

Partial rehabilitations/liner connections

We set the standard!

**QUICK**  **LOCK**



**UHRIG**



Canal technology

# QUICK LOCK

## V4A-liner for application in pipe systems

### System description

For many years, the Quick-Lock system has been used successfully as a repair system for trenchless rehabilitation. Quality and sustainability are the basis of our development and production. The positive long-term experiences of clients and Quick-Lock installation partners throughout the world ensure local patch repair at the highest level for you too.

### How it works

- The Quick-Lock system seals and stabilizes damage completely by mechanical means, without any chemicals and is suitable for all pipe materials.
- The patented locking system ensures that the sleeve stays permanently in position.
- After rehabilitation, the sleeve has its own static capability and absorbs the natural tectonic movements of the pipes.
- For repairs in longer damages the Quick-Lock sleeves can be consecutively installed in series.

### Requirements

The Quick-Lock sleeve is expanded with a compressor and the Quick-Lock packer for each CCTV crawler camera or robot system.

### System advantages

- Simple installation
- V4A stainless steel and EPDM long-life materials
- No chemicals
- Approved according to building legislation
- With statics for old sewer pipes condition type II
- Resistance to high pressure rinsing according to DIN 19 523
- Low investment in system technology

### Materials

The materials used, V4A stainless steel and EPDM rubber, have proven their reliability for decades in the area of pipeline construction. The stainless steel with its material quality 1.4404 (316L) is practically indestructible for an almost unlimited period of time when used in sewer network under normal conditions.

The EPDM rubber corresponds to the state of the art in sealing technology for pipeline construction and offers high life expectancy as well as durability.

For special applications in industry, refinery and saline waters, we offer stainless steel sleeves in special alloys and the rubber gasket in NBR quality on request for applications concerning oils, fats or hydrocarbons. For drinking water applications a sealing gasket with KTW approval (German water regulations advisory scheme) is available.



### **Quality and certification**

According to the DIN 19523 standard, the Quick-Lock system fulfills the same requirements as a newly installed pipe system. The necessary and successfully achieved requirements were 60 jetting sequences with a pressure of 110 bar on the jetting nozzle, followed by a leak test.

By using the Quick-Lock system the stability of the pipe is restored. Quick-Lock is the only partial rehabilitation system with statics for old pipes condition type II based on a hydrostatic water pressure of a 5 m water column with double static reliability.

# Area of application

The area of application for the Quick-Lock sleeve is manifold. When using the Quick-Lock sleeve, it doesn't matter whether it is horizontal or vertical, above or below water level. Due to the high quality and durability of the materials used, Quick-Lock can be used not only for sewer rehabilitation but also in the area of drinking water or in industrial applications.

## Trenchless technology

The Quick-Lock system can be utilized successfully for different damages:

- Cracked systems
- Fragmented pipes
- Infiltration and exfiltration
- Root intrusion
- Leaks
- Overcoming joint displacement

If the damage is longer than the sealing range of a single sleeve, the Quick-Lock sleeves can be interconnected forming on continuous sealed pipe. The overlapping rubber gasket provides a secure seal.

## Industrial applications

The materials used for the Quick-Lock sleeve, V4A stainless steel and EPDM, have a high corrosion and heat resistance. This opens up a multitude of application possibilities in the area of industrial pipe systems. The V4A stainless steel 1.4404 can also be used limitedly at high pollutant concentrations of acids and lyes. EPDM can be installed at temperatures up to 120 degrees Celsius and is resistant to high concentrations of acids and lyes. Before the use of Quick-Lock in industrial applications, the durability of the V4A stainless steel and the EPDM gasket should be tested by means of a sewage analysis.

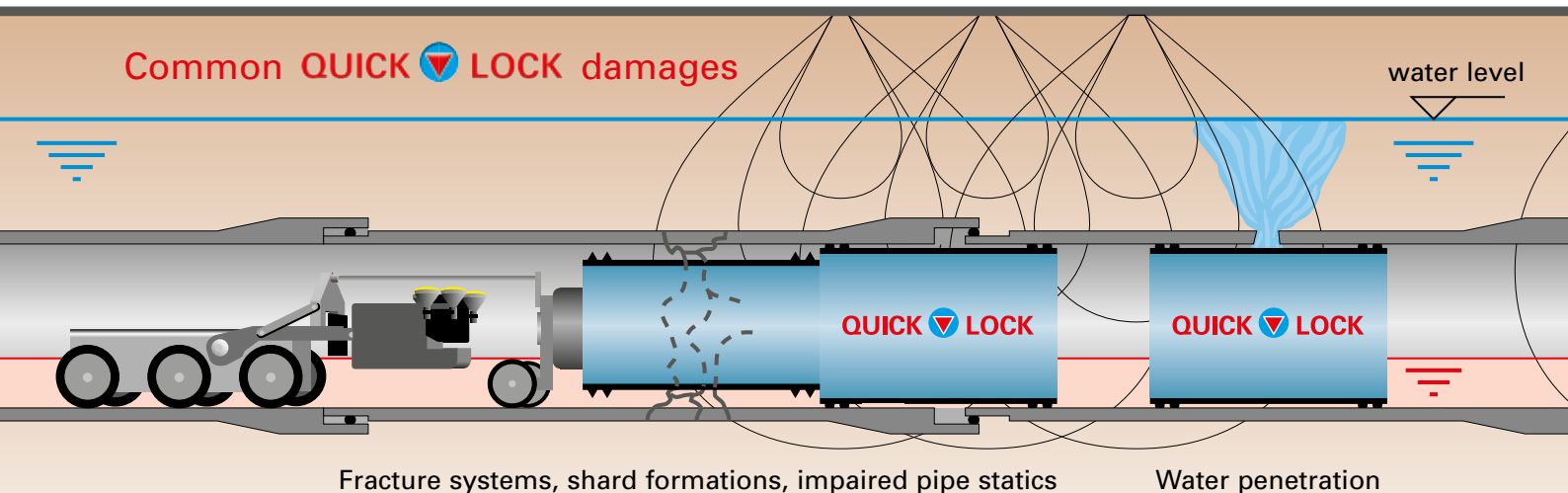


## Mobile applications

If a construction site is not accessible by rehabilitation truck, as may be the case with disposal sites, rail drainage plants or tunnel drainage, then the Quick-Lock can be utilized in a mobile way thanks to the portable equipment.

## Pressure pipes

The Quick-Lock system can be utilized in pressure pipes with internal pressure of up to 10 bar.



Certified by:

Deutsches  
Institut  
für  
Bautechnik

DIBt

ASTM  
INTERNATIONAL  
Standard for Specification

WRc  
APPROVED

NSF

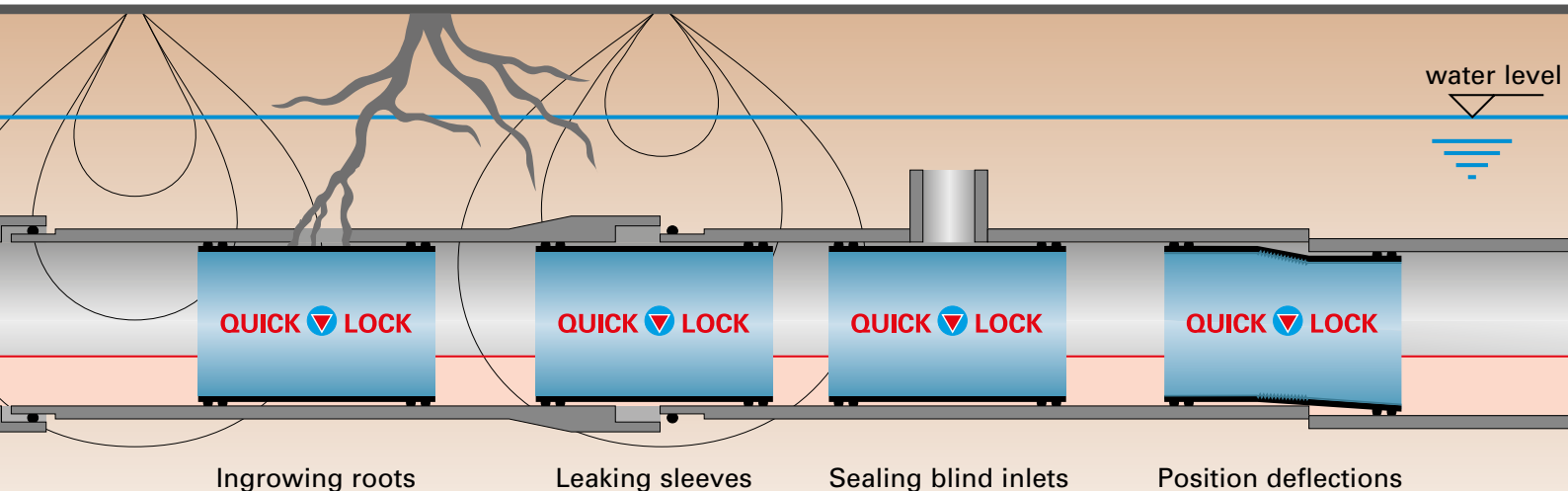


#### Drainage area

Quick-Lock sleeves can be produced in a perforated version for use in wells, horizontal wells, and seeping pipes. The seeping function remains, the rehabilitated pipes are stabilized structurally .

#### Pre-sealant and pre-stabilization

In case of extreme infiltration or for static stabilization, the Quick-Lock system can be used as a pre-sealant before using hose liner systems. The installed Quick-Lock sleeve can hardly be seen under the liner.



# Quick-Lock LEM

## System description

The Quick-Lock liner end sleeve is a system for connecting liner systems to pipes and buildings. The ring space between the liner and the old pipe is permanently sealed and the liner end is protected against the mechanical influences of high pressure cleaning.

## Operating principle

- The operating principle of the liner end sleeve resembles the well proven Quick-Lock system.
- The EPDM rubber gasket has been designed in a way so that all common liner wall thicknesses (GFK) can be compensated in the respective nominal width.



## Requirements

For the installation of the Quick-Lock liner end sleeves only a set of air-powered cutting tools, an installation balloon suitable for the system or the Quick-Lock BIG offset tool for accessible profiles are required.

## System advantages

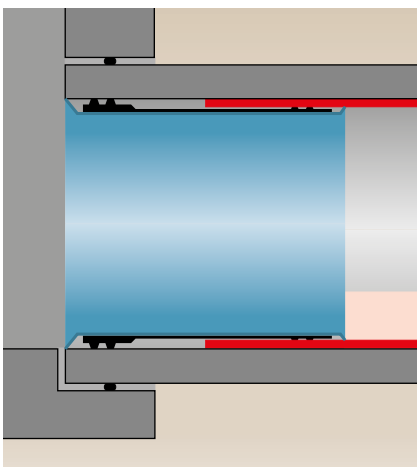
- Simple installation
- Long-life materials
- No chemicals
- Approved according to building legislation
- Tight and high pressure rinsing resistant, IKT tested (DN 150 – DN 600)
- Compensation for shrinkage behavior of GFK liners

## Pressure pipes

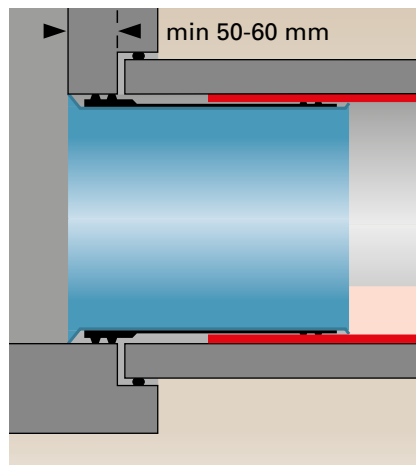
The Quick-Lock system can be utilized in pressure pipes with internal pressure of up to 10 bar.

## Area of application

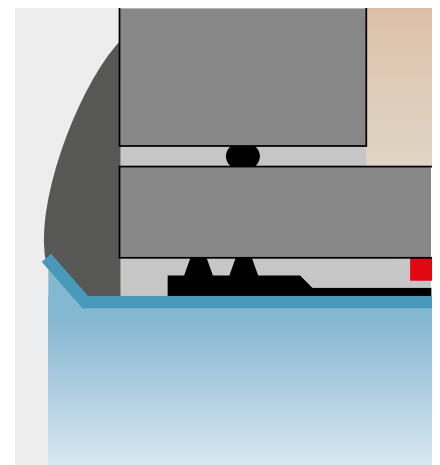
The right application of the Quick-Lock liner end sleeves depends on the respective shaft situation. There are three integration variants for the liner end sleeve:



**Integration liner old pipe**  
Normal case



**Pipe integration liner - shaft**  
The requirement is that the surface of the pipe integration shaft is suitable for sealing and that no angulation of the old pipe - shaft integration is visible.  
Max. angulation 1 degree.



**Sleeve edge as plaster support**  
Raised sleeve edge protrudes approx. 1-2 cm into the interior of the shaft and serves as a neat finish for the plastered pipe integration.

# Quick-Lock BIG

## System description

The Quick-Lock BIG system has been further designed and developed as a divisible sleeve for the rehabilitation of man entry pipes and culverts.

## Operating principle

- The Quick-Lock BIG system is based on the compression principle and the materials V4A stainless steel (base material 1.4404) and EPDM.
- The separable part ring can be inserted into the pipe or culvert system through existing normal small entry manholes
- At the damage site the system is expanded and fixed with the Quick-Lock BIG tool.

## Requirements

Only the assembly tool is required for the installation of the Quick-Lock BIG sleeve.

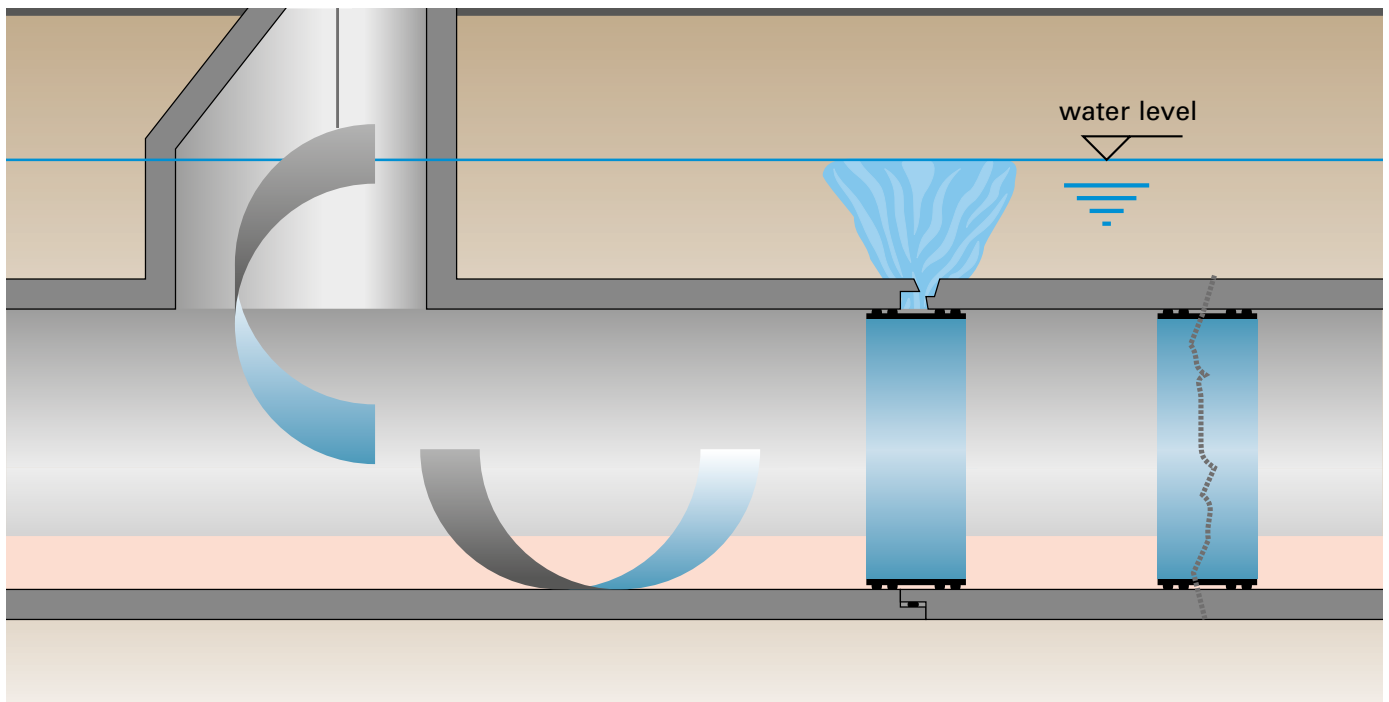
## System advantages

- Simple installation
- Long-life materials V4A stainless steel and EPDM
- Absorb the natural tectonic movements of the pipe
- No chemicals
- Materials are durable when used in sewer network under normal conditions for an almost unlimited period of time.



## Area of application

Quick-Lock BIG has been designed for the rehabilitation of damages in man entry pipes and culverts. Classic damages are leakages at joints and radial cracks. Even damages which are longer than the length of the sleeve can be repaired in connection with an overlapping rubber.



# Quick-Lock Well

## System description

The Quick-Lock system has also become well established in the area of rehabilitation of drinking and service water wells. It does not matter whether the Quick-Lock system is installed horizontal pressure piping or vertical weellpiping. Many partial damages can be repaired sustainable by Quick-Lock.

## Operating principle

- The installation of a Quick-Lock sleeve in a vertical well pipe is very similar to the application in a horizontal pipe system.
- In well rehabilitation, the offset pressures must be adjusted to the particular water depth (10 meter water column is equivalent to 1 bar of higher offset pressure).
- We offer special offset equipment for well rehabilitation and approved materials for drinking water.
- The Quick-Lock packer for well rehabilitation is especially designed for vertical applications.
- Special "feet" keep the sleeve on the packer and guide the packer centrally through the well piping.

## Requirements

- A well camera
- A tripod with winch
- The Quick-Lock well packer
- Ballast against buoyancy
- Compressor

## System advantages

- Simple installation
- Long-life materials
- Absorb the natural tectonic movements
- No chemicals
- Approved according to building legislation
- Statics for old sewer pipes condition type II
- Low investment in system technology

## Specifications

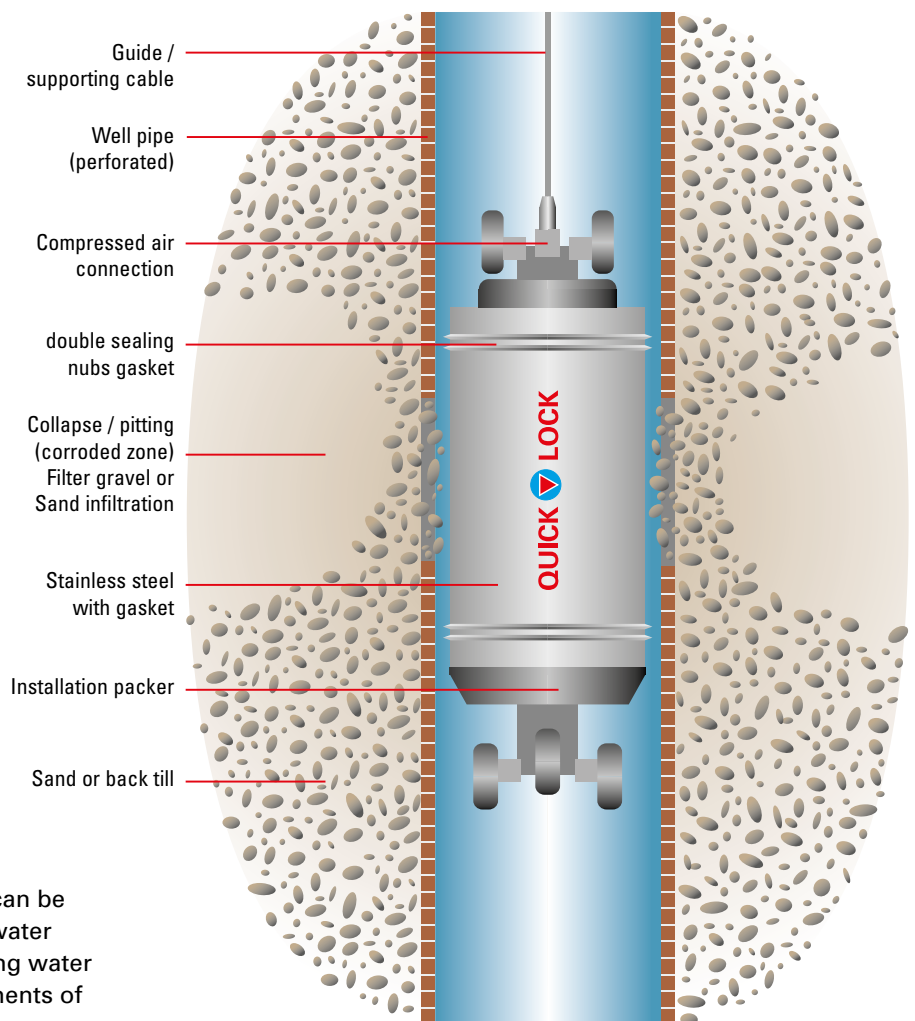
### Materials

The utilized stainless steel 1.4404 (316L) can be used without any problems for drinking water systems. You will receive a special drinking water gasket, which complies with the requirements of the KTW recommendations of the German Federal Ministry of Health.

### Quality and certification

The quality standard is similar to that of the classic Quick-Lock sleeve.

Only the gasket is adjusted with regards to quality to match the requirements of the German Federal Ministry of Health (KTW recommendation).





# Quick-Lock Flex

## System description

The new Quick-Lock Flex sleeve can be used in case of position deviations of pipe connections.

## Operating principle

The operating principle of the Flex sleeve is similar to that of the proven Quick-Lock system. Based on the compression principle and the materials V4A and EPDM.

## Requirements

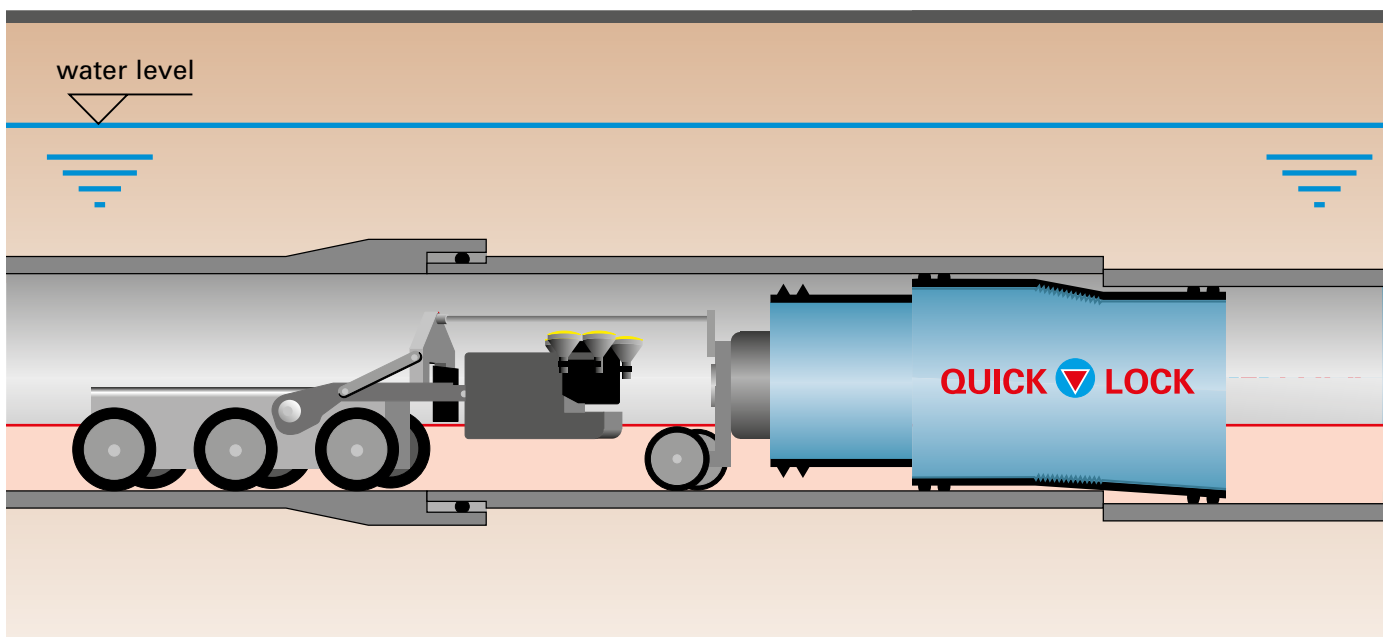
- Camera or robot system
- Compressor
- Quick-Lock installation packer

## System advantages

- Works completely with mechanical means
- Simple installation
- Long-life materials
- No chemicals
- Long service life
- Low investment in system technology
- Quick
- Economically
- No preparation work required (only cleaning)

## Area of application

Quick-Lock Flex was designed for application with radial displacements up to 2.5 cm and / or angular axle deflection up to max. 10° without further preliminary work.



# Quick-Lock Mini

## System description

The new Quick-Lock Mini for the rehabilitation of damages in pipe nominal widths DN 100 and DN 125.

## Operating principle

The Quick-Lock Mini works completely with mechanical means.

Based on the compression principle and the proven materials V4A and EPDM.

The installation packer especially designed for the Quick-Lock Mini is equipped with an adjustable chassis.

## Requirements

- Camera or robot system
- Compressor
- Quick-Lock installation packer

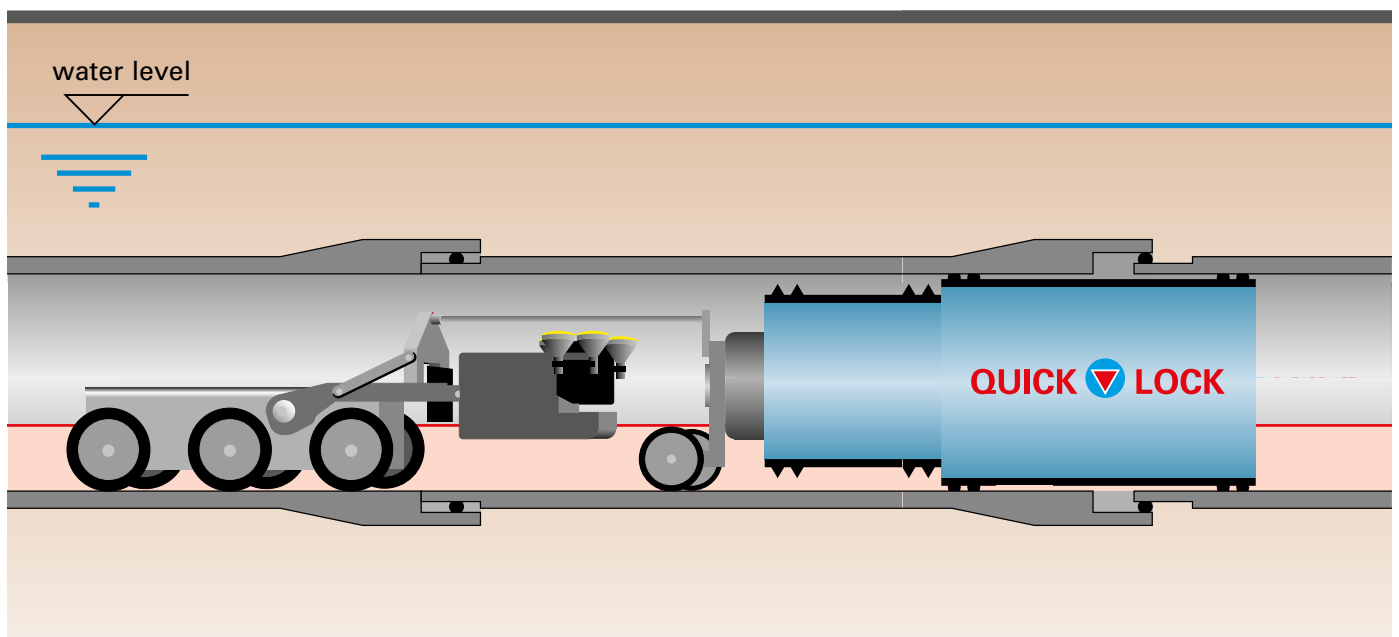
## System advantages

- Purely mechanical installation
- User-friendly
- Long-life materials
- No chemicals
- Long service life
- Quick
- Economically
- Low investment in system technology

## Area of application

- Leakages at the joints
- Infiltration and exfiltration
- Fracture systems

To be installed in standard pipe systems, downpipes and district heating piping.



# Product range



## Quick-Lock for non-man entry pipes

Diameter	Overall length	Pipe internal pressure	Pipe external pressure
DN 150 to 400	400 mm	10 bar	1,5 bar
DN 450 to 800	500 mm	10 bar	1,5 bar



## Q-L BIG for man entry pipes, \*two-piece, \*\* three-piece

Diameter	Overall length	Pipe internal pressure	Pipe external pressure
DN 800 to 1300 *	200 mm	1 bar	1 bar
DN 1400 to 2000 **	200 mm	1 bar	1 bar



## Q-L liner end sleeve \*one-piece, \*\* two-piece, \*\*\*three-piece

Diameter	Overall length	Pipe internal pressure	Pipe external pressure
DN 150 to 400 *	250 mm	10 bar	1,5 bar
DN 450 to 800 *	300 mm	10 bar	1,5 bar
DN 700 to 1300 **	300 mm	10 bar	1,5 bar
DN 1400 to 1600 ***	300 mm	10 bar	1,5 bar



## Q-L Well for supply lines

Diameter	Overall length	Pipe internal pressure	Pipe external pressure
DN 150 to 400	400 mm	10 bar	1,5 bar
DN 450 to 800	500 mm	10 bar	1,5 bar



## Q-L Flex for position deviations

Diameter	Overall length	Pipe internal pressure	Pipe external pressure
DN 200 to 400	360 mm	0,7 bar	0,7 bar
DN 500 to 600	460 mm	0,7 bar	0,7 bar



## Q-L Mini for standard pipes, down pipes

Diameter	Overall length	Pipe internal pressure	Pipe external pressure
DN 100 to 125	90 mm	In process	In process
DN 100 to 125	140 mm	In process	In process

Customized products available on request.

# UHRIG



## Kanaltechnik

**UHRIG**

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