipe joints and fractures as the liner is inverted through the pipeline and pressure is never dropped so the resin stays in-place, unlike other less precise 2-step inversion processes.

**How do you cut the ends of the liner open?**

There is no cutting required because the bladder extends beyond the end of the liner keeping the end of the liner fully open.

**How many lateral installations can be performed in a day?**

On average 4 to 6 laterals renewed in one day.



**What size lateral pipes can be renewed?**

Performance Liner® renews lateral pipes from 3” to 8” diameters.

**How many feet of the lateral pipe can be renewed by one liner installation?**

Using LMK’s Lateral Launch Tank, Up to 130’ of 4” liner or 100’ of 6” liner can be inserted through single installation.

**Will the liner significantly reduce pipe size?**

There is a minimal reduction in diameter and the smooth bore interior of cured in place pipe typically improves flow rate, as taught in the manning equation.

**Are there other pipe repair applications suited for Performance Liner®?**

LMK’s Performance Liner® lateral system is often used to renew roof drains, industrial piping, commercial piping, and residential drain and waste piping

**Is the Performance Liner® lateral system chemical resistant?**

Yes. A variety of thermo set resin systems are available based on chemicals and temperature of the effluent. LMK has an engineering staff that will design the liner specifically for your project. Shorty has been tested in accordance with ASTM D5813, D790, D2990, F1216-06, and F2561-09.

**Does the liner stick to the host pipe?**

Sometimes liners stick and sometimes they do not. How do you verify the bond between the liner and the host pipe? No manufactured CIPP product or installation contractor can tell you when the liner sticks and how well it is stuck to the pipe. There is grease in sewer pipes which has a serious effect on adhesion. LMK’s Performance Liner® incorporates patented gasket sealing technology (hydrophilic O-rings) at the end of the lateral liner ensuring the liner is preventing water migration.

**Is the lateral liner root resistant?**

Yes, the lateral liner is a new pipe within a pipe so there are no open joints, cracks or crevices where roots have an opportunity to grow.

**How long will it last?**

LMK’s Lateral liners have an engineered service of 50 -years based on ASTM F1216-09. The service life is based on extrapolation of testing data of the liner's physical properties.

