RS MaxLiner® System
DN 70 - DN 400
- Including In-House Approval
- KOMO certification according to the new BRL 5217 regulation
- DiBt approvals: Z- 42.3 - 389, Z- 42.3 - 454, Z- 42.3 - 487
RS Technik AG is one of the leading suppliers of systems for trenchless rehabilitation in the wastewater sector and can draw on many years of experience in the development and marketing of repair and rehabilitation systems.

The abbreviation „RS“ stands for „Rohrsanierung“ which means “pipe rehabilitation“. For more than 25 years, we have been offering comprehensive solutions for the rehabilitation of pipes and sewers. Our customers are executing companies that are involved in house connection rehabilitation, in-house rehabilitation or in the renovation and repair of main pipes.

In addition to high-quality systems, techniques, products and materials, we also offer comprehensive advice to our customers. We organise theoretical and practical training courses and develop tailor-made solutions. RS Technik is your partner during all phases of the project.

RS Technik AG
Your competent partner for trenchless sewer- and pipe rehabilitation systems.
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RS LinerGun® Inversion device

Properties

Small and compact

Flexible application

No liner length limitation, max. length only depending on material and processing time

Liner inversion via compressed air

Heating possible with water or steam

Time-saving: Inversion during the impregnation process calibration possible

Robust and reliable, easy handling, fully maintenance-free
Technical specifications

Range of application: DN 50 - DN 300

Accessories: RS Control unit
Attachment rings DN 150 & DN 200, air hoses, collapsable basic frame
(also usable with the manual RS calibration hose)

Dimensions (L x W x H):
With frame: 900 x 500 x 750 mm
Without frame: 500 x 400 x 450 mm
RS LinerCannon® Inversion device

Properties

Pressure drum in very light design

Material: stainless steel, sand-blasted or glass bead blasted silver matt

Liner inversion via compressed air

Heating with steam or water possible

Available in different sizes: 600, 800, 1000

Mobile structure with transport wheels and carrying handles

Viewing window above the steering wheel and temperature display on the hopper

Hand wheel with parking brake/locking pin

Shaft with loop for retaining strap

Safety valve 1.5 bar
Technical specifications

1” water outlet
2 x air connection to drum,
3/4” socket, 1/2” pressure gauge
Connection Storz coupling for attachment ring (D 600 + D 800: 8”, D 1000: 10”)

temperature display
RS Calibration roller  DN 300

Properties

- Two electrically driven, synchronous specially coated rollers
- Forward and reverse drive
- Infinitely variable speed control
- Manually height-adjustable upper calibration roller
- Simple, millimetre-accurate gap adjustment via a setting wheel
- Simple reading of the gap setting via the setting wheel display
- On/Off switch, speed control and direction of rotation are achieved via switches on the unit
- EMERGENCY OFF switch
- Transparent safety flap with stop function
- Also available as a manual version and DN 400
230 V connection

Made of high quality stainless steel

Sandblasted / glass bead blasted for matting the surface

Can also be used with RS LinerGun® and RS Manual calibration roller

For liner dimensions up to DN 300
Mixing unit

Properties

Material: stainless steel (tank, mechanics)
- Aluminium (lid)
- Hard anodised aluminium (pumps, valves)
- Partly galvanized steel

Control: Pneumatic, volume control via pneumatic stroke
- Preselection counter
- Operating lever with 3 positions
  - Mixing - Stop - Circulate
- Hardener selection lever for selection of
  - Tank 1 or 2

Safety: Tank level switch, pressure limitation pneumatics
- To 8/5 bar, safety control lever on mixing head,
- Hoses made of resistant material, pressure
- Resistant, fuse against mixing lever misuse

Mixing head: For static mixers, with start/stop lever
### Technical specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>L 750 mm, W 480 mm, H 1250 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>approx. 160 kg empty</td>
</tr>
</tbody>
</table>
| Tank volume         | Tank 1: 60 litres  
                      Tank 2: 30 litres  
                      Tank 3: 15 litres |
| Conveying capacity  | Approx. 7.5 kg/min/250 g mixture per double stroke |
| Pumps               | 3 piston dosing pumps patented, design as submersible pumps in tanks, double-acting, with pneumatic control, seals / O-rings resistant to materials |
| Drive               | pneumatic cylinder, operating pressure 5 bar |
Properties

Siemens touch panel

Conveying capacity 10 kg/min | 18 kg/min

External vacuum pump

Climate system for resin and hardener
(heating coil system available as an option)

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

Complete documentation of the mixing parameters, transfer via USB
heating coils optionally available

SPS control

Siemens Touch Panel

Progressive cavity pump for resin/hardener
Filling lances for refuelling the system from IBC or drum
Mixing head, filling hoses & spare parts set (stators etc.) included
RS HotBox® 60 | 105 Mobile heating system

Properties

Complete heating system with digital control
Fueled with diesel, supply 230V
Small, mobile and lightweight
Drivable
Throughput or circulating mode possible
Technical specifications

- 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 MicroCutter® incl. accessories

Properties

For internal pipe diameter 80 mm to 200 mm

Bend mobility of up to 90°

Can be clamped in the tube (exact milling)

For precise work with integrated part-turn gearbox

Purely pneumatically operated

Scope of delivery: Plastic box incl. RS MicroCutter® with pneumatic motor and 20 m supply hose,
Operating handle, camera holder, accessories for inner pipe diameters 80 mm - 200 mm and the necessary tools

Colorcamera mC30Duo Set
for pipes from 15 - 200 mm

Camera head diameter: 29 mm and 13 mm

Monitor 5.6” TFT-LCD with recorder in carbon housing

VA reel with parking brake

15 m / 30 m glass fibre push bar

Control unit with infinitely variable light regulation

Meter counter with electronic video insertion

Battery for over 2h operating time

Data storage on SD card
Operating element

Technical specifications

Dimensions: \( L \times \varnothing = 290 \text{ mm} \times 63 \text{ mm} \)

Radial clamping stroke: 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 of equipment: 19.5 kg

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

Motor power: approx. 0.37 kW at 22,000 rpm.
RS Steam Unit  Steam generator

Properties

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

- Capacity 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 rehabilitation with open end up to DN 200
- 1 end nozzle for rehabilitation with open end from DN 200
- Dimensions (L x W x H): 1100 x 600 x 1400 mm
RS Steam trailer

Properties

Closed floor made of slip-resistant screen printing plates, sealed

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

Hinged doors incl. door stop, 270° reversible, lockable via espagnolette lock

Powder-coated steel corner reinforcements for added stability

Edging profiles at door opening and rain bar above the door

Torsion-resistant rear portal

Screwed and galvanized german brand chassis

Original Humbaur axle

Maintenance-free rubber spring axles with independent wheel suspension

Braked with automatic reversing
Technical Specifications

Loading height approx. 530 mm
Permissible total weight: 2500 kg
Payload: approx. 1550 kg
Inner box dimensions: 4010 x 1810 x 2000 mm

RS LinerCannon® 600-1000 optionally available
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 (pumping speed: 16m³/h)

Incl. RS calibration roller table DN 300, electrically operated with drum motors built-in underframe

External filling device

One progressive cavity pump for each, resin & hardener

Tanks conforming to machine guidelines (Resin 260 L | Hardener 122 L)

Generator power: 5 kW

Vehicle equipment

< 7,5 t
Vehicle equipment

12 t

RS CCM® mixing system incl. Siemens touch panel with remote maintenance incl.
air conditioning system & standard mixing head
(capacity of resin mixing plant 18 Kg/min)
External vacuum pump V-VTN16 (pumping speed: 16 m³/h)
RS calibration roller table DN 300/ DN 400, electrically operated with drum
motors & underframe
External filling device with return line
One progressive cavity pump for each, resin & hardener
Tanks conforming to machine guidelines (Resin 480 L | Hardener 160 L)
Version with one or two hardener tanks possible
RS MaxLiner® Rehabilitation vehicles

Vehicle equipment

18 t

- RS CCM® mixing system incl. Siemens touch panel with remote maintenance incl. climate system, PLC system & standard mixing head (output 18 kg/min)
- External vacuum pump V-VTN16 (pumping speed 16 m³/h)
- RS Calibrating roller table DN 300 / DN 400, electrically operated with drum motors & underframe
- External filling device with return line
- One progressive pump cavity for each, resin & hardener
- Tanks conforming to machine guidelines (Resin 480 L | Hardener 160 L)
- Version with one or two hardener tanks possible
- Social room incl. kitchenette, dishwasher/washbasin, storage cupboards & lounge
lounge
incl. sink unit, worktop, microwave and refrigerator

RS CCM® incl. calibration roller
RS MaxLiner® Hose liner

Fix
Seamless, flexible polyester fibre hose with PU coating
Can be bent up to 90°, dimension change possible
For dimensional changes and bends a calibration hose is to be used
Cold hardening and hot hardening with water
Available from DN 70 to DN 200

Flex
Flexible needle felt liner with PU coating
Can be bent up to 45°
Wall thickness stable needle felt material
(ensures 3 mm minimum wall thickness)
Cold hardening and hot hardening with water or steam
Available from DN 70 to DN 400
**Flex S**

- Highly flexible needle felt liner with PU coating
- Can be bent up to 90°, dimension change possible
- Installations with closed end can also be implemented for dimension changes
- Wall thickness stable needle felt material (ensures 3 mm minimum wall thickness)
- Cold hardening and hot hardening with water or steam
- Available from DN 70 to DN 400

**Flex 4 D**

- Extremely flexible needle felt liner with PU coating
- Can be bent up to 90°, up to 4 dimension changes possible (DN 150 - DN 250)
- Installations with closed end can also be implemented for dimension changes
- Wall thickness stable needle felt material (ensures 3 mm minimum wall thickness)
- Hot hardening with water or steam
- Available from DN 75 to DN 400

**Superflex**

- Highly flexible needle felt liner with PU coating
- Can be bent up to 90°, dimension change possible
- Installations with closed end can also be implemented for dimension changes
- Wall thickness stable needle felt material (ensures 4.5 mm minimum wall thickness)
- Cold hardening and hot hardening with water or steam
- Available from DN 70 to DN 400
RS Calibration hoses

**Lite**
- PVC-coated fabric hose with overlapping welded seam
- Heatable up to a maximum of 40 °C
- Can be bent up to 90°
- Available from DN 80 to DN 200

**LiteTube**
- PVC-coated fabric hose with sewn and welded seam
- Heatable up to a maximum of 80 °C
- Can be bent up to 90°
- Available from DN 100 to DN 300

**LitePlus**
- PVC-coated fabric hose with welded seam
- Heatable up to a maximum of 80° C
- Can be bent up to 90°
- Available from DN 100 to DN 300

**LiteBlue**
- PVC-coated fabric hose with sewn and welded seam
- Heatable up to a maximum of 80 °C
- Extra flexible with lightweight fabric
- Available from DN 100 to DN 300

**HotPlus**
- PVC-coated fabric hose with welded surface seam
- Heatable up to a maximum of 80 °C
- Not bendable
- Available from DN 200 to DN 400, further dimensions upon request
Preliner

PE film tube with welded seam
Serves as an outer film to protect the liner from ground water and seepage water

PU-Outer hose

Thin polyester felt layer with PU coating
Serves as preliner and DIBt-approved integrated external coating
Prevents excess resin in the inlets
RS MaxPox® two-component epoxy resin systems

MaxPox® 15M
- Resin component for processing with hardeners 20, 40, 70 and 120
- Solvent- and filler-free

MaxPox® 20
- Hardener component for processing with MaxPox® 15M resin
- Working time at 20 °C approx. 25 min.
- Suitable for cold hardening, hot hardening with water or steam

MaxPox® 40
- Hardener component for processing with the resin MaxPox® 15M
- Working time at 20 °C approx. 40 min.
- Suitable for cold hardening, hot hardening with water or steam

MaxPox® 70
- Hardener component for processing with MaxPox® 15M resin
- Working time at 20 °C approx. 70 min.
- Suitable for cold hardening, hot hardening with water or steam
**MaxPox® 120**

Hardener component for processing with MaxPox® 15M resin

Working time at 20 °C approx. 70 min.

Suitable for cold hardening, hot hardening with water or steam

**MaxPox® Fill**

Filled and yellow coloured two-component epoxy resin system

High viscosity for good grip in the carrier material

Application time at 20 °C approx. 30/60/90 min (depending on hardener components)

Hot and cold hardening possible

**MaxPox® Thermo**

Red coloured two-component epoxy resin system

High temperature resistance up to 90 °C

Long processing time at 20 °C approx. 16 h

Not suitable for cold hardening, hot hardening with water or steam
RS MaxPatch® Consumables

RS MaxPatch® Comp. A 2K Fast

RS MaxPatch® Comp. A Winter

RS MaxPatch® Comp. A Summer

RS MaxPatch® Comp. C

Features & Benefits

- 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 by targeted dosing of the C-component
- Optimum adaptation to ambient conditions
**RS MaxPatch® Glass mats**

RS MaxPatch Advantex ECR glass

Glass mats rolls 330 mm/ 415 mm/ 510 mm and 1300 mm wide

Basis weights: 1086 g/ m² or 1387 g/ m²
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