



SEWER REPAIR

Product catalog

SEWER REPAIR

The term sewer repair refers to techniques and measures for the restoration or or improvement of existing drainage systems. The rehabilitation of a drainage channel is to restore its functionality and extend its and extend the service life of the drainage system.

Sewer repair is divided into three process groups, repair, renovation and replacement. **F. Willich** has specialized in the repair procedures and parts of the renovation and can draw on 50 years of experience in the field of sewer construction.





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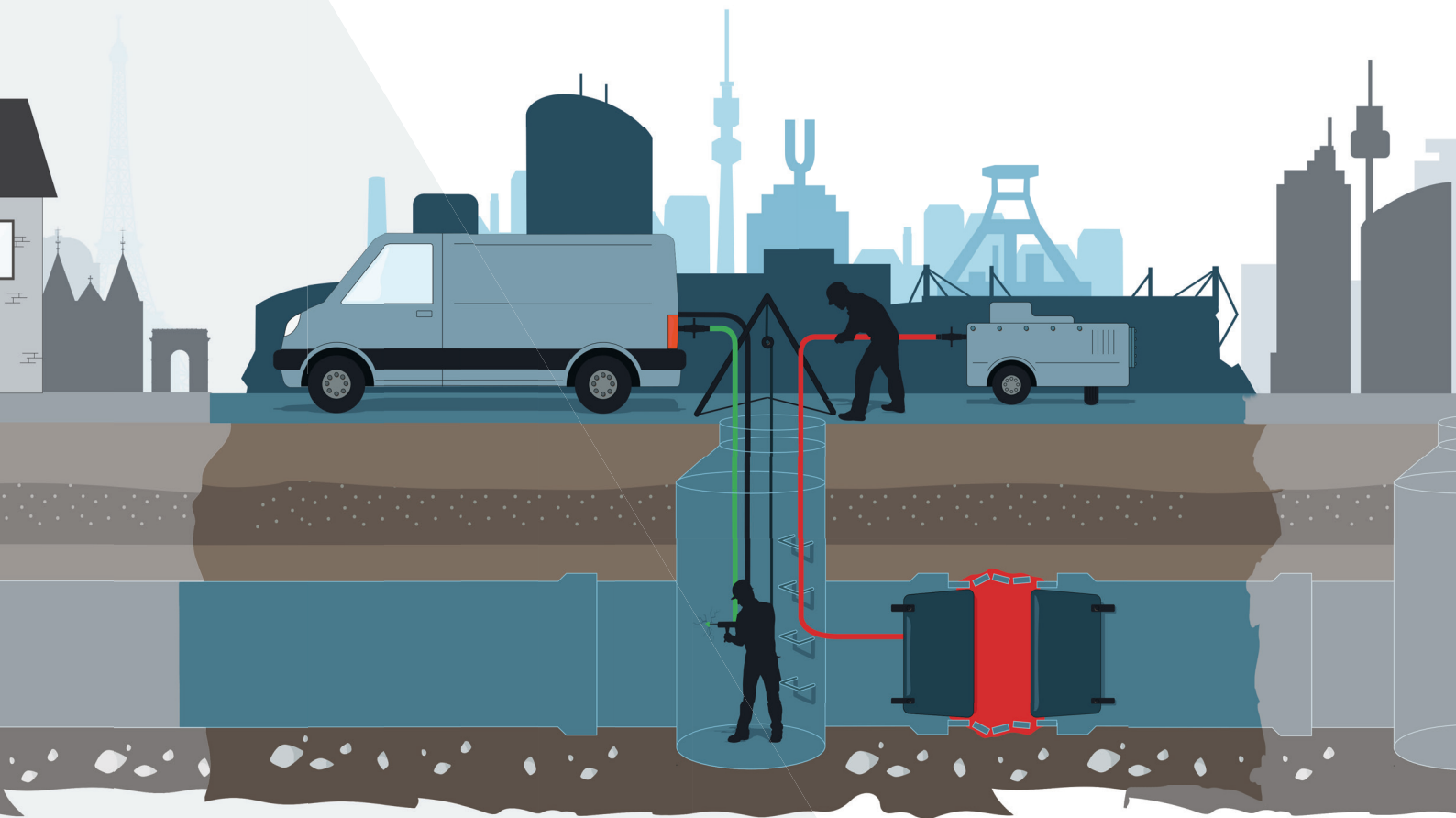
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INJECTION SYSTEM

The injection system is a proven repair method for partial sealing in sewer repair.

Injection for the repair of wastewater pipes and sewers is understood to mean the insertion of injection material into damaged areas and the pipe surroundings with a continuous supply of material. The injection system comprises the equipment technology for storing or preparing, conveying and injection of the injection material.

Depending on the injection material used, the injection system is either a temporary sealing (1K systems) or a permanent, solidifying sealing (2K systems). The injection material is subject to special hygienic requirements.
F. Willich products are certified and approved accordingly.



WILLPUR® WS INJECTION RESINS

The **WILLPUR® WS** and **WILLPUR® WS FA** products are instantaneous setting 2-component injection resins, free of CFCs and halogens, for waterproofing and consolidation in water-bearing zones, especially against water under pressure.

WILLPUR® WS HF is an immediately setting, high foaming 2-component injection resin.



WILLPUR® WS**MIXING RATIO 1:1**

Article designation	Size	Packaging	Article number
WILLPUR® WS - A/B incl. quadromixer	400 ml 1500 ml	Double chamber cartridge Double chamber cartridge	WPUR-WS-1-A/B2K-400 WPUR-WS-1-A/B2K-1500
WILLPUR® WS - A	21 kg	Metal can	WPUR-WS-1-A21
WILLPUR® WS - B	25 kg	Metal can	WPUR-WS-1-B25

WILLPUR® WS FA**MIXING RATIO 1:1**

Article designation	Size	Packaging	Article number
WILLPUR® WS FA - A/B incl. quadromixer	400 ml 1500 ml	Double chamber cartridge Double chamber cartridge	WPUR-WSFA-1-A/B2K-400 WPUR-WSFA-1-A/B2K-1500
WILLPUR® WS FA - A	21 kg	Metal can	WPUR-WSFA-1-A21
WILLPUR® WS FA - B	25 kg	Metal can	WPUR-WSFA-1-B25

WILLPUR® WS HF**MIXING RATIO 1:1**

Article designation	Size	Packaging	Article number
WILLPUR® WS HF - A/B incl. quadromixer	400 ml 1500 ml	Double chamber cartridge Double chamber cartridge	WPUR-WSHF-1-A/B2K-400 WPUR-WSHF-1-A/B2K-1500
WILLPUR® WS HF - A	21 kg	Metal can	WPUR-WSHF-1-A21
WILLPUR® WS HF - B	25 kg	Metal can	WPUR-WSHF-1-B25

WILLSTOP® 1K INJECTION RESINS

WILLSTOP® 1K products are highly conductive 1K polyurethane systems for temporary waterproofing. The reaction times can be adjusted by adding **WILLADD®** to a catalyst.

WILLSTOP® Flex is a flexible, high performance 1K polyurethane-system for the permanent sealing of water ingress.



WILLSTOP® 1

Article designation	Size	Packaging	Article number
WILLSTOP® 1	20 kg	Metal can	WSTOP-1-20

WILLADD® 1

Article designation	Size	Packaging	Article number
WILLADD® 1	5 kg	Metal can	WADD-1-5

WILLSTOP® 1K+

Article designation	Size	Packaging	Article number
WILLSTOP® 1K+	20 kg	Metal can	WSTOP-1K+-20

WILLSTOP® FLEX

Article designation	Size	Packaging	Article number
WILLSTOP® Flex	20 kg	Metal can	WSTOP-FLEX-20

WILLADD® FLEX

Article designation	Size	Packaging	Article number
WILLADD® Flex	5 kg	Metal can	WADD-FLEX-5

WILLPUR® INJECTION RESINS

WILLPUR® WX is a slow reacting 2K injection resin.

WILLPUR® JS is a high viscosity 2K injection resin for sealing joints in non-accessible ducts.

WILLPUR® CS is a very slow reacting 2K injection resin for crack injection.



WILLPUR® WX**MIXING RATIO 1:1**

Article designation	Size	Packaging	Article number
WILLPUR® WX - A	20 kg	Metal can	WPUR-WX-1-A20
WILLPUR® WX - B	24 kg	Metal can	WPUR-WX-1-B24

WILLPUR® JS**MIXING RATIO 1:1**

Article designation	Size	Packaging	Article number
WILLPUR® JS - A/B incl. quadromixer	1500 ml	Double chamber cartridge	WPUR-JS-1-A/B2K-1500
WILLPUR® JS - A	20 kg	Metal can	WPUR-JS-1-A20
WILLPUR® JS - B	24 kg	Metal can	WPUR-JS-1-B24

WILLPUR® CS**MIXING RATIO 1:1**

Article designation	Size	Packaging	Article number
WILLPUR® CS - A	18 kg	Metal can	WPUR-CS-1-A18
WILLPUR® CS - B	20 kg	Metal can	WPUR-CS-1-B20

WILLPUR® WS FLUSHING OIL & WILLPUR® WS CLEANER

WILLPUR® Flushing Oil is an effective means for flushing injection pumps and hose lines that have been previously cleaned with WILLPUR® Cleaner.



WILLPUR® WS FLUSHING OIL

Article designation	Size	Packaging	Article number
WILLPUR® WS Flushing oil	11 kg	Metal can	WPUR-SÖ-1-11

WILLPUR® WS CLEANER

Article designation	Size	Packaging	Article number
WILLPUR® WS Cleaner	4 kg	Metal can	WPUR-R-1-4

EQUIPMENT & ACCESSORIES

2K PUMP



Note

2C injection system with separate flushing pump, MV 1:1

Article number

WPUM-ARE-10100

1K PUMP



Note

1C injection system incl. injection gun reservoir

Article number

WPUM-ARE-10101

QUADROMIXER



Note

08 - 24, straight tip

Article number

WPUR-INA-00100

SETTING TOOL

**Note**

suitable for Lamella impact packer

Article number

WPUR-INA-00101

LAMELLA IMPACT PACKER

**Diameter / Length mm**

14 x 95

Article number

WPUR-INA-00102

DISCHARGER PN/MA/AKKU

**Note**

manual, 400 ml cartridge, MV 1:1
pneumatic, 400 ml cartridge, MV 1:1
akku, 400 ml cartridge, MV 1:1

Article number

WPUR-INA-00103
WPUR-INA-00104
WPUR-INA-00105

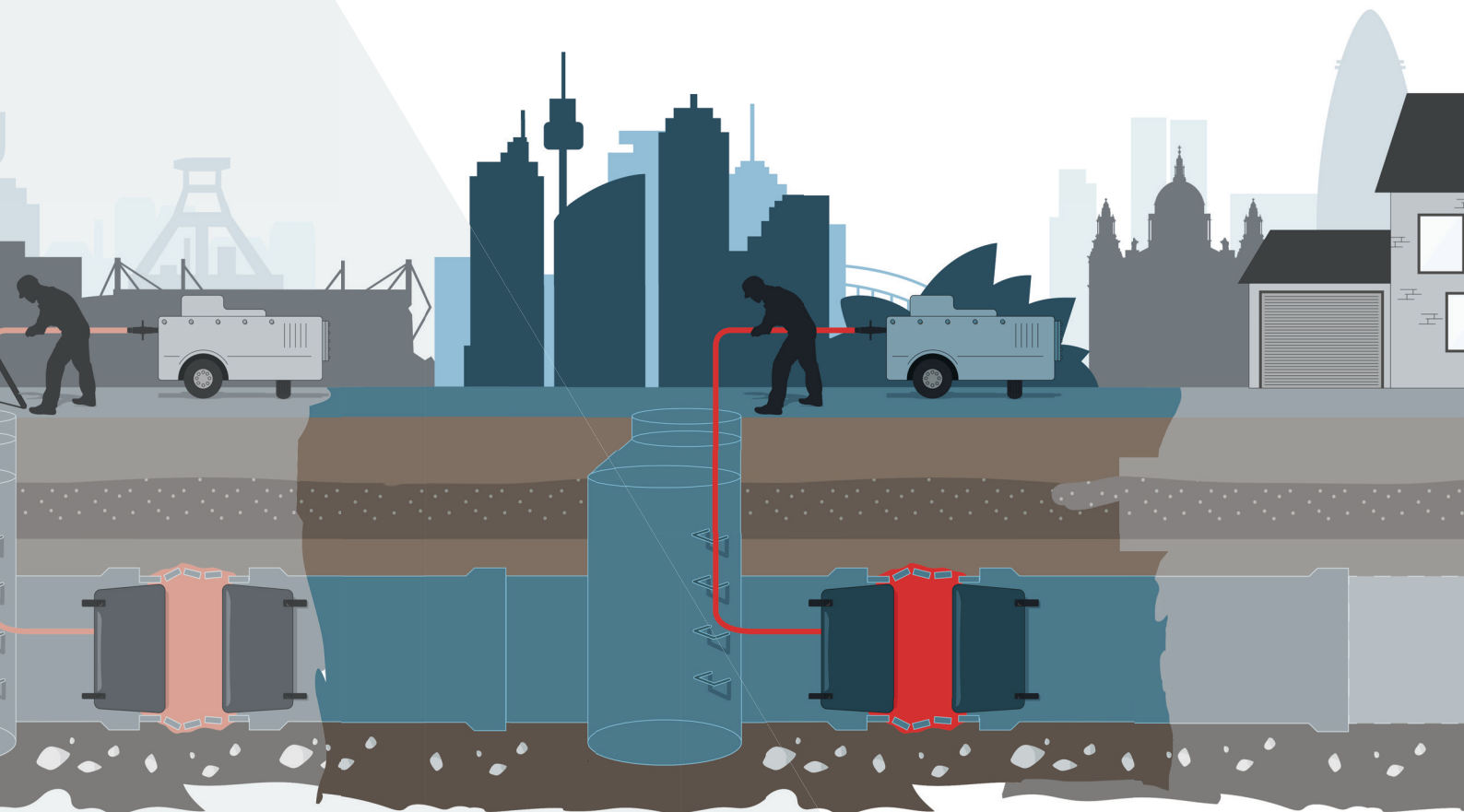


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SHORT LINER SYSTEM

In accordance with DIN EN 15885, short liners belong to the repairs with in-situ curing materials. Measures are for restoring the nominal condition or stabilizing and sealing in the case of localized damage. The aim of the repair is to maintain a sewer in this area, that, after the damage has been repaired, meets the requirements of use and safety (according to DIN EN 752).

A short liner is an in-situ curing laminate of reinforcing carrier materials and a 2K or 3K silicate resin. Reinforcing substrates usually consist of a glass fiber complex. The silicate resin in combination with the material and leads to a bonding with the old pipe during installation. The carrier material is processed in several layers, whereby in the case of sewers and drains in the public sector, a wall thickness of ≥ 3 mm must be present after curing.



WILLKAT® PL & WILLKAT® SL

WILLKAT® PL is a non-foaming, elastified two- and three-component resin on a silicate base with good adhesion even to damp surfaces for the rehabilitation and sealing of sewers and pipes using the short liner method in sewer rehabilitation. Catalysis takes place via the A-component.

WILLKAT® SL is a non-foaming, elastified two-component resin on a silicate with good adhesion even to damp surfaces for the rehabilitation and waterproofing of sewers and pipes using the short liner method in sewer rehabilitation. Catalysis takes place via the B-component.



WILLKAT® PL 3K

Article designation	Size	Packaging	Article number
WILLKAT® PL 3K - A	28 kg	Metal can	WKAT-PL-3K-1-A28
WILLKAT® PL 3K - B	21 kg	Metal can	WKAT-PL-5-1-B21
WILLKAT® PL 3K - C	1 kg	Tin can	WKAT-PL-3K-6-C1

WILLKAT® PL 2K SLOW - A**MIXING RATIO 1:2**

Article designation	Size	Packaging	Article number
WILLKAT® PL 2K Slow - A	14 kg	Metal can	WKAT-PL-2K-2-ASL14
	280 kg	Metal drum	WKAT-PL-2K-2-ASL280
	1400 kg	IBC	WKAT-PL-2K-2-ASL1400

WILLKAT® PL 2K SUMMER - A**MIXING RATIO 1:2**

Article designation	Size	Packaging	Article number
WILLKAT® PL 2K Summer - A	250 ml	PE Bottle	WKAT-PL-2K-3-ASU250
	335 ml	PE Bottle	WKAT-PL-2K-3-ASU335
	14 kg	Metal can	WKAT-PL-2K-3-ASU14
	280 kg	Metal drum	WKAT-PL-2K-3-ASU280
	1400 kg	IBC	WKAT-PL-2K-3-ASU1400

WILLKAT® PL 2K WINTER - A**MIXING RATIO 1:2**

Article designation	Size	Packaging	Article number
WILLKAT® PL 2K Winter - A	250 ml	PE Bottle	WKAT-PL-2K-4-AWI250
	335 ml	PE Bottle	WKAT-PL-2K-4-AWI335
	14 kg	Metal can	WKAT-PL-2K-4-AWI14
	280 kg	Metal drum	WKAT-PL-2K-4-AWI280
	1400 kg	IBC	WKAT-PL-2K-4-AWI1400

WILLKAT® PL 2K FAST - A**MIXING RATIO 1:2**

Article designation	Size	Packaging	Article number
WILLKAT® PL 2K Fast - A	250 ml	PE Bottle	WKAT-PL-2K-7-AFA250
	335 ml	PE Bottle	WKAT-PL-2K-7-AFA335
	14 kg	Metal can	WKAT-PL-2K-7-AFA14
	280 kg	Metal drum	WKAT-PL-2K-7-AFA280
	1400 kg	IBC	WKAT-PL-2K-7-AFA1400

WILLKAT® PL 2K FAST PLUS - A**MIXING RATIO 1:2**

Article designation	Size	Packaging	Article number
WILLKAT® PL 2K Fast Plus - A	250 ml	PE Bottle	WKAT-PL-2K-8-AFAP250
	335 ml	PE Bottle	WKAT-PL-2K-8-AFAP335
	14 kg	Metal can	WKAT-PL-2K-8-AFAP14
	280 kg	Metal drum	WKAT-PL-2K-8-AFAP280
	1400 kg	IBC	WKAT-PL-2K-8-AFAP1400

WILLKAT® PL - B**MIXING RATIO 1:2**

Article designation	Size	Packaging	Article number
WILLKAT® PL - B	500 ml	PE Bottle	WKAT-PL-5-1-B500
	665 ml	PE Bottle	WKAT-PL-5-1-B665
	21 kg	Metal can	WKAT-PL-5-1-B21
	210 kg	Metal drum	WKAT-PL-5-1-B210
	1050 kg	IBC	WKAT-PL-5-1-B1050

WILLKAT® SL 2K - A**MIXING RATIO 1:2**

Article designation	Size	Packaging	Article number
WILLKAT® SL 2K - A	13 kg	Plastic can	WKAT-SL-A13

WILLKAT® SL 2K SUMMER - B**MIXING RATIO 1:2**

Article designation	Size	Packaging	Article number
WILLKAT® SL 2K Summer - B	10 kg	Plastic can	WKAT-SL-S-B10
	20 kg	Plastic can	WKAT-SL-S-B20

WILLKAT® SL 2K WINTER - B**MIXING RATIO 1:2**

Article designation	Size	Packaging	Article number
WILLKAT® SL 2K Winter - B	10 kg	Plastic can	WKAT-SL-W-B10
	20 kg	Plastic can	WKAT-SL-W-B20

WILLKAT® SL 2K FAST - B**MIXING RATIO 1:2**

Article designation	Size	Packaging	Article number
WILLKAT® SL 2K Fast - B	10 kg	Plastic can	WKAT-SL-F-B10
	20 kg	Plastic can	WKAT-SL-F-B20

SUBSTRATES

ECR FIBER OPTIC COMPLEX - GREEN 1080 G/M² +- 8%



Length in m	Width in mm	Article number
40	1250	WSUB-FGM-10100
40	650	WSUB-FGM-10101
40	520	WSUB-FGM-10102
40	430	WSUB-FGM-10103
40	350	WSUB-FGM-10104

ECR FIBER OPTIC COMPLEX - RED 1400 G/M² +- 8%



Length in m	Width in mm	Article number
40	1250	WSUB-FGM-10105
40	650	WSUB-FGM-10106
40	520	WSUB-FGM-10107
40	430	WSUB-FGM-10108
40	350	WSUB-FGM-10109

ARC-FLEX MAT- ECR GLASS 1081 G/M²



Width in mm	Article number
1300	WSUB-FGM-00100

TEXTILE FIBER COMPLEX 450 G/M² - FOR LAMINATION



Length in m	Article number
40	WSUB-FGM-00101

HAT PROFILES



Dimension in mm	Diversion	Article number
Needle felt 5 mm without coating, spigot length 400 mm		
100	45°	WSUB-THP-10100
100	90°	WSUB-THP-10101
125	45°	WSUB-THP-10102
125	90°	WSUB-THP-10103
150	45°	WSUB-THP-10104
150	90°	WSUB-THP-10105
200	45°	WSUB-THP-10106
200	90°	WSUB-THP-10107
Needle felt 5 mm with 300 g/m PU coating, spigot length 400 mm		
100	45°	WSUB-THP-10108
100	90°	WSUB-THP-10109
125	45°	WSUB-THP-10110
125	90°	WSUB-THP-10111
150	45°	WSUB-THP-10112
150	90°	WSUB-THP-10113
200	45°	WSUB-THP-10114
200	90°	WSUB-THP-10115
Hightex 4.5 mm with 300 g/m PU coating, spigot length 400 mm		
100	45°	WSUB-THP-10116
100	90°	WSUB-THP-10117
125	45°	WSUB-THP-10118
125	90°	WSUB-THP-10119
150	45°	WSUB-THP-10120
150	90°	WSUB-THP-10121
200	45°	WSUB-THP-10122
200	90°	WSUB-THP-10123

EQUIPMENT & ACCESSORIES

F. Willich offers you the appropriate accessories, as required in the DIBt approval in order to carry out a high-quality renovation.

Our rehabilitation packers are especially suitable for partial repairs using the short liner method in the dimensions DN 70 - DN 800. The flexible construction ensures good sliding properties, bendability and handling.



HOUSE CONNECTION PACKER



Dimension in mm	Length in mm	Article number
70 - 110	1000	WPAC-HCP-10100
70 - 110	1500	WPAC-HCP-10101
70 - 110	2000	WPAC-HCP-10102
70 - 110	2500	WPAC-HCP-10103
70 - 110	3000	WPAC-HCP-10104
100 - 150	1000	WPAC-HCP-10105
100 - 150	1500	WPAC-HCP-10106
100 - 150	2000	WPAC-HCP-10107
100 - 150	2500	WPAC-HCP-10108
100 - 150	3000	WPAC-HCP-10109
150 - 200	1000	WPAC-HCP-10110
150 - 200	1500	WPAC-HCP-10111
150 - 200	2000	WPAC-HCP-10112
150 - 200	2500	WPAC-HCP-10113
150 - 200	3000	WPAC-HCP-10114

FLEXPACKER



Dimension in mm	Length in mm	Article number
wrapped, 2.5 bar, with wheel set		
150 - 200	1000	WPAC-FXP-10100
150 - 200	1500	WPAC-FXP-10101
150 - 200	2000	WPAC-FXP-10102
150 - 200	2500	WPAC-FXP-10103
150 - 200	3000	WPAC-FXP-10104
wrapped, 1.5 bar, with wheel set		
200 - 300	1000	WPAC-FXP-10105
200 - 300	1500	WPAC-FXP-10106
200 - 300	2000	WPAC-FXP-10107
200 - 300	2500	WPAC-FXP-10108
200 - 300	3000	WPAC-FXP-10109
300 - 400	1000	WPAC-FXP-10110
300 - 400	1500	WPAC-FXP-10111
300 - 400	2000	WPAC-FXP-10112
300 - 400	2500	WPAC-FXP-10113
300 - 400	3000	WPAC-FXP-10114
wrapped, 1.0 bar, with wheel set		
400 - 600	1500	WPAC-FXP-10115
600 - 800	1500	WPAC-FXP-10116
800 - 1000	1500	WPAC-FXP-10117
1000 - 1200	2200	WPAC-FXP-10118

ARCH RENOVATION PACKER

Bends & angles up to 90°, protective sheath made of silicone



Dimension in mm	Length in mm	Article number
50	600	WPAC-BDY-20100
50	1000	WPAC-BDY-20101
70	600	WPAC-BDY-20102
70	1000	WPAC-BDY-20103
80 - 100	1200	WPAC-BDY-20104
80 - 100	1500	WPAC-BDY-20105
80 - 100	2000	WPAC-BDY-20106
100 - 150	1000	WPAC-BDY-20107
100 - 150	1200	WPAC-BDY-20108
100 - 150	1500	WPAC-BDY-20109
100 - 150	2000	WPAC-BDY-20110
200 - 250	1500	WPAC-BDY-20111
200 - 250	2000	WPAC-BDY-20112
225 - 300	1500	WPAC-BDY-20113

MULTI-SIZE PACKER

Safety coupling, small packer head



Dimension in mm	Length in mm	Article number
50 - 150	1000	WPAC-MSP-20100
50 - 150	1500	WPAC-MSP-20101
50 - 150	2000	WPAC-MSP-20102
50 - 150	2500	WPAC-MSP-20103
50 - 150	3000	WPAC-MSP-20104
50 - 150	4000	WPAC-MSP-20105
50 - 150	5000	WPAC-MSP-20106
70 - 200	1000	WPAC-MSP-20107
70 - 200	1500	WPAC-MSP-20108
70 - 200	2000	WPAC-MSP-20109
70 - 200	2500	WPAC-MSP-20110
70 - 200	3000	WPAC-MSP-20111
70 - 200	4000	WPAC-MSP-20112
70 - 200	5000	WPAC-MSP-20113
100 - 250	1000	WPAC-MSP-20114
100 - 250	1500	WPAC-MSP-20115
100 - 250	2000	WPAC-MSP-20116
100 - 250	2500	WPAC-MSP-20117
100 - 250	3000	WPAC-MSP-20118
100 - 250	4000	WPAC-MSP-20119
100 - 250	5000	WPAC-MSP-20120
150 - 400	1000	WPAC-MSP-20121
150 - 400	1500	WPAC-MSP-20122
150 - 400	2000	WPAC-MSP-20123
150 - 400	2500	WPAC-MSP-20124
150 - 400	3000	WPAC-MSP-20125
150 - 400	4000	WPAC-MSP-20126
150 - 400	5000	WPAC-MSP-20127

SLIDE PACKER

One-sided ball head, dimensionally stable internal packereel



Dimension in mm	Length in mm	Article number
70 - 100	1000	WPAC-SHI-20100
70 - 100	1500	WPAC-SHI-20101
70 - 100	2000	WPAC-SHI-20102
70 - 100	3000	WPAC-SHI-20103
70 - 100	4000	WPAC-SHI-20104
70 - 100	5000	WPAC-SHI-20105
80 - 150	1000	WPAC-SHI-20106
80 - 150	1500	WPAC-SHI-20107
80 - 150	2000	WPAC-SHI-20108
80 - 150	3000	WPAC-SHI-20109
80 - 150	4000	WPAC-SHI-20110
80 - 150	5000	WPAC-SHI-20111
125 - 200	1000	WPAC-SHI-20112
125 - 200	1500	WPAC-SHI-20113
125 - 200	2000	WPAC-SHI-20114
125 - 200	3000	WPAC-SHI-20115
125 - 200	4000	WPAC-SHI-20116
125 - 200	5000	WPAC-SHI-20117
150 - 250	1000	WPAC-SHI-20118
150 - 250	1500	WPAC-SHI-20119
150 - 250	2000	WPAC-SHI-20120
150 - 250	3000	WPAC-SHI-20121
150 - 250	4000	WPAC-SHI-20122
150 - 250	5000	WPAC-SHI-20123

REVISION PACKER



Dimension in mm

100 - 125

125 - 150

Length in mm

1500

1500

Article number

WPAC-RVS-20100

WPAC-RVS-20101

PRESSURE BOX

The **F. Willich Pressure box**, specially developed for demanding and efficient partial pipe repair (short liners and cap profiles). Pressure boxes are mobile, self-explanatory control units for compressed air and vacuum dosing of rehabilitation packers.



Note

3 Connectors

2 Connectors

3 Connectors incl. timer

Dimension in mm

360 x 320 x 180

253 x 320 x 180

253 x 320 x 180

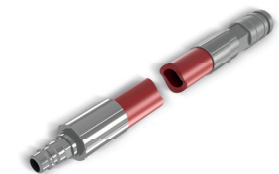
Article number

WKAT-SLE-10100

WKAT-SLE-10101

WKAT-SLE-10102

AIR PUSH RODS



The **F. Willich air push bars** are characterised by their high flexibility, dimensional stability and resistance to breakage.

Length in mm

1000

1500

2000

3000

Article number

WKAT-SLE-10103

WKAT-SLE-10104

WKAT-SLE-10105

WKAT-SLE-10106

MEASURING CUP PVC WITH HANDLE



Measuring unit in liter	Article number
1.0	WKAT-SLA-00100
2.0	WKAT-SLA-00101
3.0	WKAT-SLA-00102
5.0	WKAT-SLA-00103

STIRRER UNIVERSAL



Measuring unit in mm	Article number
60 x 400	WKAT-SLA-00105
80 x 400	WKAT-SLA-00106

PVC SPATULA



Measuring unit in cm	Article number
28	WKAT-SLA-00107

MINI STRETCH FILM / HAND DISPENSER / HAND STRETCH FILM



Article designation	Strength in μ	Article number
Hand dispenser		WKAT-SLA-00109
Mini stretch film, transparent	23	WKAT-SLA-00108
Hand stretch film, transparent	20	WKAT-SLA-00110
Hand stretch film, black	20	WKAT-SLA-00111
Hand stretch film, transparent	10 - 30	WKAT-SLA-00112

SHORT LINER WIRE



Measuring unit in m

40

Article number

WKAT-SLA-00113

ADHESIVE TAPE



Measuring unit in m

0.012 x 66

Article number

WKAT-SLA-00114

RELEASE SPRAY



Measuring unit in ml

400

Article number

WKAT-SLA-00115

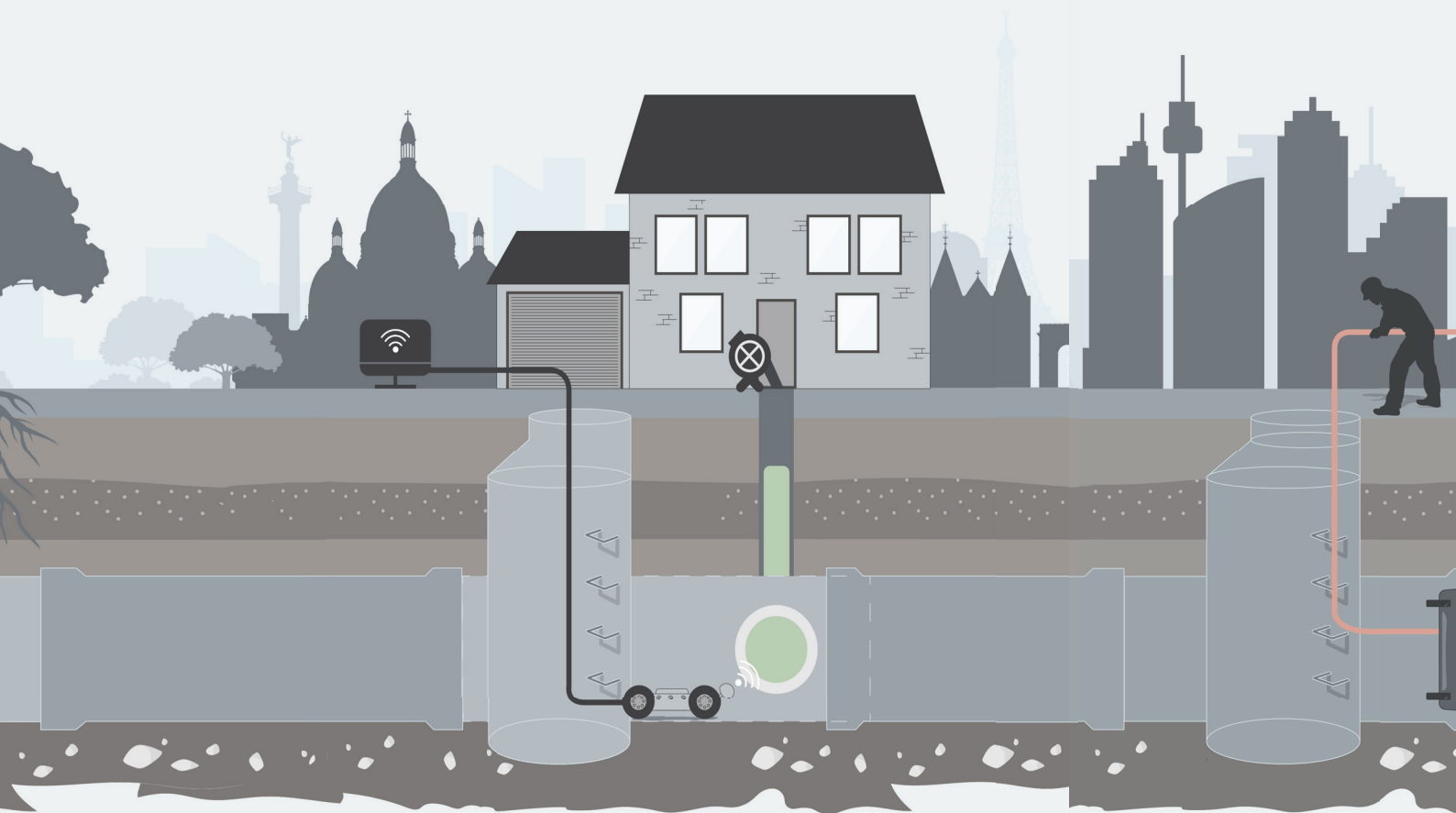
SCISSOR

Special scissors for cutting F. Willich glass fiber mats and synthetic fiber liners



Article number

WKAT-SLA-00116



3

TROWEL AND FILLING SYSTEM

According to DIN EN 15885, robotic procedures to the repairs with in-situ curing materials.

These are measures used to restore the target condition by removing drainage obstacles, closing and sealing individual damaged areas and the connection areas in sewers. They can be self-contained repairs or serve as preliminary or follow-up work (e.g. renovation procedures). The aim of the repair is to obtain a sewer in this area which, after the damage has been repaired, meets the requirements for use and safety (according to DIN EN 752).

Trowel and filling robots are used to repair faults, leaky pipe connections and improperly made connections in circular pipes and sewers that cannot be walked on and in the nominal diameter range from DN 200 to DN 600. The use in egg-shaped and special profiles as well as in other nominal diameters is possible and requires special additional equipment.



WILLPOX® RS & WILLPOX® SP 1:1

WILLPOX® RS is a solvent-free, filled and pigmented 2-component epoxy-based reactive resin for cold curing with good adhesion even to damp surfaces. **WILLPOX® RS** is pre-accelerated and has a fast and has a fast through-drying speed.

WILLPOX® SP 1:1 is a solvent-free, filled and pigmented 2-component epoxy resin-based reactive resin for cold and warm curing, even on damp surfaces. The product is easy to process despite its high thixotropy. **WILLPOX® SP 1:1** is pre-accelerated and has a quick through-drying speed.



WILLPOX® RS**DIBt: Z-42.3-529**

Article designation	Size	Packaging	Article number
WILLPOX® RS KATE - A	2.16 kg	Tin can	WPOX-RS-1-A2,16KATE
WILLPOX® RS KATE - B	0.84 kg	Tin can	WPOX-RS-1-B0,84KATE
WILLPOX® RS KATE - A	1.44 kg	Tin can	WPOX-RS-2-A1,44KATE
WILLPOX® RS KATE - B	0.56 kg	Tin can	WPOX-RS-2-B0,56KATE
WILLPOX® RS PMO - A	2.16 kg	Tin can	WPOX-RS-3-A2,16PMO
WILLPOX® RS PMO - B	0.84 kg	Tin can	WPOX-RS-3-B0,84PMO
WILLPOX® RS PMO - A	1.44 kg	Tin can	WPOX-RS-4-A1,44PMO
WILLPOX® RS PMO - B	0.56 kg	Tin can	WPOX-RS-4-B0,56PMO

WILLPOX® RS FAST

Article designation	Size	Packaging	Article number
WILLPOX® RS FAST	1 kg	Tin can	WPOX-RS-1-FAST

WILLPOX® SP 1:1**DIBt: Z-42.3-560**

Article designation	Size	Packaging	Article number
WILLPOX® SP 1:1 KATE - A	1.95 kg	Tin can	WPOX-SP1:1-8A-KATE1,95
WILLPOX® SP 1:1 - B	1.95 kg	Tin can	WPOX-SP1:1-8B-KATE1,95
WILLPOX® SP 1:1, PMO - A	1.75 kg	Tin can	WPOX-SP1:1-A2-PMO1,75
WILLPOX® SP 1:1 - B	1.75 kg	Tin can	WPOX-SP1:1-B2-PMO1,75
WILLPOX® SP 1:1 - A	0.5 l ≈ 0.7 kg	Tubular bag	WPOX-SP1:1-5-SLB-A-0,7
WILLPOX® SP 1:1 - B	0.5 l ≈ 0.7 kg	Tubular bag	WPOX-SP1:1-5-SLB-B-0,7
WILLPOX® SP 1:1 - A	0.7 l ≈ 0.98 kg	Tubular bag	WPOX-SP1:1-7-SLB-A-0,98
WILLPOX® SP 1:1 - B	0.7 l ≈ 0.98 kg	Tubular bag	WPOX-SP1:1-7-SLB-B-0,98

EQUIPMENT & ACCESSORIES



PRESS-OUT UNIT FOR 2C EPOXY RESINS

Press-out unit for 2C EP resins with 4 tubular bags à 500 ml - 700 ml, electrically driven with 230 V, AC 2 web limit switches, 1 emergency stop switch, CE marking



Article number

WPOX-FGE-00100

WILLMOL SILICONE GREASE



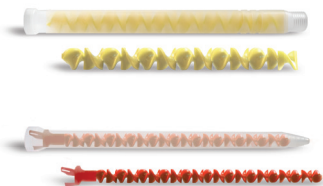
Size

1 kg Can

Article number

WPOX-FGA-00100

STATIC MIXER



Article designation

Static mixer yellow

Static mixer white

Static mixer red

Diameter

18 mm

23.7 mm

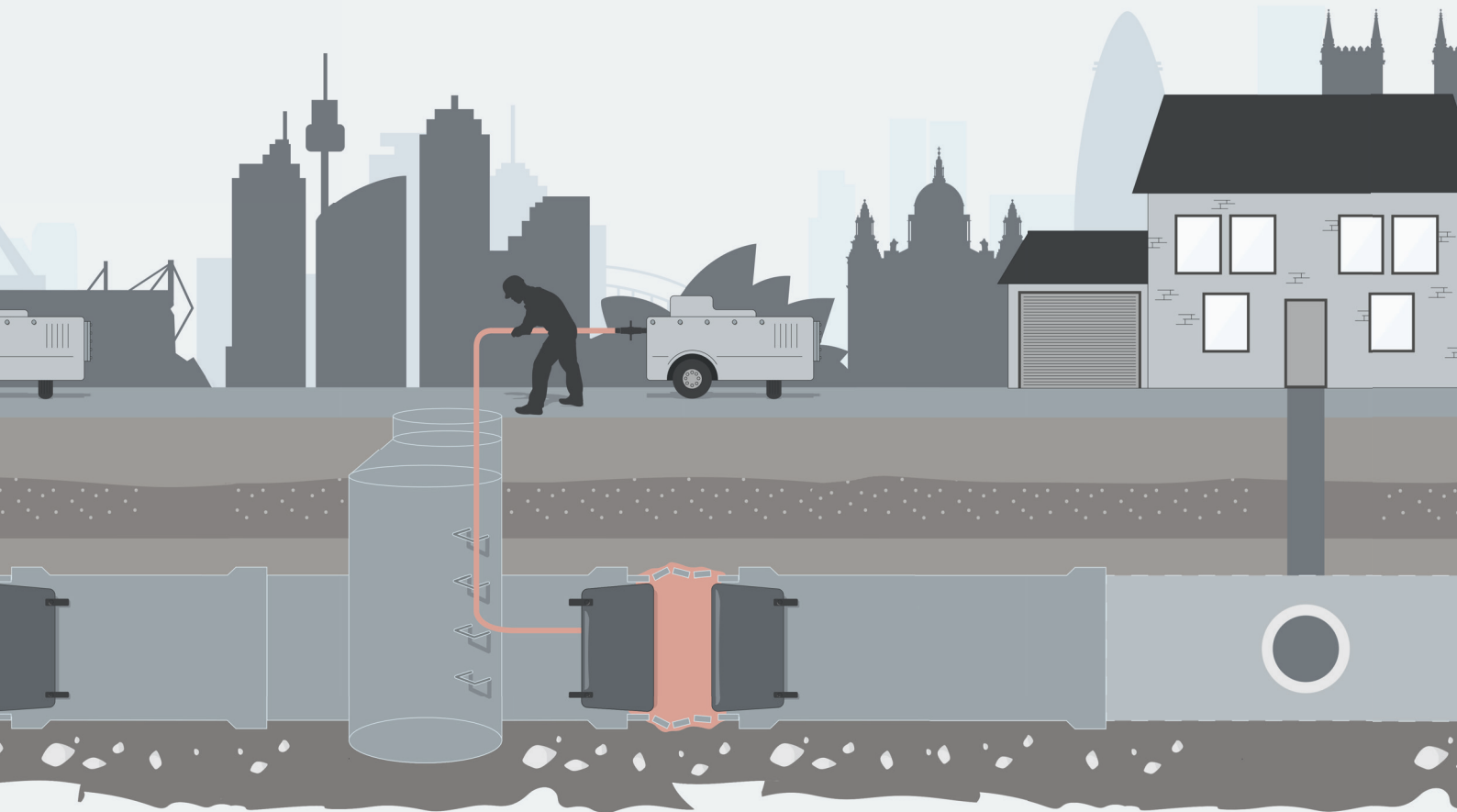
23.7 mm

Article number

WPOX-FGA-00101

WPOX-FGA-00102

WPOX-FGA-00103



4

MANHOLE REHABILITATION

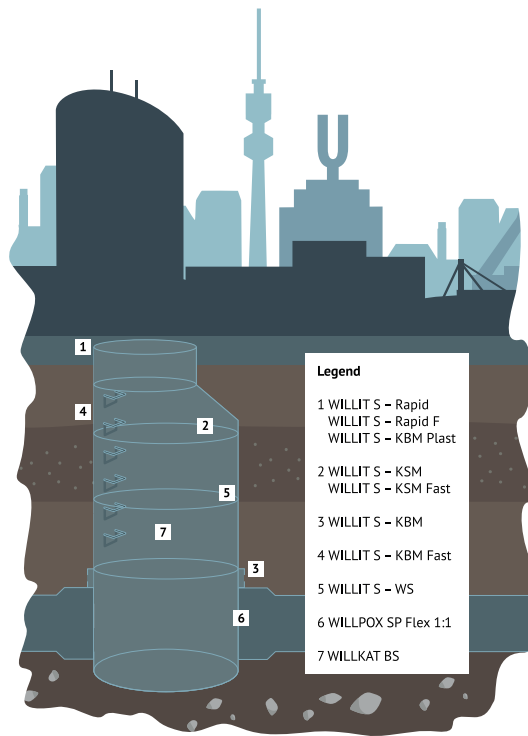
Manhole rehabilitation is a factor in almost every rehabilitation of a pipeline and is usually always necessary.

It is important to update the manholes not only structurally but also in terms of safety standards. This is the only way to ensure a holistic rehabilitation be guaranteed. On the basis of the damage analysis, appropriate rehabilitation concepts are drawn up. Damage from the bottom of the manhole (channel) to the manhole cover can be rehabilitated using various rehabilitation methods.



SYSTEMS FOR MANHOLE REHABILITATION

CROSS SECTION OF THE MANHOLE



WILLIT® S-RAPID

Is used for all force-fit grouting work where rapid loading is required:

- Shaft frame grouting (grouting heights up to 50 mm)
- reaches strengths after 1 h that allow immediate further assembly
- is highly flowable and fills every cavity self-levelling

Article designation	Size	Packaging	Article number
WILLIT® S-Rapid	25 kg	Paper bag	WIT-S-R-25
WILLIT® S-Rapid F	20 kg	Paper bag	WIT-S-RF-20

WILLIT® S-KBM

WILLIT® S-KBM is used for all non-positive connections where rapid loading is required:

- Insertion of crampons
- Bricklaying of channel clinkers
- Grouting and bricklaying of manholes, gullies and berms

WILLIT® S-KBM can also be used at low temperatures due to its short setting time. The construction height should not exceed 50 mm.

Article designation	Size	Packaging	Article number
WILLIT® S-KBM	25 kg	Paper bag	WIT-S-KBM-25
WILLIT® S-KBM Fast 3	15 kg	Plastic Bucket	WIT-S-KBMF-3-15
WILLIT® S-KBM Fast 10	15 kg	Plastic Bucket	WIT-S-KBMF-10-15
WILLIT® S-KBM Plast 01	25 kg	Paper bag	WIT-S-KBMP-1-25
WILLIT® S-KBM Plast 04	25 kg	Paper bag	WIT-S-KBMP-4-25

WILLIT® S-KSM

It is used for:

- for system-compatible repair and renovation of all types of concrete surfaces, extendable to 6 mm for large-area coating of sewers, water and sewage structures, tanks and fittings
- for grouting and sealing, coating and levelling for interior and exterior surfaces with high resistance to chemical attack
- impermeable to water, resistant to permanent water loads
- for coating other structures and surfaces exposed to chemical attack
- for concrete repair in statically relevant areas, repair methods 3.1, 3.2, 3.3, 4.4, 7.1 and 7.2 according to ENV 1504 Part 9 and 1504 Part 3 Table 1 respectively

Article designation	Size	Packaging	Article number
WILLIT® S-KSM	25 kg	Paper bag	WIT-S-KSM-25
WILLIT® S-KSM Fast	25 kg	Paper bag	WIT-S-KSMF-25

WILLIT® S-WS 30

WILLIT® S-WS 30 is used for the immediate closure of:

- water ingress points in rock, concrete and masonry
- for sealing cable and pipe penetrations
- for sealing cracks in the surface of injections

Article designation	Size	Packaging	Article number
WILLIT® S-WS 30	15 kg	Plastic Bucket	WIT-S-WS30-15
WILLIT® S-WS	15 kg	Plastic Bucket	WIT-S-WS15-15

WILLKAT® BS

DIBt: Z-59.12-445

Article designation	Size	Packaging	Article number
WILLKAT® BS - A	4.2 kg	Metal can	WKAT-BS-1-A-4,2
WILLKAT® BS - B	6.8 kg	Plastic can	WKAT-BS-2-B-6,8

WILLPOX® SP FLEX 1:1

DIBt: Z-42.3-557

WILLPOX® SP Flex 1:1 is a fast reacting flexible two component epoxy resin with good adhesion even to damp surfaces, stoneware and concrete:

- Liner bonding
- Expansion joint renovation
- Muffle renovation

Article designation	Size	Packaging	Article number
WILLPOX® SP Flex 1:1 - A/B	400 ml	Double chamber cartridge	WPOX-SPF1:1-5-A/B2K-400
WILLPOX® SP Flex 1:1 - A	1.0 kg	Tin can	WPOX-SPF1:1-A-BD1,0
WILLPOX® SP Flex 1:1 - B	1.0 kg	Tin can	WPOX-SPF1:1-B-BD1,0



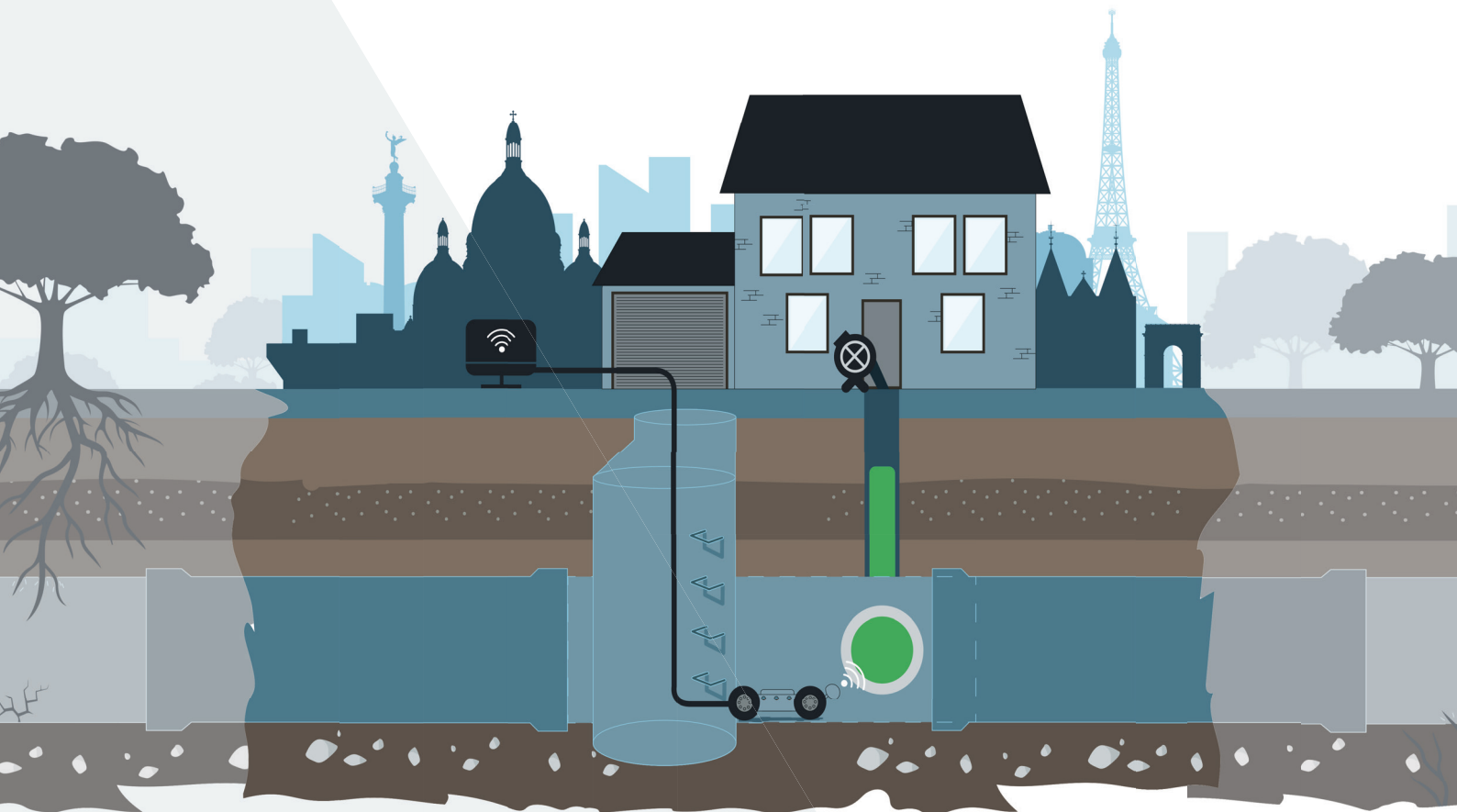
5

HOUSE CONNECTION REHABILITATION

Two important framework conditions fundamentally regulate the operation of the wastewater system.

According to §60 WHG it is stated that „wastewater facilities must be constructed, operated and maintained in accordance with the generally recognised rules of technology“. §61 states: Anyone who „operates a wastewater system is obliged to monitor its condition, its functionality, its maintenance and its operation as well as the type and quantity of wastewater and wastewater constituents themselves.“

Modern pipe lining systems make it possible to repair any damage in the house connection pipe by impregnating a pipe liner with a reactive resin and inverting it into the pipe.



WILLPOX® 20/75/100/480 & WILLPOX® LC

WILLPOX® 20/75/100/480 is a solvent-free, two-component epoxy resin system free of alkylphenols and benzyl alcohol.

The system is particularly suitable for cured coatings due to its adapted reactivity and the mechanical properties of cured coatings, the system is especially for sewer rehabilitation using the inliner system.

WILLPOX® LC is a special solvent-free 1K epoxy resin system. The system is suitable for curing impregnated synthetic fiber liners with UV and LED light due to the adapted reactivates.



WILLPOX® - A

Article designation	Size	Packaging	Article number
WILLPOX® - A	16 kg	Metal bucket	WPOX-HS-1-A16
	200 kg	Metal drum	WPOX-HS-1-A200
	1000 kg	IBC	WPOX-HS-1-A1000

WILLPOX® 20 - B**MIXING RATIO 100 : 40**

Article designation	Size	Packaging	Article number
WILLPOX® 20 - B	6.4 kg	Plastic can	WPOX-HS-1-20-B6,4
	200 kg	Metal drum	WPOX-HS-1-20-B200
	1000 kg	IBC	WPOX-HS-1-20-B900

WILLPOX® 75 - B**MIXING RATIO 100 : 25**

Article designation	Size	Packaging	Article number
WILLPOX® 75 - B	5.6 kg	Plastic can	WPOX-HS-2-75-B5,6
	190 kg	Metal drum	WPOX-HS-2-75-B190
	950 kg	IBC	WPOX-HS-2-75-B950

WILLPOX® 100 - B**MIXING RATIO 100 : 30**

Article designation	Size	Packaging	Article number
WILLPOX® 100 - B	4.8 kg	Plastic can	WPOX-HS-3-100-B4,8
	200 kg	Metal drum	WPOX-HS-3-100-B200
	900 kg	IBC	WPOX-HS-3-100-B900

WILLPOX® 480 - B**MIXING RATIO 100 : 28**

Article designation	Size	Packaging	Article number
WILLPOX® 480 - B	4.5 kg	Plastic can	WPOX-HS-3-480-B4.5
	200 kg	Metal drum	WPOX-HS-3-480-B200
	900 kg	IBC	WPOX-HS-3-480-B900

WILLPOX® LC**DIBt: Z-42.3-594**

Article designation	Size	Packaging	Article number
WILLPOX® LC	20 kg	Metal bucket	WPOX-LC-1-20

SUBSTRATES



FLEX LINER

Polyester fiber liner 3.5 mm with PU coating, 90°, 3D



Dimension in mm	Length in m	Wall thickness in mm	Article number
50 - 70	50/100	2.8	WSUB-PYL-20100
60 - 80	50/100	2.8	WSUB-PYL-20101
70 - 100	50/100	2.8	WSUB-PYL-20102
80 - 100	50/100	2.8	WSUB-PYL-20103
100 - 150	50/100	2.8	WSUB-PYL-20104
125 - 150	50/100	2.8	WSUB-PYL-20105
150 - 200	50/100	2.8	WSUB-PYL-20106
200 - 250	50/100	2.8	WSUB-PYL-20107

PROFLEX LINER

Polyester fiber liner 4.5 mm with PU coating, 90°, 3D



Dimension in mm	Length in m	Wall thickness in mm	Article number
50 - 70	50/100	3:8	WSUB-PYL-20108
70 - 80	50/100	3.8	WSUB-PYL-20109
70 - 100	50/100	3.8	WSUB-PYL-20110
80 - 100	50/100	3.8	WSUB-PYL-20111
100 - 125	50/100	3.8	WSUB-PYL-20112
100 - 150	50/100	3.8	WSUB-PYL-20113
125 - 150	50/100	3.8	WSUB-PYL-20114
150 - 200	50/100	3.8	WSUB-PYL-20115
200 - 250	50/100	3.8	WSUB-PYL-20116
250 - 300	50/100	3.8	WSUB-PYL-20117

PROFLEX XT LINER

Polyester fiber liner 6 mm with PU coating, 90°, 3D



Dimension in mm	Length in m	Wall thickness in mm	Article number
100 - 150	50/100	4.8	WSUB-PYL-20118
125 - 150	50/100	4.8	WSUB-PYL-20119
150 - 200	50/100	4.8	WSUB-PYL-20120
200 - 250	50/100	4.8	WSUB-PYL-20121
250 - 300	50/100	4.8	WSUB-PYL-20122

PROFLEX S LINER

Needle felt liner 5 mm with vapor-proof PU foil, 45°



Dimension in mm	Length in m	Wall thickness in mm	Article number
100	50/100	4.0	WSUB-NFL-20100
125	50/100	4.0	WSUB-NFL-20101
150	50/100	4.0	WSUB-NFL-20102
200	50/100	4.0	WSUB-NFL-20103
225	50/100	4.0	WSUB-NFL-20104
250	50/100	4.0	WSUB-NFL-20105

PROFLEX S XT LINER

Needle felt liner 6 mm with vapor-proof PU foil, 45°



Dimension in mm	Length in m	Wall thickness in mm	Article number
150	50/100	4.5	WSUB-NFL-20106
200	50/100	4.5	WSUB-NFL-20107
225	50/100	4.5	WSUB-NFL-20108
250	50/100	4.5	WSUB-NFL-20109

PROFLEX S SOFT LINER

Needle felt liner 5 mm with flexible PU coating, 45°



Dimension in mm	Length in m	Wall thickness in mm	Article number
100	50/100	3.8	WSUB-NFL-20110
125	50/100	3.8	WSUB-NFL-20111
150	50/100	3.8	WSUB-NFL-20112
200	50/100	3.8	WSUB-NFL-20113
225	50/100	3.8	WSUB-NFL-20114
250	50/100	3.8	WSUB-NFL-20115

PROFLEX S XT SOFT LINER

Needle felt liner 6 mm with flexible PU coating, 45°



Dimension in mm	Length in m	Wall thickness in mm	Article number
150	50/100	4.5	WSUB-NFL-20116
200	50/100	4.5	WSUB-NFL-20117
250	50/100	4.5	WSUB-NFL-20118

PROFLEX S UV

UV curing, 4.5 mm or 5.1 mm PES UV with 10 needle felt with PU coating



Dimension in mm	Length in m	Wall thickness in mm	Article number
100	50/100	4.5	WSUB-NFL-20137
125	50/100	4.5	WSUB-NFL-20138
150	50/100	4.5	WSUB-NFL-20139
200	50/100	4.5	WSUB-NFL-20140
250	50/100	4.5	WSUB-NFL-20141
150	50/100	5.1	WSUB-NFL-20142
200	50/100	5.1	WSUB-NFL-20143
250	50/100	5.1	WSUB-NFL-20144

PROFLEX UV HIGH TEX

UV curing, 4.5 mm High Tex UV with PU coating



Dimension in mm	Length in m	Wall thickness in mm	Article number
50 - 70	50 / 100	4.5	WSUB-PYL-20130
70 - 80	50 / 100	4.5	WSUB-PYL-20131
70 - 100	50 / 100	4.5	WSUB-PYL-20132
80 - 100	50 / 100	4.5	WSUB-PYL-20133
100 - 125	50 / 100	4.5	WSUB-PYL-20134
100 - 150	50 / 100	4.5	WSUB-PYL-20135
125 - 150	50 / 100	4.5	WSUB-PYL-20136
150 - 200	50 / 100	4.5	WSUB-PYL-20137
200 - 250	50 / 100	4.5	WSUB-PYL-20138
250 - 300	50 / 100	4.5	WSUB-PYL-20139

SP XF LINER

Needle felt liner 5.5 - 7.0 mm with vapor-tight PP coating, 30°



Dimension in mm	Wall thickness in mm	Article number
200	4.5	WSUB-NFL-20123
250	4.5	WSUB-NFL-20124
250	5.5	WSUB-NFL-20125
300	4.5	WSUB-NFL-20126
300	5.5	WSUB-NFL-20127
350	5.5	WSUB-NFL-20128
400	5.5	WSUB-NFL-20129

SP XS LINER

Needle felt liner 8.5 - 10 mm with vapor-proof PP coating, 15°



Dimension in mm	Wall thickness in mm	Article number
400	6.5	WSUB-NFL-20130
500	8.0	WSUB-NFL-20131
600	8.0	WSUB-NFL-20132

HYBRID LINER

Needle felt liner with glass scrim and PP coating



Dimension in mm	Wall thickness in mm	Article number
300	5.5	WSUB-NFL-20133
400	5.5	WSUB-NFL-20134
500	5.5	WSUB-NFL-20135
600	5.5	WSUB-NFL-20136

2 NL LINER

Glass liner 5.4 mm without coating, ECR glass, acid and corrosion resistant, 2-ply



Dimension in mm	Length in m	Article number
50 - 70	50	WSUB-GSL-10100
70 - 100	50/100	WSUB-GSL-10101
100 - 150	50/100	WSUB-GSL-10102
150 - 225	50/100	WSUB-GSL-10103
200 - 300	50/100	WSUB-GSL-10104
300 - 450	50/100	WSUB-GSL-10105

3 NL LINER

Glass liner 7.8 mm without coating, ECR glass, acid- and corrosion resistant, 3-ply



Dimension in mm	Length in m	Article number
70 - 100	50/100	WSUB-GSL-10106
100 - 150	50/100	WSUB-GSL-10107
150 - 225	50/100	WSUB-GSL-10108
200 - 300	50/100	WSUB-GSL-10109
300 - 450	50/100	WSUB-GSL-10110

2 HT LINER

Glass liner 5.4 mm with PU coating, ECR glass, acid- and corrosion resistant, 2-ply



Dimension in mm	Length in m	Article number
50 - 70	50/100	WSUB-GSL-10111
70 - 100	50/100	WSUB-GSL-10112
100 - 150	50/100	WSUB-GSL-10113
150 - 225	50/100	WSUB-GSL-10114
200 - 300	50/100	WSUB-GSL-10115
300 - 450	50/100	WSUB-GSL-10116

3 HT LINER

Glass liner 7,8 mm with PU coating, ECR glass, acid- and corrosion resistant, 3-ply



Dimension in mm	Length in m	Article number
50 - 70	50/100	WSUB-GSL-10117
70 - 100	50/100	WSUB-GSL-10118
100 - 150	50/100	WSUB-GSL-10119
150 - 225	50/100	WSUB-GSL-10120
200 - 300	50/100	WSUB-GSL-10121
300 - 450	50/100	WSUB-GSL-10122

EQUIPMENT & ACCESSORIES



INVERSION DRUM



Dimension in mm	Size in mm	Article number
100 - 150	286 x 614 x 565	WPOX-CPE-10100
100 - 150	454 x 710 x 621	WPOX-CPE-10101
100 - 300	645 x 1106 x 1276	WPOX-CPE-10102
100 - 300	764 x 1323 x 1397	WPOX-CPE-10103

WALK PLANT



Dimension in mm	Size in mm	Article number
< 300	750 x 520 x 550	WPOX-CPE-10104
< 300	860 x 300 x 450	WPOX-CPE-10105
< 300	1520 x 520 x 1800	WPOX-CPE-10106
< 400	1520 x 520 x 1800	WPOX-CPE-10107

ROLLER CONVEYOR



Dimension in mm	Size in mm	Article number
< 400	1500 x 540 x 775	WPOX-CPE-10108

STEAM PLANT



Article designation	Article number
Steam plant Tornado E	WPOX-CPE-10109
Steam plant Tornado D	WPOX-CPE-10110

More information in the technical data sheet.

PIPE SEALING CUSHION



Dimension in mm	Length in mm	Pressure in bar	Article number
140 - 170	1900	0.5	WPAC-PIS-10120
170 - 200	1900	0.5	WPAC-PIS-10121
60 - 120	1320	1.5	WPAC-PIS-10114
80 - 140	1810	1.5	WPAC-PIS-10115
25 - 40	115	2.5	WPAC-PIS-10100
40 - 70	155	2.5	WPAC-PIS-10101
70 - 150	300	2.5	WPAC-PIS-10102
100 - 200	250	2.5	WPAC-PIS-10103
150 - 300	350	2.5	WPAC-PIS-10104
200 - 400	650	2.5	WPAC-PIS-10105
200 - 500	750	2.5	WPAC-PIS-10106
300 - 600	735	2.5	WPAC-PIS-10107
500 - 1000	1110	2.5	WPAC-PIS-10108

FILLING HOSE



Length in m	Pressure in bar	Article number
5	0.5	WPAC-PIS-10122
10	0.5	WPAC-PIS-10124
5	1.5	WPAC-PIS-10117
10	1.5	WPAC-PIS-10116
5	2.5	WPAC-PIS-10110
10	2.5	WPAC-PIS-10109

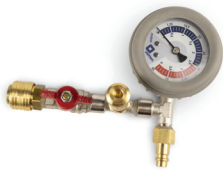
FILLING AND SAFETY HOSE



Length in m	Pressure in bar	Article number
10	1.5	WPAC-PIS-10119
10	2.5	WPAC-PIS-10112

CONTROL ELEMENT

mit Fitting-Schaltung



Article designation	Pressure in bar	Article number
Simple	0.5	WPAC-PIS-10126
Double	0.5	WPAC-PIS-10127
Simple	1.5	WPAC-PIS-10118
Simple	2.5	WPAC-PIS-10111





FOOT PUMP

with safety valve



Pressure in bar	Article number
2.5	WPAC-PIS-10113

CALIBRATION HOSES

	Dimension in mm	Length in m	Installation pressures	Article number
	color purple, temperature resistant up to 50° C			
	46	100	< 0.5	WPOX-CPE-20100
	63	100	< 0.5	WPOX-CPE-20101
	80	100	< 0.5	WPOX-CPE-20102
	100	100	< 0.5	WPOX-CPE-20103
	125	100	< 0.5	WPOX-CPE-20104
	color light blue, temperature resistant up to 50° C			
	100	100	< 0.5	WPOX-CPE-20107
	125	100	< 0.5	WPOX-CPE-20108
	150	100	< 0.5	WPOX-CPE-20109
	color orange, temperature resistant up to 70° C			
	100	100	< 1.0	WPOX-CPE-20111
	125	100	< 1.0	WPOX-CPE-20112
	150	100	< 1.0	WPOX-CPE-20113
	200	100	< 1.0	WPOX-CPE-20114
	color gray, temperature resistant up to 70° C			
	250	100	< 1.0	WPOX-CPE-20115
	125	100	< 1.0	WPOX-CPE-20116
	150	100	< 1.0	WPOX-CPE-20117
	200	100	< 1.0	WPOX-CPE-20118
	225	100	< 1.0	WPOX-CPE-20119
	250	100	< 1.0	WPOX-CPE-20120
	300	100	< 1.0	WPOX-CPE-20121
	350	100	< 1.0	WPOX-CPE-20122
	400	100	< 1.0	WPOX-CPE-20123
	450	100	< 1.0	WPOX-CPE-20124
500	100	< 1.0	WPOX-CPE-20125	
600	100	< 1.0	WPOX-CPE-20126	

PRELINER

Dimension in mm	Length in m	Article number
HDPE, temperature resistant up to 80° C		
100	100	WPOX-CPE-20127
150	100	WPOX-CPE-20128
200	100	WPOX-CPE-20129
250	100	WPOX-CPE-20130
300	100	WPOX-CPE-20131
350	100	WPOX-CPE-20132
400	100	WPOX-CPE-20133
500	100	WPOX-CPE-20134
PVC, temperature resistant up to 90° C		
100	1.5	WPOX-CPE-20135
125	1.5	WPOX-CPE-20136
150	1.5	WPOX-CPE-20137
200	1.5	WPOX-CPE-20138
250	1.5	WPOX-CPE-20139
300	1.5	WPOX-CPE-20140
350	1.5	WPOX-CPE-20141
375	1.5	WPOX-CPE-20142
400	1.5	WPOX-CPE-20143
450	1.5	WPOX-CPE-20144
500	1.5	WPOX-CPE-20145
600	1.5	WPOX-CPE-20146

DRAW STRING

Dimension in mm	Length in m	Article number
25	150	WPOX-CPE-20147
47	125	WPOX-CPE-20148

OUR PACKAGES

PLASTIC CAN

10 Liter / 20 Liter



PLASTIC BUCKET

20 Liter



PE BOTTLE

1 Liter



TUBULAR BAG

500 ml / 700 ml



PAPER BAG

25 kg





DOUBLE CHAMBER CARTRIDGE

400 ml / 1500 ml



METAL CAN

5 Liter / 10 Liter / 20 Liter



TIN CAN

KATE und PMO



METAL DRUM

200 Liter



METAL BUCKET

12 Liter / 20 Liter



IBC

1000 Liter



INSULATION



INDUSTRIALS



COATINGS



SEWER REPAIR



CIVIL ENGINEERING & MINING



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