

BRAWO[®] SYSTEMS

THE REHABILITATION EXPERT FOR PROPERTY AND BUILDING DRAINAGE SYSTEMS



PRODUCT CATALOG

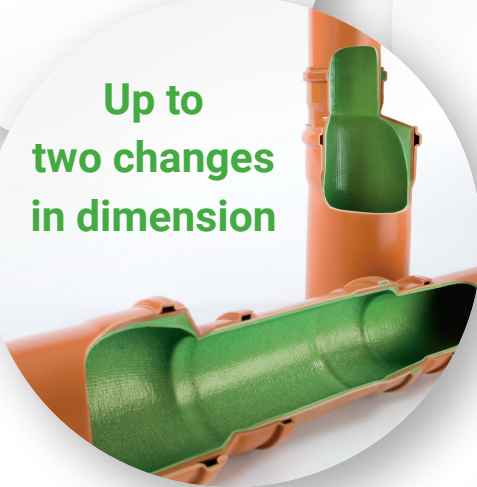
- Liners and resins
- Machine and equipment
- Training program



BRAWOLINER® - A quality product ...

Brawoliner®

**Up to
two changes
in dimension**



- Without excavation and chiselling work
- Suitable for nearly all damage profiles and pipe materials
- Much shorter rehabilitation times
- Rooms remain habitable during rehabilitation
- Environmentally friendly, sustainable and permanent
- Up to 50 % cheaper than open construction method

**Extremely
flexible and
strong**



**For bends
of up to 90°**



**Curing with
UV- & LED-light**



BRAWOLINER® fulfills quality standards, e.g.:

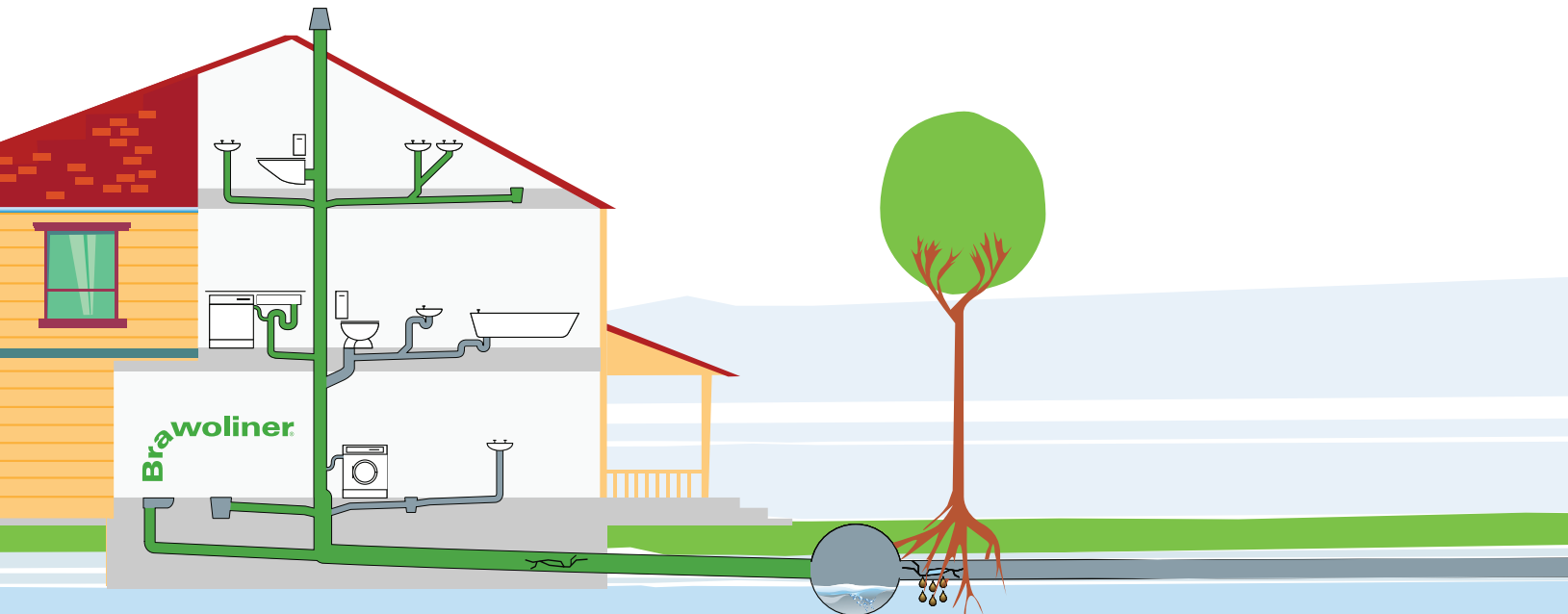
- Material examination of BRAWO® I in accordance to ASTM F 1216
- Material examination of BRAWO® III in accordance to ASTM F 1216
- BRAWOLINER® compliance tests according to DIN EN ISO 11296-4

All US partners are trained in the installation of BRAWOLINER®.



BRAWO® SYSTEMS Range of Products

- BRAWOLINER® - A quality product!**..... 2
- BRAWO® SYSTEMS Range of Products**..... 3
- BRAWOLINER®**
 - BRAWOLINER® 4
 - BRAWOLINER® 3D 4
 - BRAWOLINER® XT 4
 - BRAWOLINER® HT 4
- BRAWOLINER® Connection Collars**
 - BRAWOLINER® Connection Collars 5
- BRAWO® Installation Aids**
 - Preliner 5
 - Calibration Hoses 5
 - Airbagliner 5
- BRAWO® Resins**
 - Resins for steam / hot water / ambient curing**
 - BRAWO® I US 6
 - BRAWO® III US 6
 - BRAWO® SRR US 6
 - Table of Working and Curing Times** 7
 - Light curing resin**
 - BRAWO® UVPox US 7
- BRAWO® Tech – Light Curing**
 - BRAWO® Magnavity SX 8
- BRAWO® Academy**
 - BRAWO® Academy – Training and development program 10
- The Liner for all 4 Curing Methods** 11



BRAWOLINER®

BRAWO® SYSTEMS offers a seamless textile liner for the rehabilitation of small diameter pipes.

The BRAWOLINER® is extremely flexible due to the special loop construction. This makes it the ideal rehabilitation solution for defective pipes with bends of up to 90° and up to two changes in dimension. This liner offers an economic and environmentally-friendly alternative to open construction work!



BRAWOLINER®

The standard for repairing defective drains

- From 2" to 10" (DN 50 to DN 250)
- Bends of up to 90°
- One dimensional change



BRAWOLINER® 3D

Liner for changing diameters

- From 3" to 4" (DN 70 to DN 100)
- From 4" to 6" (DN 100 to DN 150)
- From 6" to 8" (DN 150 to DN 225)
- From 8" to 12" (DN 200 to DN 300)
- From 12" to 16" (DN 300 to DN 400)
- Bends of up to 90°



BRAWOLINER® XT

Rehabilitation of structurally impaired pipes

- From 4" to 10" (DN 100 to DN 250)
- Significantly higher stiffness
- Bends of up to 90°
- One dimensional change



BRAWOLINER® HT (XT, 3D)

For domestic sewer rehabilitation

- From 2" to 10" (DN 50 to DN 250)
- Bends of up to 90°
- Up to two changes in dimension
- Warm curing possible at higher temperatures with water or steam



BRAWO® Connection Collars

The rehabilitation of defective pipe connections represents a huge challenge. BRAWO® SYSTEMS supplies a tightly fitting solution for 4" to 6" main pipes and 3" to 6" branch connections.

BRAWOLINER® Connection Collars

- Flexible BRAWOLINER® material
- Optimal adjustment to the pipe run after the connecting piece
- Tight and particularly stable connection
- Ideal in combination with BRAWOLINER® rehabilitation



BRAWO® Installation Aid

Preliner

Preliners are used as an outer film between the liner and the old pipe if bonding with the old pipe is not required.

- From 4" to 12" (DN 100 to DN 300)
- Flexible film tube made of PE
- Material thickness approx. 150 µm
- Can be used for bends up to 90°

Calibration Hoses

Calibration hose is used as a support tube for installing the liner in the pipe being rehabilitated. Rehabilitation with open end is recommended where there is no possibility to open the sealed liner or if just a section of the pipe needs rehabilitation.

- From 3" to 16" (DN 80 to DN 400)
- Calibration hoses for various temperature ranges
- PVC material with PES fabric insert
- Good bend flexibility up to 45°

Airbagliner

To make steam curing even easier and faster, BRAWO® SYSTEMS offers the AIRBAGLINER®.

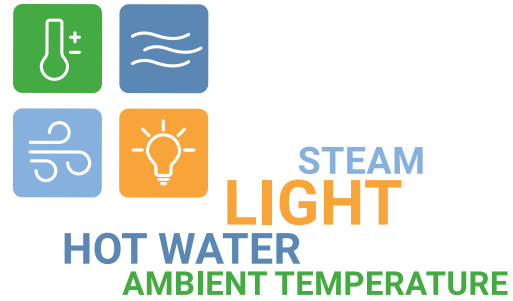
- From 2" to 16" (DN 50 to DN 400)
- Very high flexibility and an extreme sliding capacity
- Simplifies the inversion process even in pipes with small diameters and changes of direction
- Heat-resistant up to 150 °C, can be removed in less than 60 minutes
- The retraction process is made much easier by the high sliding capacity
- Pressure resistance of up to 2 bar
- Particularly suitable for negotiating bends
- Can be reused up to 6 times

BRAWO® Resins

The resins of BRAWO® SYSTEMS are especially developed for the rehabilitation of sewer systems. The BRAWO® epoxy resins will harden and cure at both ambient and higher temperatures. The application of heat considerably reduces the curing time. For fast curing with light, the epoxy resin „BRAWO® UVPox US“ must be used.

These resins have been optimized for use with the BRAWOLINER® and have outstanding properties:

- High abrasion resistance
- Solvent-free
- Excellent mechanical properties
- High chemical resistance
- Not harmful to groundwater
(Examined by the hygiene institute of the Ruhr area –
institute of environmental hygiene and toxicology,
Gelsenkirchen, GERMANY)



Resins for steam / hot water / ambient curing



BRAWO® I US

- This rapidly curing resin for underground pipes is particularly suitable for the rehabilitation of shorter pipes of up to approx. 50 ft in length



BRAWO® III US

- Thanks to the longer working time, the BRAWO® III US is suitable for the rehabilitation of longer pipe sections or large pipe diameters



BRAWO® SRR US

- For particularly economic rehabilitation of pipe connections or short pipe sections





Bulk options from 3 lbs to 2200 lbs



Working and curing times of BRAWO® epoxy resins

	BRAWO® I US	BRAWO® III US	BRAWO® SRR US
Working time at 59 °F	50 min.	3.5 hr	30 min.
Curing time 50 °F	13 hr	24 hr	4 hr
Curing time 122 °F	100 min.	220 min.	30 min.
Curing time 158 °F	45 min.	140 min.	not recommended

Light curing resin



BRAWO® UVPox US is the first pigmented light curing epoxy resin optimized to work with the BRAWOLINER®.

- Positive fit in the old pipe with no penetration or infiltration of water behind
- High installation reliability due to extremely long processing time
- Optical check using colored resin
- Targeted, fast curing
- Styrene-free and low-odour
- Curing with our light curing systems (UV or LED-light)



BRAWO® UVPox US

- For more efficient light curing in buildings and on properties

Light Curing

Curing with light



BRAWO® Magnavity **sx** smart • efficient • strong

CE conform
+ NRTL
certified



Range of
60 meters



YOU SAVE TIME AND EFFORT

The innovative and unique LED heads allow simultaneous insertion with inversion of the liner. Curing is thus carried out immediately after installation of the liner, without the need for additional insertion of the eel.

BRAWO® Magnavity SX stands for maximum flexibility and is perfectly matched to the installation of the BRAWOLINER® product line.



LIGHT CURING ON THE NEXT LEVEL!

Experience fast, reliable and above all smart light curing with „BRAWO® Magnavity SX“. Guaranteed with the usual installation safety and high quality from BRAWO® Tech.

Technical data BRAWO® Magnavity SX

Curing:	possible from 3" to 12" (DN 70 to DN 300)
Max. range (hose length):	60 m (196 ft)
Retraction speed:	0.1 – 2.0 m/min
Head diameter Nano:	45 mm (pipe range 4" – 8")
Head diameter Mega:	80 mm (pipe range 6" – 12")
Weight:	70 kg (approx. 155 lbs)
Dimensions (L x W x H mm):	735 x 490 x 975

smart

- Intelligent LED heads with integrated magnetic coupling for electromagnetic remote unlocking
- Installation log and interface to mobile end device (USB, W-LAN)
- Reversible dual camera
- Exchangeable LED head with integrated operating hours monitoring
- Plug & Play: Automatic recognition of the LED head used

efficient

- Low power consumption with high light output
- 96/192 High-performance UV LEDs with extremely high efficiency
- Saves a complete operation
- "Turtle" function for safe curing in the inlet area

strong

- Very fast curing
- Very good bend flexibility, 87° possible from 4" (DN 100)
- Easy transportation thanks to modular, lightweight construction

BRAWO® Academy

Training and development program

Benefit from expert knowledge

At the BRAWO® Academy, the training and development program of BRAWO® SYSTEMS, you can expand your expertise. Book a training course at BRAWO® SYSTEMS, the long-standing expert in property and building drainage! On our courses you will gain insights into all four curing methods – air, water, steam and light.

Learn directly on the equipment

You will learn the rehabilitation process directly on the required equipment. You will benefit from direct, personal advice from our highly qualified experts on how best to carry out rehabilitation work and which machines you really need.



The most important aspects in theory and practice

On all our courses, the basic principles are taught in theory and practice. Participants train how to handle the BRAWOLINER®, the various resins and the installation equipment. Different starting situations and requirements are presented and discussed. The preparation and follow-up of the BRAWOLINER® installation is also part of the training courses. You will receive tips and tricks for your work on your construction sites.

For more information

contact us:

contact.usa@brawosystems.com



BRAWOLINER®

The Liner for all **4**
Curing Methods:



STEAM
LIGHT
HOT WATER
AMBIENT TEMPERATURE



Light Curing (LED and UV)

Light Curing with UV and LED-light

The fast and low-cost curing with light

- For in-house rehabilitation as well as for house lateral pipes and from manhole to manhole
- Ideal for construction sites with a tight schedule



Steam Curing

Steam Curing

Curing process by steam

- For in-house rehabilitation as well as for house lateral pipes and from manhole to manhole



Hot Water Curing

Hot Water Curing

Curing process by hot water

- Ideal for house lateral pipes



Ambient Curing

Ambient Curing (without additional heat)

Curing process by ambient temperature

- Ideal for in-house rehabilitation and house lateral pipes

brawosystems-usa.com



Are you interested in our products?
Contact our sales manager USA

Andrew Marshall

+1-240 796 5007
andrew.marshall@brawosystems.com



BRAWO[®] SYSTEMS

BRAWO SYSTEMS GmbH · E-Mail: contact.usa@brawosystems.com