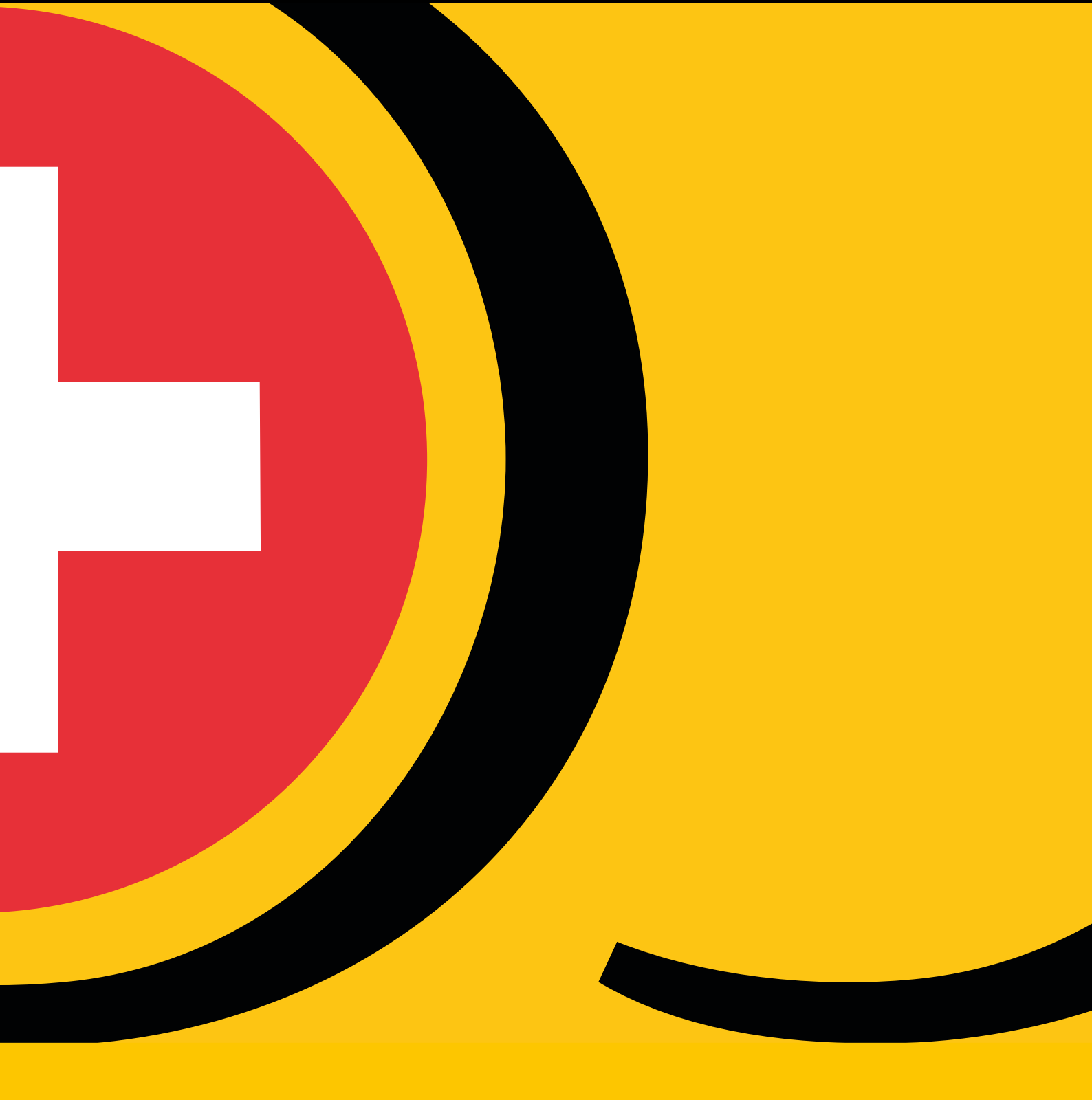


# RS MaxLiner® System

DN 70 - DN 400

- Including In-House approval
- DIBt Approvals: Z-42.3-389, Z-42.3-430, Z-42.3-454, Z-42.3-487



# RS Technik

*With a system to success*

RS Technik AG is one of the leading suppliers of systems for trenchless rehabilitation in the area of wastewater pipes and is able to look back on many years of experience in the development and marketing of repair and rehabilitation systems.

For over 25 years RS Tvechnik has been offering comprehensive solutions for the rehabilitation of pipes and sewers: with the most modern equipment, first-class materials, on-site training and ongoing technical application support. The development and application of RS Technik solutions is founded in the main on the use of proven, effective and reliable alternatives for the rehabilitation of underground infrastructures around the world. Adapted to findings and experience gained from a large variety of markets.

In addition to high-value systems, techniques, products and materials we offer comprehensive advice to our customers and are at their side in all phases of their projects.

In order to be able to apply our systems successfully and without problems, you as one of our customers will be trained not only in the theory of these but also in their practical application on site. We speak your language and lead you step by step to success with solutions customised to your particular requirements.

**RS Technik AG**

**Your expert partner for trenchless sewer and pipe rehabilitation systems.**

# Inhalt

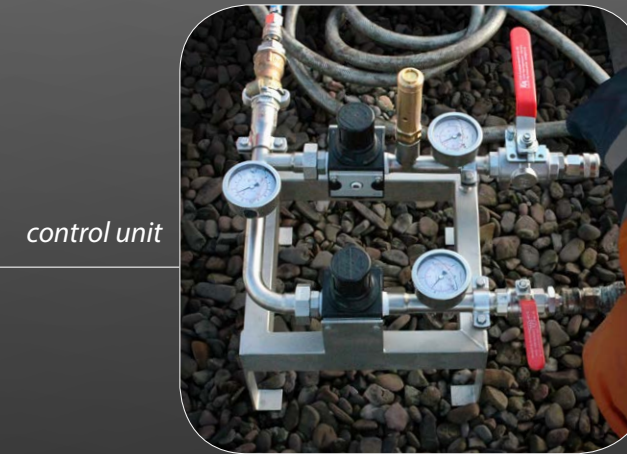
RS LinerGun® Inversion unit	6   7
RS LinerCannon® Inversion device	8   9
RS Calibration roller	10   11
RS CMU Mixing unit	12   13
RS CCM® Mixing unit	14   15
RS HotBox® Mobile heating systems	16   17
RS Miller	18   19
RS MicroCutter® Milling robot + colour camera mc30Duo	20   21
RS Steam Unit	22   23
RS Steam Trailer	24   25
RS Rehabilitation vehicles examples of extensions:	
< 7,5 t	26   26
12 t	27   27
18 t	28   29
RS Hose liners	30   31
RS Calibration hoses	31   31
RS Preliner	32   33
RS MaxPox® Epoxy resin systems	34   35
RS MaxPatch® Consumables	36   37

# RS LinerGun® Inversion device

The RS LinerGun® is a light inversion device, which can be used flexibly for the renovation of pipes.

## Properties

- Small and compact
- Flexible application
- No liner length limitation, max. length only dependent on material and processing time
- Liner inversion by means of compressed air
- Heating with water or steam possible
- Time saving: Inversion during impregnation/calibration possible
- Robust and reliable: simple operation, completely maintenance-free



control unit



adapter rings



mounting frame

## Technical data

- Application range: DN 50 - DN 300
- Accessory: RS Control unit, adapter rings  
DN 150 & DN 200, air tubes, mounting frame  
foldable (also suitable for manual use with the RS  
calibration roller)
- Dimensions (l x w x h):  
With mounting frame: 900 x 500 x 750 mm  
Without frame: 500 x 400 x 450 mm

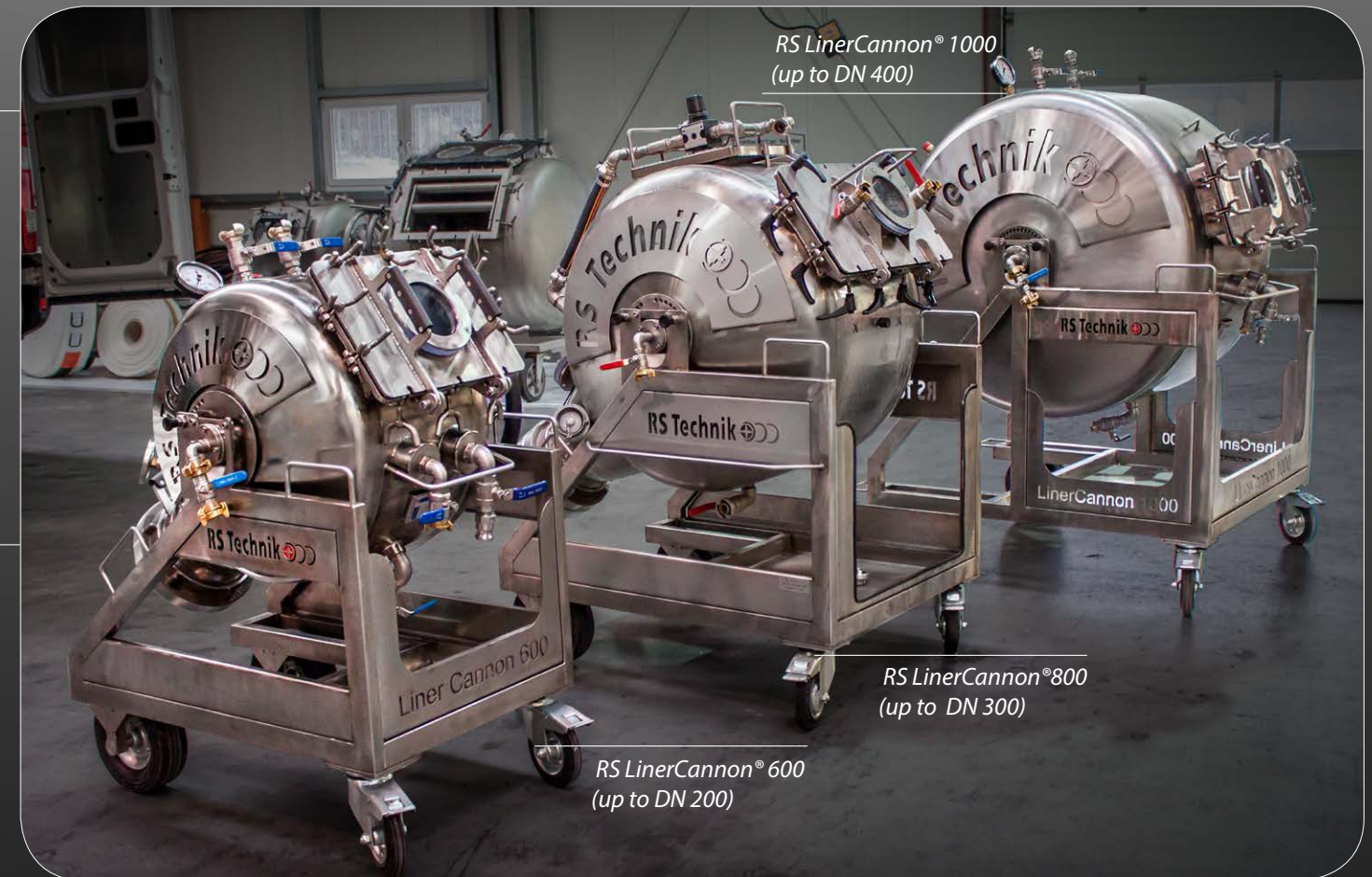


# RS LinerCannon® Inversion device

The RS LinerCannon® is used for the inversion of the impregnated liner into the damaged pipe with compressed air.

## Properties

- Pressure drum in very light design
- Material: stainless steel, sand-/ or glass bead blasted silver matt
- Liner inversion by means of compressed air
- Heating with steam or water possible
- Available in different sizes: 600, 800, 1000
- Mobile assembly by means of transport wheels and carrying grids
- Viewing window above the steering wheel and temperature display on the hopper
- Handwheel with parking brake/locking bolt
- Shaft with eyelet for retaining strap
- Safety valve 1.5 bar



RS LinerCannon® 1000  
(up to DN 400)

RS LinerCannon® 800  
(up to DN 300)

RS LinerCannon® 600  
(up to DN 200)

## Technical data

- 1" water outlet
- 2 x compressed air connection on drum,
- 3/4" sleeve, pressure gauge 1/2"
- Storz coupling connection for adapter ring





# RS Calibration roller mobil DN 300 / DN 400

With the RS calibration roller we offer a compact system for the impregnation of hose liners up to DN 300.

## Properties

- Two electrically synchronously driven, specially coated rollers
- Forward and reverse drive
- Infinitely variable speed
- Manually height-adjustable upper calibration roller
- Simple, millimetre-accurate gap adjustment via a setting wheel
- Easy reading of the gap setting via the setting wheel display
- On and off switch, speed control and direction of rotation controlled by switches on the unit
- EMERGENCY STOP switch
- Transparent tamper protection with stop function
- Also available as manual version and DN 400



## Technical data DN 300

- Usable roller width: 450 mm
- Roller diameter: 113 mm
- Motor: 0,18 kW
- Linear drive diameter: 2 \* 30 mm
- Electricity demand: max. 0,5 kW
- Dimensions (l x w x h): approx. 750 x 600 x 1.590 mm



## Technical data DN 400

- Usable roller width: 600 mm
- Roller diameter: 138 mm
- Motor: 0,25 kW
- Linear drive diameter: 2 \* 40 mm
- Electricity demand: max. 0,75 kW
- Dimensions (l x w x h): approx. 900 x 600 x 1.590 mm

# RS CMU Mixing unit

The RS CMU (Controlled Mixing Unit) is a simple mixing unit that ensures air-free mixing in the static mixer and an exact mixing ratio.

## Properties

- Material: Stainless steel (tank, mechanics)  
Aluminium (cover)  
Aluminium hard anodized (pumps, valves)  
Partly galvanized steel
- Control: Pneumatic, volume control via pneumatic stroke  
Preselection counter  
Operating lever with 3 positions  
Hardener selection lever for tank 1 or 2

RS CMU



## Technical data

- Weight: approx. 95 kg empty
- Tank capacity: tank 1: 60 litres  
tank 2: 30 litres  
tank 3: 15 litres
- Flow rate: approx. 7.5 kg/min or 250 g mixture per double stroke
- Pumps: 3 piston dosing pumps patented, designed as submersible pumps in tanks, double acting, with pneumatic control, seals/O-rings material resistant
- Drive: pneumatic cylinder, operating pressure 5 bar
- Dimensions (l x w x h): 750 x 480 x 1250 mm



control elements



# RS CCM<sup>®</sup> Mixing unit 10 kg | 18 kg

The RS CCM<sup>®</sup> (Computer Controlled Mixing Unit) is a fully automatic metering and mixing system that enables the air-free mixing of resin components while optimizing the processing time.

## Properties

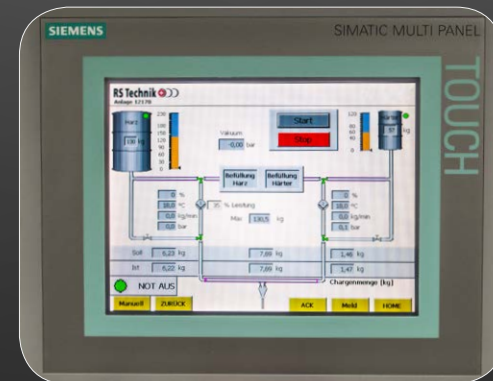
Siemens touch panel

Delivery rate 10 kg/min | 18 kg/min

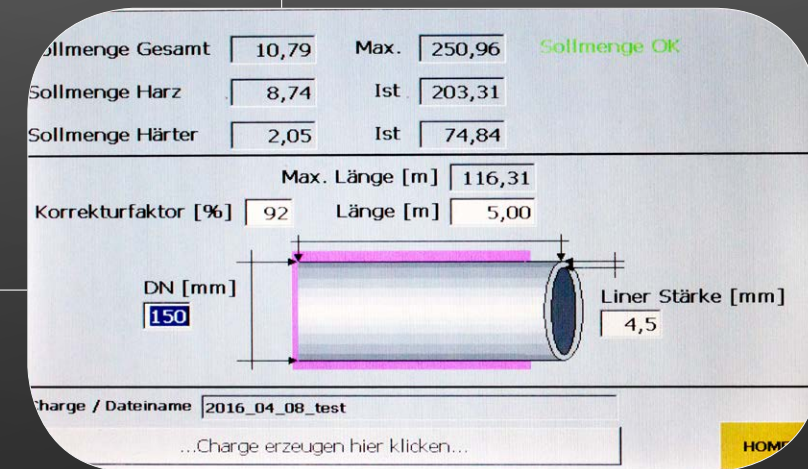
Climate system for resin and hardener  
(heating coil system optionally available)

External filling device with return line for circulation directly in the IBCs

Seamless documentation of the mixing parameters,  
Transfer via USB

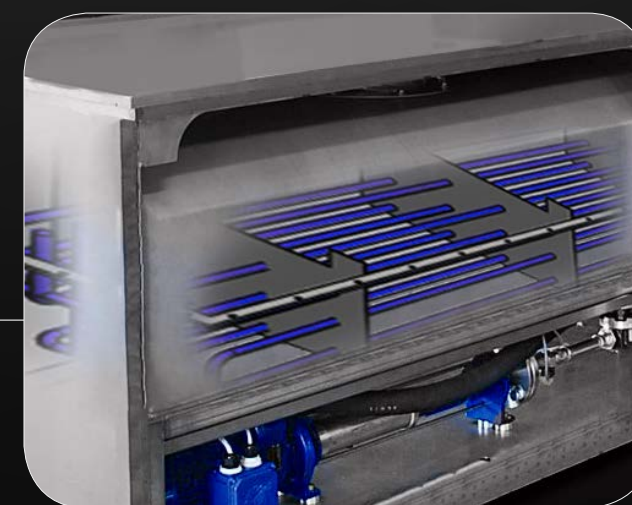


Siemens touch panel



SPS control system

control panel



heating coils  
optionally available

## Equipment

- Eccentric screw pump for resin/hardener
- Filling lances for refuelling the system from IBC or barrel
- Mixing head, filling hoses & spare parts set (stators etc.) included
- Optional remote maintenance possible



# RS HotBox® 60 | 105 Mobile heating system

A big advantage of epoxy resin systems is the safe curing through heat. The RS HotBox® is a mobile heating system, which is controlled digitally.

## Properties

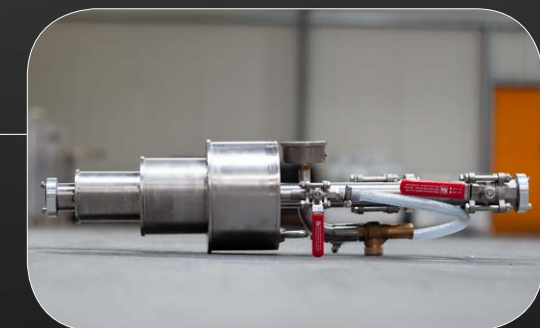
- Heating system complete with digital control
- Operation with diesel, supply 230V
- Small, mobile and light
- Drivable
- Continuous or circulation operation possible



control element



water circulation pump



universal water end plug

## Technical data

- Heating capacity: 60 kW | 105 kW, 18 l tank
- 1 water circulation pump: 8000 l/h, 6 bar
- 1 universal water end plug: DN 100 - DN 300, stainless steel
- Pressure relief valve 0,9 bar
- 3 m + 10 m hot water hose 1"
- 10 m pressure suction hose 1"
- Achievable water temperature: 95°C
- Dimension (l x w x h):
  - HB 60: 800 x 450 x 747 mm
  - HB 105: 800 x 660 x 975 mm



# RS Miller MINI/ SUPER MIDI/ MAXI

## Properties

- Areas of application: Sewer cleaning and ideal for renovation preparation
- Multifunctional: Motor, control, drive shaft with shaft cage and transport wheels
- Cleaning, milling, cutting, polishing and brushing with one machine
- Control by foot pedal
- Possible extension: 10 m

### Add-ons



Chain scraper CLASSIC



Chain scraper CYCLONE



4-panel SANDING PANEL



Twister EXPRESS



## Technical data

Type	Shaft thickness (mm)	Shaft length (m)	Pipe diameter (DN)	Rotation speed	Weight (kg)	Recommended pipe size:	
						Cleaning (DN)	Milling (DN)
MINI	8	17	50 - 150	500 - 2900	27	50 - 150	50 - 70
SUPER MIDI	12	20	70 - 150	500- 1500	69	70 - 150	70 - 150
MAXI	12	30	70 - 250	500 - 1500	89	70 - 250	70 - 200

RS Miller MINI, SUPER MIDI, and MAXI are operated with a 230V motor

(All you need is a „normal power socket“)

Infinitely variable speed regulation



# RS MicroCutter® Incl. accessories

The MicroCutter® ensures quick and flexible milling as well as effortless opening of inlets.

## Properties

For internal pipe diameter 80 mm to 200 mm

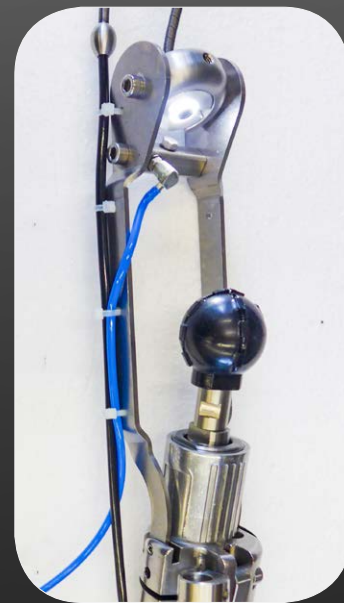
Curved up to 90°

Can be clamped into the pipe (exact milling)

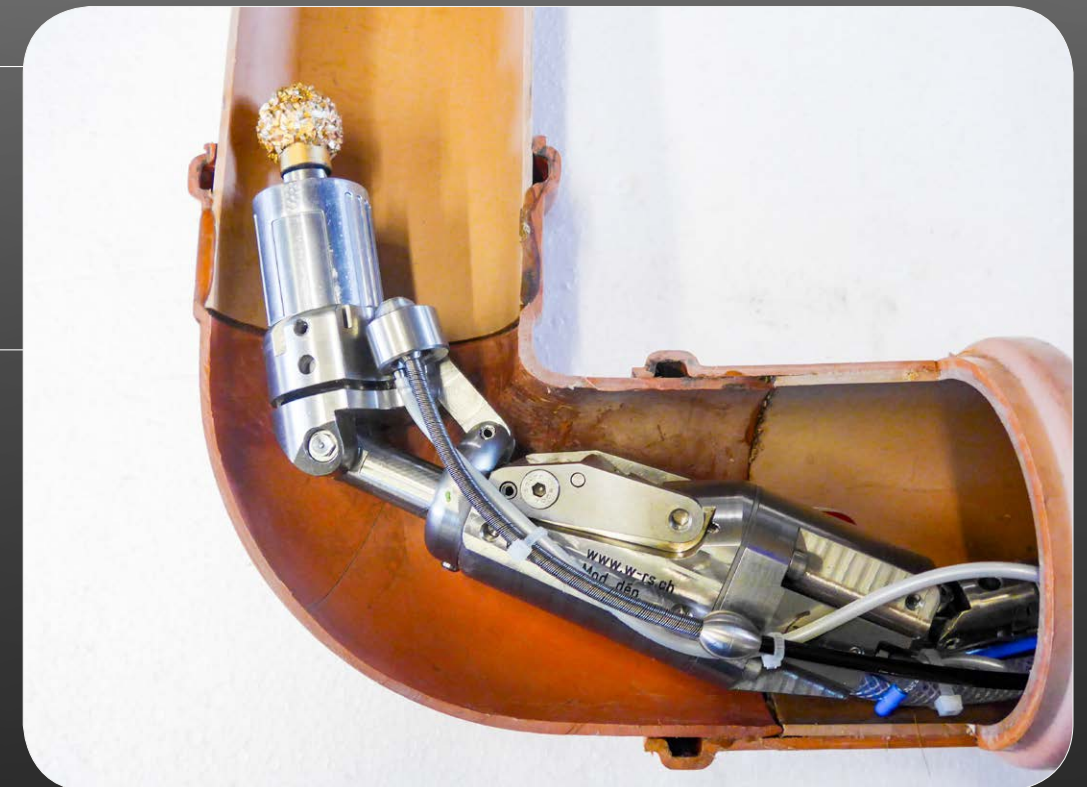
For precise work with integrated swivel gear

Purely pneumatic operation

Scope of delivery: Plastic-box incl. MicroCutter with pneumatic motor and 20 m supply hose, control panel, camera holder, accessories for the inner diameter of the pipes 80 mm - 200 mm and the necessary tool



Colour camera mC30Duo  
incl. RS MicroCutter®



Bedienungshandle



## Technical data

Clamping travel radial: 27 mm

Part-turn gearbox: Reduction ratio  $i = 1 : 2.36$

Radial deflection: 92° of the milling head

Radial stroke: 110 mm

Weight MicroCutter: 2,8 kg  
(without pneumatic motor and accessories)

Weight equipment: 19,5 kg

Air requirement: min. 700 l / min. at 8 - 10 bar

Motor power: approx. 0.37 kW at 22,000 rpm

Dimensions:  $l \times \varnothing = 290 \text{ mm} \times 63 \text{ mm}$

## Colour camera mC30Duo Set

for pipes of 15-200 mm

Camera head diameters: 29 mm and 13 mm

Monitor: 5.6" TFT-LCD with a recorder in carbon casing

Reel made of VA including a locking break,

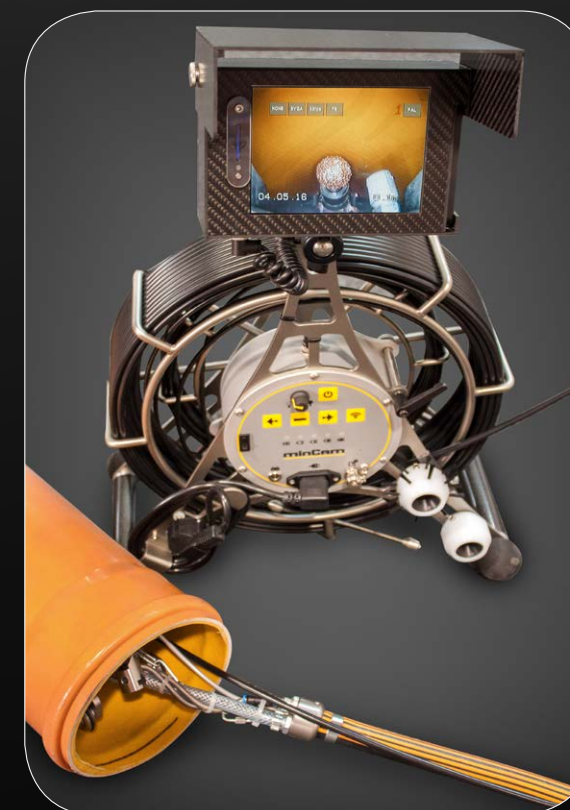
15 m/ 30 m fibreglass sliding rod

Control unit with continuous light adjustment

Meters counter with electronic video insertion

Rechargeable batteries for over 2h of operating time

Data storage on SD card



# RS Steam Unit

## Steam generator

The field of application of the Steam Unit is steam generation for curing of hose liners.

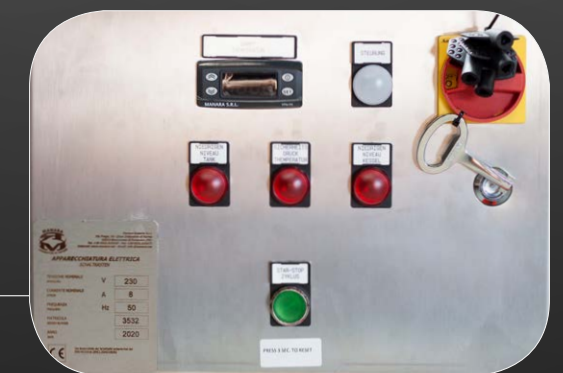
### Properties

- Built-in diesel tank incl. diesel burner
- Mobile or installation in vehicle/trailer possible
- Polyethylene feed water tank
- Electronic level control
- High quality feed water pump incl. control panel



control panels

digital temperature gauge



### Technical data

- Output from 100 kg/ h - 150 kg/ h
- 220 V / 50 Hz
- 5 m + 10 m + 20 m steam hoses
- 1 lance 1/2", 1 lance 3/4"
- 2 end nozzles for renovation with open end up to DN 200
- 1 end nozzle for renovation with open end from DN 200
- Dimensions (l x w x h): 1100 x 600 x 1400 mm



# RS Steam trailer

A great advantage of epoxy resin systems is the safe curing through heat.  
Various devices are available for this purpose.  
With our steam trailer the curing of liners is done directly on site.

## Properties

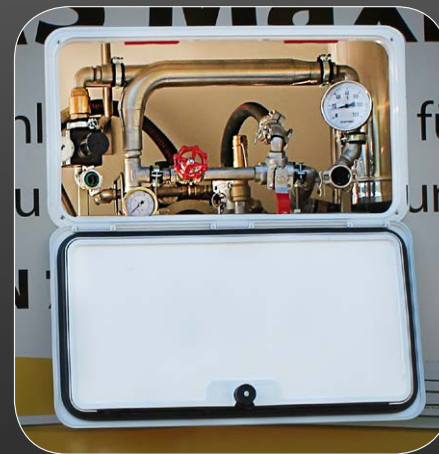
Closed floor made of anti-slip screen

Printing plates, sealed

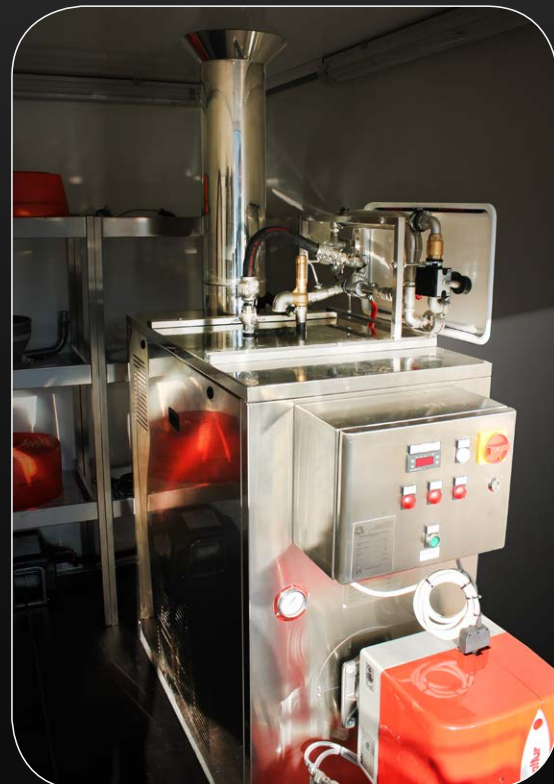
Walls and roof in plywood, waterproof glued with special synthetic coating

Wing doors incl. door stop, 270° turnable, lockable via espagnolette lock

Powder-coated steel corner reinforcements for added stability



control panel operable from outside



Profile edgings on the door opening and rain guard above the door

Torsion-resistant rear door

Bolted and galvanised German brand chassis

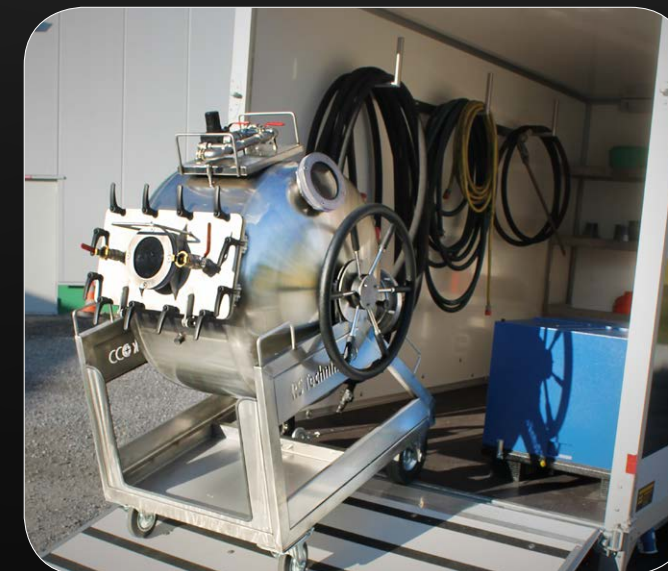
Original Humbaur axle (!)

Maintenance-free rubber spring axles with independent wheel suspension

Brakes with auto reverse



RS LinerCannon® 600-1000 optionally available



## Technical data

Loading height approx. 530 mm

Permissible total weight: 2500 kg

Payload: approx. 1550 kg

Internal box dimensions (l x w x h):  
4010 x 1810 x 2000 mm



# RS MaxLiner® Rehabilitation vehicles

## Rehabilitation vehicle equipment

< 7,5 t

- RS CCM® mixing plant incl. Siemens Touch Panel (conveying capacity 18 kg/min)
- incl. air conditioning system, SPS system & standard mixing head
- External vacuum pump V-VTN 16 (suction capacity: 16m<sup>3</sup>/h)
- Incl. RS calibration roller table DN 300, electrically operated with drum motors & built-in base frame
- External filling device
- One progressive cavity pump each, for resin & hardener
- Machine directive compliant tanks (resin 260 l | hardener 122 l)
- Power generator: 5 kW



## Rehabilitation vehicle equipment

12 t

- RS CCM® mixing plant incl. Siemens Touch Panel with remote maintenance
- incl. air conditioning system & standard mixing head
- (capacity resin mixing plant 18 Kg/min)
- External vacuum pump V-VTN16 (suction capacity: 16 m<sup>3</sup>/h)
- RS calibration roller table DN 300 / DN 400, electr. operated with drum motors & base frame
- External filling device with return line
- One progressive cavity pump each, for resin & hardener
- Machine directive compliant tanks (resin 480 l | hardener 160 l)
- Design with one or two hardener tanks possible





# RS MaxLiner® Rehabilitation vehicles

## Rehabilitation vehicle equipment

18 t

- RS CCM® mixing plant incl. Siemens Touch Panel with remote maintenance
- incl. air conditioning system, SPS system & standard mixing head (capacity 18 kg/min)
- External vacuum pump V-VTN16 (pumping speed 16 m<sup>3</sup>/h)
- RS calibration roller table DN 300 / DN 400, electr. with drum motors & base frame
- External filling device with return line
- One progressive cavity pump each, for resin & hardener
- Machine directive compliant tanks (resin 480 l | hardener 160 l)
- Design with one or two hardener tanks possible
- Social room incl. kitchenette, sink/washbasin,
- Storage cupboards & lounge



RS CCM® incl. calibration roller





# RS MaxLiner<sup>®</sup> Hose liners

## Flex

- Flexible needle felt liner with PU coating
- Bendable up to a maximum of 45°
- Wall thickness stable needle felt material (ensures 3 mm minimum wall thickness)
- Cold curing and warm curing with water or steam
- Available from DN 70 to DN 400

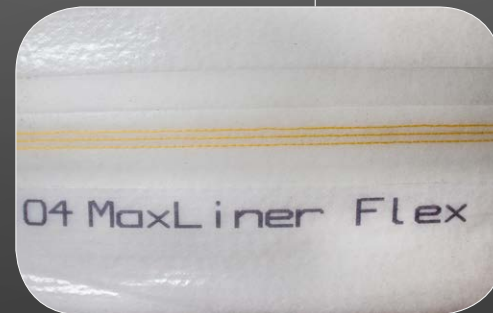
## Flex S

- Highly flexible needle felt liner with PU coating
- Bendable up to a maximum of 90°, one dimension change possible
- Installations with closed end can also be implemented when changing dimensions
- Wall thickness stable needle felt material (ensures 3 mm minimum wall thickness)
- Cold curing and warm curing with water or steam
- Available from DN 70 to DN 400

## Flex 4D

- Extremely flexible needle felt liner with PU coating
- Bendable up to a maximum of 90°, up to 4 dimension changes possible (DN 150 - DN 250)
- Installations with closed end can also be implemented when changing dimensions
- Wall thickness stable needle felt material (ensures 3 mm minimum wall thickness)
- Warm curing with water or steam
- Available from DN 75 to DN 400

Flex



Flex S



Flex 4D



SuperFlex

## SuperFlex

- Seamless, flexible polyester fibre hose with PU coating
- Bendable to a max. of 90°, one dimension change possible
- For dimension changes and bends, a calibration hose is to be used
- Cold curing and warm curing with water
- Available from DN 70 to DN 200

## Fix

- Highly flexible needle felt liner with PU coating
- Bendable to a max. of 90°, one dimension change possible
- Installations with closed end also with dimension change possible
- Wall thickness stable needle felt material (ensures 4.5 mm minimum wall thickness)
- Cold curing and warm curing with water or steam
- Available from DN 100 to DN 400



Fix





# RS Calibration hoses

## Lite

PVC-coated woven hose with overlapped welded seam  
Heatable up to 40°C  
Bendable to a max. of 90°  
Available from DN 80 to DN 200

## LiteTube

PVC-coated woven hose with sewn and welded seam  
Heatable up to a max. of 80°C  
Bendable to a max. of 90°  
Available from DN 100 to DN 300

## LitePlus

PVC-coated woven hose with welded flat seam  
Heatable up to 80°C  
Bendable to a max. of 90°  
Available from DN 100 to DN 300

## LiteBlue

PVC-coated woven hose with sewn and welded seam  
Heatable up to 80°C  
Extra flexible with light-weight woven  
Available from DN 100 to DN 300

## HotPlus

PVC-coated woven hose with welded flat seam  
Heatable up to 80°C  
Not bendable  
Available from DN 200 to DN 400, further dimensions on request

Calibration hoses  
LiteTube



Calibration hoses  
LiteBlue



Calibration hoses  
HotPlus



Calibration hoses  
LiteTube

Calibration hoses  
Lite

Calibration hoses  
LitePlus

## Preliner

Film hose made of PE with a welded seam  
Serves as an outer film for protecting the liner against underground water and infiltration water

Preliner



## PU-outer tube

Thin polyester felt with PU coating  
Serves as a preliner and is DIBt-approved for outer coating  
Reduces excess resin in the feeds

PU-outer tube



# RS MaxPox<sup>®</sup> Two-component epoxy resin systems

## MaxPox<sup>®</sup> 15M

Resin component for processing with hardeners 20, 40, 70 and 120  
Solvent and filler free

## MaxPox<sup>®</sup> 20

Hardener component for processing with the resin MaxPox<sup>®</sup> 15M  
Processing time at 20 °C approx. 25 min  
Suitable for cold curing, warm curing with water or steam

## MaxPox<sup>®</sup> 40

Hardener component for processing with the resin MaxPox<sup>®</sup> 15M  
Processing time at 20 °C approx. 40 min  
Suitable for cold curing, warm curing with water or steam

## MaxPox<sup>®</sup> 70

Hardener component for processing with the resin MaxPox<sup>®</sup> 15M  
Processing time at 20 °C approx. 70 min  
Suitable for cold curing, warm curing with water or steam



## MaxPox<sup>®</sup> 120

Hardener component for processing with the resin MaxPox<sup>®</sup> 15M  
Processing time at 20 °C approx. 120 min  
Warm curing with water or steam

## MaxPox<sup>®</sup> Fill

Filled and yellow colored two-component epoxy resin system  
High viscosity for good hold in the substrate  
Processing time at 20 °C approx. 30/60/90 min (depending on hardener components)  
Warm and cold curing possible

## MaxPox<sup>®</sup> Thermo

Red colored two-component epoxy resin system  
High temperature resistance up to 90 °C  
High processing time at 20 °C approx. 16 h  
Not suitable for cold curing, warm curing with water or steam



# RS MaxPatch® Consumables



RS MaxPatch®  
comp. A 2K Fast



RS MaxPatch®  
comp. A 2K Summer



RS MaxPatch®  
comp. A 2K Winter



RS MaxPatch®  
comp. B



RS MaxPatch®  
comp. A



RS MaxPatch®  
comp. C



RS MaxPatch®  
comp. B

RS MaxPatch®  
glass mat



## RS MaxPatch® Glass mats

RS MaxPatch® Advantex-ECR-Glass  
Glass mat rolls in 330 mm/415 mm/ 510 mm and  
1300 mm width  
Weights: 1086 g/m<sup>2</sup> or 1387 g/m<sup>2</sup>

## Properties

- Silicate-isocyanate resin with very good adhesion properties and chemical and thermal resistance
- Available as three or two-component system
- Adjustment of the processing time through targeted dosing of the C component.
- Optimum adaptation to the ambient conditions







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