

BRAWO® SYSTEMS

LEADER OF LINING SOLUTIONS

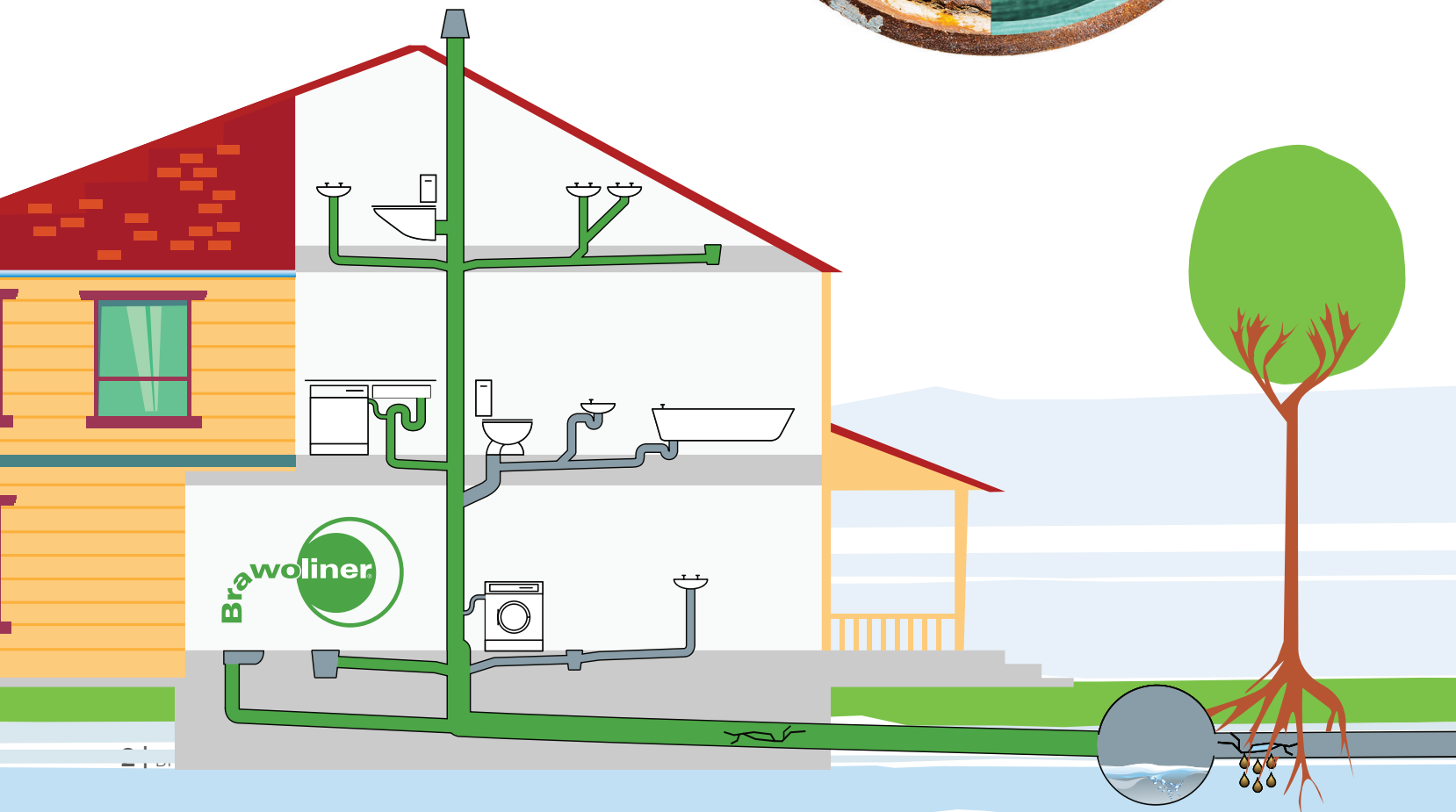
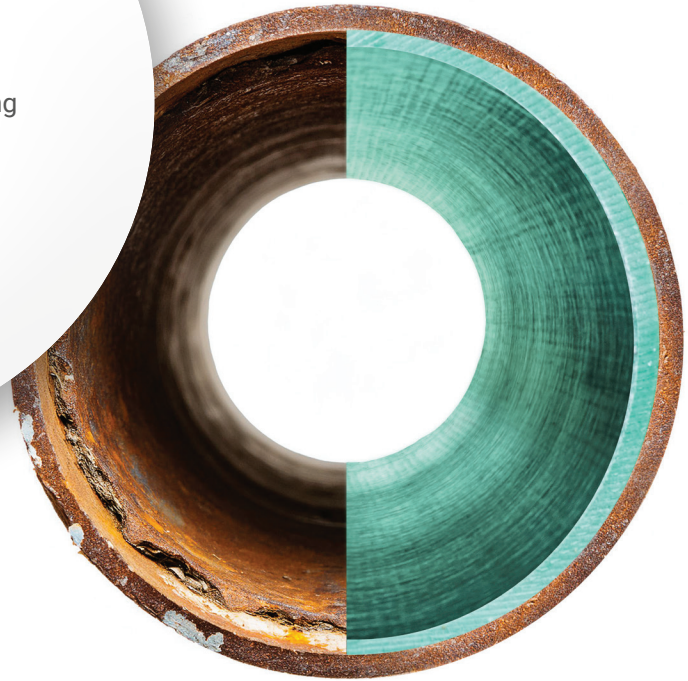


PRODUCT CATALOG

- Liners and resins
- Machines and equipment



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





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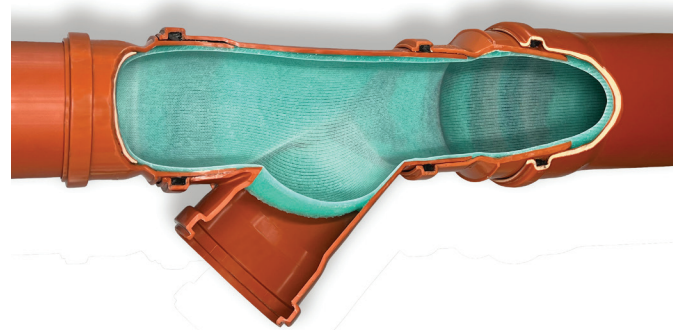
BRAWOLINER®

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!



The only seamless coated liner on the market: The new BRAWOLINER®

One liner for all four curing methods



OVOID PROFILES

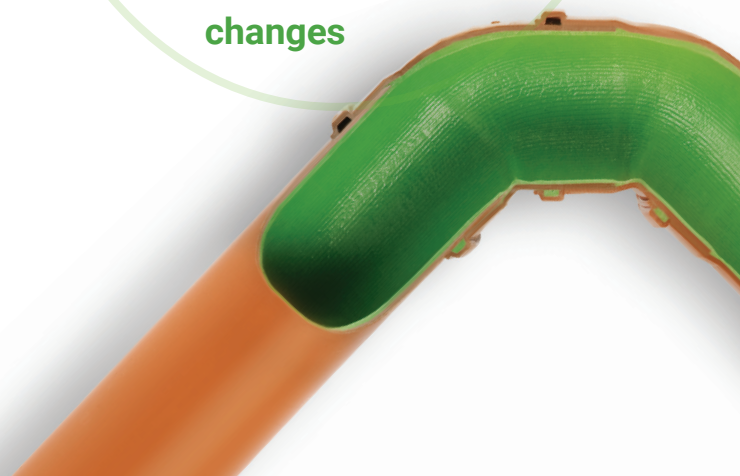
Up to two dimensional changes

Also suitable for special profiles

SQUARE PROFILES



Seamlessly knitted and extremely flexible





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 5" to 10" (DN 125 to DN 250)
- Significantly higher stiffness
- Bends of up to 90°
- One dimensional change



BRAWOLINER® HT (XT, 3D)

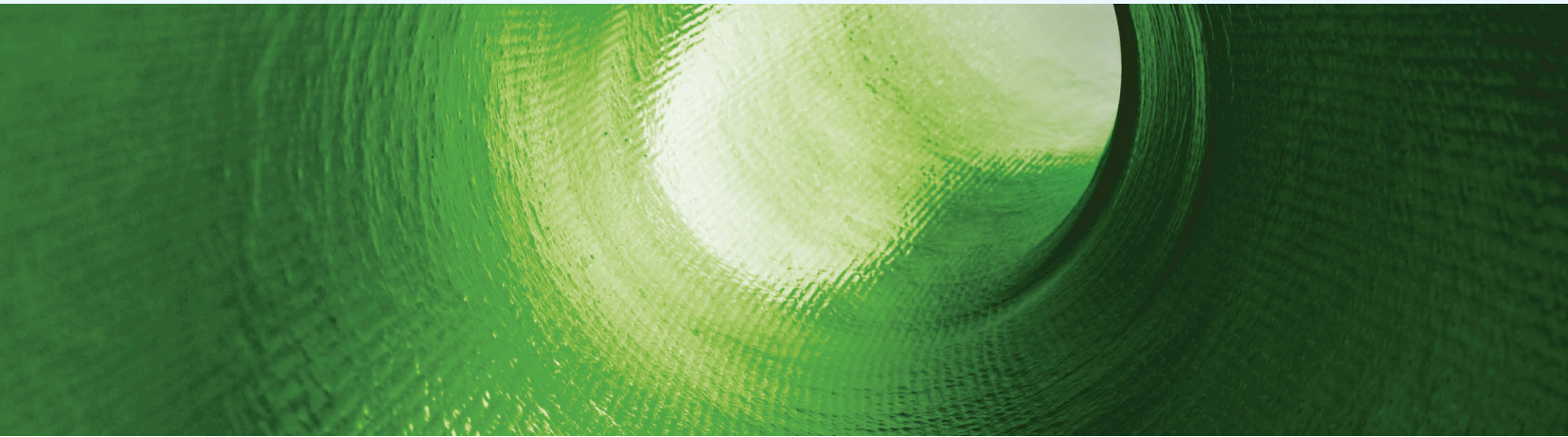
For domestic sewer rehabilitation

- 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



Bends up to 90°





Special loop construction
 – over 120 years
 of textile expertise

BRAWOLINER® fulfills quality standards, e.g.:

- Material examination of BRAWO® I US in accordance to ASTM F1216
- Material examination of BRAWO® III US in accordance to ASTM F1216
- Material examination of BRAWO® UV Pox US in accordance to ASTM F1216
- BRAWOLINER® compliance tests according to DIN EN ISO 11296-4

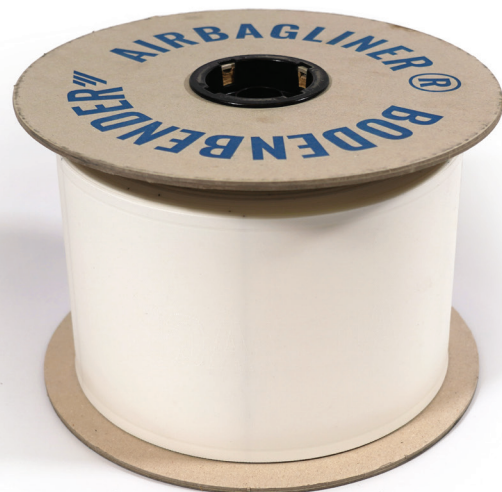
All US partners are trained in the installation of BRAWOLINER®.

BRAWO® Installation Aids

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





Everything from one source for all 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

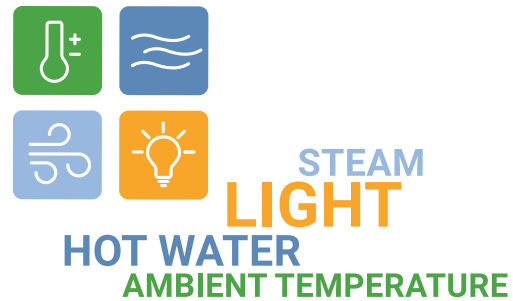
- Ideal for in-house rehabilitation and house lateral pipes

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
- Available container sizes:
22.05 lbs (10 kg)
66.14 lbs (30 kg)



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
- Available container sizes:
22.05 lbs (10 kg)
66.14 lbs (30 kg)



BRAWO® SRR US

- For particularly economic rehabilitation of pipe connections or short pipe sections
- Available container size:
66.14 lbs (30 kg)





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)
- Available container sizes:
26.46 lbs (12 kg)
2204.62 lbs (1000 kg)



BRAWO® UVPox US

- For more efficient light curing in buildings and on properties

Light Curing

Curing with light



NEW!
Nominal
widths
2" - 4"

BRAWO® Pico **SX**
smart • efficient • small



**CE conform
+ NRTL
certified**



SAVE TIME AND EFFORT

The innovative and unique LED head allows simultaneous retraction and inversion of the liner by means of unlocking. Curing is thus carried out immediately after installation of the liner – without the need for additional insertion of the eel.

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



LED head



Accessories



Control box

BRAWO® PICO SX – SMALL BUT MIGHTY

BRAWO® Pico sx is the first system specifically designed for use in very small waste water pipes. These are usually found inside buildings (in-house). The innovative light curing for small nominal diameters is unique. The high installation safety and the usual high quality of BRAWO® Tech, the brand for high-quality rehabilitation equipment, is guaranteed.

Technical data for BRAWO® Pico sx

Curing:	possible from 2" to 4" (DN 50 to DN 100)
Range:	82 ft (25 m)
Retraction speed:	from 0.3 to 6.5 ft/min from 0.1 to 2.0 m/min
Head diameter:	0.9 in (24 mm)
Weight:	approx 55 lbs (25 kg)
Dimensions (L x W x H):	17.3 x 16.7 x 23.4 (in) 440 x 425 x 595 (mm)

smart

- Intelligent LED head with integrated coupling for remote pneumatic unlocking
- Installation log and interface to mobile terminal device (USB, W-LAN)
- Changeable hose package with LED head
- Integrated operating hours control and temperature monitoring

efficient

- Low power consumption with high light output
- 20 high-power UV LEDs with extremely high efficiency
- Saves a complete operation, only one access point necessary

small

- Very fast curing
- Very good bend flexibility, 87° possible from 2" (DN 50) upwards
- Easy transport thanks to compact, lightweight modular design
- Extremely small construction, particularly suitable for in-house rehabilitation

Light Curing

Curing with light



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

CE conform
+ NRTL
certified



Range of
196 ft



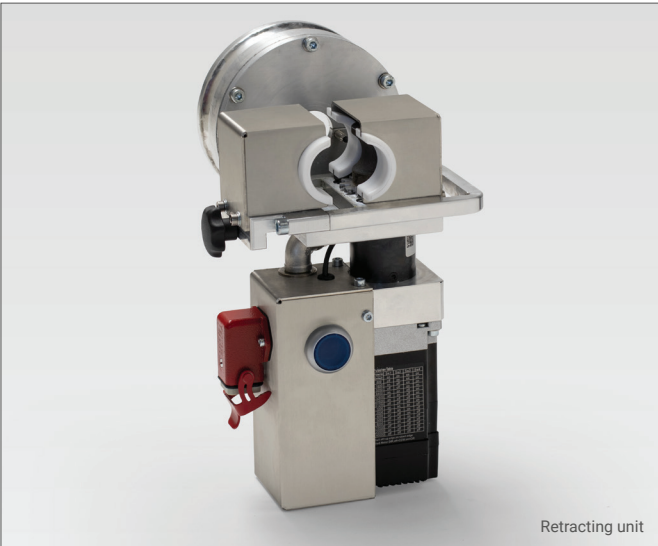
YOU SAVE TIME AND EFFORT

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.



Intelligent LED heads with integrated magnetic coupling



Retracting unit



Big Display
(User interface 10")

Control box

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):	196 ft (60 m)
Retraction speed:	from 0.3 to 6.5 ft/min from 0.1 – 2.0 m/min
Head diameter Nano:	1.77 in (45 mm; pipe range 4" – 8")
Head diameter Mega:	3.15 in (80 mm; pipe range 6" – 12")
Weight:	approx. 155 lbs (70 kg)
Dimensions (L x W x H):	28.9 x 19.3 x 38.4 (in) 735 x 490 x 975 (mm)

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

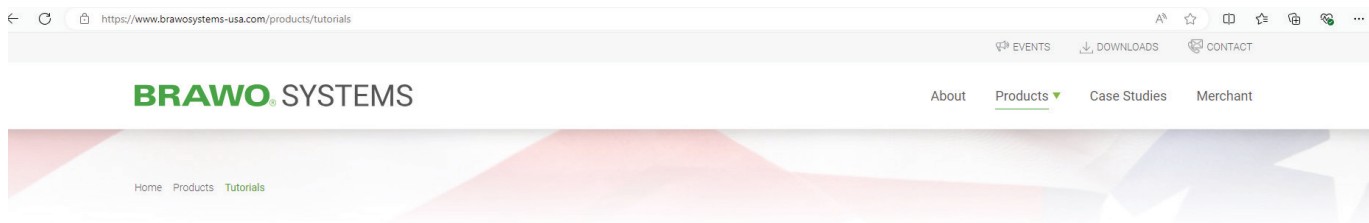
- Very fast curing
- Very good bend flexibility, 87° possible from 4" (DN 100)
- Easy transportation thanks to modular, lightweight construction

BRAWO® Academy Tutorials

Have you seen our tutorials?

Short application videos in which the BRAWO® SYSTEMS experts present the various rehabilitation solutions can be found here

[brawosystems-usa.com/products/tutorials](https://www.brawosystems-usa.com/products/tutorials)



Tutorials

In addition to our training offer at the BRAWO® Academy, on site in Kaiserslautern, here you will find short application videos in which the BRAWO® SYSTEMS experts present the various rehabilitation solutions for in-house and GEA rehabilitation to you step-by-step. Learn everything about the various BRAWO® SYSTEMS products and aids as well as many tips for successful rehabilitation in the videos.



BRAWO® Academy Training – Repair with BRAWO® connection collars



BRAWO® Academy Training – Rehabilitation with BRAWO® Magnavity SX and end cap



BRAWO® Academy Training – Repairing with BRAWO® ShortLiner

BRAWO® Downloads

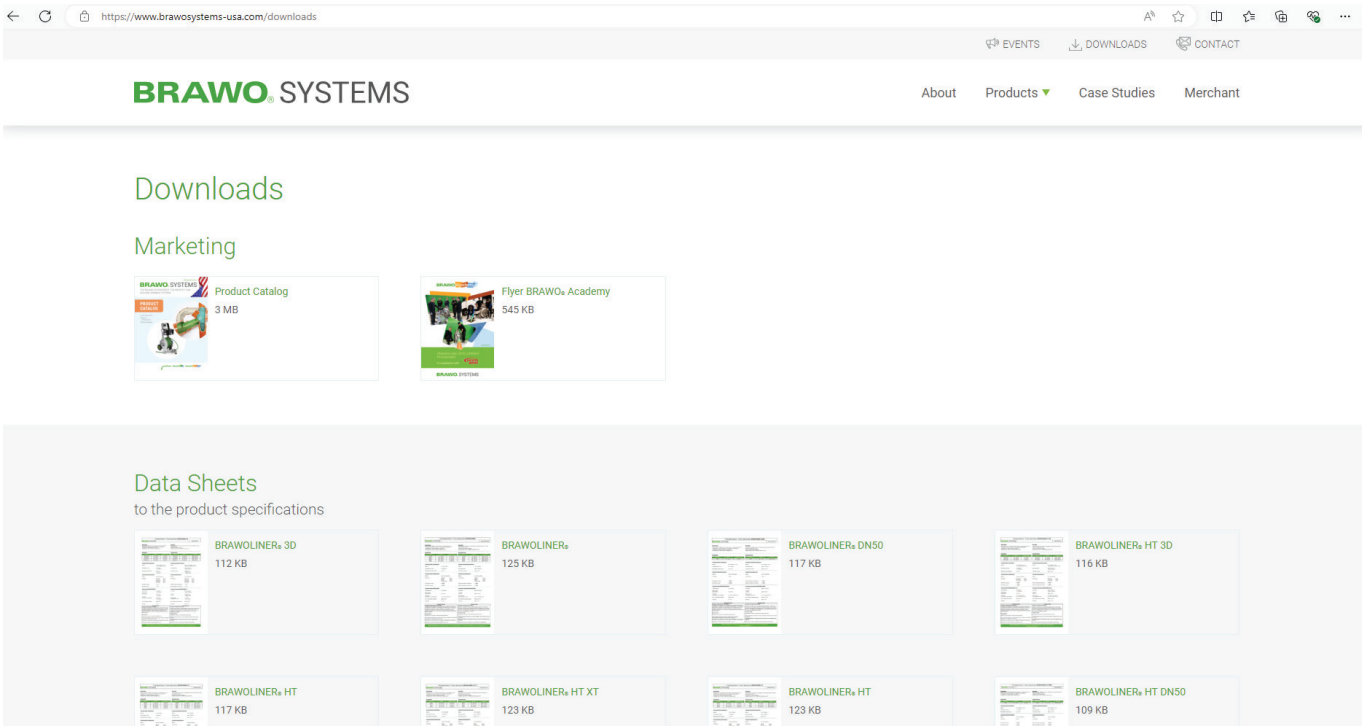
Your direct access to all important information!

In our download area you will find all important documents, such as data sheets, process instructions, marketing documents, etc. All documents are available to download free of charge.

At a glance you will find:

- Marketing documents, e.g. product catalogue
- Safety data sheets, technical data sheets, data sheets on product specifications, structural engineering values and resin consumption
- Process instructions for the different rehabilitation methods with the BRAWOLINER®
- Independent test reports
- Installation information for BRAWOLINER®

<https://www.brawosystems-usa.com/downloads>



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BRAWO[®] SYSTEMS

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