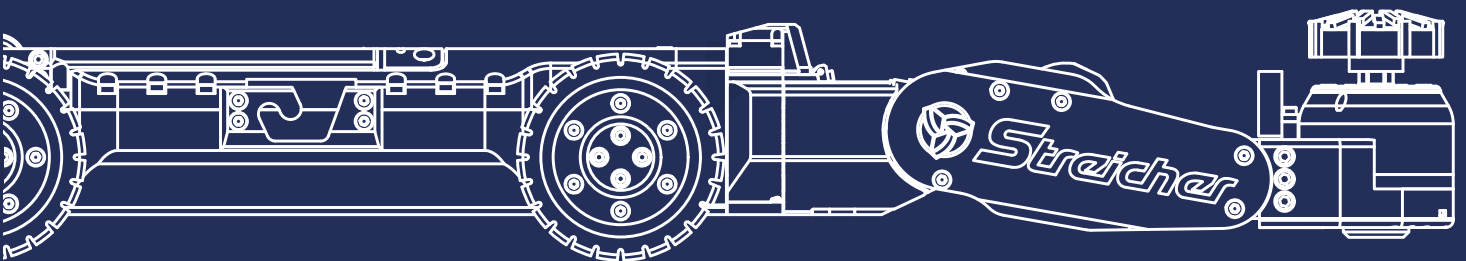
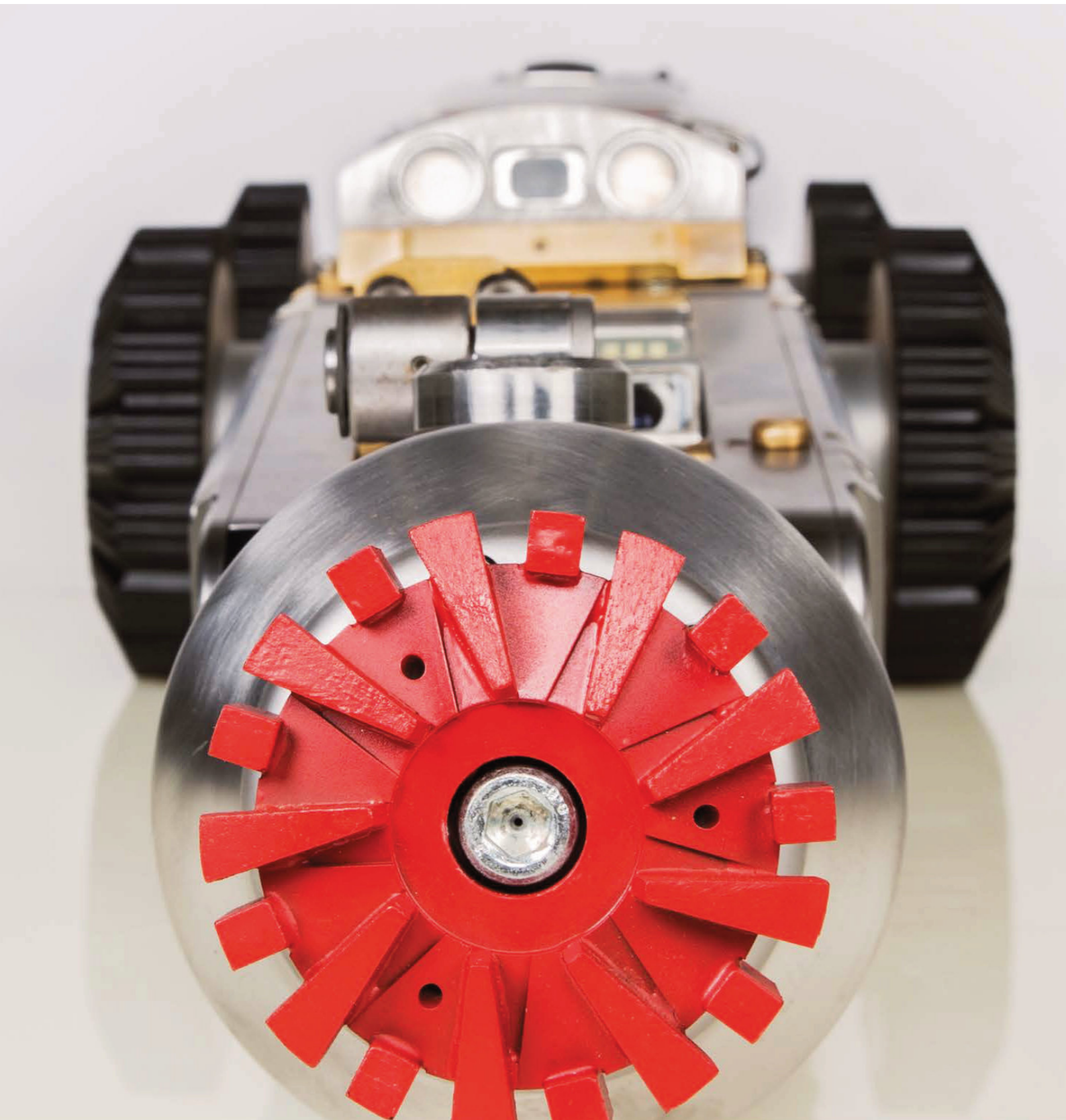


ROBOTIC SYSTEMS VEHICLE EXPANSION SERVICE

FOR SEWER REHABILITATION

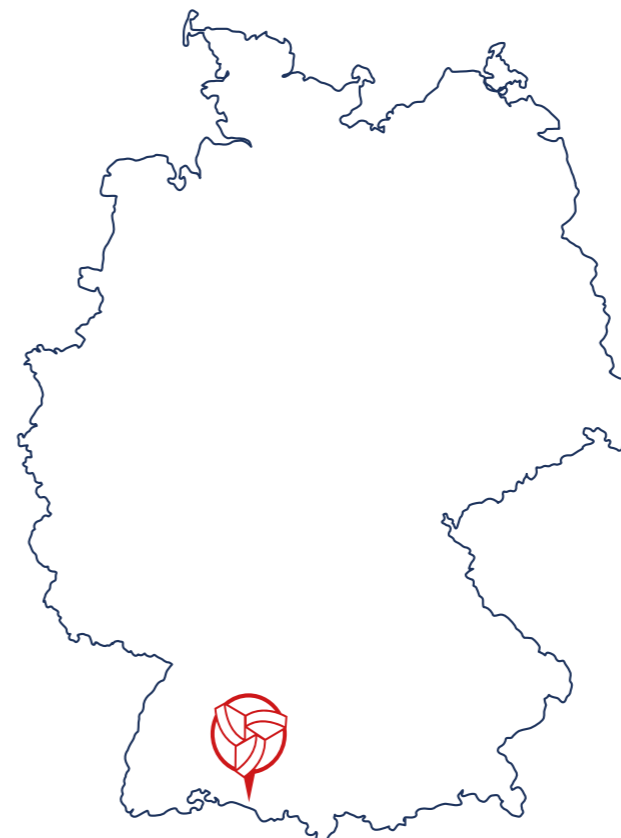


Manufacturer of robotic systems for over 30 years



Due to the increasing awareness of environmental protection worldwide, the technical environment of sewer rehabilitation comes more into focus. The maintenance of wastewater infrastructure requires efficient and reliable technical equipment that can be used anywhere in the world and that meet the highest quality requirements. In this environment, innovative strength and dynamics are important prerequisites for system providers. With over 30 years of experience in the industry, we at Streicher are up to this challenge and are positioning ourselves in the market with our products and services with an eye to the future.

Our operator-friendly products, high availability and excellent service ensure that our comprehensive solutions are demanded for applications worldwide. All spare parts are available at any time. On request, rental robots can also be sent directly to the construction site. Our activities in the sectors of development, manufacturing and sale of equipment for the monitoring and renovation of all types of duct systems are certified according to **ISO 9001**. To provide our customers with the best solutions in the future, we concentrate on continuous improvement, close customer relationships and an extensive partner network.



Contact

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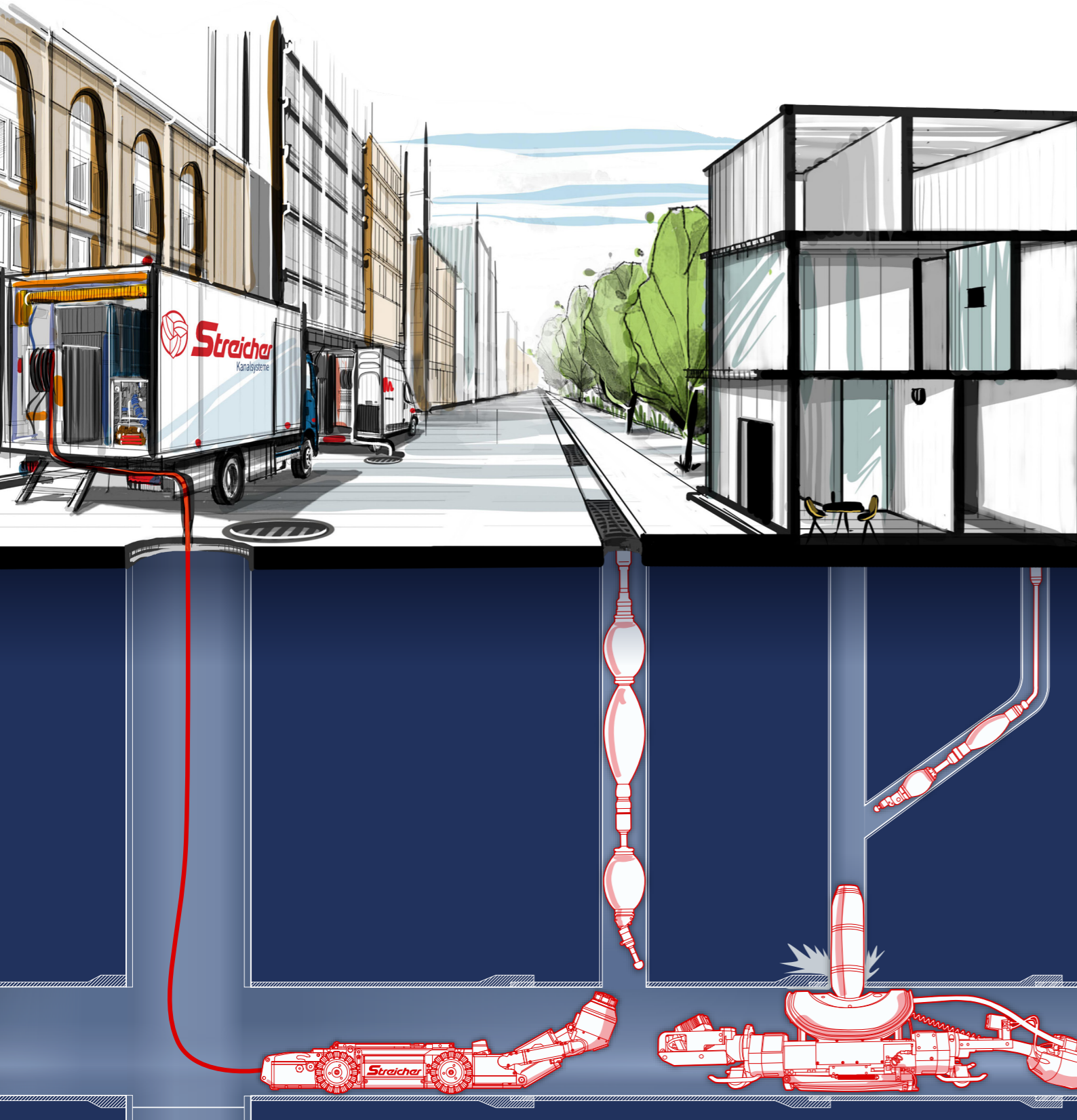
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SERVICE

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Shipping of spare parts

Germany

- Delivery within 24 h!
- Order by 2pm, receive goods the following day
- Deliveries directly to the construction site
- Saturday delivery

Worldwide

- Delivery within 48h!
- Order by 2pm, receive goods the following day

Repair

Repair time: Ø 2 working days

Availability of spare parts

With our 99% stock and 6 storage towers, we assure you an unbeatable service with a delivery time of 1 working day.

Spare parts order:
service@streicher-ks.de

Personal contact

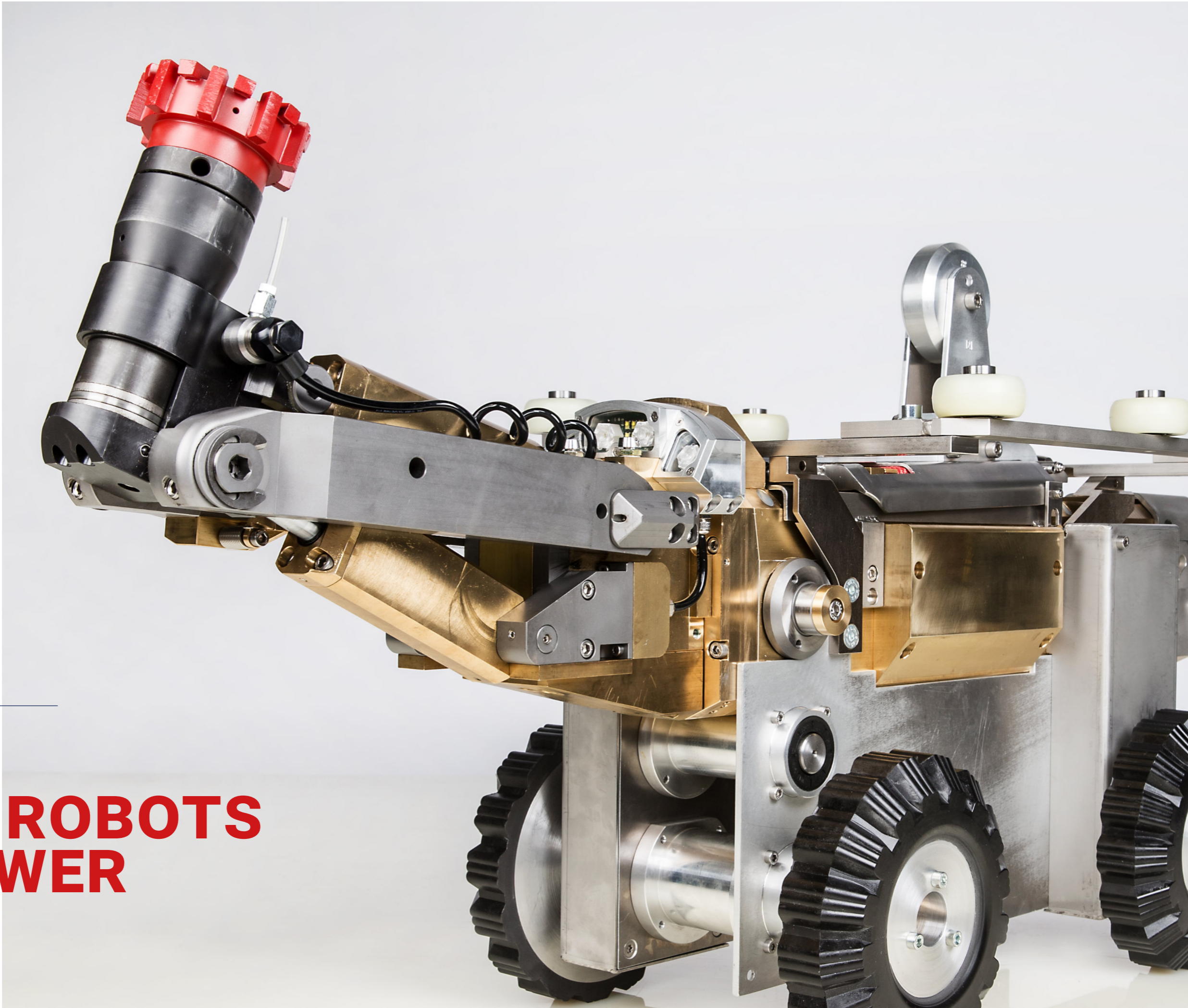
No hotline!
Direct personal contact for questions about mechanics, electrics, repair registration or telephone assistance. Personal contact person.

Rental robots

All robot models are also available to our customers as loaners while their own robot is being repaired. This means that work can be continued without delay.

Rental park

The purchase of a new milling robot is not worthwhile for you at the moment? Rent our products! You have a special case or you are not sure which product is the right one for your application? Then we look forward to your call or message.



MILLING ROBOTS MAIN SEWER

DN140 - 1.200

ELECTRIC MILLING ROBOT



Electric milling robot
EF130

- 3 axle cutting arm with extension up to 80mm
- One swivel and one rigid camera with dimmable LED lighting
- Permanently printed with oil-free and dry air
- Wide swivel angle of 600°
- Due to water cooling, the milling motor can be heavily overloaded in continuous operation
- Milling motor speed adjustable
- Powerful and precise control of the milling arm through high reduction gearbox
- 100% electric drives

Accessories:

- Lateral connection packer adapter
- Lateral connection packer control
- Adapter for ultra high pressure water jetting **NEW**

Technical data

Pipe dimensions	circular profile: DN140-400
Weight (only milling robot)	45 kg
Drive	electric
Milling arm drive	electric
Milling motor drive	electric
Milling motor power	2 kW
Length supply cable	150 m



Electric milling robot
EF200

- 3 axle cutting arm with extension up to 200 mm
- One swivel and one rigid camera with dimmable LED lighting
- Permanently printed with oil-free and dry air
- Wide swivel angle of 600°
- Due to water cooling, the milling motor can be heavily overloaded in continuous operation
- Milling motor speed adjustable
- Powerful and precise control of the milling arm by mini hydraulic unit in the robot, hydraulic supply line to the vehicle is not required

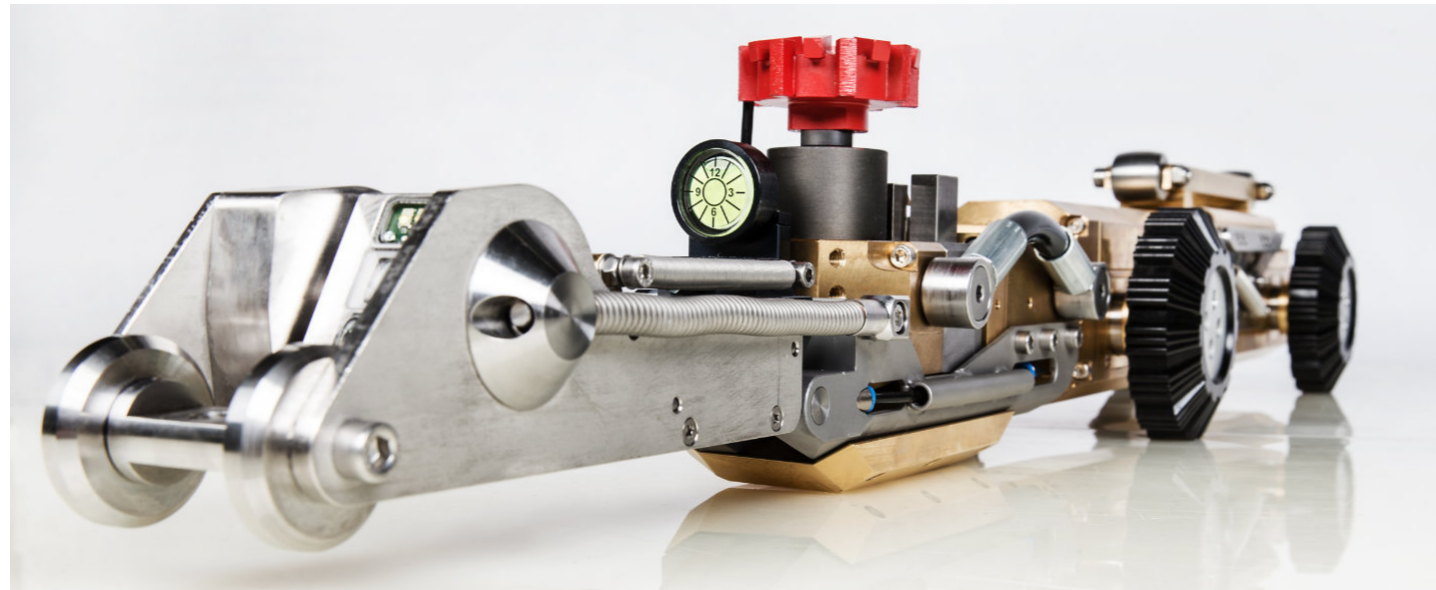
Accessories:

- Filling unit
- Chassis
- Egg-shaped profile support
- Lateral connection packer adapter
- Lateral connection packer control
- Adapter for ultra high pressure water jetting **NEW**

Technical data

Pipe dimensions	circular profile: DN 200-600 (DN1.000) egg-shaped profile: DN 250/375 - 800/1.200
Weight (only milling robot)	85 kg
Drive	electric
Milling arm drive	electric/hydraulic
Milling motor drive	electric
Milling motor power	1kW, 2kW and 4kW
Length supply cable	150 m

HYDRAULIC MILLING ROBOT



Hydraulic milling robot
HF130

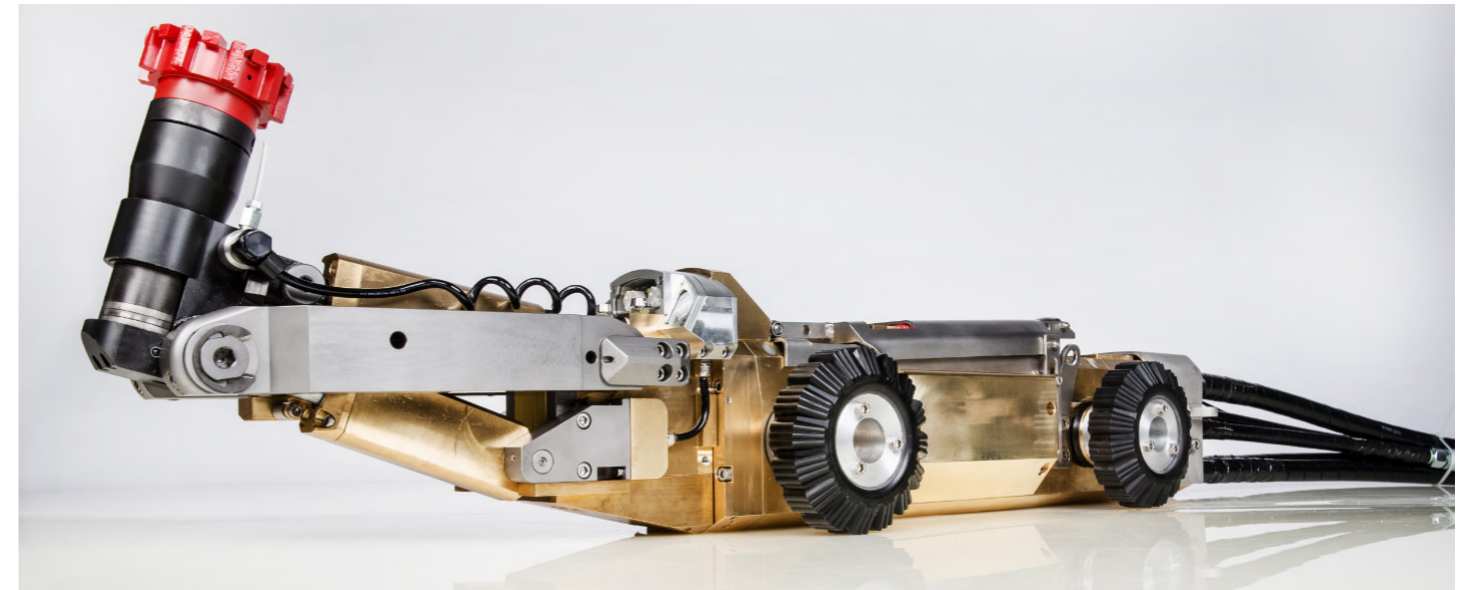
- 2 axle cutting arm with extension up to 60 mm
- Swivelling colour camera with power LED and foldable camera arm
- Permanently printed with oil-free and dry air
- Wide swivel angle of 600°
- Diagnostic LED on the robot

Accessories:

- Additional weight for better traction
- Front milling device

Technical data

Pipe dimensions	circular profile: DN130-300
Weight (only milling robot)	55 kg
Drive	electric
Milling arm drive	hydraulic / electric
Milling motor drive	hydraulic
Milling motor power	2 kW
Length supply cable	75 m (100 m)



Hydraulic milling robot
HF200

- 3 axle cutting arm with extension up to 200 mm
- Swivelling colour camera with power LEDs
- Permanently printed with oil-free and dry air
- Wide swivel angle of 600°
- Diagnostic LED on the robot

Accessories:

- Filling unit
- Chassis
- Egg-shaped profile support
- Lateral connection packer adapter
- Lateral connection packer control
- Adapter for ultra high pressure water jets **NEW**

Technical data

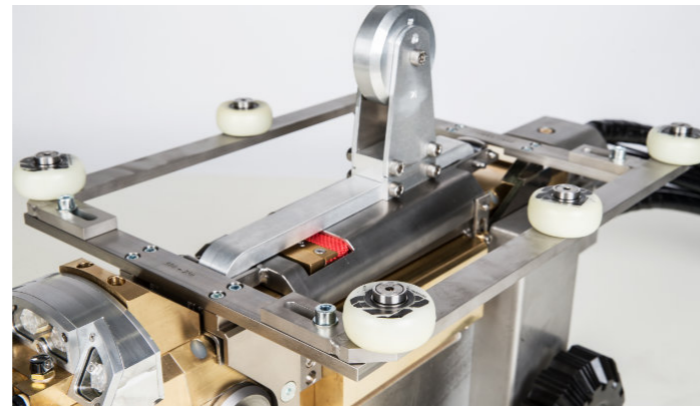
Pipe dimensions	Circular profile: DN200-800 (with accessories DN1.000) egg-shaped profile: 250/375 – 800/1.200
Weight (only milling robot)	90 kg
Drive	electric
Milling arm drive	hydraulic/electric
Milling motor drive	hydraulic
Milling motor power	2 kW
Length supply cable	75 m (100 m)

ACCESSORIES



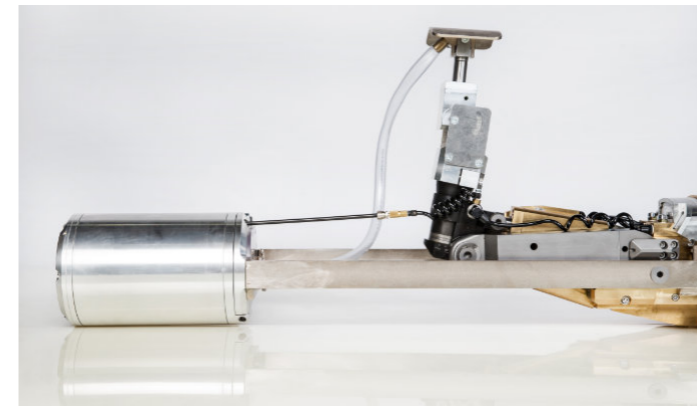
Chassis HF200 / EF200

- Extension for the working radius of the robot in circular and egg-shaped channels with larger dimensions
- Easy mounting on the underside of the robot
- Wheelsets are driven directly by the robot via a gearbox
- Chassis 600 for DN 450-600
- Chassis 1.000 for circular profile DN 700 to 1.000 and egg profile 500/750 to 800/1.200



Egg-shaped profile support HF200 / EF200

- Additional stability of the robot when using chassis
- The support wheels can be adapted to all egg-shaped profile dimensions via cross struts and adjusting screws
- Can be used for egg profiles 250/375 to 800/1,200



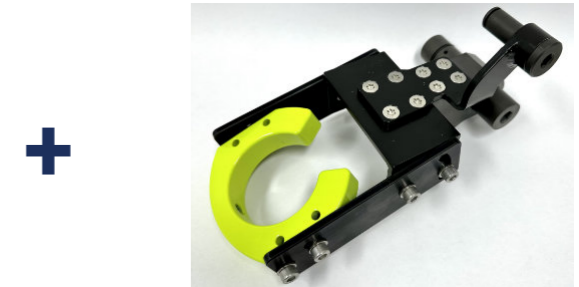
Filling unit HF200 / EF200

- Additional system for filling damaged areas consisting of supply cartridge and filling tool
- The putty is squeezed out at the damaged area and filled with the robot arm
- Easy mounting on the HF200 / EF200 robot
- The cartridge has a filling volume of 2 liters and can be filled with an epoxy resin mixture or mortar
- Status of the supply quantity in the cartridge is displayed to the user via LEDs
- Various trowel attachments for longitudinal and transverse cracks
- Spring-loaded trowel tool for clean and uniform processing
- Collapsible for easy entry into the main channel

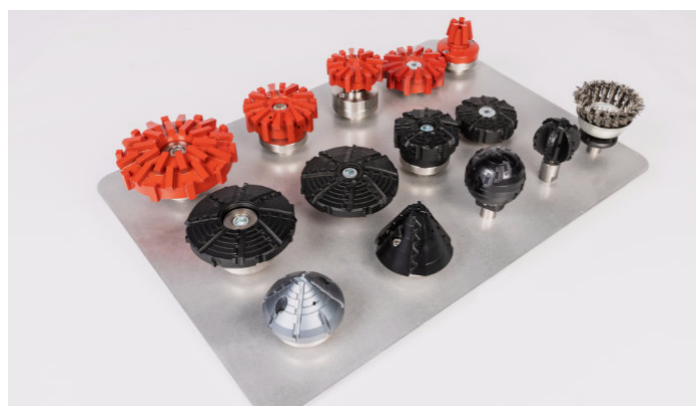


Hat set control HF200 / EF200

- System for controlling HutlinerPacker®, hat profiles and short liners.



- Adapter for positioning of HutlinerPacker®, hat profiles and short liners



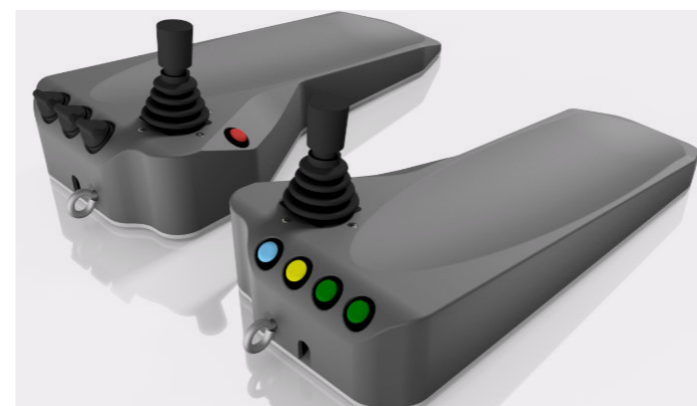
Milling tools

We rely on innovative diamond cutting materials for our milling tools. Through continuous testing with the manufacturer, we have the right tool for every application.



EF-remote control NEW EF130 / EF200

- Operation of most robot functions outside the vehicle, especially when inserting into the canal
- Range up to 150m



Ergonomic control console NEW EF130 / EF200

- Access to touch display functions
- Supports ergonomic posture

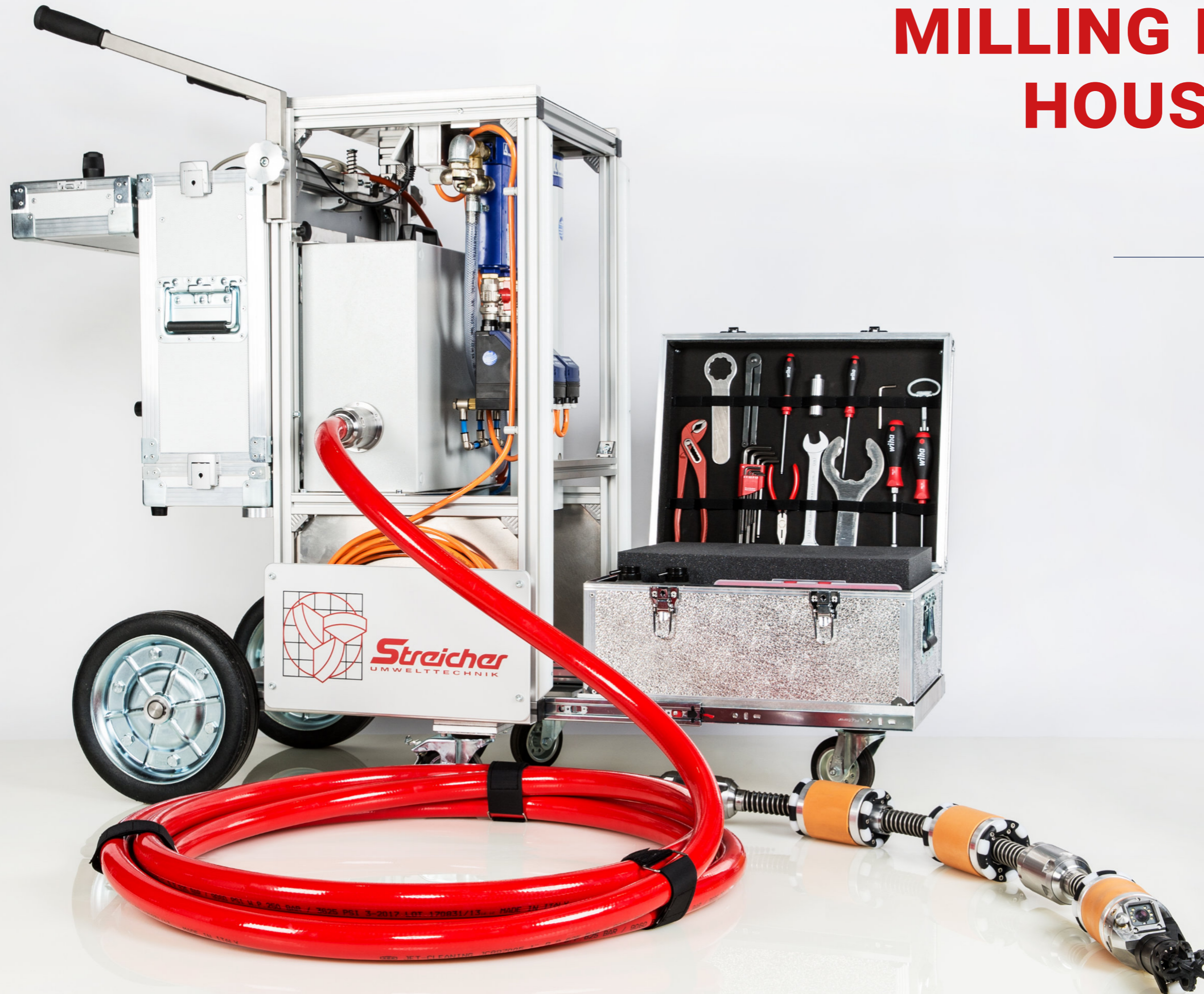


Video recording system NEW HF130 / HF200
EF130 / EF200

- Easy archiving of video recordings and images via USB interface.
- No additional documentation software necessary

MILLING ROBOTS HOUSE PIPES

DN60 - 300





Pneumatic milling robot CL50 compact

- Excellent curve mobility, 90° bends can be passed without any problems
- Wide swivel angle of 600°
- Feed through sliding eel
- Recovery by means of hauling rope and deflection is always possible without any problems
- Color camera with adjustable LED lights
- Camera cleaning by pressurized air
- Bracing with simultaneous centring through bracing bladder
- Operation via a portable control unit for maximum flexibility
- Control and storage box in sturdy and compact aluminium case design, incl. carrying handle and quick-release fastener
- Choice of battery operation (18V DC) or mains power (230V AC)
- Incl. air drying unit CL50

Accessories:

- Extension cable
- Centering brushes **NEW**
- Muscle feed

Technical data

Pipe dimension	DN 60-150
Power supply	18V DC or 230V AC
Weight (only robot)	2,5 kg
Feed drive	rod
Milling arm drive	electric
Milling motor drive	pneumatic
Milling motor power	500 W at 20.000 rpm
Length supply cable	Max. 37,5 m



Pneumatic milling robot CL50

- Ergonomic sliding wagon for comfortable work
- Height and tilt adjustment of the control panel
- Fold-in / fold-out handles
- Lateral storage space for robot and tools
- Camera cleaning with water and compressed air
- 2 litre water reservoir integrated
- Integrated air drying unit
- High-quality rotary distributor in the drum for the passage of all media
- Comfortable pneumatic tyres
- Choice of battery operation (18V DC) or mains power (230V AC)
- Docking stations for an additional exchangeable rechargeable battery

Accessories:

- Extension cable
- Centering brushes **NEW**
- Muscle feed



Pneumatic milling robot CL80

- Excellent curve mobility, 45°-bends (DN100) as well as 90°-bends (DN125) can be passed without any problems
- Wide swivel angle of 600°
- Pneumatic feed mechanism
- AHD colour camera with adjustable LED illumination **NEW**
- Camera cleaning with compressed air or water
- Operation via a mobile control case with joystick and touch panel (PLC control)
- The equipment trolley is equipped with all necessary tools for application
- Sensors and messages in the display inform the user about the current status of the robot system
- Integrated recording function **NEW**
- Incl. air drying unit

Accessories

- Extension cables
- Sliding wagon up to DN300
- Muscle feed

Technical data

Pipe dimension	DN (80) 85-300
Power supply	230 V AC
Weight (only robot)	10 kg
Feed drive	pneumatic
Milling arm drive	electric
Milling motor drive	pneumatic
Milling motor power	750 W at 20.000 rpm
Length supply cable	50 m (100 m)



Electric milling robot CL70 **NEW**

- Excellent curve mobility, 45°-bends (DN100) as well as 90°-bends (DN100) can be passed without any problems
- Wide swivel angle of 600°
- Finely adjustable pneumatic feed mechanism
- AHD colour camera with adjustable LED illumination
- Camera cleaning with water
- Modular and freely combinable case system with matching chassis
- 5 litre water storage tank integrated
- Operation via a removable control panel with joystick and touch function (PLC control)
- Sensors and messages in the display inform the user about the current status of the robot system
- Integrated recording function
- Adjustable speed
- Battery operated (22V DC)
- Incl. air drying unit

Accessories:

- Centering brushes
- Muscle feed

Technical data

Pipe dimension	DN 75-200
Power supply	22V DC
Weight (only robot)	10 kg
Feed drive	pneumatic
Milling arm drive	electric
Milling motor drive	electric
Milling motor power	800 W at 17.000 U/min
Length supply cable	20 m (40 m)

ACCESSORIES



Muscle feed

CL50 / CL80 / CL70

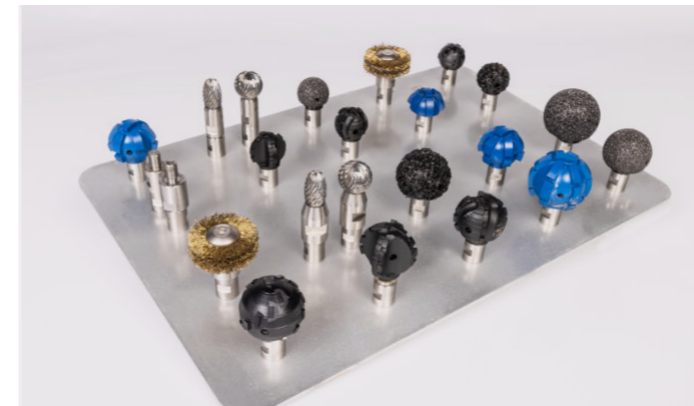
- Stepless feed movement or infeed movement of 20cm when milling
- Good curve mobility, 45° bends can be passed without problems
- Simple assembly of the muscle feed between the milling head and the supply line with screw connection



Sliding wagon

CL80

- Extension of the robot working range to pipes with larger dimensions
- Centric milling in main sewers DN190-300
- Easy mounting on the robot
- Positioning via sliding eel
- Bracing to fix the robot in the canal
- Additional lighting on the sides for optimal illumination of the working area



Milling tools

We rely on innovative diamond cutting materials for our milling tools. Through continuous testing with the manufacturer, we have the right tool for every application.



Video recording system **NEU**

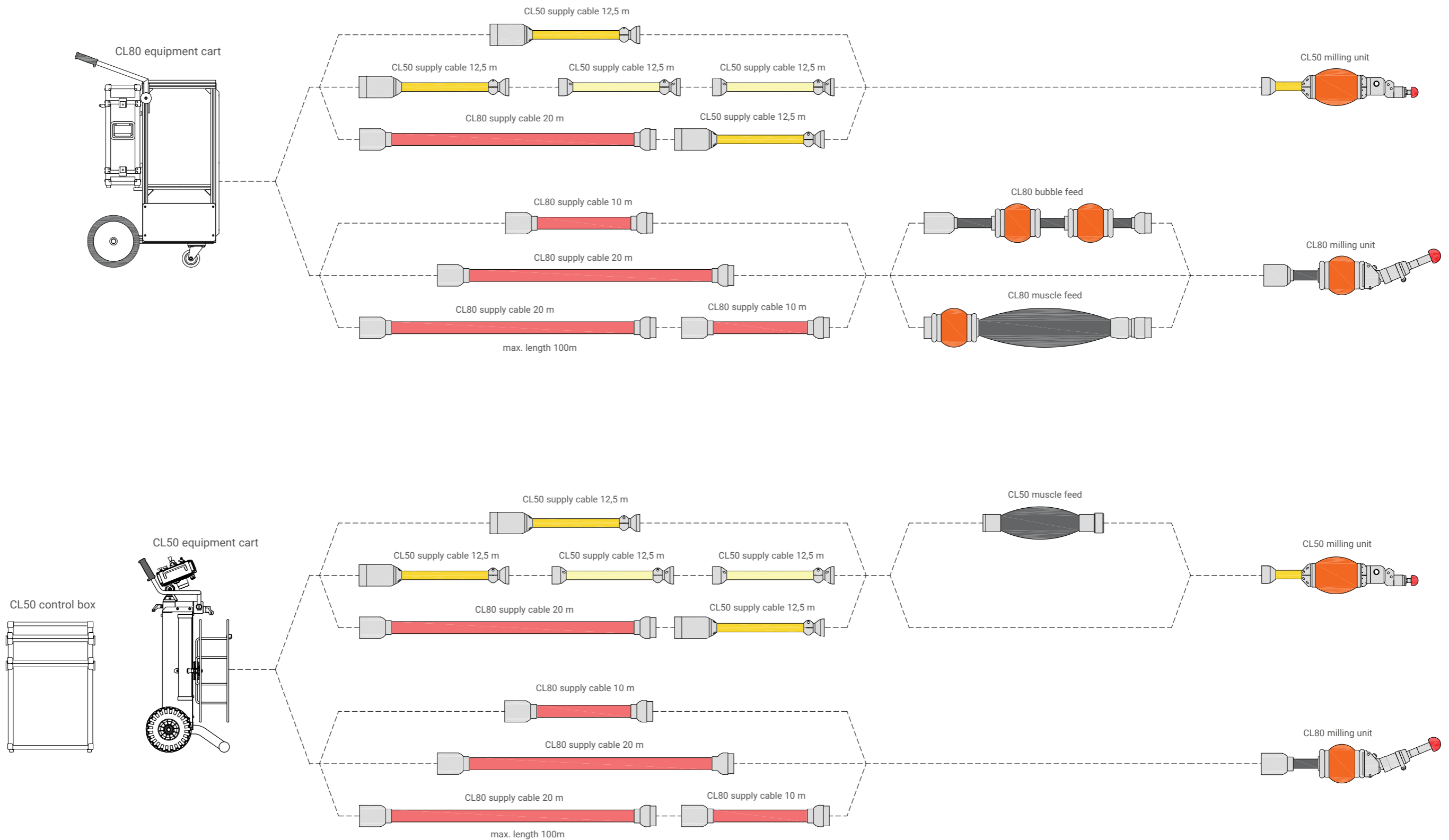
CL50 (CL80)

- Easy archiving of video recordings and images via USB interface.
- No additional documentation software necessary

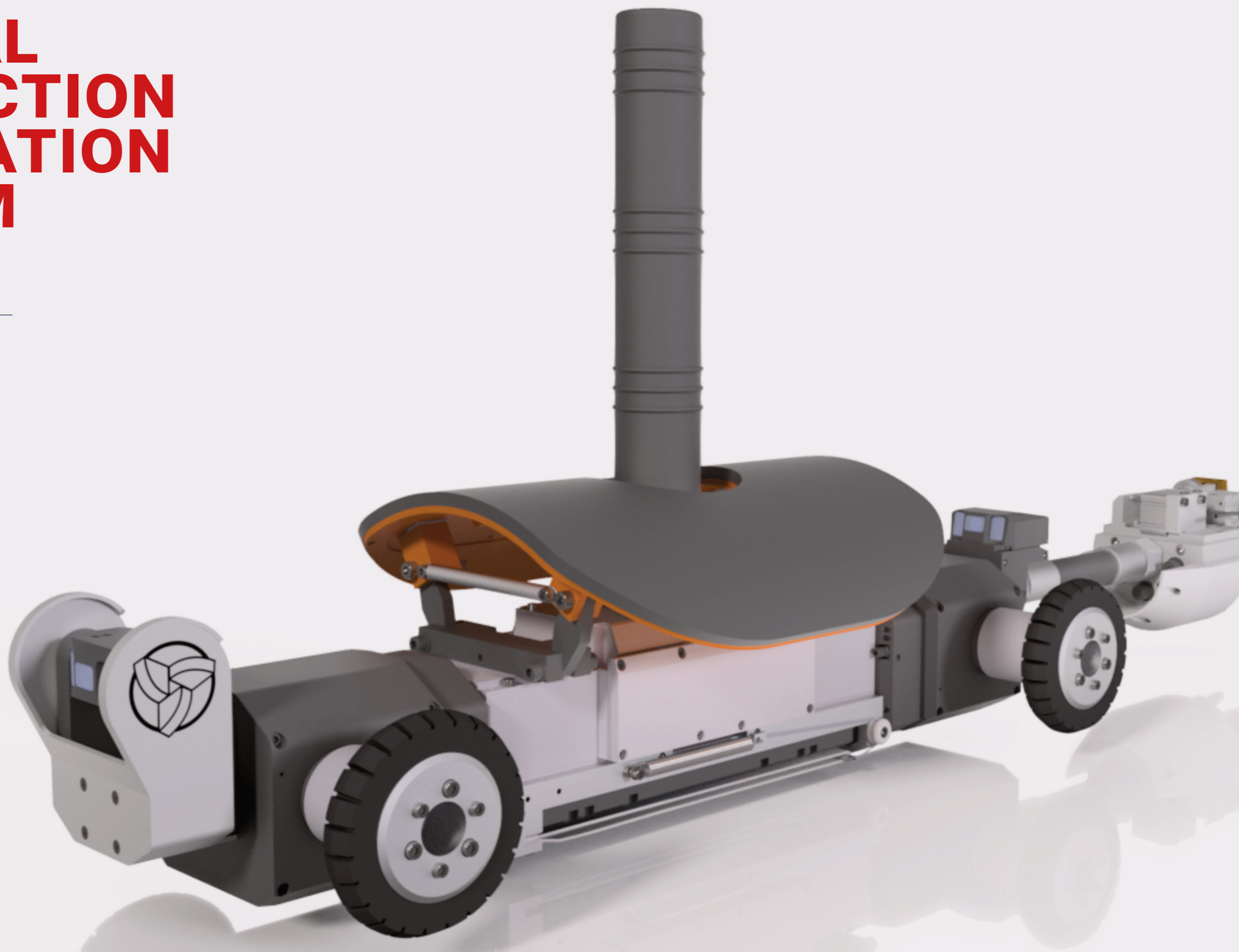
Overview

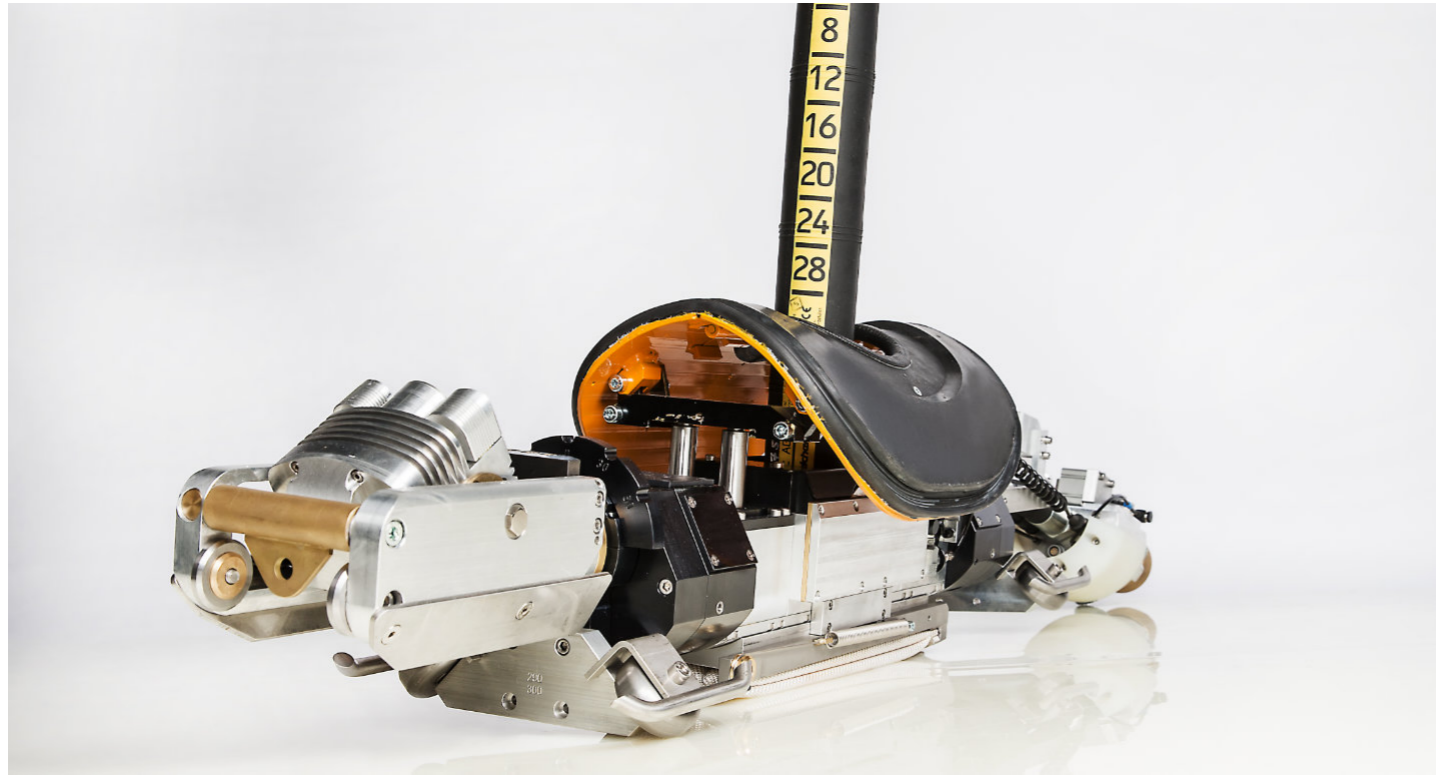
COMBINATION OPTIONS CL50 AND CL80

The CL50 and CL80 milling robots have universal interfaces, which means they can also be combined with each other. Users benefit from higher flexibility and lower acquisition costs at the same time. The illustrations show the possible combinations of the individual components.



LATERAL CONNECTION RENOVATION SYSTEM





Lateral connection renovation system EL300



Grouted nozzle with mortar



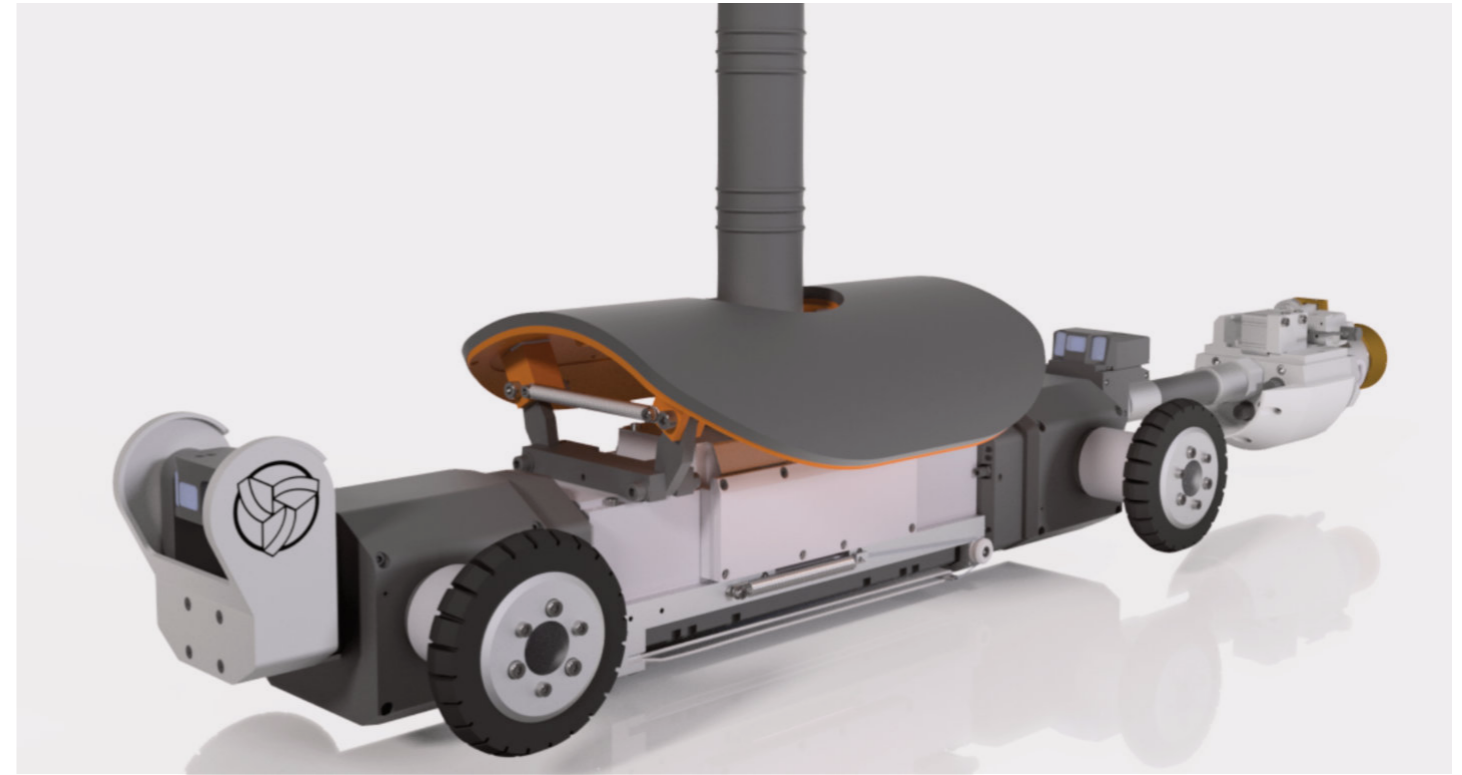
Grouted nozzle with epoxy resin

Technical data

Pipe dimension	circular connection: DN200-600 lateral connection: DN70-200
Weight (only robot)	40 kg
Drive	manual, rope
Swivel drive	electric
Contact pressure	12.7000 N
Length of supply cable	70 m

- The system is suitable for the trenchless, efficient and professional rehabilitation of lateral connections such as house connections. Lateral connections can enter at an angle, tangentially or horizontally. Even inlets that are behind, heavily broken out or poorly connected can be rehabilitated without any problems.

- The grout is mixed and delivered to the damaged area through a pipe using a concrete pump. In contrast to other renovation methods, where the supply of grout in the cartridge is limited, unlimited material can be refilled and delivered to the damaged area.
- The bubble is first rolled up on a winch. After the robot is correctly positioned, it is pushed into the side inlet by unrolling. The rehabilitation shield can be rotated by



Lateral connection renovation system EL400drive NEW



Grouted nozzle with mortar



Grouted nozzle with epoxy resin

Technical data

Pipe dimension	circular connection: DN250-600 lateral connection: DN70-200
Weight (only robot)	100 kg
Drive	electric
Swivel drive	electric
Contact pressure	12.700 N
Length of supply cable	70 m

- 180°, which means that horizontal inlets can also be rehabilitated.
- 2 cameras are available for process monitoring and positioning, one at the front and one at the rear
- The robot is permanently printed with air and thus protected against the ingress of water
- Different bubble sizes and shapes enable sealing even in the case of distant damaged areas

- Mortar or epoxy resin can be used as grouting material. If dry mortar is used, the damaged area can be successfully rehabilitated even with heavy water infiltration. If resin systems are used, a cartridge is filled and carried along. A heated rehabilitation shield accelerates the curing process.



Example of a rehabilitation trailer

- Installation in a 3.5 t trailer with a total weight of 2.3 t
- Space-saving arrangement of the technical equipment and components

Equipment

- Lightweight construction
- Concrete pump with bucket mixer
- 13 kVA generator 13 kVA with soundproof housing
- Compressor
- Slewing crane
- Working light
- Printed water tank with 350 l
- Control cabinet with touch panel and monitor
- Cable drum and hose drum

ACCESSORIES



Rehabilitation bubbles

- Different bubble sizes and shapes enable the sealing of a wide range of renovation tasks



Equipment for resin application

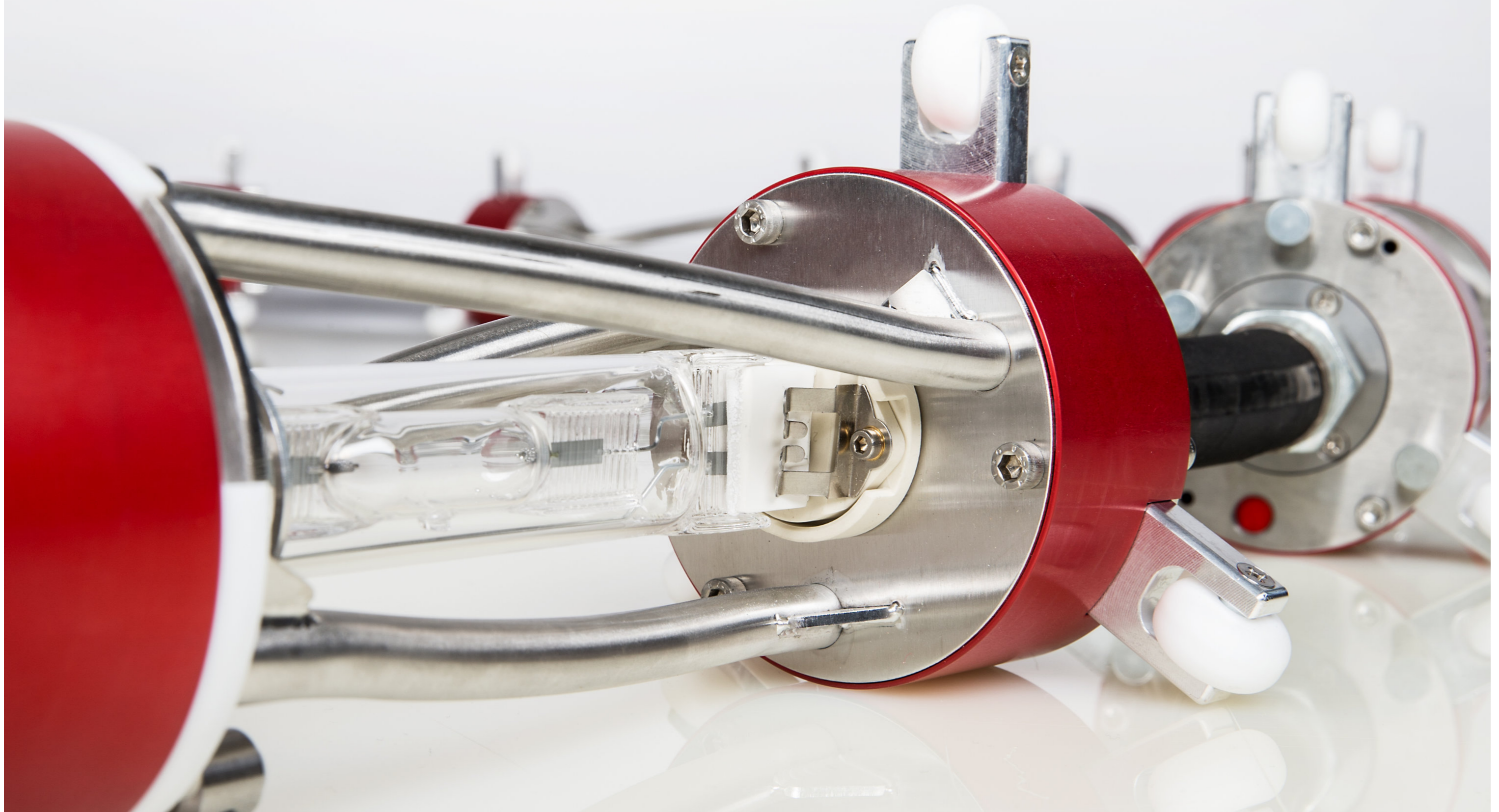
- Equipment set for renovation with resin instead of mortar
- Consisting of a control unit, a heated silicone injection shield and a bubble attachment
- The resin is filled into a cartridge (volume 3 litres) and carried along on the robot
- All functions can be carried out via the control
- 230V AC connection
- Due to the heated shield, the curing time can be reduced to a minimum
- For dimensions DN200-600



Resin mixing unit AP4

- Squeezing and mixing of 4 tubular bags
- Suitable for 500 ml or 700 ml tubular bags
- Electrically driven, therefore better dosage compared to pneumatic systems
- 230V AC connection
- Quick-change mechanism for the use of low-cost compulsory mixers
- Easy change of the tubular bags

UV-TECHNOLOGY





UV light chain SK600

- The chain consists of 2 segments that can be connected to each other, if required, only one segment can be used
- 4x 600 Watt UV lamps per segment
- Can be used in circular and egg profiles
- 2 cameras for process monitoring
- The temperature of the liner surfaces is measured at three different points using infrared sensors
- Temperature sensor for measuring the air temperature in the liner
- Flexible structure due to flexible connecting elements between the lamps
- Lamp cages can be rotated against each other, a helix arrangement ensures minimal shadows are cast on the liner surface
- Camera with self-levelling bearing and active cooling for highest performance
- Teflon wheels are particularly gentle on the liner surface and prevent adhesion of resin particles
- Lamp cages to protect the spotlights

Technical data

Pipe dimensions	DN150-600 egg-shaped profile: 200/300-500/750
Number of UV lamps	2 x 4
UV radiator output	(400 W) 600 W
Total output	(3.200 W) 4.800 W

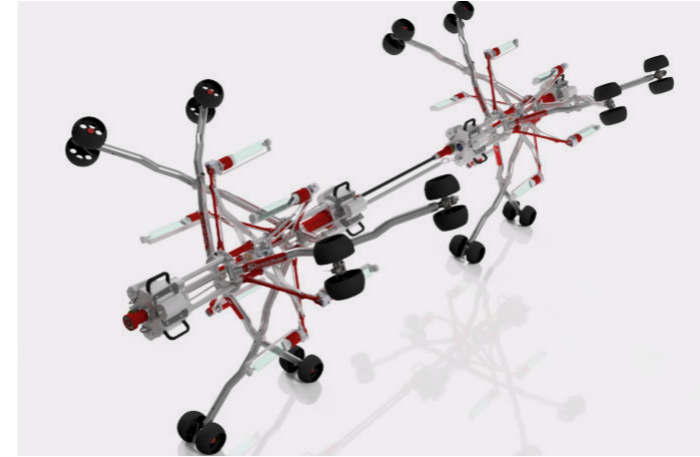


UV light chain SK1500

- The chain consists of 2 cores that can be connected to each other, if required only one core can be used
- 4x 1,200 Watt UV lamps per core
- Can be used in circular and egg profiles
- 2 cameras for process monitoring
- The temperature of the liner surfaces is measured at three different points using infrared sensors
- Temperature sensor for measuring the air temperature in the liner
- Spotlights and wheels are electrically extendable and can thus be adapted to the pipe diameter
- Camera with self-levelling bearing and active cooling for highest performance
- Teflon wheels are particularly gentle on the liner surface and prevent adhesion of resin particles
- Lamp cages to protect the spotlights

Technical data

Pipe dimensions	DN600-1.500 egg-shaped profile: 600/900-800/1.200
Number of UV lamps	2 x 4
UV radiator output	1.000 W
Total output	8.000 W

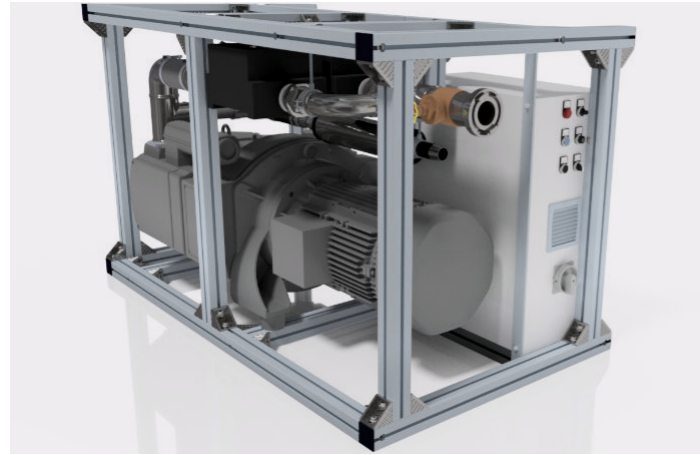


UV light chain SK2000

- The chain consists of 2 cores that can be connected to each other, if required only one core can be used
- 6x 1,500 Watt UV lamps per core
- Can be used in circular and egg profiles
- 2 cameras for process monitoring
- The temperature of the liner surfaces is measured at three different points using infrared sensors
- Temperature sensor for measuring the air temperature in the liner
- Spotlights and wheels are electrically extendable and can thus be adapted to the pipe diameter
- Camera with self-levelling bearing and active cooling for highest performance
- Wheels made of high-performance plastic are particularly gentle on the liner surface and prevent adhesion of resin particles

Technical data

Pipe dimensions	DN1.200-2.000 egg-shaped profile: 1.000/1.500-1.200/1.800
Number of UV lamps	2 x 6
UV radiator output	1.500 W
Total output	18.000 W



Blower

- 480V high performance compressor for continuous operation
- Oil-free operation
- Air flow rate up to max. 584m³/h
- Relative pressure +1.8bar
- 2 power levels available (11kW & 18,5kW)
- Active air cooler integrated
- Control via UV cable drum
- Autarkic emergency operation possible



UV cable drum with control

- Mobile plant
- Cable lengths 200m and 300m
- Integrated control and control cabinet
- Direct liner pressure control via blower control
- Automatic tension speed control
- Automatic reeling
- Manual reeling in emergency operation via hand crank possible
- Optional power increase available

ACCESSORIES



Packer

- Various packers made of stainless steel
- Suitable for all UV light chains
- Available for circular and egg-shaped profiles
- Easy handling, from larger dimensions in two- or three-part design
- Storz-B coupling, claw coupling, measuring connection integrated and easily accessible
- Low-friction cable feed-through
- From DN400 with holder for packer camera



Deflection roller set

- Various deflection rollers for hauling ropes and liner hoses
- Devices and threaded spindles for mounting the pulleys on the channel

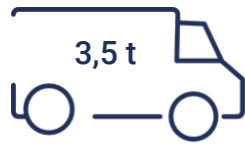


Equipment

- Pull ropes for liner installation
- Safety goggles with high UV light protection
- Tools for liner installation
- Lashing straps
- Couplers

VEHICLES





Van 3.5t

EF

- Customised vehicle planning or standard version
- From driving licence class B
- In 2 versions: with separation (transverse installation) or without separation (longitudinal installation) between operating and working area
- Lightweight construction
- Attractively designed operator compartment, suitable for 2 persons
- Storage space for tools and equipment
- Approx. 250 kg freely usable loading capacity



Van up to 7.5 t

EF HF EL *

- Customised vehicle planning or standard version
- From driving licence class C1
- In 2 versions: with separation (transverse installation) or without separation (longitudinal installation) between operating and working area
- Attractively designed operator compartment, suitable for at least 2 persons
- Sufficient storage space and cabinets for tools and equipment
- Ample loading capacity

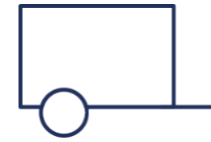


Truck from 7.5 t

EF HF EL UV *

- Customised vehicle planning or standard version
- From driving licence class C
- Maximum comfort and rich equipment
- Divided into 3 rooms: working room, operating and common room, generator room
- Attractively designed service room, suitable for 4 persons
- Extensive equipment: kitchen, toilet, heating, air conditioning, windows, various shelves and cupboards
- Ample storage space and cupboards for tools and equipment
- Ample loading capacity

*Combinations of the systems with each other or with external systems (flushing system, inspection system, pressure testing system) are possible.



Trailer

EL

- Customised vehicle planning or standard version
- From driving licence class BE



Self-installation system

EF HF

- Cable drum
- Hydraulic power unit (HF only)
- Compressor with air drying
- Water tank
- Tool cabinet
- Control unit
- Distribution cabinet
- Control panel
- Weight 1,400 kg

Equipment versions

EF

- With EF200 / EF130 milling robot
- Power supply via auxiliary shaft with underfloor generator or battery system
- Control system with touch panel, joysticks and monitor
- Cable drum (150 m)
- Printed water tank
- Compressor with air drying unit
- Pivoting crane
- Pull-out drawer for the robot
- Shaft and channel diversion
- Support by PV system possible **NEW**

HF

- With HF200 / HF130 milling robot
- Power supply through auxiliary shaft with underfloor generator
- Control with touch panel, joysticks and monitor
- Cable drum (75 m / 100 m)
- Printed water tank
- Compressor with air drying unit
- Slewing crane
- Hydraulic power unit
- Pull-out drawer for the robot
- Shaft and channel diversion

EL

- With EL lateral connection renovation system
- Concrete pump with bucket mixer
- 13 kVa generator 13 kVA with soundproof housing
- Compressor
- Slewing crane
- Working light
- Printed water tank (350 l)
- Control unit with touch panel and monitor
- Cable and hose reel

UV

- With UV light curing unit
- UV light chains SK600 / SK1500 / SK2000
- Power supply via auxiliary shaft with underfloor generator or battery system
- Control system with touch panel
- Cable drum (150 m or 300 m)
- Blower
- Generator
- Packer



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