

Frequently asked questions of sewer authorities

Is the CableRunner system the only solution for installing fiber optic cables through sewer networks? Is it safe?

The CableRunner system is the only technology available for man-accessible and non-accessible sewers that streamlines the installation process resulting in a safe, efficient and cost-effective process. CableRunner owns patents worldwide for its technology. There haven't been any incidents with any of our installations in the past 15 years.

Does the CableRunner fiber optic installation cause any blockage?

The City of Vienna Sewer Department's main objective in designing the CableRunner system was to address debris buildup and blockage prevention. All CableRunner products and devices are developed and tested to offer resistance under extreme conditions. High pressure cleaning does not affect any of our systems. Every fiber optic installation is finished off with the patented CableRunner covers that prevent blockages and buildups.

Can the system be used with any sewer wall composition?

The CableRunner system was invented by the City of Vienna Sewer Department, which has maintained and rehabilitated Vienna's wastewater system for hundreds of years. Since the beginning, the engineers have documented their extensive knowledge and experience with various sewer wall materials such as bricks, concrete, ferroconcrete, HDPE, PP, GRP etc. With these preconditions in mind, the CableRunner system has been constructed to work with almost every material.

Does drilling damage the pipes?

CableRunner International has successfully used drilling techniques in its fiber-in-the-sewer installations for the past fifteen years without any incident or compromise of sewer pipe integrity. The specifically developed screw mounting technique for use in small pipes minimizes the pressure of displaced material that is normally placed on the pipe when using regular drilling techniques. The mounting screw immediately seals the drilled hole.

How are cables prevented from rodent attacks?

Cables are protected in a threefold manner: The cable tray is made of PVC, it houses blowing tubes made of HDPP and the fiber cable itself is protected by coatings.

Are there any limitations regarding the age of the sewer?

In Vienna, there are installed fully functional cables in sewers that are hundreds of years old. There is no limitation to the age of the sewer.

What happens when the sewer breaks?

Most municipalities regularly inspect and maintain their sewer systems, taking steps to prevent sewer breakage. If a break actually should happen, the small affected part of fiber optic cables (splice box to splice box) can be rerouted or temporarily rerouted while the fiber optic cables are being replaced. Moreover, the connection usually still is fully functional in case of a break as the network is designed in rings, which means having a connection from both sides.

What sewer condition needs to be given to perform robot installations?

The sewer pipe has to be intact. In case of sections that are cracked, broken or collapsed, these have to be replaced. And there shouldn't be any root intrusion as heavy root cutters could harm the cable trays.

What impact does a CableRunner International installation have on the capacity in an existing sewer and how does it impact cleaning and televising of the sewer?

CableRunner International installations have minimal, if any impact on existing sewers. The pre-inspection identifies potential trouble spots that the city can then rectify, improving the overall sewer environment. Only sewers that are deemed suitable for installation are used.

Do sewer pipes have to be cleaned before robot installations?

This depends on the level of sludge at the bottom of the pipe – major debris has to be removed. The robot has to be able to move easily through the pipe for the mounting process.

Is the robot able to work in water?

The robot can work in water, but the water level should not exceed 30% of the pipe diameter as there are 3 cameras for remote control function and the image is better when the cameras are not underwater.

Is there a danger for the work crew when entering sewers?

A pre-entrance inspection details proper security measures, including continuous measurement of (potentially) dangerous levels of oxygen, CO, CO₂, H₂S, LEL and other gases that may pose a health or flammability threat. Proper aeration and ventilation of the sewer is also covered in the pre-entrance inspection. Those are common procedures for every sewer department worldwide.

What are other precautions to perform safe installations?

For traffic safety, the installation unit has a signaling system. For workers that enter sewers, the air quality is monitored and, if necessary, aeration is provided. A cable winch safely transports technicians. Communication systems are used to maintain contact between workers above and below ground. Workers have to wear special protective clothing (helmets with lights, special overalls, rubber boots, tools etc.).

Can high voltage cables and fiber optic cables be deployed in one cable tray?

Yes, theoretically, these cables can be placed into one cable tray. It is very important to use submarine cables (specially shielded) and to implement additional safety/security regulations that are determined during the planning phase of the project.

What equipment is required to run the robot?

The installation unit is a complete self-contained system that is realized and implemented in a container mounted on a truck. The container is equipped with material, a cable tray assembling station, workshop, air-conditioning, an operating room, 2 robotic systems, power generator, air compressor and tools.

What are power supply and pressure requirements?

The system is self-contained. Everything required to perform installations is stored in the installation unit.