LINK-PIPE® INC.

Manufacturer of No-Dig Pipe Repair Products

Insta-Liner™

2-27 West Beaver Creek Road
Richmond Hill, ON
Canada L4B 1M8

Tel: 800-265-5696
Tel: 905-886-0335
Fax: 905-886-7323
e-mail: info@linkpipe.com

Insta-Liner™

The patented Insta-Liner™ System from Link-Pipe Inc. is a Trenchless Mechanical Lining (TML) system developed for the continuous repair of long sections of underground pipes and culverts.

The Insta-Liner™ system is used in No-Dig applications where excavation is not cost effective, impossible, or undesirable. Most repairs can be carried out in less time than with other technologies. Installers can be highly productive and reduce costs for their customers.

The core element used in the Insta-Liner™ technology is stainless steel. The annular space between the stainless steel and the host pipe is filled with a grout. Various grouts are available and the choice depends on the specific application. The stainless steel protects the grout from exposure to the environment and adds structural strength to the repair. The result is a cured-in-place pipe repair with a Stainless Steel Protective Cover that has a longer life expectancy and is achieved at an average installed cost that is less than conventional repair methods.

The Insta-Liner™ is currently available in all standard diameters from 6” up to 54”. Section lengths of 18”, 24”, 36”, and 48” are standard. Metric sizes are also available. Larger diameters are available upon request.

Two grades of Stainless Steel are available. SST-316 is used in storm and sanitary sewer lining applications where chemical resistance is an issue. SST-409 is used in culverts where high abrasion is expected.

Installation Instructions

General Overview

Before starting installation, the culvert or sewer line must be inspected to ensure that Insta-Liner™ will pass through the entire length of the pipe. Any irregularities such as dips, out of round conditions, bumps, etc. reduce the diameter of Insta-Liner™ that can be installed. If this is unacceptable, the obstructions must be eliminated. Various tools designed to accomplish this are available from Link-Pipe.

The tools required to install the Insta-Liner™ are very simple.

To assemble the Insta-Liner™ you will need specially configured needle-nose pliers and a 1/8”ø pop rivet gun. After installation, a grouting pump will be needed to fill the annular space with the appropriate grout.

The complete Insta-Liner™ can be installed above ground prior to installation or it can be attached one-by-one in a manhole and pushing it in one section at a time.

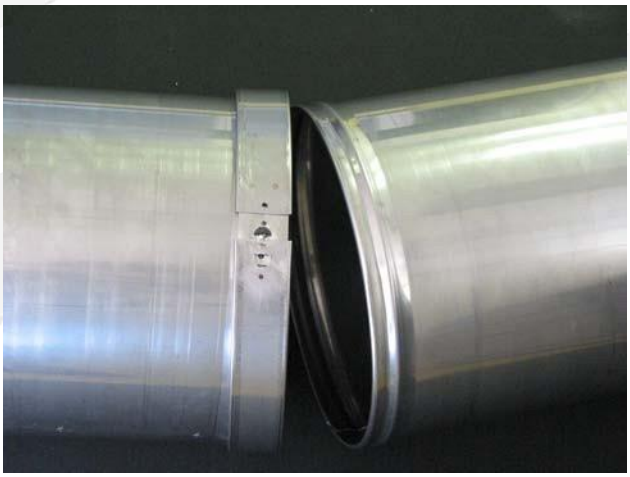
The following section shows a typical installation and all the major steps taken to install the Insta-Liner™.

Installation Procedure

Before repair

The pipe must be cleaned and all obstructions removed.

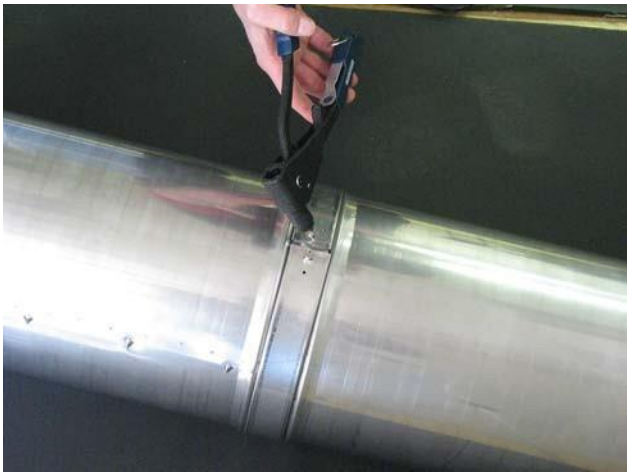
Arrival on site and start of assembly



The above sequence of photos of the Insta-Liner™ stainless steel core shows two lengths

of the liner joined by the flexible Insta-Lock™ band. The Insta-Lock™ band is snapped together with pliers.

The joint is flexible up to approximately 15°.



The pop rivet ensures that the clamp will not become undone during insertion.

All the pieces can be assembled in advance above ground.

End cone makes it easier to pull the liner into the culvert:

Assembly finished and insertion begins:

Grout injection into annular space

The light weight assembly can be pulled in from the other end

End section is now attached:

Insertion completed

Landscaping completed

Where have you installed the Insta-Liner™?

The Insta-Liner™ has been installed in various culverts throughout Ontario.

Frequently Asked Questions

How does the Insta-Liner™ change the hydraulic capacity of the culvert?

Compared to corrugated steel pipe (CSP), the Insta-Liner™ Stainless Steel liner has a hydraulic resistance that is significantly lower. In many cases the hydraulic capacity of the pipe is increased even though the diameter has been marginally reduced.

The formula for calculating the hydraulic resistance (Manning Formula) is provided in the AWWA Manual M-11.

How does the installed cost of the Insta-Liner™ compare with other technologies?

When one compares rehabilitation costs, it is best to evaluate the total installed cost of the alternative methods being considered. The life expectancy of the repair must also be included since once that is exceeded, the repair will have to be repeated. The longer the operating life of the repair, the lower the net present value of the repair will be.