

**SWELLING TAPES**

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**JOINT SHEET METAL**

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**INJECTION HOSES  
CONSTRUCTION CHEMISTRY**

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**PRESSURE WATER-TIGHT  
SERVICE DUCTS**

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**LIGHTNING PROTECTION**

---

**FORMWORK ACCESSORIES**

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**PRODUCT RANGE 2020  
2021**



## New articles in our product range!

On 152 pages you will find an extract from our product range, with many technical details and installation videos.

We are permanently working on the improvement of our existing products and the presentation of new ones. We have been successful this year as well and are pleased to present you these new products:

Please take a look at the most important articles:

**NEW!**



**LinkForm stopend panels**  
Lost formwork for construction joints in the rough joint category

PRODUCT GROUP 2 Page 28

**NEW!**



**LinkFix stopend panels**  
Lost formwork for construction joints in the toothed joint category

PRODUCT GROUP 2 Page 29

**NEW!**



**ABS spacer**  
Fibre cement square spacer with integrated rib lath

PRODUCT GROUP 2 Page 30

**NEW!**



**PROTECT Easy 1K**  
Single-component polymer-based concrete adhesive

PRODUCT GROUP 3 Page 58

**NEW!**



**ROND0 Protect**  
The sealing collar with maximum media and pressure resistance

PRODUCT GROUP 4 Page 75

**NEW!**



**Sewage pipe bushing double socket type Novo**

PRODUCT GROUP 4 Page 86

**NEW!**



**MAXI multi-purpose connecting clamp**  
for connection of round conductors to the reinforcement

PRODUCT GROUP 5 Page 115

**NEW!**



**M12 "DW Safe" wall bushing**  
with pre-assembled fixed earthing terminals

PRODUCT GROUP 5 Page 122

**NEW!**



**STOPPER SCREW**  
Screwed inner seals for sealing of formwork tie points

PRODUCT GROUP 6 Page 132

Have we piqued your curiosity? Start browsing and if you have any questions or require further information, do not hesitate to contact our sales team.

# MASTERTEC PRODUCT RANGE

PRODUCT GROUP

## Swelling tapes

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- Bentonite swelling tapes
- Self-adhesive swelling tape
- High-pressure swelling tapes
- Swelling pastes
- Adhesives
- Grids

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PRODUCT GROUP

## Joint sheet metals

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- Joint sheet metals
- Crack-inducing profiles
- Stopend panels
- Small coils
- Connectors
- Joint tapes

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PRODUCT GROUP

## Injection hoses

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### Construction chemistry

- Structural waterproofing
- Injection hoses
- Accessories for injection hoses
- Injection packers
- Injection resins
- Concrete release agents

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# MASTERTEC PRODUCT RANGE

PRODUCT GROUP

## 4 Pressure water-tight service ducts

- Sealing collars
- Lining pipes
- Pipe bushings
- Gasket inserts
- Sealing compound
- Pump sumps

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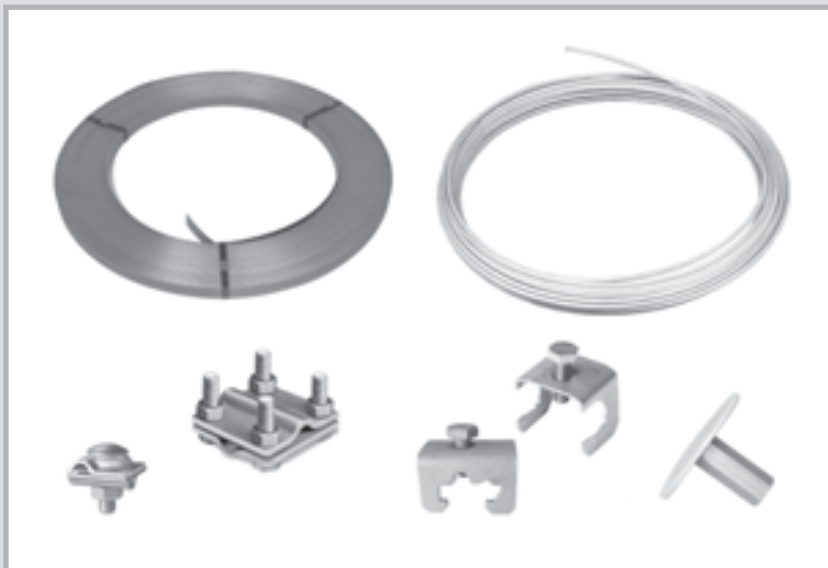


PRODUCT GROUP

## 5 Lightning protection

- Lightning protection conductors
- Connectors
- Connecting clamps
- Fixed earthing terminals
- Wall bushings
- Earth rods

pages 107 – 130

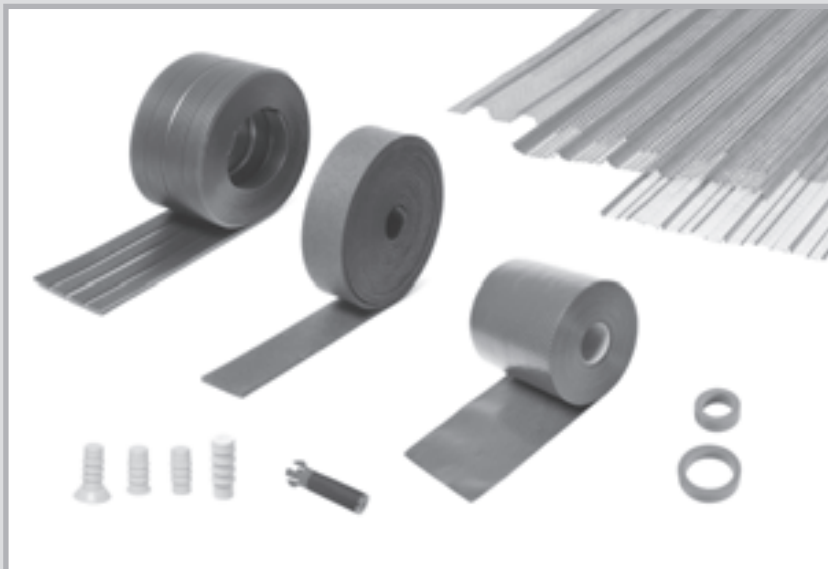


PRODUCT GROUP

## 6 Formwork accessories

- Sealing plugs
- Distance tube seals
- Damp proof courses
- Impact sound insulation/bearings
- Corrugated bearings
- Rib laths

pages 131 – 149



## Product safety

Our products are certified by testing institutes for the various areas of application.



## Our pictograms

Testing of impermeability to pressurised water



Testing of fire resistance class to DIN EN 13501-2 and construction materials class to DIN EN 13501-1 and DIN 4102-1



Testing of resistance to various media



Standard sound level differential testing to DIN EN ISO 10140-2



Testing of impermeability to the naturally-occurring radioactive inert gas Radon



Additional tests that go beyond the requirements of the test principles.



Testing of the impact sound reduction based on DIN EN ISO 140-8



Testing of the lightning current carrying capacity class according to DIN EN 62561-1



Compliance with the European requirements for construction technology



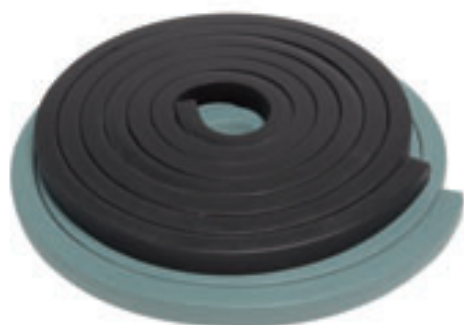
Compliance with a European harmonised standard



You can find the technical notes for the relevant product here.



# SWELLING TAPES



**MASTERSTOP**  
Bentonite swelling tape  
page 6



**MASTERSTOP SK**  
Self-adhesive  
bentonite swelling tape  
page 7



**FLOWSTOP**  
High-pressure swelling tape  
page 7



**Accessories for swelling tapes**  
pages 8 – 9

# Swelling tapes

## MASTERSTOP bentonite swelling tapes for the waterproofing of construction joints

Technical details pages 10 – 13



Art. no.	Description	PU	Secondary packaging	Weight
<b>010010</b>	Size: 25 x 20 mm, colour: green Carton 30 m (6 rolls of 5 m each) <b>Pressure-tight up to 50 m water column</b>	1 carton	36 cartons per pallet	22.80 kg per carton
<b>010011</b>	Size: 25 x 20 mm, colour: black Carton 30 m (6 rolls of 5 m each) <b>Pressure-tight up to 50 m water column</b>	1 carton	36 cartons per pallet	22.80 kg per carton
<b>010012</b>	<b>MASTERSTOP LONG TIME</b> coated bentonite swelling tape Size: 25 x 20 mm, colour: black Carton 30 m (6 rolls of 5 m each) <b>Pressure-tight up to 50 m water column</b>	1 carton	36 cartons per pallet	23.00 kg per carton
<b>010020</b>	Size: 20 x 15 mm, colour: green Carton 30 m (6 rolls of 5 m each) <b>Pressure-tight up to 20 m water column</b>	1 carton	36 cartons per pallet	14.30 kg per carton

Art. no. 010010 + 010011



Art. no. 010012



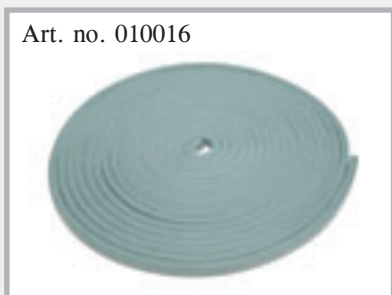
Art. no. 010020



## MASTERSTOP bentonite swelling tapes for subordinate waterproofing

Art. no.	Description	PU	Secondary packaging	Weight
<b>010016</b>	Size: 15 x 10 mm, colour: green Carton 90 m (9 rolls of 10 m each)	1 carton	36 cartons per pallet	21.00 kg per carton
<b>010017</b>	Size: 20 x 10 mm, colour: black Carton 54 m (9 rolls of 6 m each)	1 carton	36 cartons per pallet	19.00 kg per carton

Art. no. 010016



Art. no. 010017




# Swelling tapes

## MASTERSTOP SK

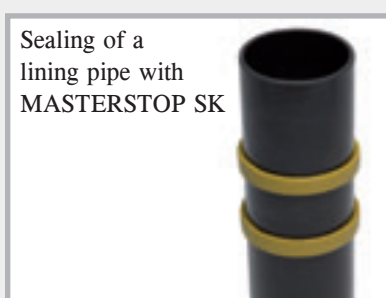


Self-adhesive bentonite swelling tape [Technical details page 14](#)

YouTube



Art. no.	Description	PU	Secondary packaging	Weight
<b>010025</b>	Size: 20 x 5 mm, self-adhesive Carton 90 m (5 rolls of 18 m each) <b>Pressure-tight up to 50 m water column</b>	1 carton	36 cartons per pallet	16.00 kg per carton



## FLOWSTOP



High-pressure TPE swelling tapes

for waterproofing of construction joints [Technical details pages 15 – 17](#)

YouTube



Art. no.	Description	PU	Secondary packaging	Weight
<b>010040</b>	Size 20 x 5 mm Carton 120 m (6 rolls of 20 m each)	1 carton	36 cartons per pallet	18.00 kg per carton
<b>010045</b>	Size 20 x 10 mm Carton 60 m (6 rolls of 10 m each)	1 carton	36 cartons per pallet	17.00 kg per carton



FLOWSTOP is fixed using POWER swelling tape adhesive.





# Accessories for swelling tapes

## Adhesives and swelling pastes Technical details pages 18 – 20

Art. no.	Description	PU	Secondary packaging	Weight
<b>010050</b>	<b>Swelling tape adhesive for bentonite swelling tapes</b> Cartridge 310 ml Usage: 1 cartridge = approx. 7 m suitable for damp substrates	1 pc.	20 cartridges per carton	11.60 kg per carton
<b>010052</b>	<b>POWER swelling tape adhesive</b> High-pressure adhesive, for MASTERSTOP and FLOWSTOP swelling tapes, cartridge 310 ml Usage: 1 cartridge = approx. 7 m suitable for damp substrates	1 pc.	20 cartridges per carton	10.00 kg per carton
<b>010030</b>	<b>MasterMastic PU swelling paste</b>  Polyurethane-based swelling paste, for waterproofing of construction joints and wall penetrations, cartridge 310 ml Usage: Construction joint approx. 360 ml/m Usage: Wall penetration approx. 80-100 ml/m	1 pc.	12 cartridges per carton	5.90 kg per carton
<b>010033</b>	<b>MasterMastic PU swelling paste</b>  Polyurethane-based swelling paste, for waterproofing of construction joints and wall penetrations, 600 ml, aluminium foil bag Usage: Construction joint approx. 360 ml/m Usage: Wall penetration approx. 80-100 ml/m	1 pc.	12 foil bags per carton	10.40 kg per carton
<b>010038</b>	<b>Injection gun for 310 ml cartridge</b> , professional cartridge gun with aluminium casing, hardened coupling and push rod	1 pc.		0.90 kg per pc.
<b>010039</b>	<b>Injection gun for 600 ml aluminium foil bag</b> , incl. 3 nozzles, professional cartridge gun with ergonomic handle, hardened coupling and push rod, pipe and ring nuts made of aluminium	1 pc.		1.25 kg per pc.
<b>010037</b>	<b>Nozzle for injection gun 600 ml</b>	1 pc.		0.05 kg/pc.

Art. no. 010050



Art. no. 010052



Art. no. 010030



Art. no. 010033



Art. no. 010038



Art. no. 010039



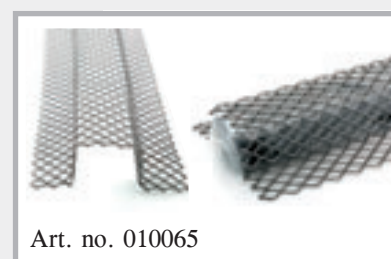
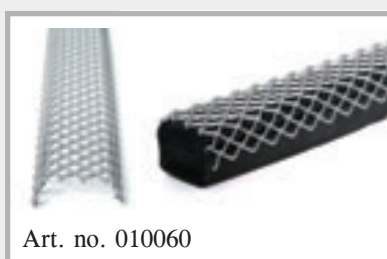
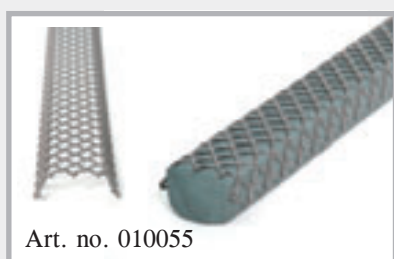
Art. no. 010037



# Accessories for swelling tapes

## Fastening grids

Art. no.	Description	PU	Secondary packaging	Weight
<b>010055</b>	<b>Swelling tape grid for 20/15</b> Carton 30 m (30 grids of 1 m each)	1 carton	160 cartons per pallet	1.95 kg per carton
<b>010060</b>	<b>Swelling tape grid for 25/20</b> Carton 30 m (30 grids of 1 m each)	1 carton	160 cartons per pallet	2.60 kg per carton
<b>010065</b>	<b>Swelling tape grid for MASTERSTOP LONG TIME 25/20</b> Carton 30 m (30 grids of 1 m each)	1 carton	160 cartons per pallet	4.90 kg per carton



## Fastening nails

Art. no.	Description	PU	Weight
<b>010080</b>	<b>Nails for bolt-firing tool</b> Length: 42 mm with big washer	1 bag of 100 pcs.	0.90 kg per bag
<b>010090</b>	<b>Nails for manual fastening</b> Length: 40 mm with washer	1 carton of 250 pcs.	1.00 kg per carton





# MASTERSTOP swelling tapes



- European Technical Assessment ETA
- General Building Supervisory Test Certificate



## Product description

MASTERSTOP bentonite swelling tapes have a proven track record which goes back many years in construction practise. They swell upon contact with water and seal cracks or construction joints reliably and permanently. The test certificates confirm the product's suitability for various applications.

YouTube



## The convincing advantages of MASTERSTOP bentonite swelling tapes

- Easy and secure installation
- No foundation curb
- Self-injecting effect  
The swelling tapes penetrate cracks and cavities
- Environmentally friendly
- No fittings or welding
- Swelling and shrinking process is reversible
- Dimensionally stable and not sticky
- No cuttings or oddments
- Safety proved by extensive testing

## Resistance of MASTERSTOP bentonite swelling tapes and MASTERSTOP SK

Medium	resistant	not resistant
Alkalis in general	✓	
Urea	✓	
Liquid manure/slurry	✓	
Biogas	✓	
Radon	✓	
De-icing salt	✓	
Substances obtained by means of fermentation	✓	
Substances obtained by means of composting	✓	
Waste water in water treatment plants	✓	
Petrol		X
Diesel		X
Heating oil		X

Further resistances are available on request.

## Installation

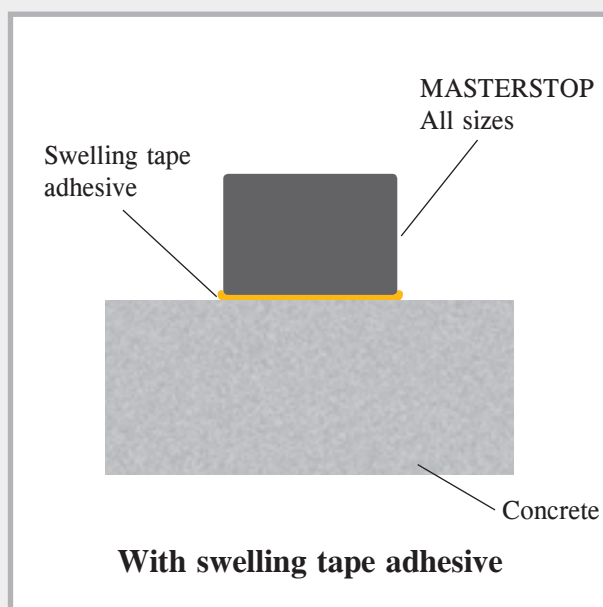
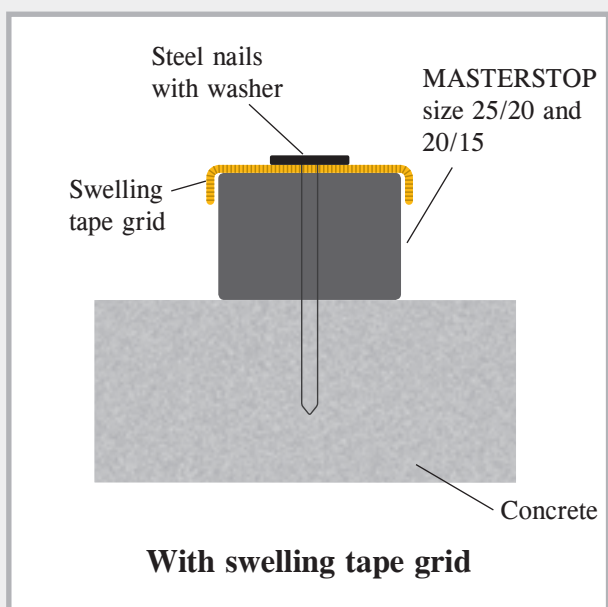
MASTERSTOP bentonite swelling tapes are fixed with a swelling tape grid or swelling tape adhesive. They are laid inside the reinforcement with a concrete cover of at least 8 cm.



Installation with fastening grid and nails

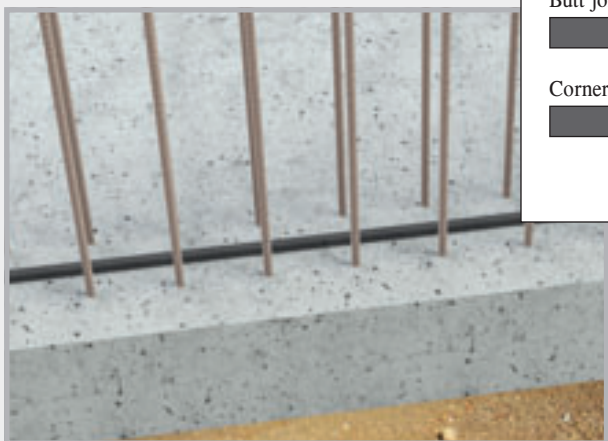


Installation with swelling tape adhesive

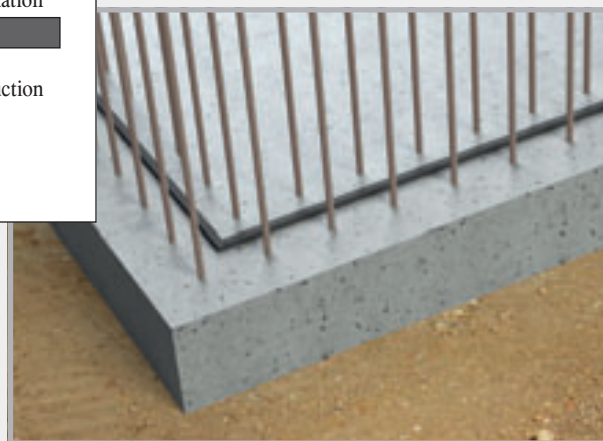
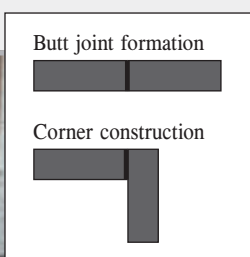


## Installation of MASTERSTOP

Size 25/20 mm



Straight butt joint



Corner butt joint

# MASTERSTOP LONG TIME

## All-weather bentonite swelling tape

### Product description and function

MASTERSTOP LONG TIME 25 x 20 mm is a coated bentonite swelling tape for the waterproofing of foundation/foundation, foundation/wall and wall/wall construction joints. MASTERSTOP LONG TIME is equipped with a protective film which enables installation in all kinds of weather.

The protective film ensures that the swelling tape can be exposed to rain and in-situ water for at least 10 days without expanding.

This changes when it is encased in concrete. The composition of the concrete causes the protective film to lose its effect after a few days so that the swelling tape is set free and seals the joints safely and permanently in case of water ingress.

The tape is not suitable for installation underwater or long-term immersion in water.

### Safety

MASTERSTOP LONG TIME is not a hazardous substance and is uncomplicated to use and handle.

### Storage

MASTERSTOP LONG TIME must be stored in a dry place and protected from contamination and mechanical damage. Swelling tapes which have already started expanding as well as swelling tapes with an altered geometry or damaged protective film must not be installed.



**Rain protection**      **10 days**  
**Pressure-tight**      **50 m water column**



Comparison of swelling tape with and without protective film

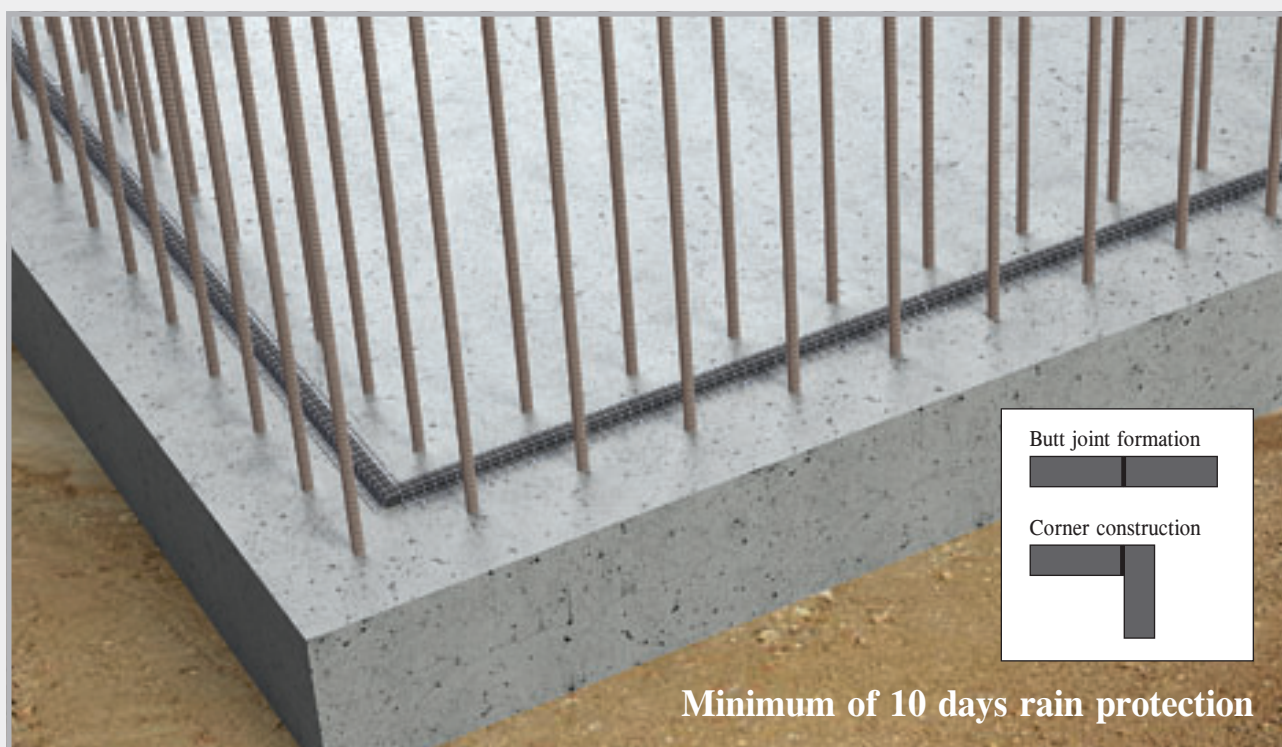
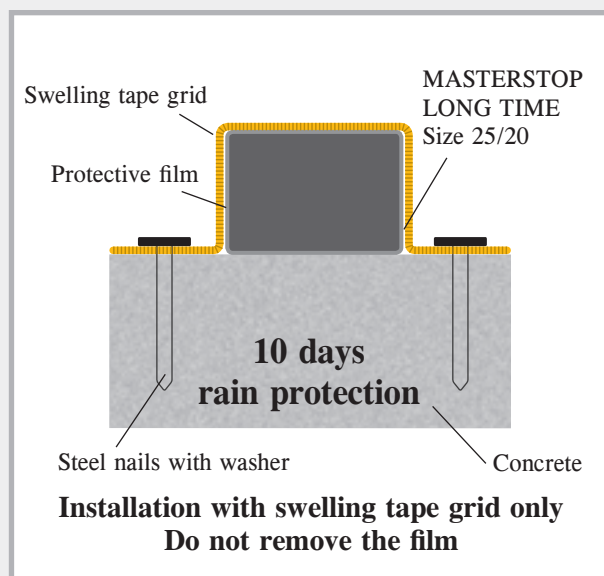
## The convincing advantages of MASTERSTOP LONG TIME

- All-weather installation
- No foundation curb
- Self-injecting effect
  - The swelling tapes penetrate cracks and cavities
- Environmentally friendly
- No fittings or welding
- Swelling and shrinking process is reversible
- Dimensionally stable and not sticky
- No cuttings or oddments
- Safety proved by extensive testing



## Installation of LONG TIME

- MASTERSTOP LONG TIME is installed in the centre of the joint within the reinforcement.
- An adequate concrete cover of at least 8 cm must be ensured.
- The swelling tape cannot be glued and instead must be fixed to the substrate using a swelling tape grid. To ensure that the swelling tape lies flat on the concrete substrate, the grid usually needs to be fixed to the concrete using nails every 25 cm in the longitudinal direction. The distance between the nails can be reduced if necessary.
- Make sure that the protective film is not damaged.
- The tape ends are butt jointed. If tape sections are used, pull back the protective film, cut off approx. 5 cm of the swelling tape and turn down the film in order to prevent contact with water.
- The concrete substrate must be level and free of loose or separating particles and must not be excessively rough.



Installation of MASTERSTOP LONG TIME with swelling tape grid  
8 cm concrete cover within reinforcement

# MASTERSTOP SK

## Self-adhesive bentonite swelling tape



YouTube



### Product description

MASTERSTOP SK is a self-adhesive bentonite swelling tape which expands on contact with water and prevents water penetration.

### Testing

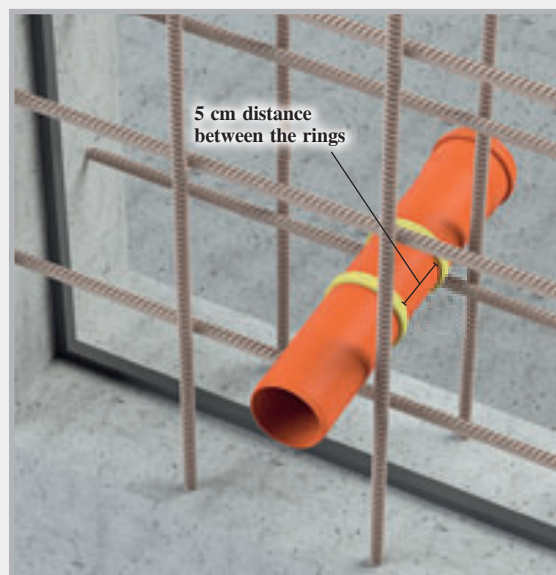
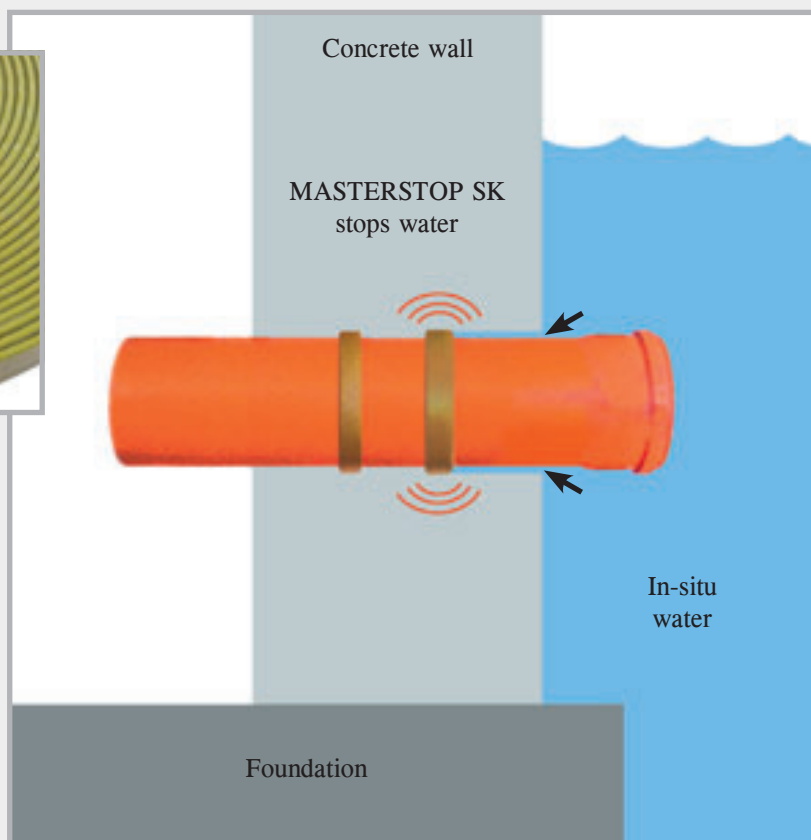
- Test report MFPA Leipzig, up to 50 m water column
- Environmentally friendly

### Application

- Water-impermeable integration of pipe ducts in concrete buildings
- Waterproofing of reinforcement connections
- Waterproofing of ground drains

### Installation

- Pull off silicone paper and affix 2 rings of MASTERSTOP SK around the pipe to be waterproofed.
- Butt joint ends, no overlaps
- The surface of the pipes must be rigid
- MASTERSTOP SK adheres to metal, plastic, PVC and stone.
- Secure MASTERSTOP SK with binding wire if necessary.



MASTERSTOP SK is affixed around the pipe inside the reinforcement with 6 cm concrete cover.

# FLOWSTOP

## High-pressure swelling tapes



For sealing construction joints and penetrations in concrete structures. With a proven ability to withstand a pressure of 8 bar, FLOWSTOP satisfies the conditions of the German WU directive on water-impermeable concrete structures for a continuous pressure of 2 bar, as well as international standards that require high pressure resistance.



- European Technical Assessment ETA
- General Building Supervisory Test Certificate
- Suitable for zones with frequently varying water levels
- Good chemical resistance
- Dimensionally stable
- Maximum pressure of 8 bar with size 20 x 5 mm
- Long-term testing for more than 250 days
- Easy installation with the POWER swelling tape adhesive
- No foundation curb required



### Product description

FLOWSTOP is a high-pressure resistant swelling tape for construction joints and penetrations in concrete construction.

A reliable and permanent seal up to a water column of 80 m is achieved when using the size 20 x 5 mm.

### Technical data

Chemical basis:	Modified TPE
Colour:	red
Surface:	smooth
Profiles:	20 x 5 mm 20 x 10 mm
Temperature range:	-30°C to +60°C
Storage:	Dry and protected

### Resistance

- Diluted acids and alkalis
- Salt water
- Methane gas + radon
- Liquid manure + slurry
- Fermentation mash + biogas
- Concrete alkalinity
- Liquid aggressive to concrete

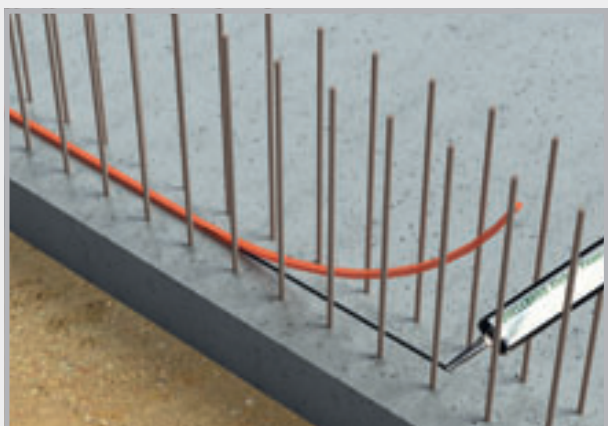
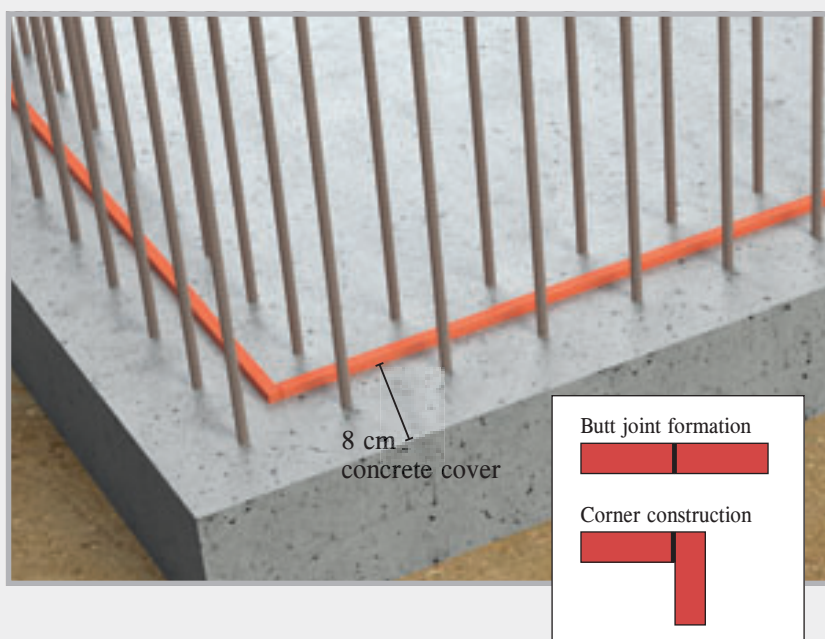


## Installation of FLOWSTOP

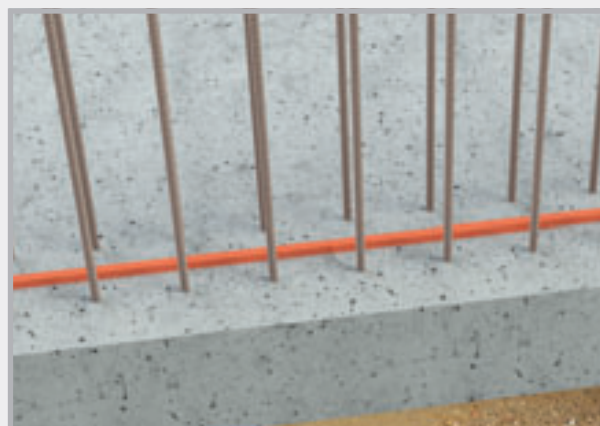
The substrate must be clean, dry and free of loose particles. Once the POWER swelling tape adhesive has been applied in the centre of the joint, the tape is placed on the adhesive and gently pressed in. A concrete cover of at least 8 cm inside the reinforcement must be ensured. Not suitable for installation with swelling tape grid.

Prior to concreting the tape must not lie in water for an extended period.

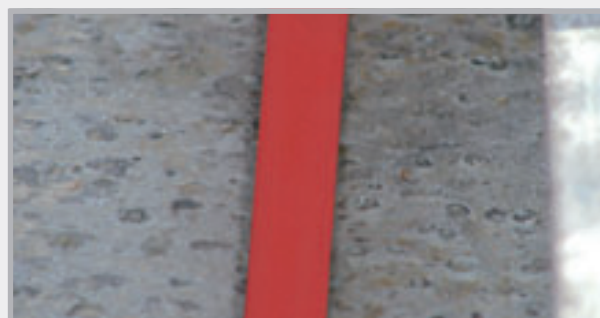
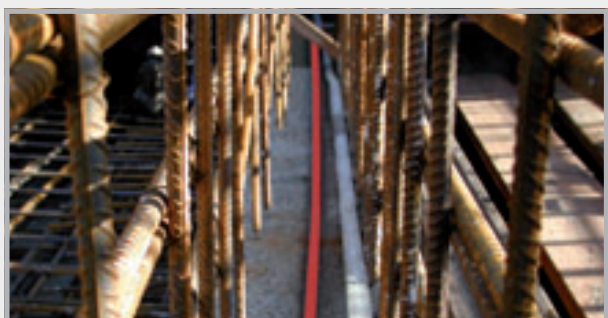
Rain water that runs off does not activate the swelling.



Apply the POWER swelling tape adhesive and roll the FLOWSTOP swelling tape in the adhesive.



## Sealing of a construction joint





## Swelling behaviour

The swelling behaviour of FLOWSTOP was tested over 180 days through immersion in 4 test liquids.

Test liquid	Maximum expansion in all test cycles
Neutral liquid with pH value 7	600 %
Alkaline liquid with pH value 13	350 %
Liquid that is aggressive to concrete with pH value 4.5	200 %
Salt water	100 %



The final expansion was reached after 6 to 10 days, depending on the test liquid. These periods provide adequate time for secure installation.

## FLOWSTOP test procedure

Water pressure [bar]	Test duration days	Water passage	Remarks
0.03	3	not measurable	Adjustment of the construction joint to 0.25 mm and water filling without pressure Water penetration from all sides, quickly reducing with increased swelling
0.2	1	0	Start of the first exposure to pressurised water
0.4	1	0	impermeable
0.6	1	0	impermeable
0.8	1	0	impermeable
1.0	3	0	impermeable
2.0	1	0	impermeable
3.0	1	0	impermeable
4.0	1	0	impermeable
5.0	14	0	impermeable
–	43	–	Six weeks of drying with hot air supply
0.03	3	0	Water filling without pressure, impermeable
0.2	1	0	Start of the second exposure to pressurised water, impermeable
0.4	1	0	impermeable
0.6	1	0	impermeable
0.8	1	0	impermeable

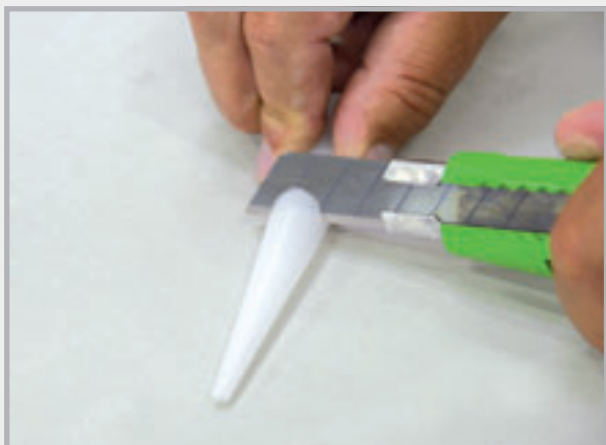
Water pressure [bar]	Test duration days	Water passage	Remarks
1.0	3	0	impermeable
2.0	1	0	impermeable
3.0	1	0	impermeable
4.0	1	0	impermeable
5.0	14	0	impermeable
–	43	–	Six weeks of drying with hot air supply
0.03	3	0	Water filling without pressure, impermeable
0.2	1	0	Start of the third exposure to pressurised water, impermeable
0.4	1	0	impermeable
0.6	1	0	impermeable
0.8	1	0	impermeable
1.0	3	0	impermeable
2.0	1	0	impermeable
3.0	1	0	impermeable
4.0	1	0	impermeable
5.0	14	0	impermeable
6.0	28	0	Additional pressure level, impermeable
7.0	28	0	Additional pressure level, impermeable
8.0	28	0	Additional pressure level, impermeable

# Adhesives and swelling pastes

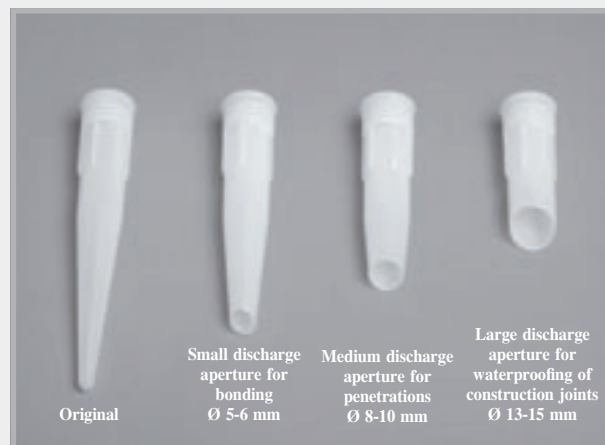
MASTERTEC produces adhesives for swelling tapes and swelling pastes for waterproofing various types and qualities of construction joints and wall penetrations.

## Preparatory work

### Cutting the cartridge tips



The nozzle is cut off to suit the various areas of application.

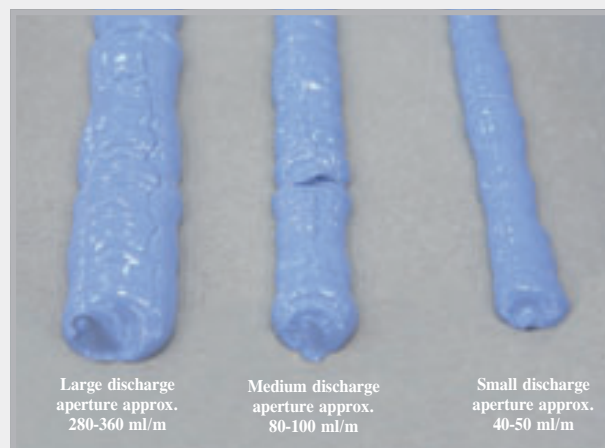


Cuts

### Application of the adhesive or pastes



Example: Large discharge aperture  
Usage approx. 280-360 ml/m



# Adhesives and swelling pastes

## Swelling tape adhesive

Single-component, solvent-free sealant for bonding of MASTERSTOP bentonite swelling tapes.

Usage:	40-50 ml/m $\triangleq$ approx. 7 m per cartridge
Application:	For dry and slightly moist substrates
Bonds with:	Concrete
Application temperature:	+5°C to +45°C
Thermal stability following curing:	-20°C to +70°C
Setting time:	approx. 8 hrs. at +20°C
Environmental aspects:	Once cured, the product is odourless and physiologically harmless.
Supplied as:	Cartridge 310 ml



Apply adhesive to clean substrate



Offer up the swelling tape

## POWER swelling tape adhesive

Single-component, solvent-free sealant for bonding of MASTERSTOP and FLOWSTOP swelling tapes. The POWER version is a high-pressure adhesive.

Usage:	40-50 ml/m = approx. 7 m per cartridge
Application:	For dry and moist substrates
Bonds with:	Concrete, steel, rigid PVC, soft PVC, stone. Achieves a very high mechanical strength.
Application temperature:	+5°C to +45°C
Thermal stability following curing:	-30°C to +80°C
Setting time:	approx. 8 hrs. at +20°C
Environmental aspects:	Once cured, the product is odourless and physiologically harmless. Highly recommended environmentally compatible building product
Supplied as:	Cartridge 310 ml



Press the swelling tape into the adhesive bed



POWER high-pressure adhesive for MASTERSTOP and FLOWSTOP

 YouTube



# MasterMastic PU swelling paste



YouTube



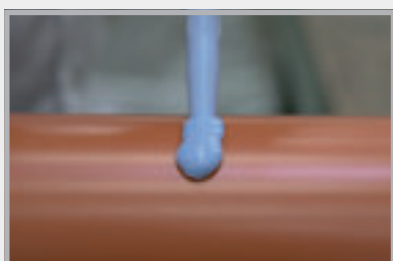
Single-component, swellable polyurethane paste, for waterproofing of wall penetrations and construction joints in water-impermeable concrete structures.

- For dry and moist substrates
- Solvent-free
- Application:  
+5°C to +45°C
- Physiologically harmless
- Setting speed: approx.  
6-7 mm/24 hrs.

Art. no. 010033  
600 ml tubular bag



Art. no. 010030  
310 ml cartridge



## Wall penetrations

**Certified waterproofing up to 40 m water column  
(test report MFPA Leipzig)**

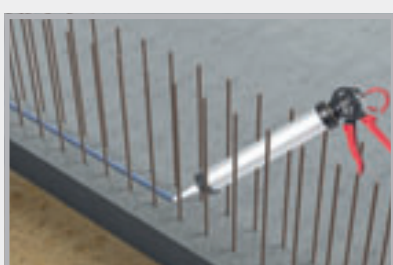
Application: Circular Ø approx. 8-10 mm

Usage: approx. 80-100 g/m

Adheres to: Concrete, steel, stone, rigid PVC  
**Not suitable for polypropylene!**

Installation: Inside the reinforcement with a concrete cover of at least 8 cm.

**To prevent premature swelling,  
protect against moisture and rain.**



## Construction joints

**General Building Supervisory Test Certificate according to  
WU guideline up to 20 m water column**

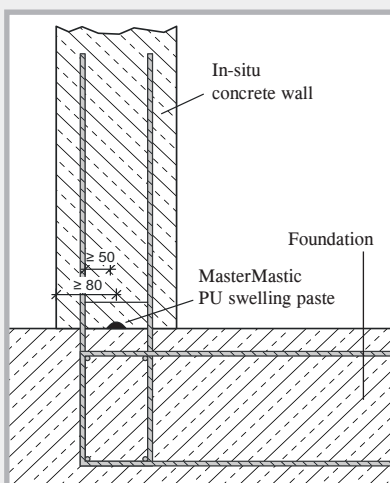
Application: Bead approx. 35 x 12 mm

Usage: approx. 380-420 g/m

Adheres to: Dust-free, dry or matt damp concrete surfaces

Installation: Inside the reinforcement with a concrete cover of at least 8 cm.

**To prevent premature swelling,  
protect against moisture and rain.**



# JOINT SHEET METAL



**Coated joint sheet metal**  
pages 22 – 24



**Crack-inducing profiles, stopend panels + accessories**  
pages 25 – 31



**Small coils, joint tapes, connectors + accessories**  
pages 32 – 34

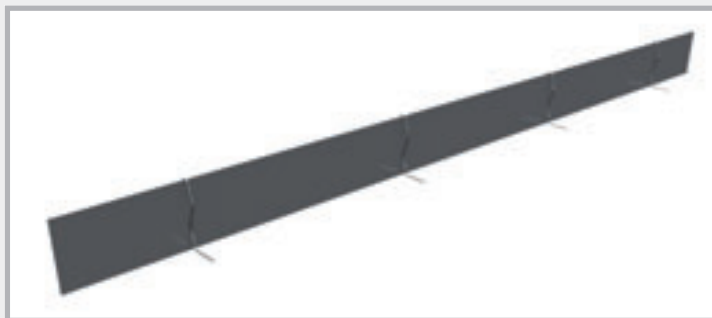


# Coated joint sheet metal

## VB joint sheet metal high-pressure metal sheets

Joint sheet metals with reactive, bitumen-free polymer coating for sealing construction joints.

- Very high-pressure water tests
- Resistance tests
- All-weather installation  
-20°C to +70°C



### VB joint sheet metal strips in crates

Art. no.	Description	PU	Secondary packaging	Weight
070450	<b>VB joint sheet metal</b> <b>length 2.4 m, width 160 mm</b> Crate 120 m (50 strips of 2.4 m each) fully coated on both sides incl. 55 fixing clips and 150 mounting brackets <a href="#">Technical details page 35</a>	1 crate of 50 pcs.  incl. fastening material	12 crates per pallet	130.00 kg per crate
070452	<b>VB joint sheet metal</b> <b>length 2.0 m, width 160 mm</b> Crate 100 m (50 strips of 2 m each) fully coated on both sides incl. 55 fixing clips and 150 mounting brackets <a href="#">Technical details page 35</a>	1 crate of 50 pcs.  incl. fastening material	12 crates per pallet	110.00 kg per crate
070455	<b>Joint sheet metal 80</b> <b>length 2.4 m, width 80 mm</b> Crate 120 m (50 strips of 2.4 m each) fully coated on both sides incl. 55 fixing clips <a href="#">Technical details page 47</a>	1 crate of 50 pcs.  incl. fastening material		74.00 kg per crate

### VB joint sheet metal strips in carton

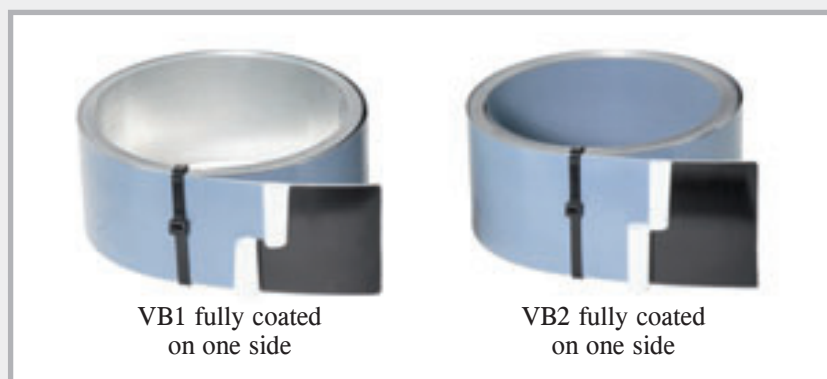


Art. no.	Description	PU	Secondary packaging	Weight
070470	<b>VB joint sheet metal</b> <b>length 2.0 m, width 160 mm</b> Carton 30 m (15 strips of 2 m each) fully coated on both sides incl. 20 fixing clips and 40 mounting brackets <a href="#">Technical details page 35</a>	1 carton of 15 pcs.  incl. fastening material	32 cartons per pallet	30.50 kg per carton
<b>NEW</b> 070400	<b>Joint sheet metal 80</b> <b>length 2.4 m, width 80 mm</b> Carton 60 m (25 strips of 2.4 m each) fully coated on both sides incl. 30 fixing clips <a href="#">Technical details page 47</a>	1 carton of 25 pcs.  incl. fastening material	32 cartons per pallet	28.00 kg per carton

# VB joint sheet metal roll



The packaging in rolls minimises joints and therefore increases the installation reliability.



Art. no.	Description	PU	Secondary packaging	Weight
<b>070461</b>	<b>Joint sheet metal roll 160 VB2</b> Joint sheet metal fully coated on both sides width 160 mm, roll length 20 m incl. 30 mounting brackets and 2 fixing clips <a href="#">Technical details page 35</a>	1 roll per carton  incl. fastening material	36 cartons per pallet	21.00 kg per carton
<b>070460</b>	<b>Joint sheet metal roll 160 VB1</b> Joint sheet metal fully coated on one side width 160 mm, roll length 20 m incl. 30 mounting brackets and 2 fixing clips <a href="#">Technical details page 35</a>	1 roll per carton  incl. fastening material	36 cartons per pallet	19.00 kg per carton
<b>070463</b>	<b>Joint sheet metal roll 120 VB1</b> Joint sheet metal fully coated on one side width 120 mm, roll length 20 m incl. 30 mounting brackets and 2 fixing clips <a href="#">Technical details page 35</a>	1 roll per carton  incl. fastening material	48 cartons per pallet	15.00 kg per carton
<b>070462</b>	<b>Joint sheet metal roll 240 VB2</b> Joint sheet metal fully coated on both sides width 240 mm, roll length 20 m incl. 30 mounting brackets and 4 fixing clips <a href="#">Technical details page 35</a>	1 roll per carton  incl. fastening material	24 cartons per pallet	31.00 kg per carton

## Packaging



Pallet containing VB joint sheet metal strips in crates



Pallet containing VB joint sheet metal or 80 joint sheet metal supplied in strips in cartons



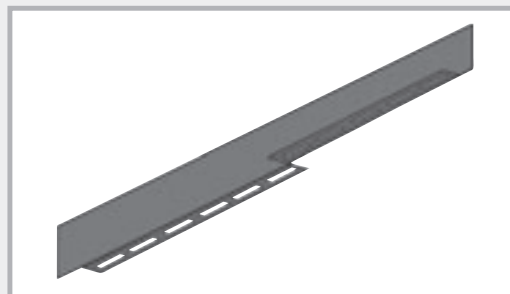
Pallet containing VB joint sheet metal rolls in cartons

Mounting brackets and fixing clips are included in the scope of supply.



# Coated joint sheet metal

## MASTER joint sheet metal



The joint sheet metal with support rail

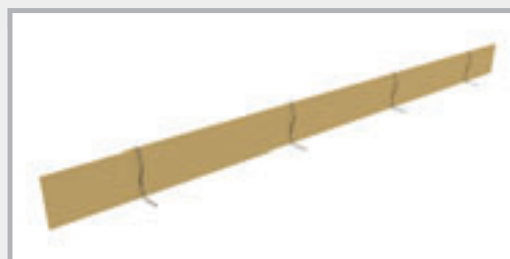
Art. no.	Description	PU	Secondary packaging	Weight
070200	<b>MASTER joint sheet metal</b> length 2.5 m, width 160 mm fully coated sealing element with support rail, 20 mm perforated <a href="#">Technical details pages 36 – 37</a>	1 crate of 40 pcs.	12 crates per pallet	155.00 kg per crate

## MB joint sheet metal



Mineral-coated joint sheet metals for waterproofing of construction joints.

- Water pressure test
- Resistance test
- All-weather installation -20°C to +70°C



Art. no.	Description	PU	Secondary packaging	Weight
070482	<b>Joint sheet metal MB 160, overlap type</b> with full mineral coating on both sides length 2.4 m, width 160 mm incl. 150 mounting brackets 55 fixing clips <a href="#">Technical details page 38</a>	1 crate of 50 pcs.  incl. fastening material	12 crates per pallet	135.00 kg per crate
070486	<b>Joint sheet metal MB 120, overlap type</b> with full mineral coating on both sides length 2.4 m, width 120 mm incl. 150 mounting brackets 55 fixing clips <a href="#">Technical details page 38</a>	1 crate of 50 pcs.  incl. fastening material	12 crates per pallet	100.00 kg per crate

## AKTIV joint sheet metal



The active, bentonite-coated joint sheet metal

Art. no.	Description	PU	Secondary packaging	Weight
070490	<b>Joint sheet metal AKTIV,</b> fully coated on one side with bentonite width 160 mm, roll length 10 m incl. 20 mounting brackets, 4 fixing clips + 1.5 m adhesive tape <a href="#">Technical details page 39</a>	1 roll per carton  incl. fastening material	36 cartons per pallet	15.00 kg per carton

# Crack-inducing profiles

Art. no.	Description	PU	Secondary packaging	Weight
070250	 <b>MASTER joint sheet metal SFG</b> Length: 2.5 m Incl. 5 nail plugs 5/50 and 4 fixing clips, adjustable brackets Extension at the construction site possible Wall thicknesses up to 40 cm <a href="#">Technical details pages 40 – 42</a> 	1 pc.	88 pcs. per pallet	4.80 kg per pc.
070260	 <b>MASTER joint sheet metal SFE</b> Length: 2.5 m Incl. 5 nail plugs 5/50 and 4 fixing clips, adjustable brackets Extension at the construction site possible Wall thicknesses up to 40 cm <a href="#">Technical details pages 40 – 42</a> 	1 pc.	80 pcs. per pallet	4.80 kg per pc.
070263	 <b>MASTER joint sheet metal FE</b> Length: 2.5 m Incl. 5 nail plugs 5/50 and 4 fixing clips, adjustable brackets Extension at the construction site possible Wall thicknesses up to 40 cm <a href="#">Technical details pages 40 – 42</a> 	1 pc.	72 pcs. per pallet	5.00 kg per pc.
070278	 <b>SRF 125 Multi Cavity wall type Coated crack-inducing profile</b> incl. 2 fixing clips, with perforated support rail and perforated foldable retaining plates Type for cavity walls Wall thicknesses up to 40 cm <a href="#">Technical details page 43</a>   	1 pc.	120 pcs. per pallet	4.60 kg per pc.
070280	 <b>SRF 125 Multi In-situ concrete wall type Coated crack-inducing profile</b> incl. 2 fixing clips, with perforated support rail and perforated foldable retaining plates Type for in-situ concrete walls Wall thicknesses up to 36.5 cm <a href="#">Technical details page 43</a>   	1 pc.	120 pcs. per pallet	5.40 kg per pc.

# Stopend panels ABS

Rough or toothed joint with integrated coated joint sheet metal



## ABS rough



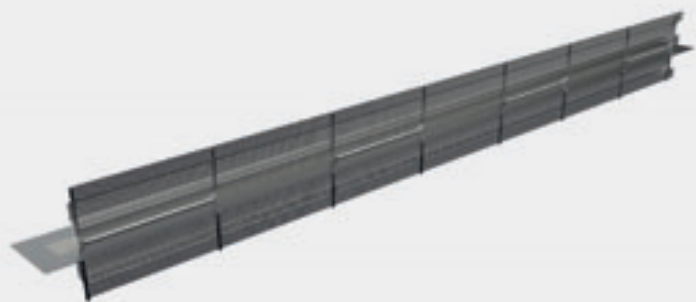
Art. no.	Description	Installation dimension E = width of perforated plate	Length	PU	Weight per pc.
070281	ABS 130 rough	Perforated plate 130 mm	2.50 m	1 pc.	4.80 kg
070282	ABS 160 rough	Perforated plate 160 mm	2.50 m	1 pc.	6.00 kg
070284	ABS 200 rough	Perforated plate 200 mm	2.50 m	1 pc.	6.50 kg
070287	ABS 250 rough	Perforated plate 250 mm	2.50 m	1 pc.	8.00 kg
070289	ABS 300 rough	Perforated plate 300 mm	2.50 m	1 pc.	8.40 kg
070291	ABS 400 rough	Perforated plate 400 mm	2.50 m	1 pc.	9.90 kg
070293	ABS 500 rough	Perforated plate 500 mm	2.50 m	1 pc.	10.60 kg
070295	ABS 600 rough	Perforated plate 600 mm	2.50 m	1 pc.	11.00 kg
070297	ABS 700 rough	Perforated plate 700 mm	2.50 m	1 pc.	13.00 kg
070299	ABS 800 rough	Perforated plate 800 mm	2.50 m	1 pc.	14.00 kg
070301	ABS 900 rough	Perforated plate 900 mm	2.50 m	1 pc.	15.00 kg
070303	ABS 1000 rough	Perforated plate 1000 mm	2.50 m	1 pc.	16.00 kg

Technical details pages 44 – 45

All intermediate sizes are available at short notice

## ABS toothed

according to DIN EN 1045-1/EC2



Art. no.	Description	Installation dimension E = width of perforated plate	Length	PU	Weight per pc.
070362	ABS 160 toothed	Perforated plate 160 mm	2.50 m	1 pc.	6.00 kg
070364	ABS 200 toothed	Perforated plate 200 mm	2.50 m	1 pc.	6.50 kg
070366	ABS 250 toothed	Perforated plate 250 mm	2.50 m	1 pc.	7.50 kg
070368	ABS 300 toothed	Perforated plate 300 mm	2.50 m	1 pc.	8.00 kg
070370	ABS 400 toothed	Perforated plate 400 mm	2.50 m	1 pc.	9.20 kg
070372	ABS 500 toothed	Perforated plate 500 mm	2.50 m	1 pc.	10.10 kg
070374	ABS 600 toothed	Perforated plate 600 mm	2.50 m	1 pc.	11.20 kg
070376	ABS 700 toothed	Perforated plate 700 mm	2.50 m	1 pc.	13.20 kg
070378	ABS 800 toothed	Perforated plate 800 mm	2.50 m	1 pc.	14.00 kg
070380	ABS 900 toothed	Perforated plate 900 mm	2.50 m	1 pc.	15.30 kg
070382	ABS 1000 toothed	Perforated plate 1000 mm	2.50 m	1 pc.	16.50 kg

Technical details pages 44 – 45

All intermediate sizes are available at short notice

The scope of supply includes 2 fixing clips per pc.

# ABS deflection profiles

## ABS deflection profiles for rough stopend panels

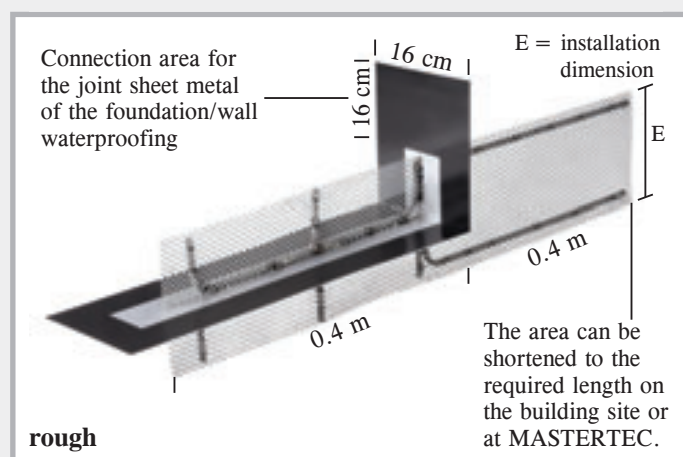
Art. no.	Description	Installation dimension E = width of perforated plate	PU	Weight per pc.
070330	UL 130 rough	Perforated plate 130 mm	1 pc.	1.70 kg
070333	UL 160 rough	Perforated plate 160 mm	1 pc.	1.80 kg
070336	UL 200 rough	Perforated plate 200 mm	1 pc.	1.90 kg
070339	UL 250 rough	Perforated plate 250 mm	1 pc.	2.00 kg
070342	UL 300 rough	Perforated plate 300 mm	1 pc.	2.40 kg
070345	UL 400 rough	Perforated plate 400 mm	1 pc.	2.80 kg
070347	UL 500 rough	Perforated plate 500 mm	1 pc.	3.30 kg
070349	UL 600 rough	Perforated plate 600 mm	1 pc.	3.70 kg
070351	UL 700 rough	Perforated plate 700 mm	1 pc.	4.20 kg
070353	UL 800 rough	Perforated plate 800 mm	1 pc.	4.50 kg
070355	UL 900 rough	Perforated plate 900 mm	1 pc.	5.00 kg
070357	UL 1000 rough	Perforated plate 1000 mm	1 pc.	5.60 kg

Further widths are available on request – intermediate sizes available

## ABS deflection profiles for toothed stopend panels

Art. no.	Description	Installation dimension E = width of perforated plate	PU	Weight per pc.
070387	UL 160 toothed	Perforated plate 160 mm	1 pc.	1.60 kg
070389	UL 200 toothed	Perforated plate 200 mm	1 pc.	1.80 kg
070391	UL 250 toothed	Perforated plate 250 mm	1 pc.	1.90 kg
070393	UL 300 toothed	Perforated plate 300 mm	1 pc.	2.30 kg
070395	UL 400 toothed	Perforated plate 400 mm	1 pc.	2.60 kg
070397	UL 500 toothed	Perforated plate 500 mm	1 pc.	3.00 kg
070399	UL 600 toothed	Perforated plate 600 mm	1 pc.	3.50 kg
070401	UL 700 toothed	Perforated plate 700 mm	1 pc.	4.00 kg
070403	UL 800 toothed	Perforated plate 800 mm	1 pc.	4.30 kg
070405	UL 900 toothed	Perforated plate 900 mm	1 pc.	4.60 kg
070407	UL 1000 toothed	Perforated plate 1000 mm	1 pc.	5.00 kg

Further widths are available on request – intermediate sizes available

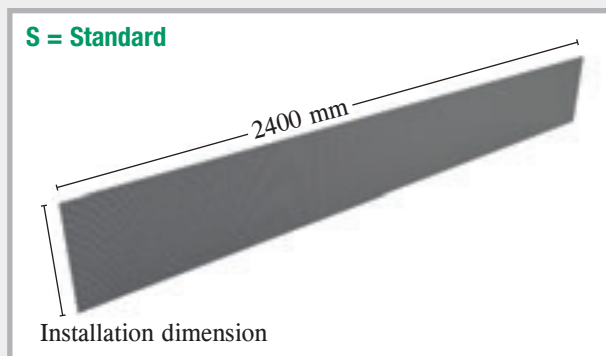


### ABS deflection profiles

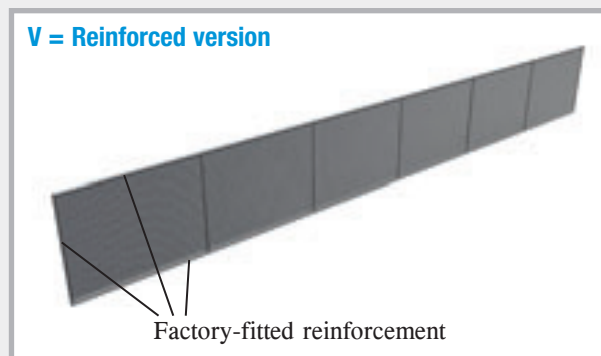
For a pressure water-tight transition from the foundation shuttering to the wall. We require the installation dimension E, which is the measurement between the reinforcement.

# LinkForm stopend panels

**NEW!** Lost formwork for construction joints  
in the rough joint category according to Eurocode 2,  
prefabricated ready for installation



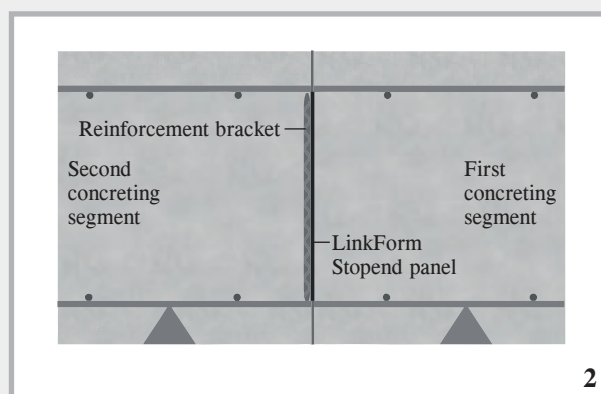
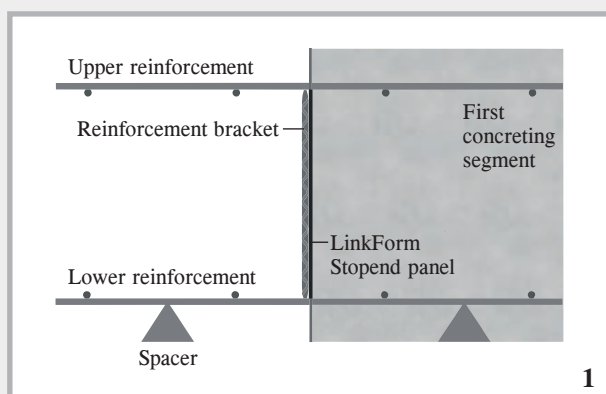
LinkForm rough stopend panels – standard



LinkForm rough stopend panels – reinforced

Description	Installation dimension	Length	PU	S = Standard		V = Reinforced version	
				Art. no.	Weight	Art. no.	Weight
LinkForm 130 rough S / V	130 mm	2.4 m	1 pc.	<b>070500</b>	0.81 kg per pc.	<b>070530</b>	2.91 kg per pc.
LinkForm 160 rough S / V	160 mm	2.4 m	1 pc.	<b>070502</b>	1.00 kg per pc.	<b>070532</b>	3.14 kg per pc.
LinkForm 200 rough S / V	200 mm	2.4 m	1 pc.	<b>070504</b>	1.25 kg per pc.	<b>070534</b>	3.45 kg per pc.
LinkForm 250 rough S / V	250 mm	2.4 m	1 pc.	<b>070506</b>	1.56 kg per pc.	<b>070536</b>	3.84 kg per pc.
LinkForm 300 rough S / V	300 mm	2.4 m	1 pc.	<b>070508</b>	1.87 kg per pc.	<b>070538</b>	4.23 kg per pc.
LinkForm 400 rough S / V	400 mm	2.4 m	1 pc.	<b>070512</b>	2.50 kg per pc.	<b>070540</b>	5.00 kg per pc.
LinkForm 500 rough S / V	500 mm	2.4 m	1 pc.	<b>070514</b>	3.12 kg per pc.	<b>070544</b>	5.78 kg per pc.
LinkForm 600 rough S / V	600 mm	2.4 m	1 pc.	<b>070516</b>	3.74 kg per pc.	<b>070546</b>	6.55 kg per pc.
LinkForm 700 rough S / V	700 mm	2.4 m	1 pc.	<b>070518</b>	4.37 kg per pc.	<b>070548</b>	7.33 kg per pc.
LinkForm 800 rough V	800 mm	2.4 m	1 pc.			<b>070550</b>	8.11 kg per pc.

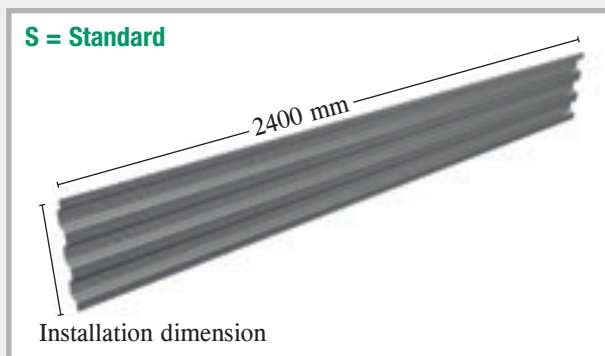
All intermediate sizes are available at short notice



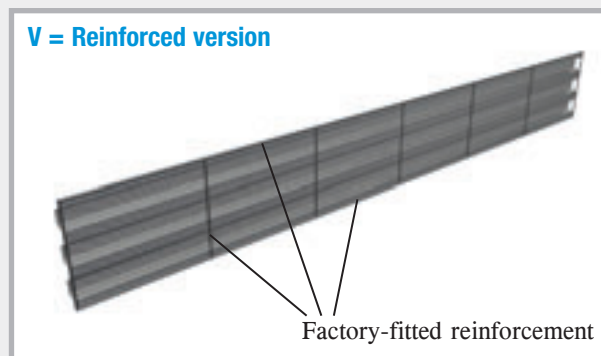


# LinkFix stopend panels

**NEW!** Lost formwork for construction joints in the toothed joint category according to Eurocode 2, prefabricated ready for installation



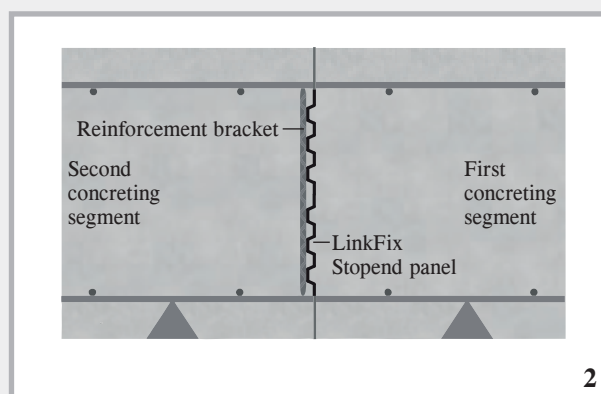
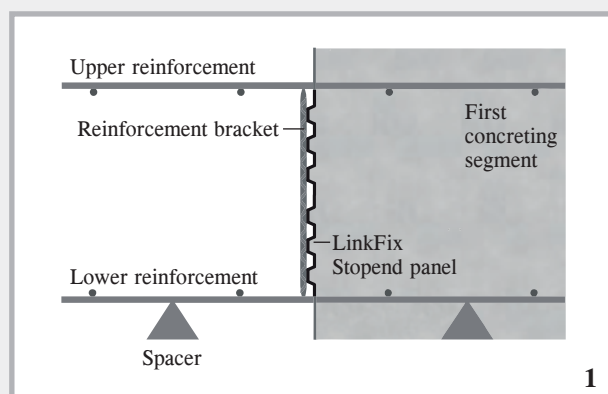
LinkFix toothed stopend panels – standard



LinkFix toothed stopend panels – reinforced

Description	Installation dimension	Length	PU	S = Standard		V = Reinforced version	
				Art. no.	Weight	Art. no.	Weight
LinkFix 130 toothed S / V	130 mm	2.4 m	1 pc.	<b>070556</b>	0.66 kg per pc.	<b>070576</b>	2.75 kg per pc.
LinkFix 160 toothed S / V	160 mm	2.4 m	1 pc.	<b>070558</b>	0.81 kg per pc.	<b>070578</b>	2.95 kg per pc.
LinkFix 200 toothed S / V	200 mm	2.4 m	1 pc.	<b>070560</b>	1.01 kg per pc.	<b>070580</b>	3.21 kg per pc.
LinkFix 250 toothed S / V	250 mm	2.4 m	1 pc.	<b>070562</b>	1.26 kg per pc.	<b>070582</b>	3.54 kg per pc.
LinkFix 300 toothed S / V	300 mm	2.4 m	1 pc.	<b>070564</b>	1.51 kg per pc.	<b>070584</b>	3.87 kg per pc.
LinkFix 400 toothed S / V	400 mm	2.4 m	1 pc.	<b>070566</b>	2.02 kg per pc.	<b>070586</b>	4.52 kg per pc.
LinkFix 500 toothed S / V	500 mm	2.4 m	1 pc.	<b>070568</b>	2.52 kg per pc.	<b>070588</b>	5.18 kg per pc.
LinkFix 600 toothed S / V	600 mm	2.4 m	1 pc.	<b>070570</b>	3.02 kg per pc.	<b>070590</b>	5.83 kg per pc.
LinkFix 700 toothed S / V	700 mm	2.4 m	1 pc.	<b>070572</b>	3.53 kg per pc.	<b>070592</b>	6.49 kg per pc.
LinkFix 800 toothed V	800 mm	2.4 m	1 pc.			<b>070594</b>	7.15 kg per pc.

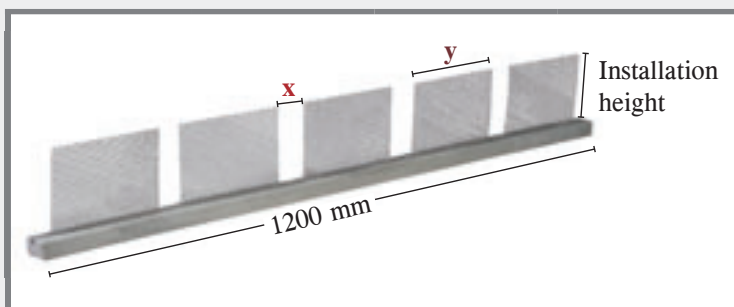
All intermediate sizes are available at short notice



# ABS spacer

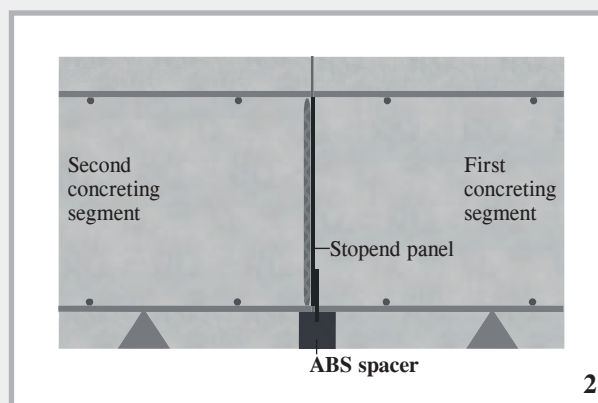
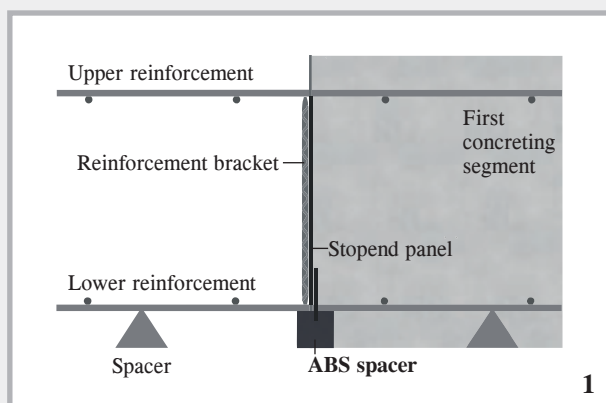
## **NEW!** Fibre cement square spacer with integrated rib lath

The location of the ABS spacer below the longitudinal direction of stopend panels minimises the discharge of concrete below and in the area of the lower reinforcement layer.



Description	Length	PU	Installation height 120		Installation height 150	
			Art. no.	Weight	Art. no.	Weight
ABS spacer 35 mm concrete cover Installation height 120/150-x-y	1.2 m	1 pc.	<b>070630</b>	3.20 kg per pc.	<b>070636</b>	3.40 kg per pc.
ABS spacer 40 mm concrete cover Installation height 120/150-x-y	1.2 m	1 pc.	<b>070632</b>	4.20 kg per pc.	<b>070638</b>	4.40 kg per pc.
ABS spacer 50 mm concrete cover Installation height 120/150-x-y	1.2 m	1 pc.	<b>070634</b>	6.50 kg per pc.	<b>070640</b>	6.70 kg per pc.

To adapt the ABS spacers perfectly to your installation situation, we need, in addition to the installation height, the reinforcement width **x** and the formwork width **y**.





# Accessories for coated joint sheet metals

Art. no.	Description	PU	Weight
070266	 <p><b>Soundproofing joint</b> element length 2.5 m</p> <p><b>DSK 24/25</b> for wall thickness 24 + 25 cm</p> <p><b>DSK 30</b> for wall thickness 30 cm</p> <p><b>DSK 35/36.5</b> for wall thickness 35 + 36.5 cm</p> <p>1 soundproofing joint consists of 2 elements</p> <p>Technical details page 46</p>	1 element = 2.5 m	2.40 kg/m
070267		1 element = 2.5 m	2.80 kg/m
070268		1 element = 2.5 m	3.20 kg/m
070269	 <p><b>Sound joint tape DSF</b> Internal A24 construction joint tape according to DIN 18541, specially coated up to 15 cm on one side, compatible with bitumen, roll length 3 m</p> <p>Technical details page 46</p>	1 roll	4.20 kg per roll
070230	 <p><b>Joint sheet metal/joint tape connector</b> transition from joint sheet metal to joint tape</p> <p>Technical details page 47</p> 	1 set = 2 pcs.	2.50 kg per set
070240	 <p><b>MASTER adhesive tape for joint sheet metal</b> Adhesive tape for securing joints and crossing points, thickness 1.5 mm, roll length 10 m, width 38 mm</p>	1 carton of 16 pcs.	0.90 kg per roll
070270	 <p><b>MASTER joint sheet metal angle 90°</b> side length 25 x 25 cm, with fixing rail</p>	1 pc.	0.60 kg per pc.
070273	 <p><b>MASTER joint sheet metal corner element FB</b> with fixing rail</p>	1 pc.	0.70 kg per pc.
<b>NEW</b> 070224	 <p><b>VB joint sheet metal corner element FB</b></p>	1 pc.	0.45 kg per pc.
070275	 <p><b>Joint sheet metal VB angle 90°</b> side length 25 x 25 cm height 160 mm</p>	1 pc.	0.45 kg per pc.
070415 070421 070422	 <p><b>Mounting bracket</b> for joint sheet metals up to height 160 mm height 161-205 mm height 206-330 mm</p>	150 pcs./sack 150 pcs./sack 150 pcs./sack	per sack 7.50 kg 8.60 kg 13.00 kg
070410	 <p><b>Fixing clip</b> for securing the element joints</p>	1 bag of 55 pcs.	3.08 kg per bag

# Small coils

Uncoated joint sheet metal

Black



Galvanised

Art. no.	Description	PU	Secondary packaging	Weight per roll
070175	<b>Joint sheet metal, black, 1.5 x 250 mm in accordance with the WU directive</b>	<b>1 roll of 30 m</b>	<b>12 rolls per pallet</b>	<b>90.00 kg</b>
070176	<b>Joint sheet metal, black, 1.5 x 300 mm in accordance with the WU directive</b>	<b>1 roll of 30 m</b>	<b>10 rolls per pallet</b>	<b>108.00 kg</b>
070177	Joint sheet metal, black, 2.0 x 200 mm	1 roll of 30 m	12 rolls per pallet	96.00 kg
070178	<b>Joint sheet metal, black, 2.0 x 250 mm in accordance with the WU directive</b>	<b>1 roll of 30 m</b>	<b>10 rolls per pallet</b>	<b>120.00 kg</b>
070180	<b>Joint sheet metal, black, 2.0 x 300 mm in accordance with the WU directive</b>	<b>1 roll of 30 m</b>	<b>8 rolls per pallet</b>	<b>144.00 kg</b>
070090	Joint sheet metal, galvanised, 0.6 x 100 mm	1 roll of 30 m	60 rolls per pallet	14.40 kg
070100	Joint sheet metal, galvanised, 0.6 x 125 mm	1 roll of 30 m	60 rolls per pallet	18.00 kg
070110	Joint sheet metal, galvanised, 0.6 x 150 mm	1 roll of 30 m	48 rolls per pallet	21.60 kg
070120	Joint sheet metal, galvanised, 0.6 x 200 mm	1 roll of 30 m	36 rolls per pallet	28.80 kg
070130	Joint sheet metal, galvanised, 0.6 x 250 mm	1 roll of 30 m	30 rolls per pallet	36.00 kg
070135	Joint sheet metal, galvanised, 0.6 x 300 mm	1 roll of 30 m	24 rolls per pallet	43.20 kg
070181	Joint sheet metal, galvanised, 2.0 x 300 mm	1 roll of 30 m	8 rolls per pallet	144.00 kg

Black joint sheet metal with a min. thickness of 1.5 mm and a min. width of 250 mm complies with the WU directive for Water-Impermeable Concrete Buildings. All other types do not comply with this directive.

## MASTER-Connect

Connector for joint sheet metal and joint tapes

### MASTER-Connect joint sheet metal



Technical details page 48

Art. no.	Description	PU	Weight	
070196	<b>MASTER-Connect joint sheet metal F150</b> for joint sheet metal widths up to 150 mm	1	2.00 kg	
070193	<b>MASTER-Connect joint sheet metal F250</b> for joint sheet metal widths up to 250 mm	1	3.00 kg	
070194	<b>MASTER-Connect joint sheet metal F330</b> for joint sheet metal widths up to 330 mm	1	4.00 kg	

Resistance:

- Oil and petrol
- Fermentation mash
- Diluted acids and alkalis
- Radon and methane gas
- Liquid manure and slurry

### MASTER-Connect joint tape



Technical details page 48

Art. no.	Description	PU	Weight	
070610	<b>MASTER-Connect joint tape B250</b> for joint tape widths up to 250 mm	1	3.00 kg	
070620	<b>MASTER-Connect joint tape B330</b> for joint tape widths up to 330 mm	1	4.00 kg	

Resistance:

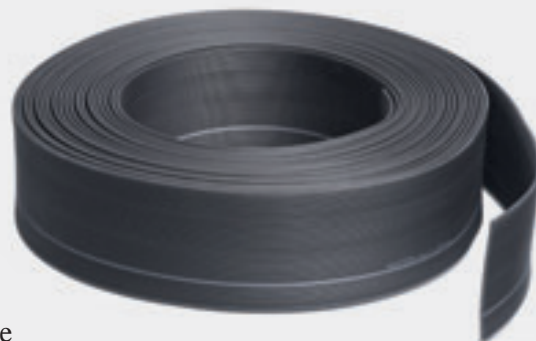
- Diluted acids and alkalis
- Fermentation mash
- Liquid manure and slurry

# MASTER-MultiFlex (MMF 140)

Active joint tape for permanent waterproofing of construction joints in concrete with General Building Supervisory Test Certificate (abP)

**NEW!** MASTER-MultiFlex (MMF 140)

combines passive and active waterproofing in one product. This combination guarantees a high level of reliability.

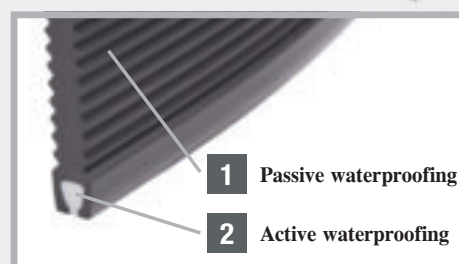


## 1. Passive waterproofing

The joint tape provides the mechanical waterproofing of the joint. The corrugated structure of the joint tape extends the water circulation path and thus makes for increased reliability.

## 2. Active waterproofing

The integrated swelling tape expands downwards into the construction joint. At the same time, the flanks of the joint tape are pressed outwards by the expansion, making the flow of water impossible.



## MMF 140 product range

Technical details pages 49 – 50

Art. no.	Description	PU	Secondary packaging	Weight	
080643	<b>MMF 140 MASTER-MultiFlex</b> Construction joint tape with additional swelling profile, Width 140 mm Roll length 25 m including 50 mounting brackets	1 carton	32 cartons per pallet	30.00 kg per carton	
080645	<b>MMF 140 Adhesive joining kit</b> 6 fixing clips and 3 m special adhesive tape Width 75 mm	1 set		0.90 kg per set	
080647	<b>MMF 140 Mounting bracket</b> for attachment of joint tape to the reinforcement	1 sack of 50 pcs.		4.30 kg per sack	
080648	<b>MMF 140 Fixing clips</b> for securing the adhesive bonded joint	1 bag of 25 pcs.		1.50 kg per bag	
080649	<b>MMF 140 Adhesive tape</b> Width 75 mm Roll length 3 m for bonding of joints	1 pc.		0.45 kg per roll	
070605	<b>MMF 140 MASTER-Connect "active"</b> Joint tape connector with additional swelling tape protection	1 pc.		2.00 kg per pc.	

# Joint tape, factory standard PVC

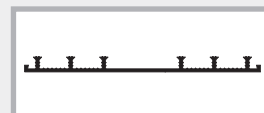
## Construction joint tape, internal

Type	Tape width	Roll length	PU	Weight per roll	PVC Factory standard
A 19	190 mm	25 m	1 pc.	24.0 kg	<b>080500</b>
A 24	240 mm	25 m	1 pc.	30.0 kg	<b>080510</b>
A 32	320 mm	25 m	1 pc.	45.0 kg	<b>080520</b>



## Construction joint tape, external

AA 19	190 mm	25 m	1 pc.	27.0 kg	<b>080530</b>
AA 24	240 mm	25 m	1 pc.	42.0 kg	<b>080540</b>
AA 32	320 mm	25 m	1 pc.	67.0 kg	<b>080550</b>



## Construction joint tape, internal, reinforced with plastic loops

SFA 100	100 mm	50 m	1 pc.	35.0 kg	<b>080590</b>
SFA 150	150 mm	25 m	1 pc.	23.0 kg	<b>080600</b>
SFA 190	190 mm	25 m	1 pc.	29.0 kg	<b>080610</b>
SFA 240	240 mm	25 m	1 pc.	39.0 kg	<b>080620</b>
SFA 320	320 mm	25 m	1 pc.	67.0 kg	<b>080630</b>



with plastic loops

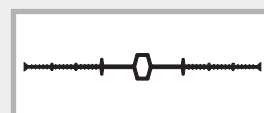
## Construction joint tape, internal, made of rigid PVC

P 150	150 mm	25 m	1 pc.	26.0 kg	<b>080640</b>
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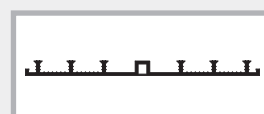
## Expansion joint tape, internal

D 19	190 mm	25 m	1 pc.	34.0 kg	<b>080650</b>
D 24	240 mm	25 m	1 pc.	50.0 kg	<b>080660</b>
D 32	320 mm	25 m	1 pc.	62.0 kg	<b>080670</b>



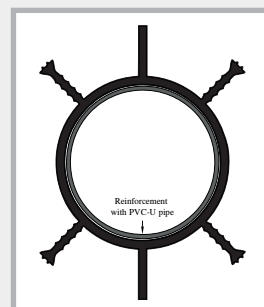
## Expansion joint tape, external

DA 19	190 mm	25 m	1 pc.	32.0 kg	<b>080680</b>
DA 24	240 mm	25 m	1 pc.	49.0 kg	<b>080690</b>
DA 32	320 mm	25 m	1 pc.	68.0 kg	<b>080700</b>



## Crack inducer tubes

Art. no.	Type	Diameter / mm	Pipe length	PU	Pipe weight
<b>080710</b>	Q 1	88 wall thickness 24-35 cm	2.5 m	1 pc.	10.0 kg
<b>080712</b>	Q 1	88	3.0 m	1 pc.	11.0 kg
<b>080714</b>	Q 1	88	3.5 m	1 pc.	14.0 kg
<b>080722</b>	Q 3	60 wall thickness 17-24 cm	2.5 m	1 pc.	6.0 kg
<b>080724</b>	Q 3	60 + cavity walls	3.0 m	1 pc.	8.0 kg
<b>080726</b>	Q 3	60	3.5 m	1 pc.	10.0 kg



## Joint tape clamp

Art. no.	Description	PU	Weight
<b>070510</b>	<b>Joint tape clamp</b> 3 pcs. per metre and side	1 carton of 200 pcs.	1.50 kg per carton

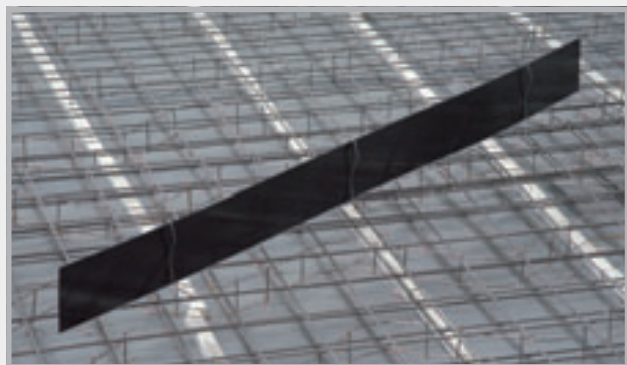




# VB joint sheet metal High-pressure metal sheets



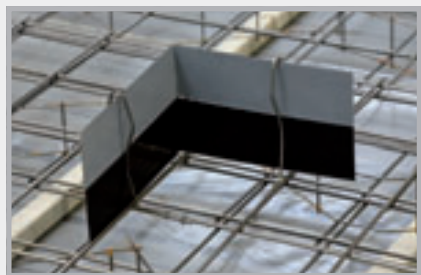
**Joint sheet metals with reactive, bitumen-free polymer coating for waterproofing of construction joints**



Packaging in strips and rolls, with coating on one or both sides.

## Installation of VB joint sheet metal

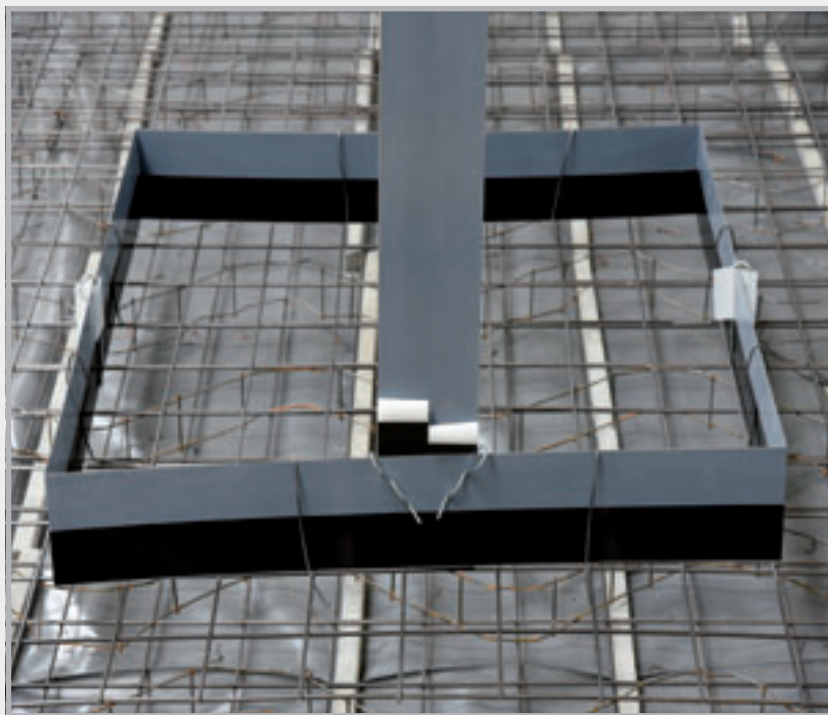
We deliver strips or rolls, complete with installation accessories.



Remove the foil on the underside and start (for example) in the corner. The sheet metal can be bent on the building site.



Also remove the foil on the underside of the connection plate and prepare for the 6 cm overlap.



Secure embedment in concrete, max. 50% of sheet metal profile width. The foil on the upper side is removed prior to concreting of the wall. When using sheet metal plates with a coating on one side, the coating must always face the water side.

**Detailed information:**

**Request our technical data sheet or scan the QR code!**

YouTube



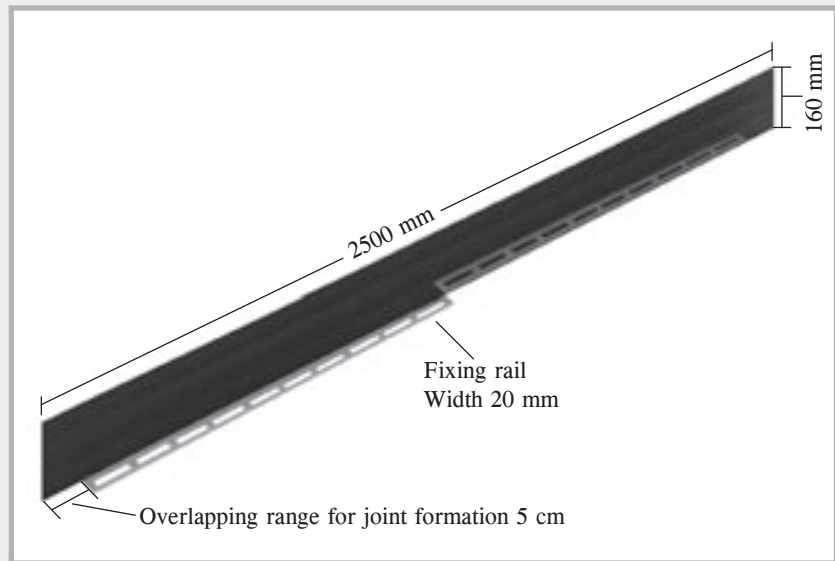
# MASTER joint sheet metal



## Product description

■ MASTER joint sheet metal is made of galvanised sheet steel which is fully coated on both sides with a special coating. The coating forms a water-tight bond with the fresh concrete.

- Element length 2500 mm
- Width 160 mm
- Total thickness 2.1 mm



## Function

- The special coating ensures a very firm bond between concrete and joint sheet metal
- Tested for resistance to pressurised and non-pressurised water
- Environmentally friendly
- For in-situ concrete and prefabricated construction
- Suitable for zones with frequently varying water levels
- For waterproofing of foundation/wall, foundation/foundation and wall/wall construction joints.



## Scope of supply

- MASTER joint sheet metal is supplied complete with fixing clips in stable wooden crates. Thanks to the fixing rail, no further accessories are required for installation.



 YouTube





# Installation of MASTER joint sheet metal



1 Remove the lower protective film



2 Place element on top of upper reinforcement layer



3 Overlap MASTER joint sheet metal by 5 cm and press together



4 Secure the joint with a fixing clip



5 Fix the element's support rail using a tie wire. Simply bend the element in the corner area



6 The MASTER joint sheet metal elements can be bent in any way. Waterproofing of staggered levels is also possible without any problems.

In order to prevent the joint sheet metal from being contaminated, do not remove the upper film until after concreting of the foundation.

# Joint sheet metal MB Overlap

## Mineral-coated joint sheet metals for waterproofing of construction joints



Presentation: 160 and 120 mm-wide joint sheet metal with full mineral coating on both sides.



### Installation of MB joint sheet metal

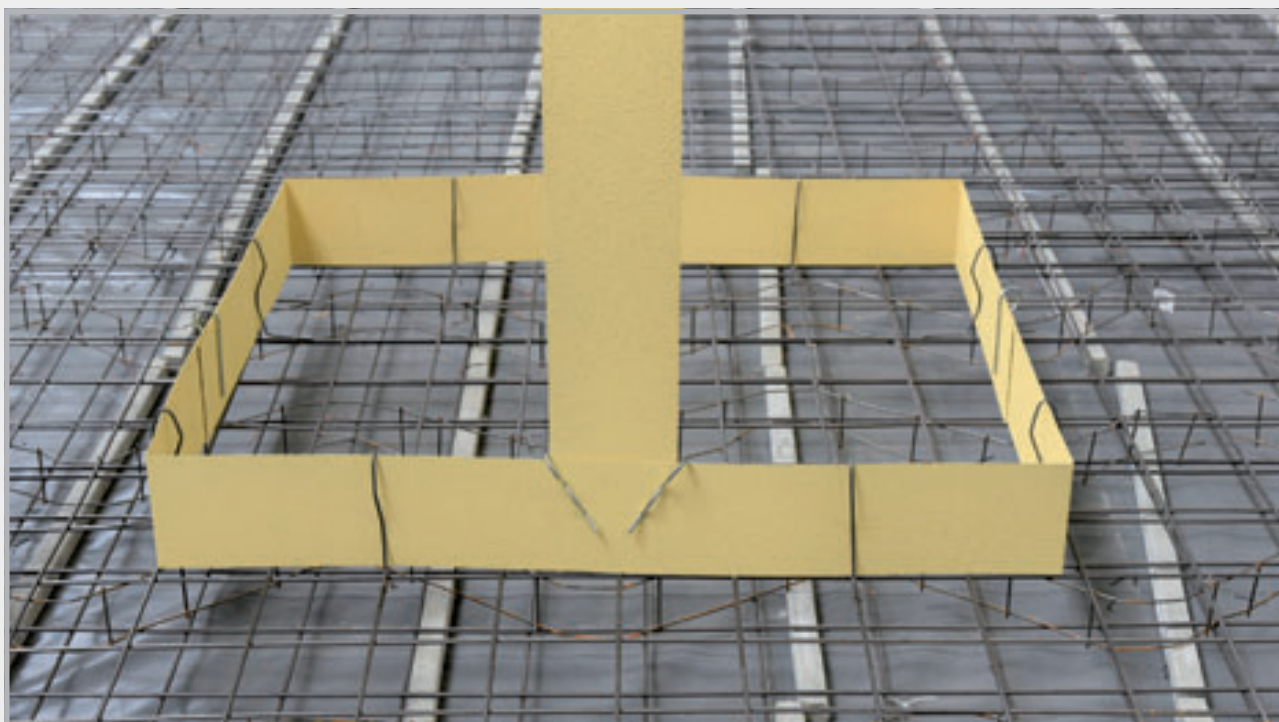
The joint sheet metal elements are supplied complete with installation accessories.



The coating is fully insensitive. The metal sheets can be bent by hand.



20 cm overlap in area of joint.  
No adhesive joints required.



Joint sheet metal MB before placement of concrete. 3 cm embedment depth in the concrete is sufficient to achieve a pressure-tight seal.

**Detailed information:**

**Request our technical data sheet or scan the QR code!**

 YouTube





# AKTIV joint sheet metal



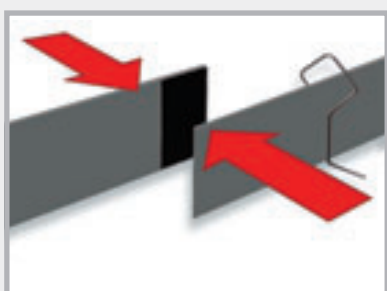
## Bentonite-coated joint sheet metal for waterproofing of construction joints.

### Presentation

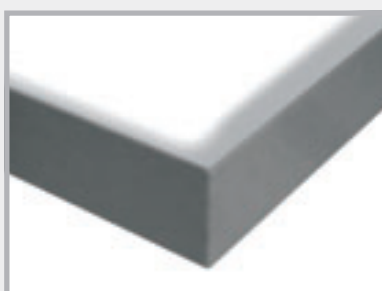
Joint sheet metal, fully coated on one side with bentonite  
Delivered complete with installation accessories.



### Installation of AKTIV joint sheet metal



Tear the protective film off the ends of the two elements to be bonded and press them together.



Corners are formed by simply bending the elements.



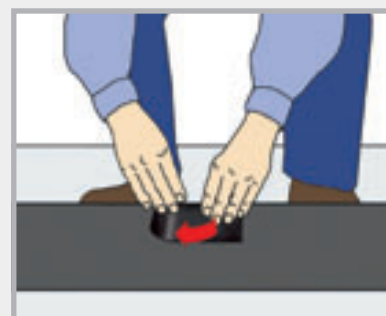
Cut the element to the required length.



Cut off strip of adhesive tape.

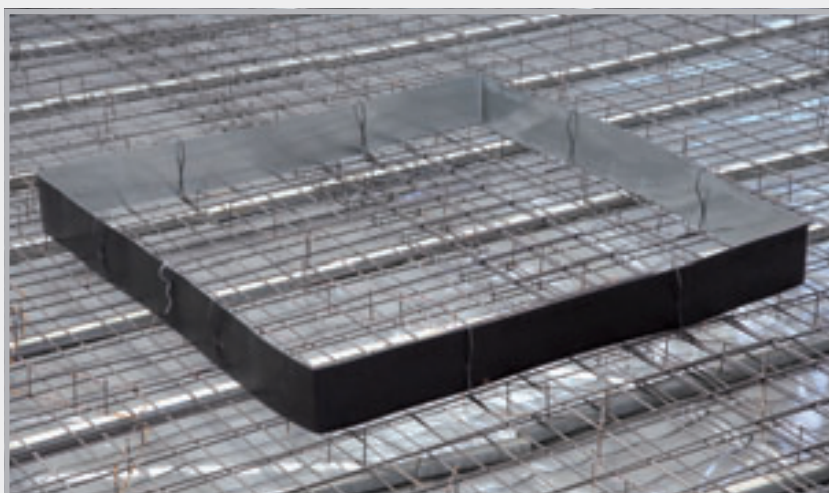


Apply the adhesive tape in the area where two elements are to be joined. The adhesive tape must be applied on both elements.



AKTIV joint sheet metal installation complete.

Coating always faces the water side.  
Embedment depth of 3.5 cm in the concrete.



**Detailed information:**  
**Request our technical data sheet!**

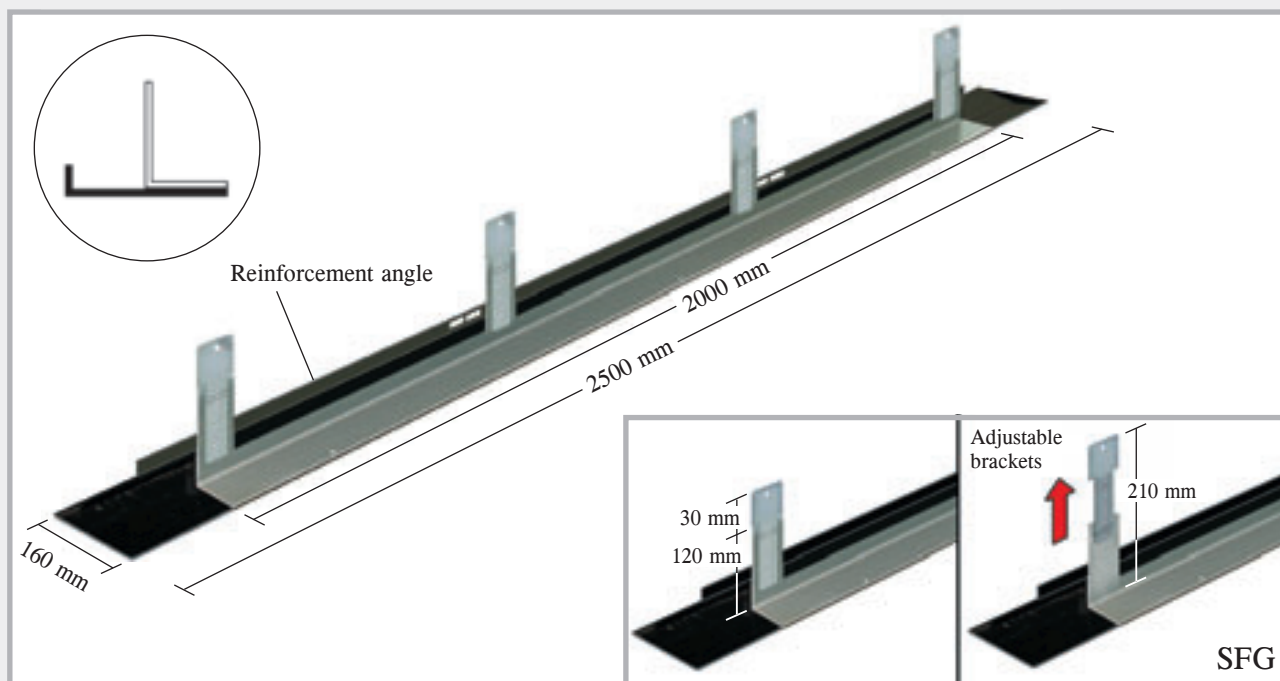
# Crack-inducing profiles



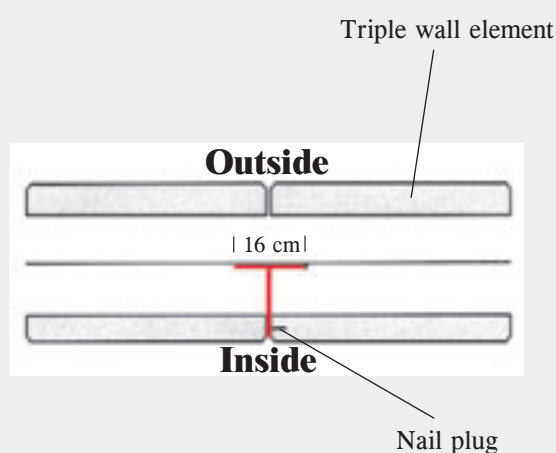
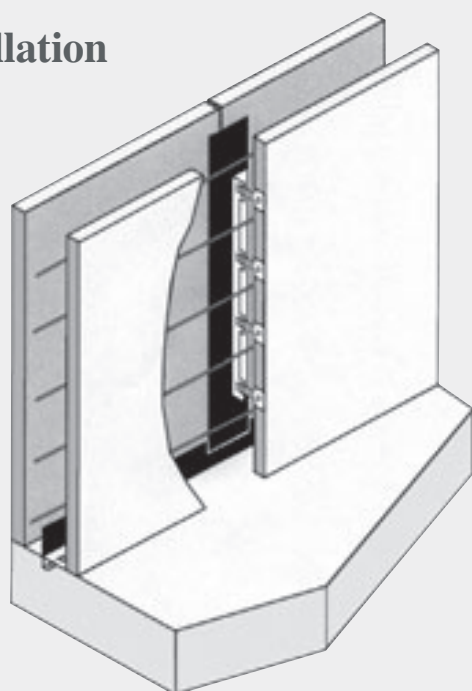
**MASTER joint sheet metal SFG adjustable**  
(prefabricated crack inducing element, straight) for straight butt joints

## Product description

- The profile consists of a fully coated joint sheet metal, which forms a watertight bond with the fresh concrete, and adjustable brackets.

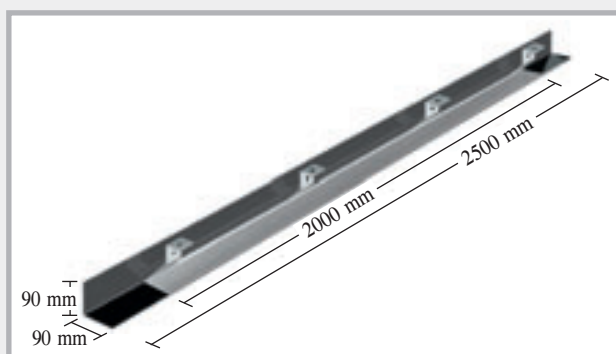


## Installation

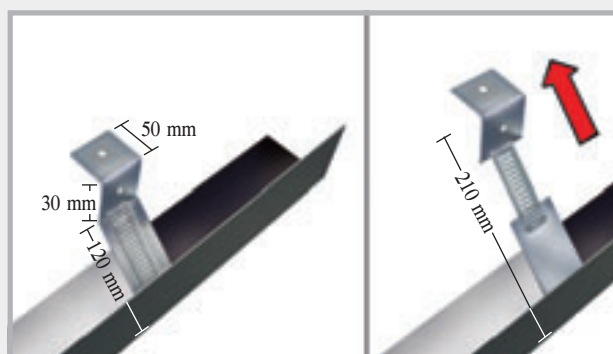


The elements supplied are completely prefabricated and are fixed to the internal formwork of the triple wall using the nail plugs provided. The lower part of the elements is bonded to the waterproofing element in the foundation area.

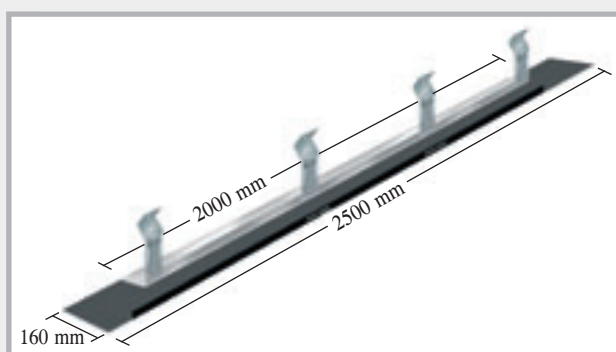
# Crack inducing elements for the corner area, SFE adjustable FE adjustable



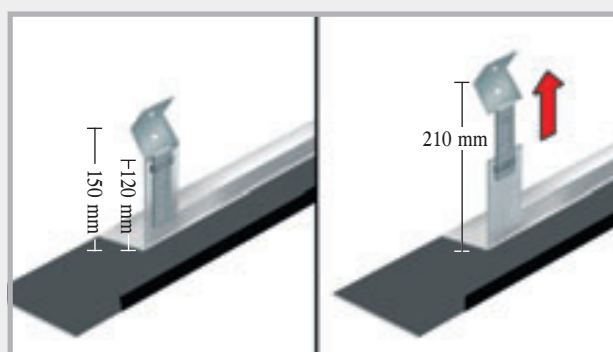
SFE profile



Adjustable brackets

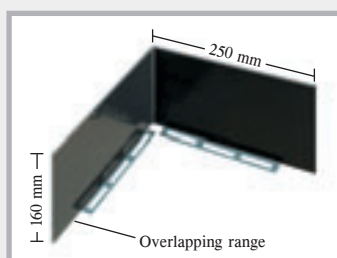
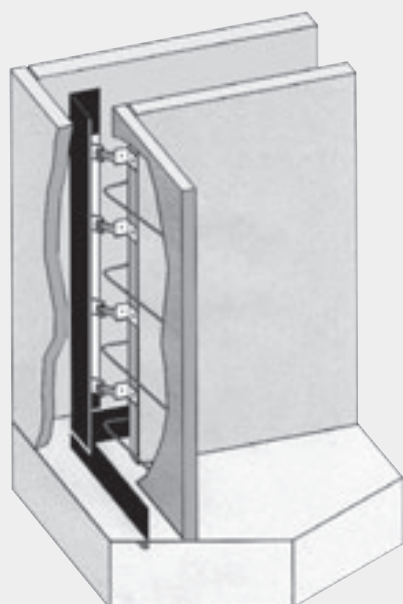


FE profile



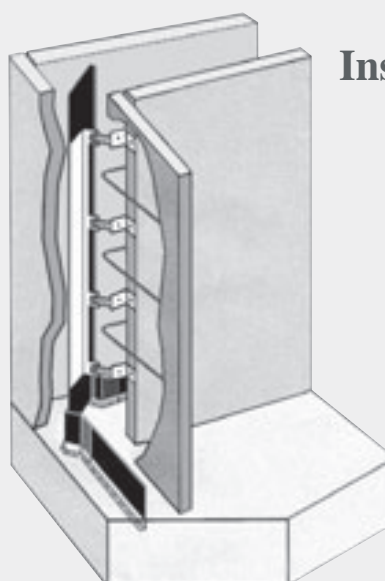
Adjustable brackets

## Installation of SFE

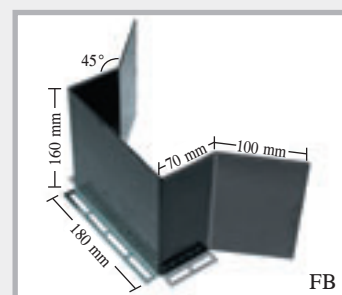


MASTER joint sheet metal angle  
90° for connection of SFE profile

The adjustable brackets  
always enable contact with the  
waterproofing elements in the  
foundation.



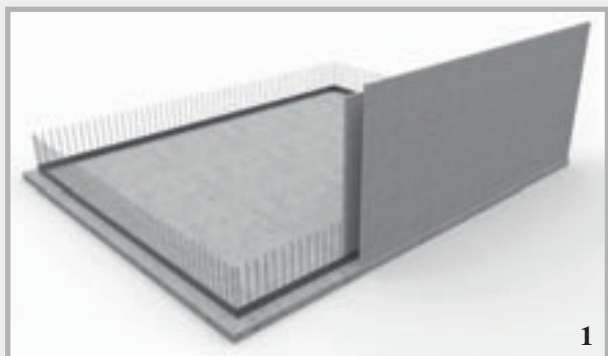
## Installation of FE



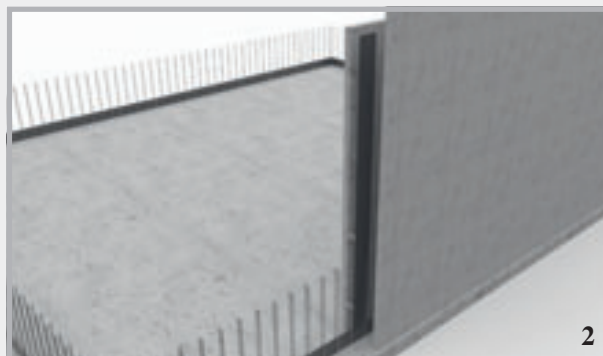
MASTER joint sheet metal  
corner element FB for connec-  
tion of FE profile



## At the construction site



The first cavity wall element is positioned with VB joint sheet metal acting as the foundation/wall waterproofing element.



The SFG profile is set vertically and overlapped with the joint sheet metal (overlap  $\geq 5$  cm).



The adjustable mounting brackets are adjusted to fix them on the face of the cavity wall.



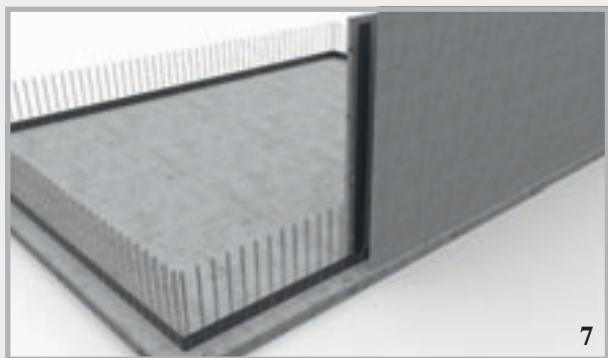
The wall formwork is drilled in order to fix the mounting bracket.



The mounting bracket is fixed with a drive-in plug.



The overlapping area on the floor/wall joint sheet metal is secured with two fixing clips.



Installation of the SFG profile is complete; the next cavity wall element can be placed.



Follow the same procedure to install the SFE crack-inducing profiles in the corner area of the cavity wall elements. The geometry of the mounting brackets is optimised for installation in the corner area.

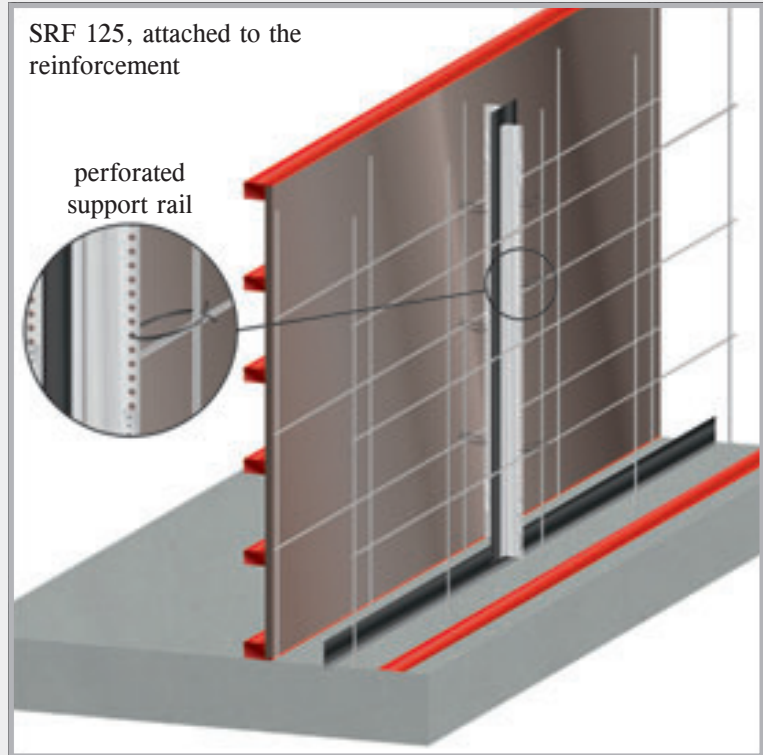
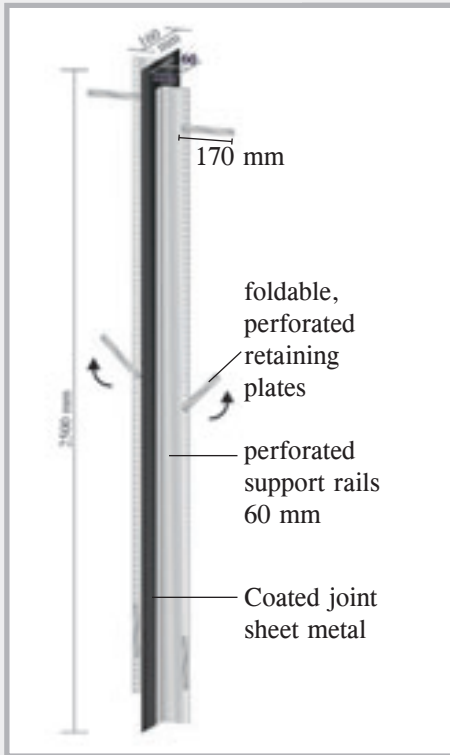
# Crack inducing profile SRF 125 Multi



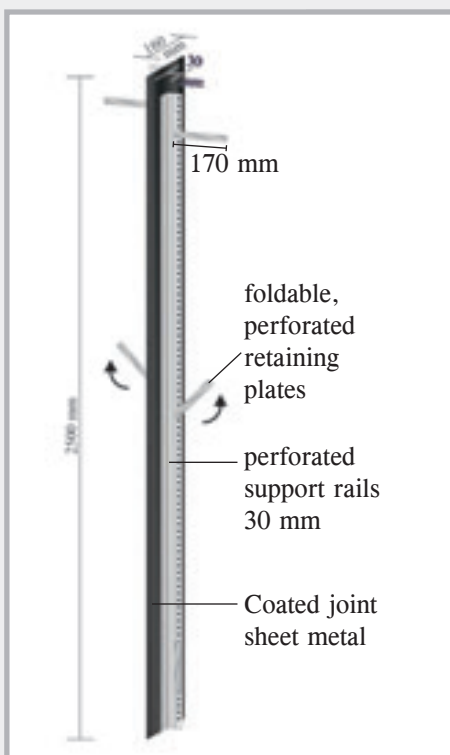
## Product description

The SRF 125 Multi profile consists of a coated joint sheet metal element with perforated support rails attached to both sides and additional retaining plates. Depending on the requirements, the profile is fastened via the support rails or the perforated foldable retaining plates.

## Type SRF 125 Multi in-situ concrete



## Type SRF 125 Multi cavity wall



### Cavity wall installation

One profile for straight joints and corner constructions.

Fastening with support rails  
Wall thicknesses up to 40 cm

Connection to joint sheet metal  
The offset arrangement of the retaining plates means you remain flexible at all times.



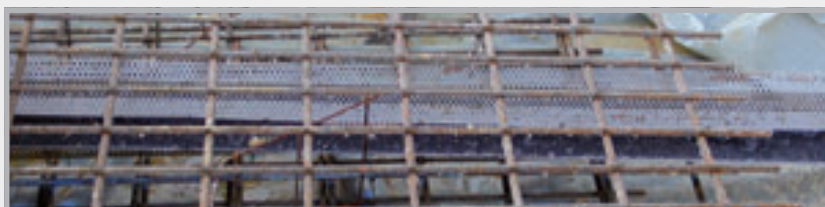
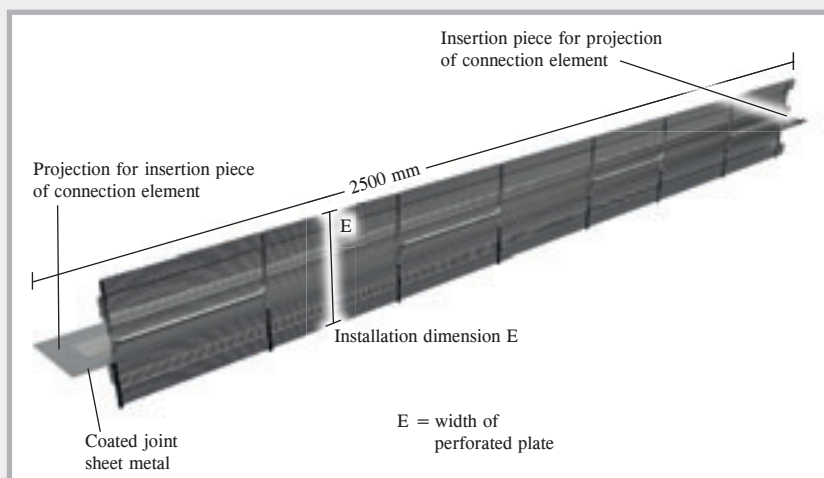
# Profiles for in-situ concrete

## Stopend panel joint sheet metal ABS



### Product description

- The ABS profiles consist of a joint sheet metal coated with a special coating and a perforated plate welded on on both sides. The coated joint sheet metal forms a watertight bond with the fresh concrete. The ABS profiles are installed in horizontal and vertical construction joints of foundations or walls.



### Function and installation

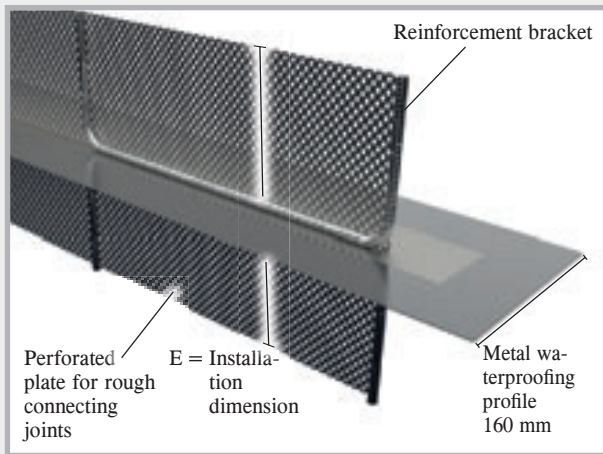
- Place the ABS elements between the reinforcement layers and fix them with tie wire
- Fit the individual elements into each other and glue the panels together
- Additional shuttering is recommended when using thick/high constructional elements.
- The elements remain in the concrete, i.e. no time-consuming shuttering or stripping required
- Remove the foil before concreting



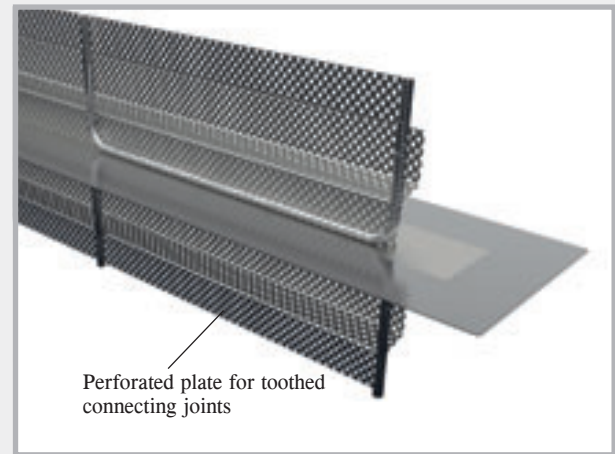
In your order, please specify the width within the reinforcement (please refer to the list of products).



## ABS rough



## ABS toothed

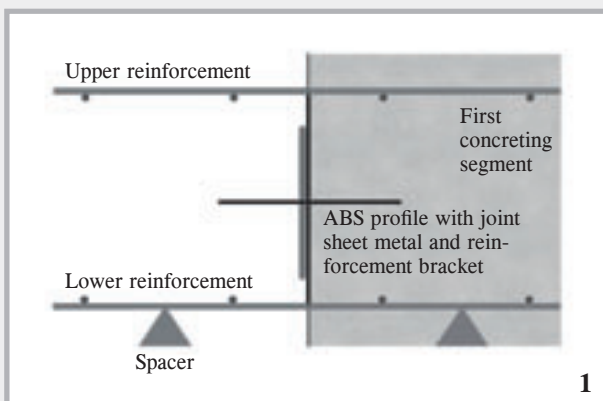


## ABS stopend panels for wall and foundation shuttering

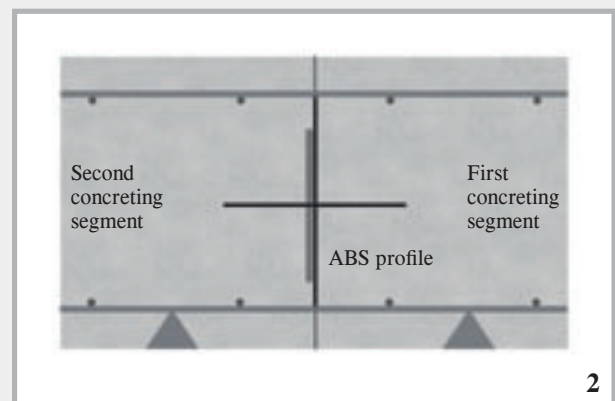
The ABS elements consist of perforated sheet metal with integrated coated joint sheet metal. The scope of delivery includes 2 fixing clips per element.

We require the installation dimension E, which is the measurement between the upper and lower reinforcement.

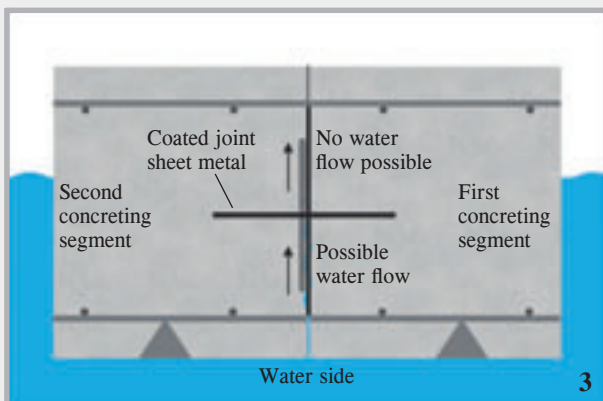
## Function of ABS stopend panels



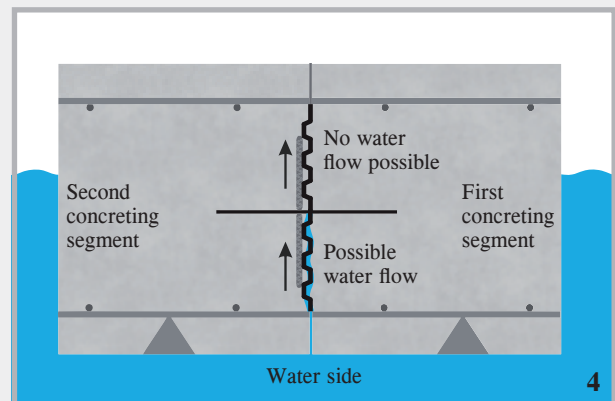
The ABS element serves as shuttering for the first concreting segment.



The rough or toothed version ensures a reliable connection of the second concreting segment.



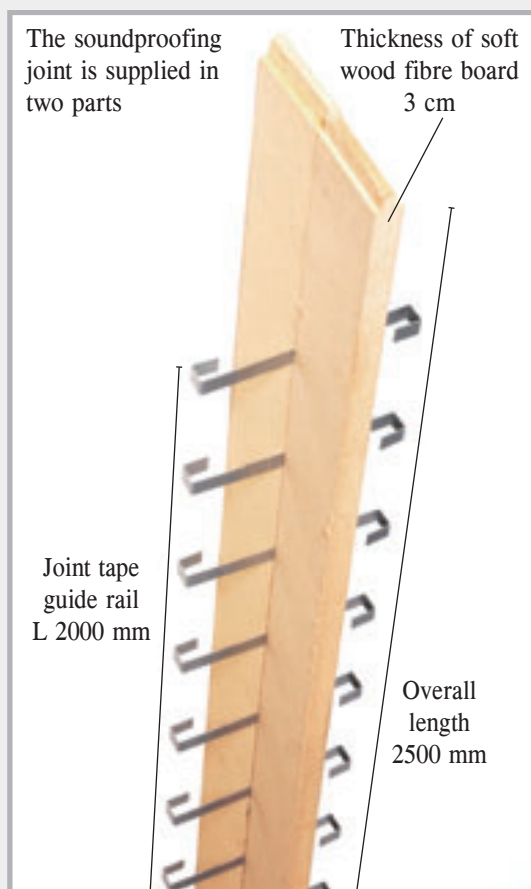
The coated joint sheet metal eliminates the possibility of water inflow.



Same waterproofing principle, here in combination with toothed joint according to DIN 1045-1/EC2.

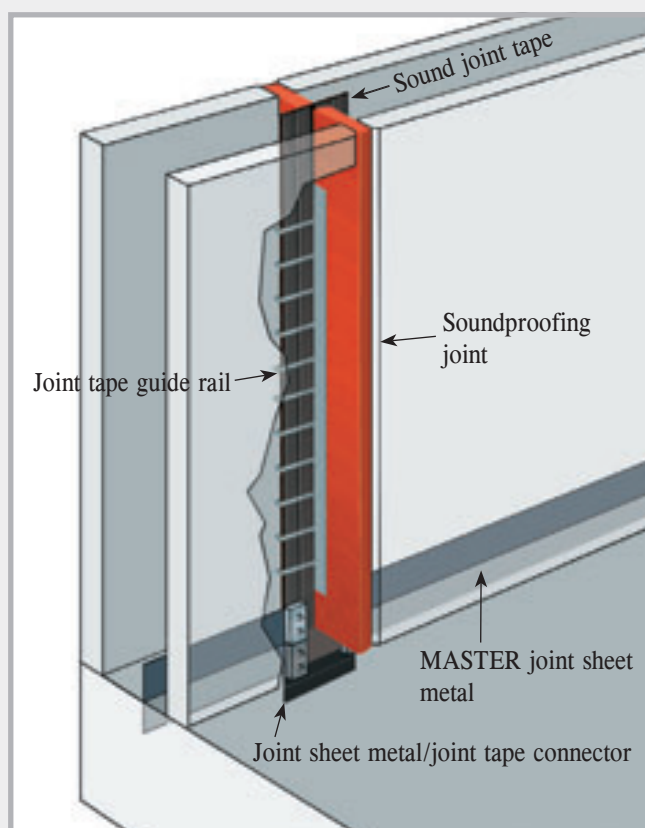
# Soundproofing joint DSK

## Product description



## Installation and function

- In the course of concreting of the foundation, the coated area of the sound joint tape DSF is encased in the concrete
- Remove the foil before concreting
- In the foundation area, the sound joint tape is connected to the foundation/wall waterproofing element using the joint sheet metal/joint tape connector
- The soundproofing joint is fastened to the front face of the wall elements.
- The sound joint tape is fed upwards through the joint tape guide rail
- Secure joint tape with joint tape clamps





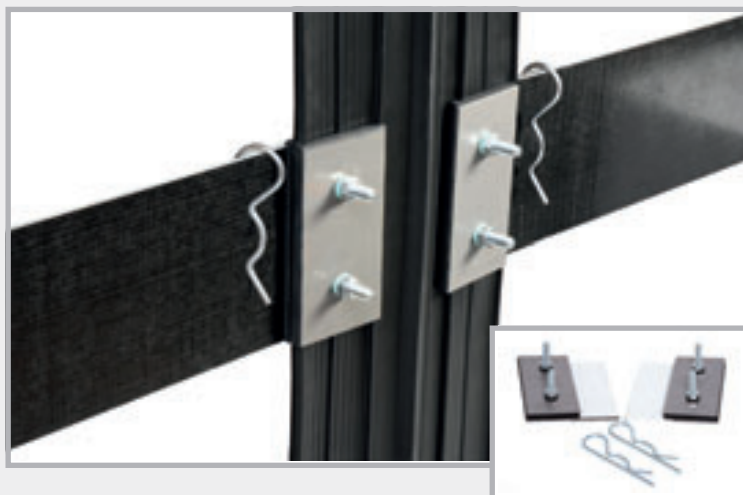
# Joint sheet metal/joint tape connector



## Product description

The joint sheet metal/joint tape connector establishes a reliable pressure water-tight connection between PVC joint tapes and coated joint sheet metals.

A joint sheet metal/joint tape connector consists of 2 connecting elements.



## Installation



The ribs must be removed from the joint tape in the areas where the connectors are mounted.



Mark the positions of the bore holes.



Drill the holes.



Assemble the connectors and joint tape.



Tighten the screws.



Pull off the foil, affix the connection plates and secure with the fixing clips.

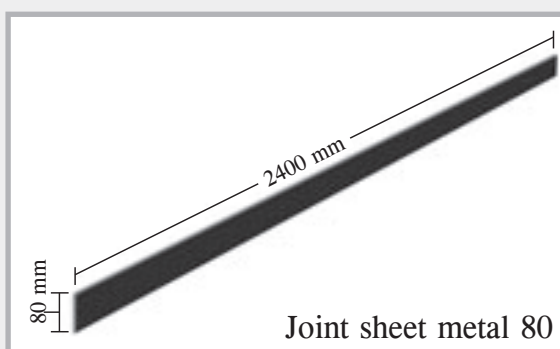
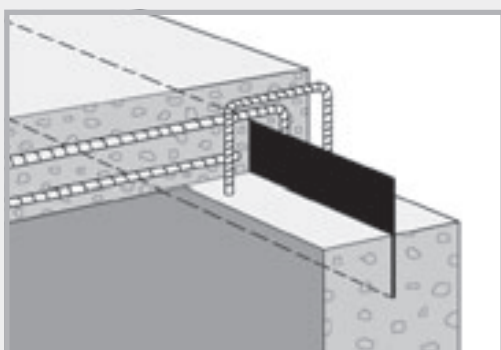
## Joint sheet metal 80

Joint sheet metal fully coated on both sides for wall/slab connection.

Length: 2400 mm; width: 80 mm

Pack: wooden crate with 50 elements + 55 fixing clips

carton with 25 elements + 30 fixing clips



Joint sheet metal 80

# MASTER-Connect

## Connector for joint sheet metal and joint tapes

MASTER-Connect connectors are manufactured in 2 versions. MASTER-Connect Type F for joint sheet metal and Type B for joint tapes.

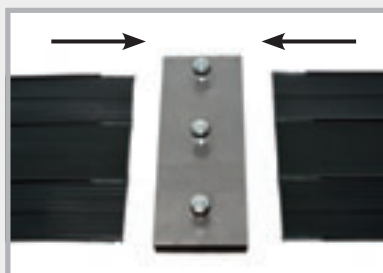
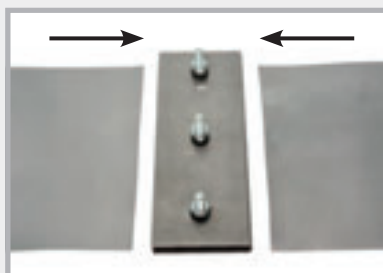


- No boreholes
- Supplied ready for installation
- No welding
- Completely pressure water-tight connection

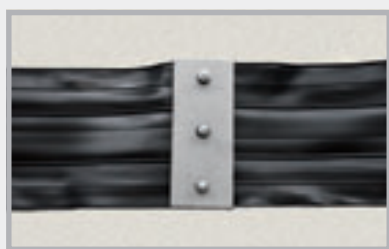


## MASTER-Connect technology

1. The connectors are supplied preassembled.
2. The joint sheet metal elements or joint tapes are pushed in between the seals on the left and right.
3. The ribs are removed at the insertion section of the joint tapes to ensure this section is as smooth as possible.
4. Following insertion the screws are tightened to 8 Nm.
5. The connection is completely pressure water-tight.



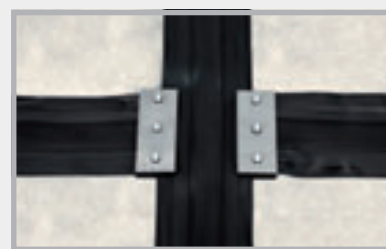
## Installation options for joint tape and joint sheet metal



Butt joint



T piece



Junction



Butt joint



T piece



Junction

## Detailed information:

**Request our current brochure or scan the QR code!**

 YouTube



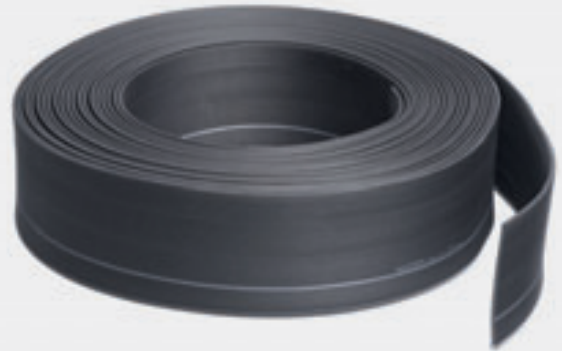
# MASTER-MultiFlex (MMF 140)

**NEW!** The active joint tape with General Building Supervisory Test Certificate for permanent waterproofing of construction joints in concrete. MMF 140 is a PVC joint tape with an additional swelling profile on one side.



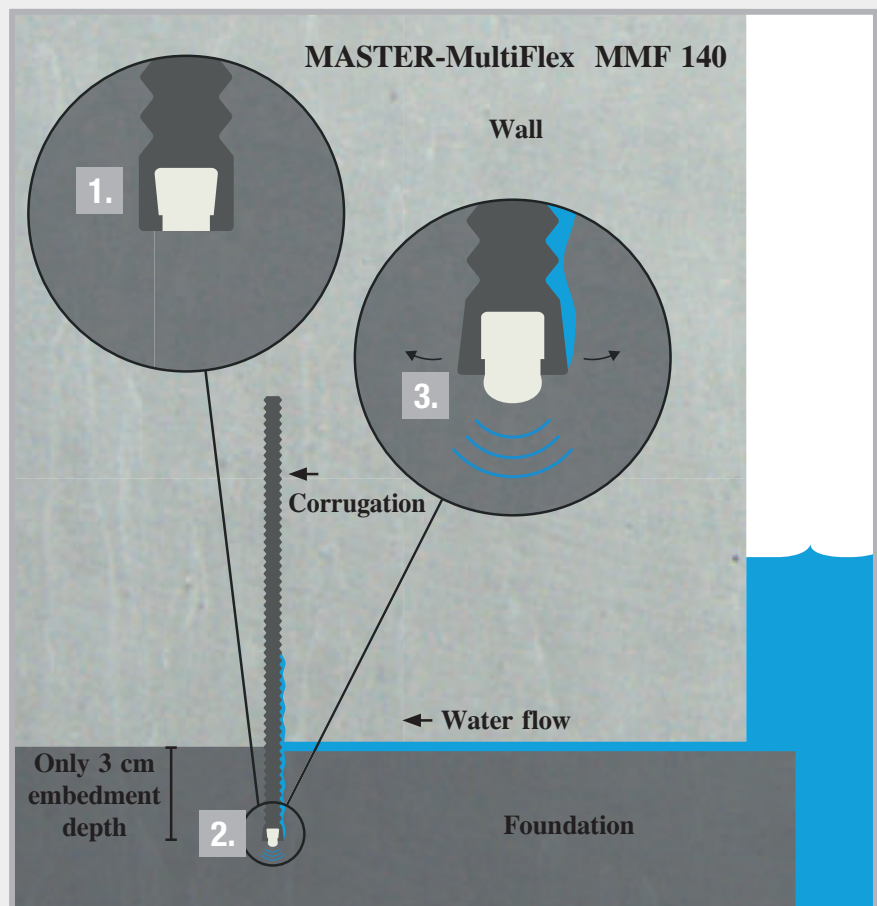
## MMF 140 product description

<b>Material:</b>	Soft PVC – free of cadmium, chrome and lead MMF 140 does not contain any substances of very high concern (SVHCs) according to Annex XIV of the REACH Regulation. <b>MMF 140 thus complies with European standards.</b>
<b>Swelling profile:</b>	Active TPE
<b>Height:</b>	140 mm
<b>Thickness:</b>	approx. 6 mm
<b>Profile:</b>	Corrugated
<b>Safety:</b>	With marking strips
<b>Elongation at break:</b>	High
<b>Tensile strength:</b>	High
<b>Workability:</b>	-10°C to +60°C
<b>Joinability:</b>	Welding, bonding or MASTER-Connect “active”



## Function of MMF 140

1. The figure shows the side of the joint tape with the swelling profile still not activated.
2. The pressure resistance of MMF 140 has already been proven from an embedment depth of 3 cm. In the image, you see the joint tape with an activated swelling profile.
3. Here, you see the function of the swelling profile. It expands downwards and compresses the joint. For further reliability the two flanks are pushed outwards, also preventing the flow of water.



## Resistance

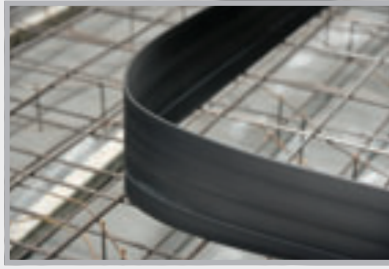
MMF 140 has a good to very good resistance to a number of chemicals.

- |                             |                                   |
|-----------------------------|-----------------------------------|
| ■ Diluted acids and alkalis | ■ Methane gas                     |
| ■ Salt water                | ■ Biogas                          |
| ■ Alkalinity of concrete    | ■ Very good ageing resistance     |
| ■ Urea                      | ■ Very good long-term performance |

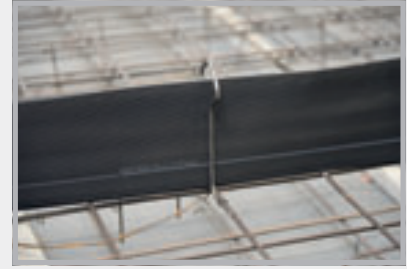
## Processing and installation of MMF 140



The non-sagging joint tape can be cut to length easily with a cutter.

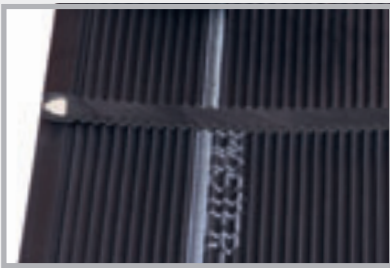


Non-sag but flexible.



Fastened using the MMF 140 mounting bracket provided.

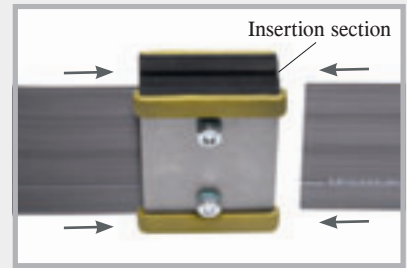
## Three bonding options



**1. Welding:** Duration of approximately 30-40 min. at the construction site  
Welded, overlapped joint.



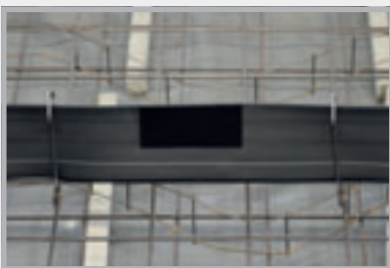
**2. Adhesive joint:** Duration of approximately 10-15 min. at the construction site  
Secure the join area with the MMF 140 fixing clip.



**3. Screwed connection:** Duration of approximately 10-15 min. at the construction site  
The MMF 140 joint tape is inserted into the MASTER-Connect on the left and right, and the screws are tightened to approximately 8 Nm.

## Connection of SRF 125 crack-inducing profiles

Duration of approximately 10-15 min. at the construction site



Apply the MMF 140 adhesive tape and remove the backing.



Glue on the SRF 125 crack-inducing profile and secure it with 2 fixing clips.



# INJECTION HOSES CONSTRUCTION CHEMISTRY



**Mastertec EasySeal 1K**

page 52

**Injection hoses  
+ accessories**



**MASTERTUBE  
Yellow**



**MASTERTUBE  
Injection hose**

pages 53 – 56



**PROTECT resin system +  
injection packers**

pages 57 – 59



**LIDOL concrete release agent  
in MULTI and BIO quality**

pages 60 – 62



# Mastertec EasySeal 1K

**NEW!** Single-component, solvent-free, water-free and bitumen-free structural waterproofing

Technical details pages 63 – 68



YouTube

With high-pressure test for external strip-shaped waterproofing of walls made of prefabricated elements

- International high-pressure test up to 80 m water column with a crack width of up to 3 mm
- Tested in accordance with the current WU directive
- General Building Supervisory Test Certificate

Art. no.	Description	PU	Weight	
050100	<b>Mastertec EasySeal 1K</b> <b>Single-component</b> <b>high-pressure waterproofing</b> 14 kg bucket	14 kg bucket (2 x 7 kg bag)  30 buckets per pallet	14.90 kg per bucket	
050110	<b>Mastertec EasySeal 1K non-woven</b> Roll length 100 m Roll width 0.3 m	1 pc.	3.80 kg per roll	
050120	<b>Mastertec EasySeal 1K special roller</b> Width 18 cm  <i>Professional quality</i>	1 pc.	0.10 kg per pc.	
050130	<b>Mastertec EasySeal 1K roller frame</b>  <i>Professional quality</i>	1 pc.	0.20 kg per pc.	
050140	<b>Mastertec EasySeal 1K roller grid</b> Size 24 x 22 cm  <i>Professional quality</i>	1 pc.	0.05 kg per pc.	
050150	<b>Mastertec EasySeal 1K corner roller</b>  <i>Professional quality</i>	1 pc.	0.21 kg per pc.	
050160	<b>Mastertec EasySeal 1K professional brush</b> Width 50 mm  <i>Professional quality</i>	1 pc.	0.12 kg per pc.	
050170	<b>Mastertec EasySeal 1K pressure roller</b> Width 15 cm  <i>Professional quality</i>	1 pc.	0.19 kg per pc.	

# MASTERTUBE

## Injection hose systems



### Injection hoses

Technical details pages 69 – 71

Art. no.	Description	PU	Weight
<b>030400</b>	<b>MASTERTUBE "YELLOW"</b> round, size: 6/12 mm PVC injection hose	1 roll of 100 m	11.20 kg per roll
<b>030050</b>	<b>MASTERTUBE injection hose</b> round, size: 5/10 mm, red/yellow with woven jacket	1 roll of 100 m	10.00 kg per roll



Art. no. 030400



Art. no. 030050

- Very high water pressure test
- For injection with polyurethane resin
- For multiple injections with acrylate and cement suspension
- Hose sections up to 15 m with polyurethane resin

- Very high water pressure test
- For injection with polyurethane resin
- For multiple injection with acrylate
- Hose sections up to 15 m with polyurethane resin
















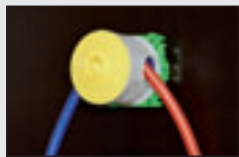


### MASTERTUBE installation set

Art. no.	Description	PU	Weight
<b>030052</b>	<b>MASTERTUBE installation set</b> 40 m MASTERTUBE injection hose 20 fastening packers 200 plastic fastening clips type A 100 metal clips with nails 10 hose connectors 1 roll of filament tape	1 bag = 1 set	8.40 kg per set

# Injection hose and accessories

Art. no.	Description	PU	Secondary packaging	Weight
030060 	<b>Fastening packer</b> incl. nipple, for fastening of injection hose to the formwork, Colour of packer: black, 10 red plugs, 10 white plugs, for resin injection	1 bag of 20 pcs.	25 bags per carton	0.50 kg per bag
030362 	<b>Plastic foam for fastening packer</b> Diameter 35 mm, thickness 20 mm, self-adhesive, 10 pcs. white, 10 pcs. anthracite 	1 bag of 20 pcs.		0.05 kg per bag
030065 	<b>Fixing spider</b> for fixing the fastening packer to the reinforcement 	1 pc.		0.11 kg per pc.
030075 	<b>Plastic fastening clip type A</b> for pressing into the fresh concrete or into Ø 8 mm bore holes, distance between clips: 15 cm	1 bag of 100 pcs.	25 bags per sack	0.29 kg per bag
030070 	<b>Plastic fastening clip type B</b> for pressing into the fresh concrete or into Ø 8 mm bore holes, distance between clips: 15 cm	1 bag of 100 pcs.	25 bags per sack	0.29 kg per bag
030080 	<b>Metal clip with pre-fitted nail</b> for all common nailguns, for firing and nailing, distance between clips: 15 cm	1 carton contains 100 pcs.		1.80 kg per carton
030081 	<b>Metal clip without nail</b>	1 carton of 100 pcs.		1.40 kg per carton
030083 	<b>Nail plug 5 x 40 mm</b> borehole Ø 5 mm	1 carton of 200 pcs.		0.60 kg per carton
030072 	<b>Fastening grids for MASTERTUBE</b> 25 m per carton (25 grids of 1 m) 	1 carton		1.80 kg per carton

# Injection hose and accessories

Art. no.	Description	PU	Weight
030100	<b>Hose connector</b> for hose extension and connection of oddments   	1 bag of 10 pcs.	0.04 kg per bag
030102 030104	<b>Ventilation hose, fabric hose</b> blue-transparent round, size: 5/11 mm red-transparent round, size: 5/11 mm 	1 roll contains 50 m	4.85 kg 4.85 kg per roll
030112 030114	<b>Injection end pieces</b> incl. sealing plug and hose connector Length: 50 cm blue-transparent round 5/11 mm red-transparent round 5/11 mm  	1 bag of 10 pcs. 1 bag of 10 pcs.	0.50 kg PU 0.50 kg PU
030096	<b>Sealing plugs</b> for injection end pieces and ventilation hose 	1 bag of 20 pcs.	0.006 kg per bag
030101	<b>Hose bushing</b> for gluing with superglue 	1 bag of 20 pcs.	0.02 kg per bag
030125	<b>Superglue</b> bottle 10 ml 	1 bag of 10 pcs.	0.21 kg per bag
030350	<b>Storage box for ventilation hose</b>    <p>Nail on the formwork support</p> <p>Clip on the storage box with inlets open</p>   <p>Introduce the ventilation hoses on the left and right</p> <p>Ready for concrete placement</p>	1 bag of 10 pcs.	0.55 kg per bag
030120	<b>Shrink-on sleeve, length 10 cm</b> for securing connection points 	1 bag of 20 pcs.	0.04 kg per bag
030140	<b>Hand-lever press 500 ccm</b> for resin injection 	1 pc.	1.00 kg per pc.



## Injection hose and accessories

Art. no.	Description	PU	Weight
030150 	<b>Reinforced hose L 300 mm</b> incl. gripping head	1 pc.	0.09 kg per pc.
030160 	<b>Gripping head</b>	1 pc.	0.03 kg per pc.
030165 	<b>Manometer 400 bar with T piece</b> incl. connecting tube and adapter	1 pc.	0.26 kg per pc.
030155 	<b>Replacement seal for hand-lever press</b>	1 pc.	0.01 kg
030130 	<b>Injection packer incl. nipple</b> for injection via ventilation hose or injection hose	1 bag of 10 pcs.	0.16 kg per bag
030135 	<b>Steel hose packer incl. nipple</b> for injection via ventilation hose or injection hose	1 bag of 10 pcs.	0.19 kg per bag
030170 	<b>Measuring beaker 3 l</b>	1 pc.	0.26 kg per pc.
030090 	<b>Filament tape</b> roll width: 25 mm, roll length: 50 m to safeguard the hose ends	1 carton of 36 pcs.	0.17 kg per roll
030355 	<b>Connection thread for fastening packer</b> Length: 35 mm The connection thread is screwed into the fastening packer to facilitate mineral injection.	1 bag of 10 pcs.	0.08 kg/bag
030360 	<b>Attachment for connection thread</b> The attachment is screwed onto the connection thread. The injection pump can be connected with a sliding coupling or spring lock.	1 bag of 10 pcs.	0.20 kg/bag
030063 	<b>Nipple, extra</b>	1 bag of 100 pcs.	0.46 kg/bag

# PROTECT Resin system

Injection resins, adhesives and cleaning agents for injection of injection hoses and injection packers and pressure water-tight bonding of fibre cement plugs.

## PROTECT PUR resin

Swellable polyurethane resin for hose and crack injection

CE label, low viscosity and provides a permanently elastic seal; long processing time of approx. 100 min. at +20°C



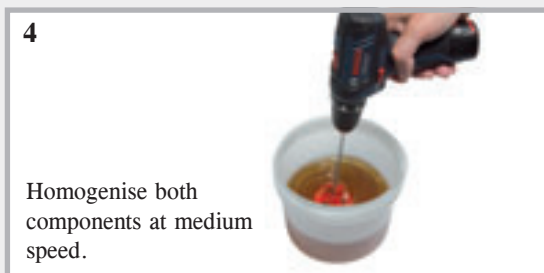
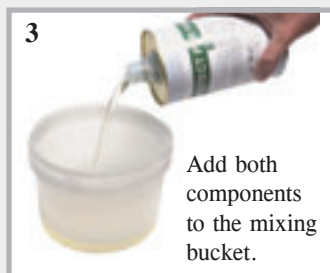
Art. no.	Description	PU	Secondary packaging	Weight
040015	PROTECT PUR resin	1 l combination can: (750 ml component A + 250 ml component B)	6 cans per carton	1.30 kg per can
040018	PROTECT PUR resin	10 l container: (7.5 l component A + 2.5 l component B)		11.50 kg per container

### Application

All resins must be very well homogenised when stirred in.  
Example - PROTECT PUR resin:

For detailed descriptions and work instructions refer to our product descriptions which you can request from us.

Resins and adhesives cannot be shipped at temperatures below +5°C.



## PROTECT foam resin

Low-viscosity polyurethane-based foam

Immediately stops the inflow of water; rapid expansion with high increase in volume; Satisfies UBA guideline for contact with potable water; reaction time upon contact with water approx. 50 seconds; Volume increase of up to 3500% upon contact with water;



Art. no.	Description	PU	Secondary packaging	Weight
040050	PROTECT Foam resin	1 l combination can: (875 ml component A + 125 ml component B)	6 cans per carton	1.35 kg per can

## PROTECT EP resin

### Epoxy resin for non-positive seals

Non-positive filling of cracks and joints;  
Injection into injection hoses;  
Suitable for dry and wet substrates;  
Processing time approx. 45 min. at +20°C



Art. no.	Description	PU	Secondary packaging	Weight
040020	PROTECT EP resin	1 l combination can: (800 ml component A + 200 ml component B)	6 cans per carton	1.30 kg per can

## PROTECT Clean

### Cleaning agent

For cleaning of polyurethane and epoxy resin prior to curing



Art. no.	Description	PU	Secondary packaging	Weight
040045	PROTECT Clean	1 can 1 l	12 cans per carton	1.10 kg per can
040040	PROTECT Clean	1 canister 10 l		10.00 kg per canister

## Universal concrete adhesive

### PROTECT Easy 1K



**NEW!** Single-component polymer-based concrete adhesive

For water-impermeable bonding  
of fibre cement distance tubes.  
Processing takes approx. 20 min. at +23°C;  
**Resistant to all normal uncontaminated groundwater.**



Tested for  
impermeability  
up to 50 m  
water column.  
Suitable  
for all fibre  
cement distance  
tubes.

Art. no.	Description	PU	Secondary packaging	Weight
040030	PROTECT Easy 1K in resealable aluminium bag	1 set: (3 x 800g aluminium bag + 1 x processing cup + 1 x fastening clip)	10 sets / carton  18 cartons per pallet	2.54 kg per set

### PROTECT BK 2K



#### Solvent-free epoxy-based concrete adhesive

For water-impermeable bonding and non-positive connection of concrete components.  
Processing time approx. 60 min. at +20°C

**Resistances of PROTECT BK once cured:**

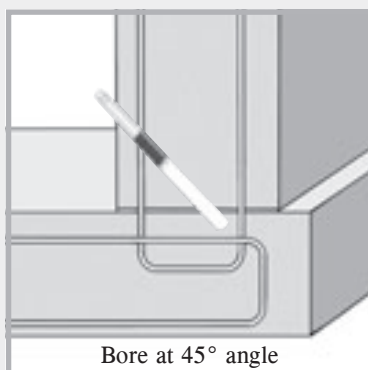
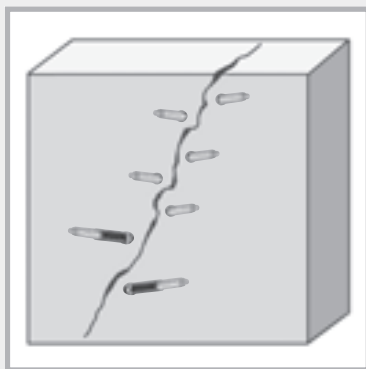
Diluted acids, mineral oil, lubricants and fuels, saltwater, wastewater, large number of  
alkalis and solvents, test of suitability for contact with drinking water.



Tested for  
impermeability  
up to 70 m  
water column  
Suitable  
for all fibre  
cement distance  
tubes.

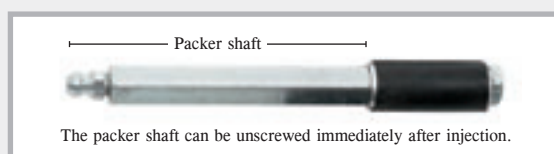
Art. no.	Description	PU	Secondary packaging	Weight
040100	PROTECT BK For pressure water-tight sealing of fibre cement distance tubes.	1 kg combination can: (0.5 kg component A + 0.5 kg component B)	10 cans per carton  28 cartons per pallet	1.20 kg per can

# Injection packers + surface packers



Art. no.	Screw injection packer incl. nipple/sizes	Drill bit Ø	PU	Weight
030185	10/70 mm	10 mm	1 carton of 100 pcs.	1.90 kg/ctn.
030187	10/100 mm	10 mm	1 carton of 100 pcs.	2.70 kg/ctn.
030183	13/80 mm	14 mm	1 carton of 100 pcs.	2.90 kg/ctn.
030180	13/100 mm	14 mm	1 carton of 100 pcs.	4.60 kg/ctn.
030181	13/170 mm	14 mm	1 carton of 100 pcs.	7.00 kg/ctn.
030182	13/250 mm	14 mm	1 carton of 100 pcs.	10.50 kg/ctn.

## One day site packer



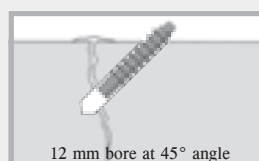
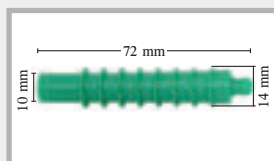
Art. no.	One day site packer incl. nipple/sizes	Drill bit Ø	PU	Weight
030188	10/110 mm	10 mm	1 carton of 100 pcs.	3.80 kg/ctn.
030189	13/115 mm	14 mm	1 carton of 100 pcs.	5.20 kg/ctn.

## Surface packer



Art. no.	Description	PU	Weight
030200	Plastic surface packers, washer diameter 5 cm	1 bag of 100 pcs.	1.75 kg per bag








## Plastic injector



Art. no.	Description	PU	Weight
030210	Plastic injector with non-return ball	1 bag of 200 pcs.	0.09 kg per bag
030215	Impact stud	1 pc.	0.07 kg/pc.



# LIDOL concrete release agent

Art. no.	Description	PU	Secondary packaging	Weight	
<b>040310</b>	LIDOL MULTI	1 canister 20 l	30 canisters per pallet	18.5 kg per canister	 Drum
<b>040315</b>	LIDOL MULTI Universal release agent for all common types of formwork	1 canister 30 l	24 canisters per pallet	27.5 kg per canister	
<b>040320</b>	LIDOL MULTI	1 drum 200 l with integrated faucet	2 drums per pallet	191.0 kg per drum	
<b>040330</b>	LIDOL BIO  Universal release agent for all common types of formwork	1 canister 20 l	30 canisters per pallet	18.5 kg per canister	 30 l canister
<b>040335</b>	LIDOL BIO  Rapidly biodegradable	1 canister 30 l	24 canisters per pallet	27.5 kg per canister	
<b>040340</b>	LIDOL BIO  Environmental label "Blauer Engel"	1 drum 200 l with integrated faucet	2 drums per pallet	191.0 kg per drum	
<b>040350</b>	TECCO 10 l compression sprayer with fine spray nozzle	1 pc.		6.2 kg per pc.	 20 l canister

LIDOL concrete release agents are environmentally sound and biodegradable or highly biodegradable formwork release agents. Our range includes 200 litre drums as well as 20 litre and 30 litre canisters.

LIDOL concrete release agents are universally applicable release agents which can be used for all common types of formwork in building construction.

Formwork type	Use of LIDOL
Betoplan	YES
Magnoplan	YES
NOE-Form	YES
Struktoplan	YES
Plastic facing formwork	YES
Timber formwork, planed sucking	YES
Timber formwork, unplanned sucking	YES



# LIDOL MULTI

LIDOL MULTI is an  
environmentally sound universal release agent

The application of LIDOL MULTI to the formwork prevents the formwork from coming into contact with the concrete.

The formwork can therefore be easily stripped.

## Applications:

- For all common formwork types
- With fair-faced concrete
- When coating concrete surfaces with plaster, stucco or similar material, e.g. wallpaper, paint, ceramic
- Does not contain corrosion protection additives, corrosion protection is provided by mineral oils



## Environmental aspects:

- Water hazard class 1 = low hazard to water
- Not subject to mandatory labelling
- Flashpoint > +120°C
- Neutral odour

## Application:

LIDOL MULTI is not sensitive to frost and can be used without problems in all weather conditions. The release agent can be applied by spraying, brushing or rolling.

The most economical application method is using the TECCO compression sprayer.

Formwork type	Yield per 1 litre of LIDOL MULTI
formwork panels	approx. 80 m <sup>2</sup>
planed timber surface	approx. 40 m <sup>2</sup>
unplaned timber surface	approx. 30 m <sup>2</sup>



# LIDOL BIO



LIDOL BIO is an environmentally sound and highly biodegradable universal release agent

## Special award:

Due to its high environmental compatibility, LIDOL BIO was awarded the environmental label “Blauer Engel” by RAL Deutsches Institut für Gütesicherung und Kennzeichnung e.V (German Institute for Quality Assurance and Labelling).



## Applications:

- In water protection areas and zones with environmental stipulations
- For all common formwork types
- With fair-faced concrete
- When coating concrete surfaces with plaster, stucco or similar material, e.g. wallpaper, paint, ceramic

## Environmental aspects:

- Water hazard class 1 = low hazard to water, highly biodegradable
- Not subject to mandatory labelling
- Flashpoint  $> +120^{\circ}\text{C}$
- Neutral odour



## Application:

LIDOL BIO is not sensitive to frost and can be used without problems in all weather conditions. The release agent can be applied by spraying, brushing or rolling. The most economical application method is using the TECCO compression sprayer.



Formwork type	Yield per 1 litre of LIDOL BIO
formwork panels	approx. 75 m <sup>2</sup>
planed timber surface	approx. 35 m <sup>2</sup>
unplaned timber surface	approx. 25 m <sup>2</sup>

## TECCO 10 I

Compression sprayer with fine filter for economical application of concrete release agents.

## Structure:

- Steel container with polyester coating
- 2.5 m spiral hose with safety lock
- Flat jet nozzle with fine filter
- Sight glass for level monitoring
- Oil-resistant seals
- Integrated spare parts compartment with spare seals and O-rings



# Mastertec EasySeal 1K

**NEW!** Single-component,  
solvent-free, water-free and  
bitumen-free structural waterproofing



YouTube

## Product description

Mastertec EasySeal 1K is one of the most modern and effective external waterproofing product for water-tight structures. Modified polymers form the basis for the product. They have an extremely high adhesive force on multiple substrates and are thus the prerequisite for a high-pressure seal. Application is simple, quick and cost-efficient.



## Product characteristics

- Modified single-component polymer
- Colour grey
- Solvent-free, water-free and bitumen-free
- Neutral odour
- Very low emissions
- Water hazard class 1 – low hazard to water
- Storable for 12 months frost-free
- Protect against frost during transportation

## Technical data

Testing:	High-pressure 80 m water column
Certificate:	General Building Supervisory Test Certificate
Crack width:	Up to 3 mm
Application temperature:	0°C to +35°C
Component temperature:	min. +2°C
Thermal resistance:	up to +70°C
Rain-proof:	immediately at +20°C At lower temperatures after approximately 3 hours
Completely dry:	after approximately 24 hours at +20°C and 50% relative air humidity The setting time may be longer at lower temperatures and lower air humidity.
Usage:	approximately 1.20 kg/m with 2 coats and a seal of approximately 32 cm in width; layer thickness: approximately 1.2 mm depending on application

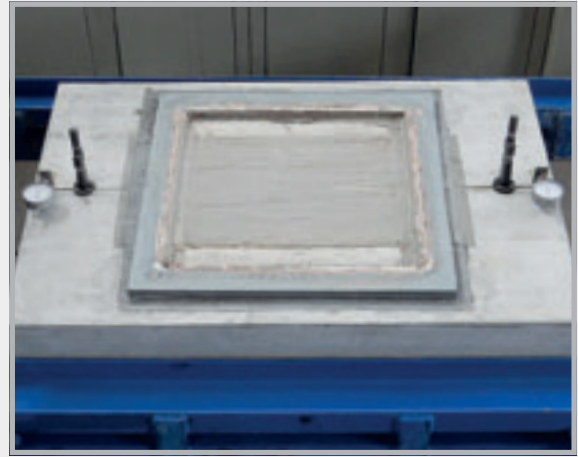




## Tests and resistance



Here you see the specimen after the initial test with a joint width of 1 mm. The joint is widened to 3 mm by driving in wedges.



Specimen on 3 mm widened joint. After widening the joint, the pressure vessel was fitted and pressurised with 8 bar.

- Test pressure 80 m water column
- Crack width 3 mm
- Good UV resistance
- Very good resistance to alkali
- Bitumen-compatible: Can be applied to bitumen or plastic-modified thick coating. The carrying capacity of the substrate must be observed.
- Resistant to common liquids which are aggressive to concrete
- Weatherproof
- Further processing with insulation is possible (fastened with insulation adhesive)
- Prior to filling, protect the external waterproofing against mechanical damage.



### **A base plaster can be applied to Mastertec EasySeal 1K under the following conditions:**

- Transition zone: 15-20 cm above and below the ground edge
- A thin coating of Mastertec EasySeal1K must be applied to this 30-40 cm area, and the full surface sprinkled with quartz sand.
- Tile adhesive can be used as the keying surface/plaster base, and is applied with a toothed spatula with 6-8 mm teeth.
- To reduce cracking in the transition zone, the base plaster must be reinforced with a suitable fabric.

## Preparing the joint and the non-woven



The butt joints on the components are filled and the surface is cleaned to remove any loose parts before coating.



The joint is coated to a width of approximately 32 cm.  
The non-woven can be cut to the desired length.

## Application of Mastertec EasySeal 1K

- Immediately ready for processing on a clean substrate from the bucket without mixing
- Suitable for brushing or rolling on
- Also adheres to slightly damp substrate
- Structure:
  - a) First application with Mastertec EasySeal 1K
  - b) Rolling in of the Mastertec EasySeal 1K non-woven
  - c) Covering layer of Mastertec EasySeal 1K after approx. 2-3 hours
- The construction site can usually be completed in a single day. No second visit required.



## Coating work



Open the bags and pour the coating into the bucket.



Apply the first coating layer.

Layer thickness: approximately 1.2 mm

Usage: approximately 0.6 kg per metre/joint



There is a brush and corner roller for the fillet and other areas.



Align and gently press on the non-woven.



Roll the non-woven into the coating completely with the pressure roller.

This working step makes it possible to apply the second layer after approximately 2-3 hours, depending on the temperature and air humidity.



Apply the second coating layer.

Layer thickness: approximately 1.2 mm

Usage: approximately 0.6 kg per metre/joint

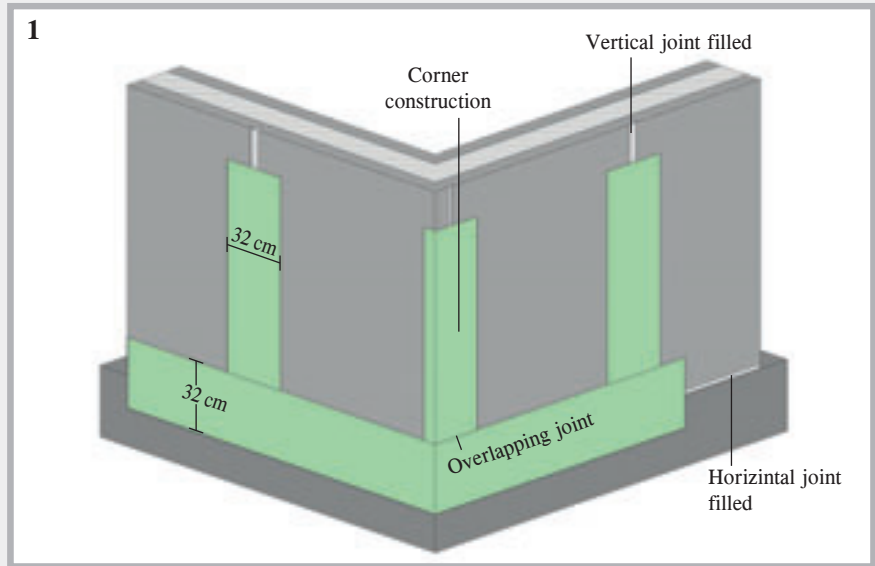
The edge area of the non-woven must be completely covered.

# Installation of Mastertec EasySeal 1K

## Mastertec EasySeal 1K

### Joint 1

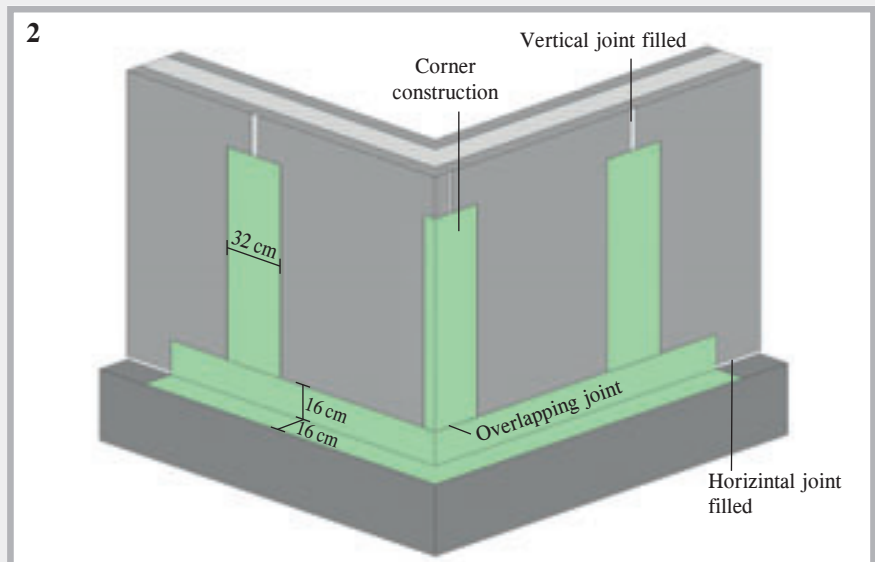
Foundation/wall connection  
without fillet



## Mastertec EasySeal 1K

### Joint 2

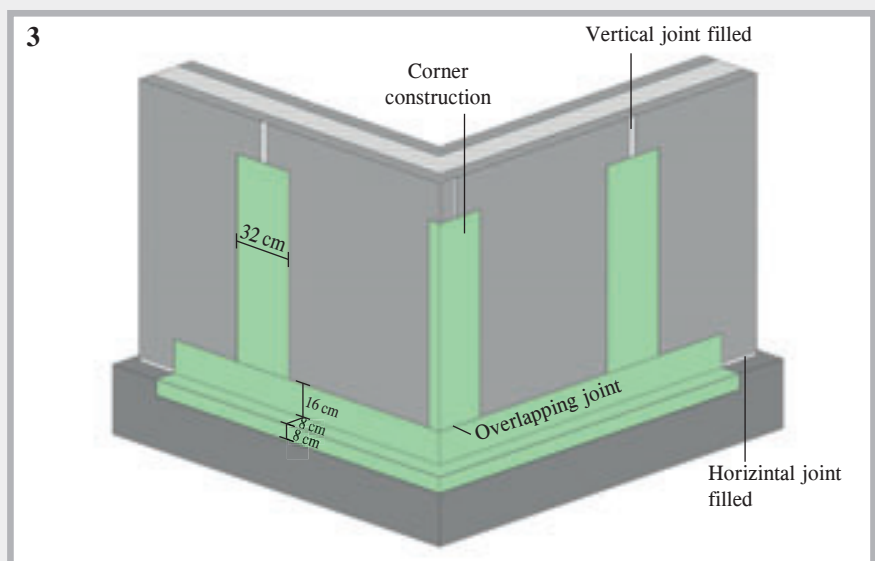
Foundation/wall connection  
with wide fillet



## Mastertec EasySeal 1K

### Joint 3

Foundation/wall connection  
with narrow fillet



Every overlapping joint must be implemented with an overlap length of the non-woven webs of at least 10 cm. If the joints cross (T or cross joint), the vertical joints first have to be sealed off. The seal on the horizontal joints then overlays the overlap area of the vertical joint.



## At the construction site



Sealed horizontal joints  
and vertical joints



Sealed horizontal joint

# MASTERTUBE

## Injection hose systems



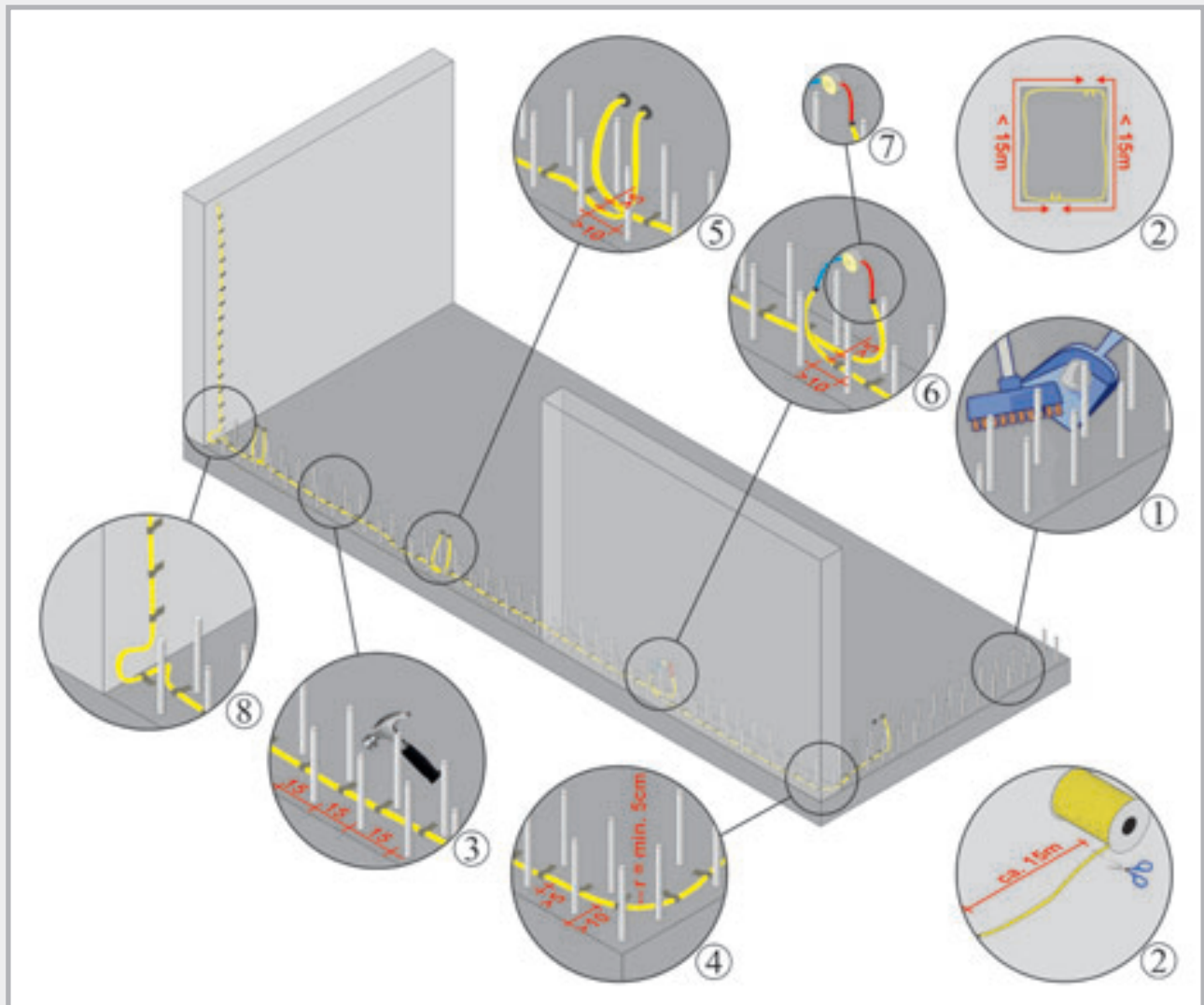
The MASTERTUBE “YELLOW” and MASTERTUBE injection hoses make construction joints watertight.

The form and structure of the hose profiles ensure a particularly secure and even filling of shrinkage gaps and damaged spots.



	MASTERTUBE YELLOW	MASTERTUBE Injection hose
Very high water pressure tests	50 m water column	50 m water column
For injection with polyurethane resin	tested	tested
For multiple injection with acrylate	tested	tested
For multiple injection with cement suspension	tested	–
Additional 15 m circulation with polyurethane resin	tested	tested
Even discharge of injection material	tested	tested
No sintering during concreting	tested	tested
Suitable for zones with frequently varying water levels	tested	tested
All-weather installation	-10°C to + 60°C	-10°C to + 60°C
Extremely straightforward installation	Used on building sites for more than 10 years	Used on building sites for more than 20 years
Accessories	Comprehensive system	Comprehensive system

# Installation and injection



1. Clean the surface on which the injection hose is routed to remove loose dirt. Professionally smooth out excessive unevenness, e.g. cavities, ensuring friction-locked adhesion.
2. Plan injection sections, maximum length incl. injection end pieces  $\leq 15$  m, shorten hose using a suitable cutting tool. When using the MASTERTUBE injection hose, mask the hose to be shortened with filament tape to prevent the braided fabric from coming loose. The hose is then cut at the centre of the filament tape.
3. It can then be fastened with clips inserted into the fresh concrete. The hose is clipped on underneath once the concrete has cured. It can be fastened to a solid surface using metal clips or fastening grids which are nailed to it.  
The distance between the fixing clips or metal clips should not be more than 15 cm. This ensures the hose is always in contact with the construction joint. The hose must not float or be clear of the supporting surface at any point.
4. The distance from the surrounding reinforcement rods should be at least 5 cm.  
Ensure a minimum distance of 10 cm from the edge on all sides. The minimum bending radius is 5 cm
5. Successive injection hose sections must overlap by at least 10 cm to ensure continuous injection of the joint.  
Injection hoses running parallel to one another must be at least 5 cm apart. Otherwise during injection of one hose, the other could also be filled and subsequently may no longer be injectable.

6. The injection hose can either be directly connected to our fastening packers which are mounted on the formwork or routed via injection end pieces to a storage box. The connection should be as close as possible to a 90° angle to the wall.  
The storage boxes or fastening packers must be attached so they can subsequently be accessed without difficulty at any time.
7. A hose connector should be used as the transition between injection hose and injection end piece. This hose connector must be cast into the concrete in order to be able to inject the injection hose correctly later on.
8. At the foundation/wall transition, the injection hose must be routed right into the corner of the joint and routed upwards via a loop.
9. If injection hoses cross over and are a distance of  $\leq 5$  cm apart, adhesive tape must be wound round one of the injection hoses in the area of the intersection for a distance of 8-10 cm. This prevents accidental injection of the other injection hose.
10. Once the concrete has cured, 28 days after concreting at the earliest, the joints can be injected via the fastening packer or injection end pieces in the storage box.
11. The DBV code of practise: Injection hose systems and swellable linings for construction joints (January 2010) must be observed.

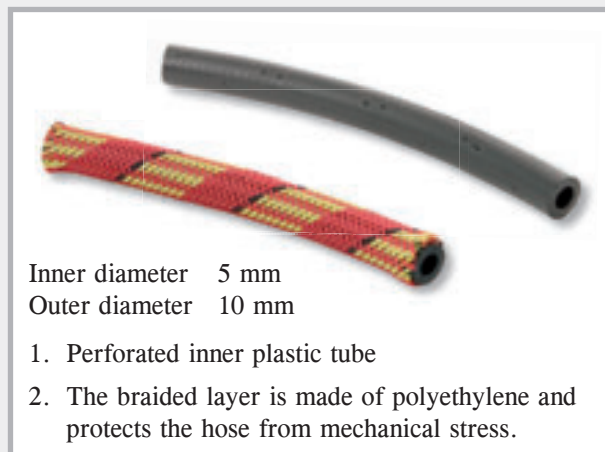
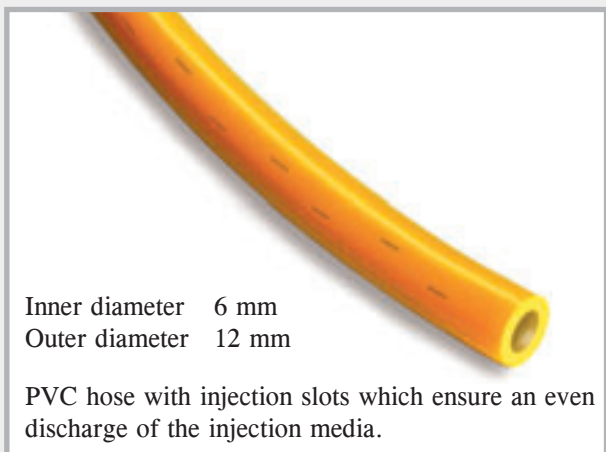
## Two systems with 100% reliability



Roll length 100 m



Roll length 100 m







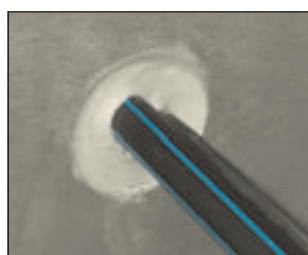
# PRESSURE WATER-TIGHT SERVICE DUCTS



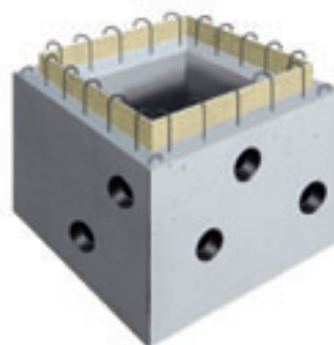
**RONDO sealing collars**  
pages 74 – 78



**Lining pipes & pipe bushings**  
pages 78 – 94



**Gasket inserts, FLEX 2000 & modular seals**  
pages 95 – 101



**Pump sumps**  
pages 102 – 106

# RONDO Standard sealing collar

YouTube



## Dimensions

Technical details pages 77 – 78

Art. no.	Type	for pipe outer diameters mm	Suitable for outer dia. from (mm) to (mm)	PU	Secondary packaging	Weight per pc.
090890	RO 10	For lightning protection round conductors	8 10	1 pc.	Carton of 100 pcs.	0.13 kg
090892	RO flat	For earthing strap	30x3.5 + 30x3	1 pc.		0.15 kg
<b>NEW!</b> 090988	RO EFP	For hexagon fixed earthing terminal		1 pc.	Bag of 25 pcs.	0.04 kg
090900	RO 25	25	25 25	1 pc.		0.25 kg
090902	RO 32	32	31 32	1 pc.		0.25 kg
090904	RO 40	40	39 42	1 pc.		0.26 kg
090906	RO 50	50	48 53	1 pc.		0.29 kg
090908	RO 63	63	61 64	1 pc.		0.32 kg
090910	RO 75	75	72 80	1 pc.		0.36 kg
090912	RO 90	90	87 92	1 pc.		0.45 kg
090914	RO 110	Sewage pipe DN 100 110	107 115	1 pc.	Carton of 50 pcs.	0.48 kg
090916	RO 125	Sewage pipe DN 125 125	123 130	1 pc.	Carton of 40 pcs.	0.51 kg
090918	RO 140	140	137 147	1 pc.		0.54 kg
090920	RO 160	Sewage pipe DN 150 160	157 166	1 pc.	Carton of 35 pcs.	0.62 kg
090921	RO 170	170	167 177	1 pc.		0.66 kg
090922	RO 180	180	177 187	1 pc.		0.68 kg
090924	RO 200	Sewage pipe DN 200 200	197 207	1 pc.	Carton of 30 pcs.	0.70 kg
090926	RO 225	225	220 230	1 pc.		0.81 kg
090928	RO 250	Sewage pipe DN 250 250	245 260	1 pc.		0.89 kg
090930	RO 280	280	275 290	1 pc.		0.92 kg
090932	RO 315	Sewage pipe DN 300 315	310 324	1 pc.		1.07 kg
090934	RO 355	355	350 365	1 pc.		1.18 kg
090936	RO 400	Sewage pipe DN 400 400	395 410	1 pc.		1.31 kg
090938	RO 450	450	440 460	1 pc.		1.90 kg
090940	RO 500	Sewage pipe DN 500 500	495 515	1 pc.		2.15 kg
090942	RO 560	560	555 580	1 pc.		2.60 kg
090944	RO 630	630	625 650	1 pc.		2.90 kg
090946	RO 710	710	705 735	1 pc.		3.00 kg
090948	RO 800	800	795 830	1 pc.		3.40 kg
090950	RO 900	900	895 930	1 pc.		4.25 kg
090952	RO 1000	1000	995 1030	1 pc.		4.45 kg
090954	RO 1200	1200	1195 1240	1 pc.		5.75 kg

The sealing collars are even easier to install if placed in warm water beforehand (10 minutes).

# RONDO Protect



## The sealing collar with maximum media and pressure resistance

**NEW!** The RONDO Protect sealing collar offers the following advantages compared to the RONDO Standard:

### Water pressure test

- High-pressure test up to 80 m water column

### Resistance

In addition to use in agricultural slurry/liquid manure/silage effluent systems and biogas systems, the red TPE mixture offers effective protection against many aggressive media, e.g.:

- Animal excretions
- Diluted sulphuric acid
- Silage effluent
- Methane gas



## Dimensions

Technical details pages 77 – 78

Art. no.	Type	for pipe outer diameters mm	Suitable for outer dia. from (mm) to (mm)	PU	Weight per pc.
091225	ROPRO 10	For lightning protection round conductors	8 10	1 pc.	0.13 kg
091226	ROPRO flat	For earthing strap	30x3.5 + 30x3	1 pc.	0.15 kg
091227	ROPRO 25	25	25 25	1 pc.	0.25 kg
091228	ROPRO 32	32	31 32	1 pc.	0.25 kg
091229	ROPRO 40	40	39 42	1 pc.	0.26 kg
091230	ROPRO 50	50	48 53	1 pc.	0.29 kg
091231	ROPRO 63	63	61 64	1 pc.	0.32 kg
091232	ROPRO 75	75	72 80	1 pc.	0.36 kg
091233	ROPRO 90	90	87 92	1 pc.	0.45 kg
091234	ROPRO 110	Sewage pipe DN 100 110	107 115	1 pc.	0.48 kg
091235	ROPRO 125	Sewage pipe DN 125 125	123 130	1 pc.	0.51 kg
091236	ROPRO 140	140	137 147	1 pc.	0.54 kg
091237	ROPRO 160	Sewage pipe DN 150 160	157 166	1 pc.	0.62 kg
091238	ROPRO 170	170	167 177	1 pc.	0.66 kg
091239	ROPRO 180	180	177 187	1 pc.	0.68 kg
091240	ROPRO 200	Sewage pipe DN 200 200	197 207	1 pc.	0.70 kg
091241	ROPRO 225	225	220 230	1 pc.	0.81 kg
091242	ROPRO 250	Sewage pipe DN 250 250	245 260	1 pc.	0.89 kg
091243	ROPRO 280	280	275 290	1 pc.	0.92 kg
091244	ROPRO 315	Sewage pipe DN 300 315	310 324	1 pc.	1.07 kg
091245	ROPRO 355	355	350 365	1 pc.	1.18 kg
091246	ROPRO 400	Sewage pipe DN 400 400	395 410	1 pc.	1.31 kg

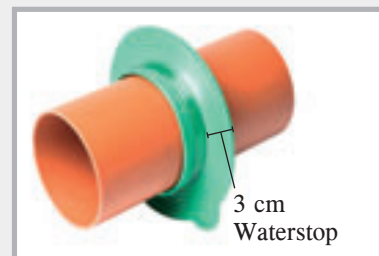
The sealing collars are even easier to install if placed in warm water beforehand (10 minutes).



# RONDO Ecco



The low-priced sealing collar  
for waterproofing of pipes and cables



Supplied ready for installation with  
stainless steel fastening straps

## Dimensions

Art. no.	Type	Suitable for outer dia. from to	PU	Secondary packaging	Weight per pc.
091050	RO Ecco 110	107-115 mm	1 pc.	Carton of 80 pcs.	0.30 kg
091053	RO Ecco 125	122-130 mm	1 pc.	Carton of 70 pcs.	0.34 kg
091056	RO Ecco 160	157-170 mm	1 pc.	Carton of 60 pcs.	0.40 kg
091059	RO Ecco 200	197-210 mm	1 pc.	Carton of 50 pcs.	0.47 kg

# RONDO Base



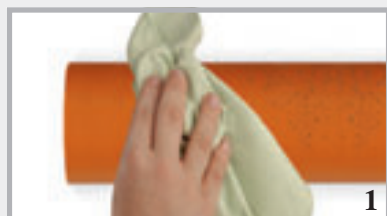
## Dimensions

High-pressure sealing  
collar

70 m water column with only  
one fastening strap

Art. no.	Type	for pipe outer diameters/mm	PU	Secondary packaging	Weight per pc.
090970	RO Base 90	90	1 pc.	Carton of 25 pcs.	0.13 kg
090978	RO Base 110	110	1 pc.	Carton of 25 pcs.	0.16 kg
090980	RO Base 125	125	1 pc.	Carton of 25 pcs.	0.17 kg
090984	RO Base 160	160	1 pc.	Carton of 25 pcs.	0.22 kg
090990	RO Base 200	200	1 pc.	Carton of 25 pcs.	0.24 kg
090994	RO Base 250	250	1 pc.	Carton of 10 pcs.	0.32 kg
090998	RO Base 315	315	1 pc.	Carton of 10 pcs.	0.40 kg

## Installation RONDO Base



Clean outside of pipe



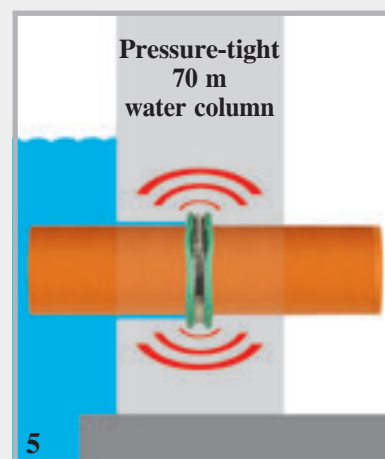
Pull on RONDO Base



Position sealing collar, ideally at  
centre of wall or foundation



Tighten fastening strap to approx.  
5-6 Nm.

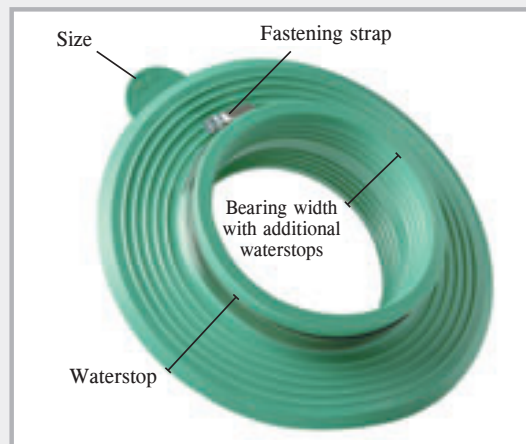


RONDO Base installation  
complete

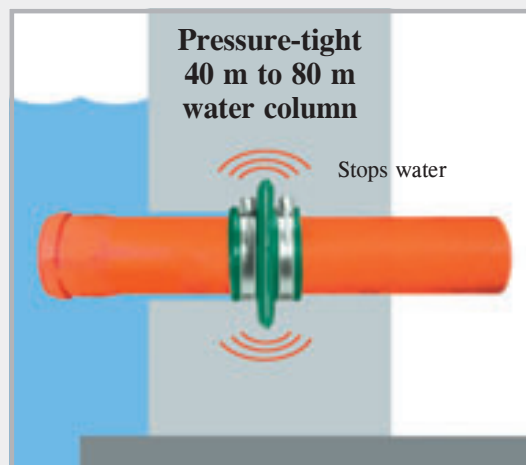
# RONDO + RONDO Protect Product description

RONDO sealing collars securely seal pipes and cables made of plastic, steel, fibre cement and vitrified clay against a water column of up to **40 metres** (Standard) or **80 metres** (Protect). The bushings in concrete foundations and walls are securely sealed against groundwater and pressurised water.

	RONDO Protect	RONDO Standard	
Colour	red	green	black
Material	modified TPE	TPE	EPDM
Size	10-400 mm	10-400 mm	450-1200 mm
Height of waterstop	4 cm	4 cm	4 cm
Number of waterstops	1	1	2
Bearing width	6 cm	6 cm	8 cm
Pressure test	<b>80 m water column</b>	50 m water column	40 m water column
Resistance			
Diluted acids	✓	✓	✓
Alkalis	✓	✓	✓
Ground water	✓	✓	✓
Radon	✓	✓	✓
Liquid manure	✓	✓	✓
Slurry	✓	✓	✓
Fermentation mash	✓		
Methane gas	✓		
Animal excretions	✓		
Silage effluent	✓		
Diluted sulphuric acid	✓		
Further resistances are available on request			



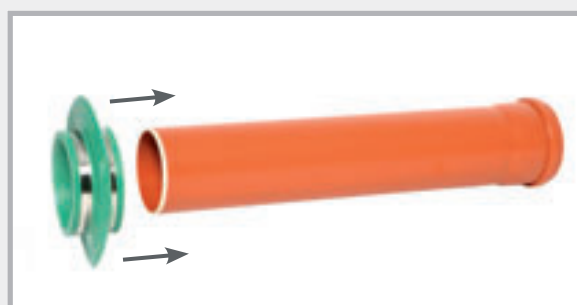
The sealing collar is supplied with fastening straps, ready for installation



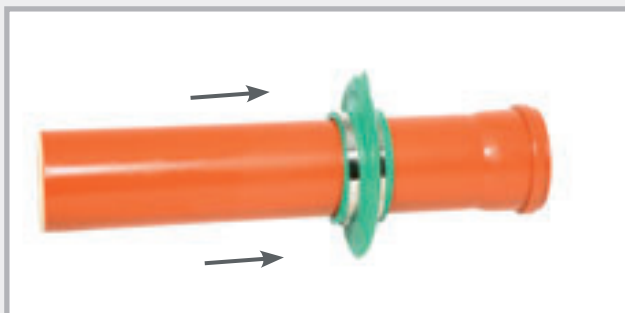
## Installation of RONDO sealing collars



Sewage pipe and RONDO 110



Pushing on the sealing collar



Positioning the sealing collar



Securing by tightening the fastening straps

The surface of the pipe should be cleaned, if dirty.

# RONDO Sealing Collars practical applications



RONDO for lightning protection round conductor



RONDO Protect for lightning protection flat conductor



The sealing collar can be used for almost all pipe types. Regardless of whether your pipes are made of plastic, vitrified clay, concrete, cast iron, or steel – the collar ensures perfect sealing.

## At the construction site



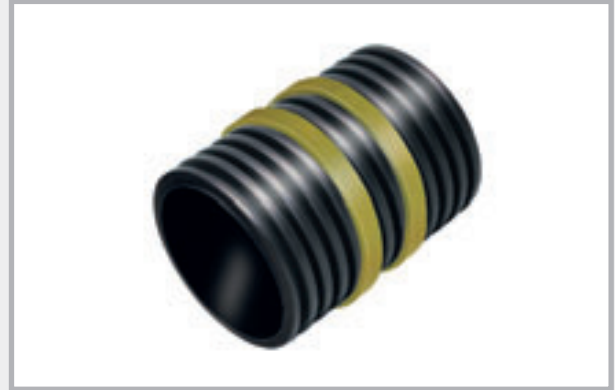
The Rondo, shortly before placement of concrete. The drainpipes are securely and permanently sealed against rising moisture.

# Lining pipes

## Pressure water-tight recess pipes for installation flush with formwork



FASO lining pipe



WELLO active lining pipe



DURO Plus high-pressure lining pipes + double-wall DW3 type



STEELLO stainless steel lining pipe

For the subsequent, professional introduction of pipes and lines into buildings, the use of lining pipes is essential. The built-in components are manufactured for the corresponding wall thickness, enable installation flush with the formwork and form a pressure water-tight bond with the surrounding concrete component.

They leave a circular recess with a smooth surface in the wall, into which pipes and cables can subsequently be fed then sealed with MASTER-Ring gasket inserts or MASTER-SEAL modular seals.



# FASO lining pipe



Our fibre cement lining pipes are available immediately ex stock in sizes DN 80 to DN 600.

The pipe is smooth on the inside and corrugated and rough on the outside. The bond formed by the corrugated exterior of the pipe with the concrete prevents water permeation.

If you wet the lining pipes prior to placement of the concrete, the bond with the concrete will be even more effective.



FASO inner Ø mm	outer Ø mm	Standard lengths											
		200 mm	240 mm	250 mm	300 mm	350 mm	365 mm	400 mm	500 mm	600 mm	800 mm	1000 mm	1250 mm
DN 80 Weight/pc.	120	080210 2.4 kg	080211 2.8 kg	080212 3.0 kg	080213 3.5 kg	080214 4.1 kg	080215 4.3 kg	080216 4.7 kg	080217 5.9 kg	080218 7.0 kg	080918 9.4 kg	080950 11.7 kg	080219 14.6 kg
DN 100 Weight/pc.	140	080220 2.9 kg	080221 3.4 kg	080222 3.6 kg	080223 4.3 kg	080224 5.0 kg	080225 5.2 kg	080226 5.7 kg	080227 7.1 kg	080228 8.5 kg	080921 11.4 kg	080952 14.2 kg	080229 17.8 kg
DN 125 Weight/pc.	165	080230 3.6 kg	080231 4.3 kg	080232 4.5 kg	080233 5.4 kg	080234 6.3 kg	080235 6.6 kg	080236 7.2 kg	080237 9.0 kg	080238 10.7 kg	080922 14.3 kg	080954 17.9 kg	080239 22.4 kg
DN 150 Weight/pc.	190	080240 4.1 kg	080241 4.9 kg	080242 5.1 kg	080243 6.1 kg	080244 7.1 kg	080245 7.4 kg	080246 8.1 kg	080247 10.1 kg	080248 12.1 kg	080924 16.2 kg	080956 20.1 kg	080249 25.1 kg
DN 200 Weight/pc.	250	080250 6.5 kg	080251 7.8 kg	080252 8.1 kg	080253 9.7 kg	080254 11.3 kg	080255 11.8 kg	080256 12.9 kg	080257 16.1 kg	080258 19.3 kg	080926 25.8 kg	080958 32.2 kg	080259 40.2 kg
DN 250 Weight/pc.	300	080260 8.1 kg	080261 9.7 kg	080262 10.1 kg	080263 12.1 kg	080264 14.2 kg	080265 14.8 kg	080266 16.2 kg	080267 20.2 kg	080268 24.2 kg	080928 32.3 kg	080960 40.1 kg	080269 50.2 kg
DN 300 Weight/pc.	350	080270 9.8 kg	080271 11.8 kg	080272 12.3 kg	080273 14.7 kg	080274 17.1 kg	080275 17.9 kg	080276 19.6 kg	080277 24.4 kg	080278 29.3 kg	080930 39.1 kg	080962 48.9 kg	080279 61.1 kg
DN 350 Weight/pc.	400	080280 11.2 kg	080281 13.4 kg	080282 14.0 kg	080283 16.7 kg	080284 19.5 kg	080285 20.4 kg	080286 22.3 kg	080287 27.9 kg	080288 33.4 kg	080932 44.6 kg	080964 55.7 kg	080289 69.6 kg
DN 400 Weight/pc.	460	080290 15.4 kg	080291 18.5 kg	080292 19.3 kg	080293 23.1 kg	080294 26.9 kg	080295 28.1 kg	080296 30.8 kg	080297 38.5 kg	080298 46.1 kg	080934 61.5 kg	080966 76.9 kg	080299 96.1 kg
DN 450 Weight/pc.	510	080300 17.5 kg	080301 21.0 kg	080302 21.9 kg	080303 26.2 kg	080304 30.6 kg	080305 31.9 kg	080306 35.0 kg	080307 43.7 kg	080308 52.4 kg	080936 69.6 kg	080968 87.4 kg	080309 109.3 kg
DN 500 Weight/pc.	570	080310 22.4 kg	080311 26.8 kg	080312 28.0 kg	080313 33.5 kg	080314 39.1 kg	080315 40.8 kg	080316 44.7 kg	080317 55.9 kg	080318 67.0 kg	080938 89.4 kg	080970 111.7 kg	080319 139.6 kg
DN 600 Weight/pc.	670	080320 26.8 kg	080321 32.1 kg	080322 33.5 kg	080323 40.1 kg	080324 45.9 kg	080325 48.8 kg	080326 53.5 kg	080327 66.9 kg	080328 80.2 kg	080940 107.0 kg	080972 133.7 kg	080329 167.1 kg
DN 700 Weight/pc.	780	080330 38.0 kg	080331 45.6 kg	080332 47.5 kg	080333 57.0 kg	080334 66.5 kg	080335 69.4 kg	080336 76.0 kg	080337 95.0 kg	080338 114.0 kg	080942 152.0 kg	080974 190.0 kg	080339 237.5 kg
DN 800 Weight/pc.	880	080340 42.5 kg	080341 51.0 kg	080342 53.2 kg	080343 63.8 kg	080344 74.7 kg	080345 77.6 kg	080346 85.0 kg	080347 106.3 kg	080348 127.5 kg	080944 170.0 kg	080976 212.5 kg	080349 265.6 kg

Special lengths: Any intermediate lengths can be supplied.

Lead time for DN 700 and DN 800: 10 days

DN 80 to DN 600 can be extended up to 1600 mm: 40% surcharge

Delivery: From DN 250 only by forwarding agent; up to DN 200 by parcel service with restrictions, clarify dispatch method

**We recommend installation with closure plugs**

# WELLO active lining pipe



When the use of sealing collars is not possible, lining pipes are installed, which enable the subsequent water-tight lead-through of the medium pipe into the building.

The cost-efficient PE lining pipe is available at short notice ex stock in dia. 100 to 400 mm. Its inner surface is smooth. The corrugated outside ensures a firm bond with the concrete. Two swelling tapes applied centrally around the lining pipe act as waterstops.



Tested for impermeability up to 20 m water column

WELLO inner Ø mm	Standard lengths								
	200 mm	240 mm	250 mm	300 mm	350 mm	365 mm	400 mm	500 mm	600 mm
<b>DN 100</b> Weight/pc.	<b>080130</b> 0.28 kg	<b>080131</b> 0.31 kg	<b>080132</b> 0.32 kg	<b>080133</b> 0.35 kg	<b>080134</b> 0.39 kg	<b>080135</b> 0.40 kg	<b>080136</b> 0.43 kg	<b>080137</b> 0.50 kg	<b>080138</b> 0.57 kg
<b>DN 125</b> Weight/pc.	<b>080140</b> 0.33 kg	<b>080141</b> 0.36 kg	<b>080142</b> 0.37 kg	<b>080143</b> 0.42 kg	<b>080144</b> 0.46 kg	<b>080145</b> 0.48 kg	<b>080146</b> 0.51 kg	<b>080147</b> 0.60 kg	<b>080148</b> 0.69 kg
<b>DN 150</b> Weight/pc.	<b>080150</b> 0.44 kg	<b>080151</b> 0.49 kg	<b>080152</b> 0.51 kg	<b>080153</b> 0.57 kg	<b>080154</b> 0.64 kg	<b>080155</b> 0.66 kg	<b>080156</b> 0.70 kg	<b>080157</b> 0.84 kg	<b>080158</b> 1.01 kg
<b>DN 200</b> Weight/pc.	<b>080160</b> 0.67 kg	<b>080161</b> 0.75 kg	<b>080162</b> 0.77 kg	<b>080163</b> 0.88 kg	<b>080164</b> 0.99 kg	<b>080165</b> 1.02 kg	<b>080166</b> 1.10 kg	<b>080167</b> 1.31 kg	<b>080168</b> 1.53 kg
<b>*DN 250</b> Weight/pc.	<b>080170</b> 0.94 kg	<b>080171</b> 1.07 kg	<b>080172</b> 1.10 kg	<b>080173</b> 1.27 kg	<b>080174</b> 1.43 kg	<b>080175</b> 1.48 kg	<b>080176</b> 1.59 kg	<b>080177</b> 1.92 kg	<b>080178</b> 2.24 kg
<b>DN 300</b> Weight/pc.	<b>080180</b> 1.19 kg	<b>080181</b> 1.36 kg	<b>080182</b> 1.41 kg	<b>080183</b> 1.62 kg	<b>080184</b> 1.83 kg	<b>080185</b> 1.90 kg	<b>080186</b> 2.04 kg	<b>080187</b> 2.47 kg	<b>080188</b> 2.89 kg
<b>*DN 350</b> Weight/pc.	<b>080190</b> 1.70 kg	<b>080191</b> 1.96 kg	<b>080192</b> 2.02 kg	<b>080193</b> 2.35 kg	<b>080194</b> 2.67 kg	<b>080195</b> 2.77 kg	<b>080196</b> 3.00 kg	<b>080197</b> 3.65 kg	<b>080198</b> 4.30 kg
<b>DN 400</b> Weight/pc.	<b>080200</b> 2.14 kg	<b>080201</b> 2.47 kg	<b>080202</b> 2.56 kg	<b>080203</b> 2.98 kg	<b>080204</b> 3.40 kg	<b>080205</b> 3.52 kg	<b>080206</b> 3.82 kg	<b>080207</b> 4.66 kg	<b>080208</b> 5.50 kg

Special lengths: Any intermediate lengths can be supplied.  
Maximum length of lining pipe: 2000 mm

\* DN 250 + DN 350 waterproofing with modular seal only

**We recommend installation with closure plugs**



# DURO Plus high-pressure lining pipes

DURO Plus are high pressure-resistant lining pipes for secure and permanent routing of pipes and cables in buildings. A collar which can withstand water pressures of up to 7 bar is fitted to the lining pipes at the factory.

The diameters DN 50 to DN 300 are available within a few days. When ordering, please state whether you require the lining pipes with or without plugs.



DURO Plus with and without foil flange

DURO inner Ø mm	outer Ø mm	Standard lengths											
		200 mm	240 mm	250 mm	300 mm	350 mm	365 mm	400 mm	500 mm	600 mm	800 mm	1000 mm	1200 mm
<b>DN 50</b> Weight/pc.	<b>54</b>	<b>090010</b> 0.31 kg	<b>090013</b> 0.37 kg	<b>090016</b> 0.39 kg	<b>090019</b> 0.46 kg	<b>090022</b> 0.54 kg	<b>090025</b> 0.56 kg	<b>090028</b> 0.62 kg	<b>090031</b> 0.78 kg	<b>090034</b> 0.93 kg	<b>090037</b> 1.24 kg	<b>090040</b> 1.56 kg	<b>090043</b> 1.87 kg
<b>DN 80</b> Weight/pc.	<b>85</b>	<b>090050</b> 0.30 kg	<b>090053</b> 0.36 kg	<b>090056</b> 0.38 kg	<b>090059</b> 0.45 kg	<b>090062</b> 0.53 kg	<b>090065</b> 0.55 kg	<b>090068</b> 0.60 kg	<b>090071</b> 0.76 kg	<b>090074</b> 0.91 kg	<b>090077</b> 1.21 kg	<b>090080</b> 1.52 kg	<b>090083</b> 1.82 kg
<b>DN 100</b> Weight/pc.	<b>110</b>	<b>090110</b> 0.60 kg	<b>090113</b> 0.72 kg	<b>090116</b> 0.76 kg	<b>090119</b> 0.91 kg	<b>090122</b> 1.06 kg	<b>090125</b> 1.10 kg	<b>090128</b> 1.21 kg	<b>090131</b> 1.52 kg	<b>090134</b> 1.82 kg	<b>090137</b> 2.43 kg	<b>090140</b> 3.04 kg	<b>090143</b> 3.64 kg
<b>DN 125</b> Weight/pc.	<b>137</b>	<b>090150</b> 0.75 kg	<b>090153</b> 0.90 kg	<b>090156</b> 0.94 kg	<b>090159</b> 1.12 kg	<b>090162</b> 1.31 kg	<b>090165</b> 1.37 kg	<b>090168</b> 1.50 kg	<b>090171</b> 1.88 kg	<b>090174</b> 2.25 kg	<b>090177</b> 3.00 kg	<b>090180</b> 3.76 kg	<b>090183</b> 4.51 kg
<b>DN 150</b> Weight/pc.	<b>162</b>	<b>090210</b> 0.86 kg	<b>090213</b> 1.03 kg	<b>090216</b> 1.08 kg	<b>090219</b> 1.29 kg	<b>090222</b> 1.51 kg	<b>090225</b> 1.57 kg	<b>090228</b> 1.72 kg	<b>090231</b> 2.16 kg	<b>090234</b> 2.59 kg	<b>090237</b> 3.45 kg	<b>090240</b> 4.32 kg	<b>090243</b> 5.18 kg
<b>DN 200</b> Weight/pc.	<b>214</b>	<b>090250</b> 1.31 kg	<b>090253</b> 1.57 kg	<b>090256</b> 1.64 kg	<b>090259</b> 1.96 kg	<b>090262</b> 2.29 kg	<b>090265</b> 2.39 kg	<b>090268</b> 2.62 kg	<b>090271</b> 3.28 kg	<b>090274</b> 3.93 kg	<b>090277</b> 5.24 kg	<b>090280</b> 6.56 kg	<b>090283</b> 7.87 kg
<b>DN 250</b> Weight/pc.	<b>264</b>	<b>090310</b> 1.63 kg	<b>090313</b> 1.95 kg	<b>090316</b> 2.04 kg	<b>090319</b> 2.44 kg	<b>090322</b> 2.85 kg	<b>090325</b> 2.97 kg	<b>090328</b> 3.26 kg	<b>090331</b> 4.08 kg	<b>090334</b> 4.89 kg	<b>090337</b> 6.52 kg	<b>090340</b> 8.16 kg	<b>090343</b> 9.79 kg
<b>DN 300</b> Weight/pc.	<b>316</b>	<b>090350</b> 2.48 kg	<b>090353</b> 2.98 kg	<b>090356</b> 3.11 kg	<b>090359</b> 3.73 kg	<b>090362</b> 4.35 kg	<b>090365</b> 4.54 kg	<b>090368</b> 4.97 kg	<b>090371</b> 6.22 kg	<b>090374</b> 7.46 kg	<b>090377</b> 9.95 kg	<b>090380</b> 12.44 kg	<b>090383</b> 14.92 kg

Any intermediate lengths can be supplied

Lengths up to 3000 mm are available

**We recommend installation with closure plugs**

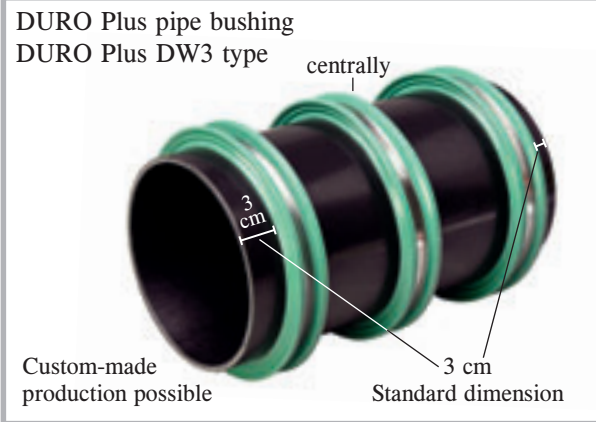
# DURO Plus high-pressure lining pipes

**NEW!** Double-wall (DW) type



DURO Plus double-wall type high-pressure lining pipes are specially designed for use in double-wall elements.

The waterstops in the edge zone prevent water permeation of the pipe bushing directly in the outer shells. The centrally mounted waterstop provides an additional seal in the core concrete.

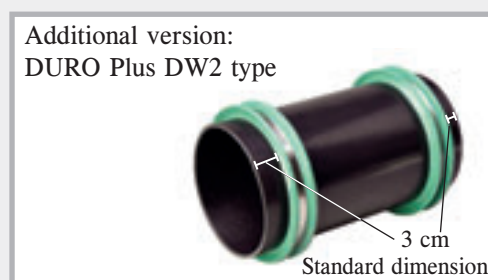
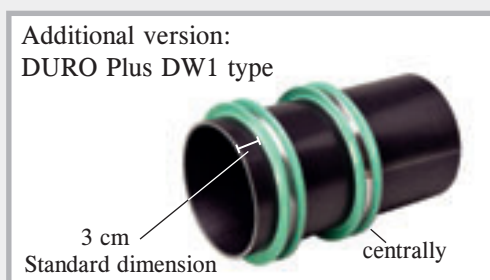


## DURO Plus DW3 type product range

DURO-Ø DN mm	Wall thicknesses						
	200 mm	240 mm	250 mm	300 mm	350 mm	365 mm	400 mm
<b>DN 80</b> Weight/pc.	<b>090600</b> 0.56 kg	<b>090602</b> 0.62 kg	<b>090604</b> 0.64 kg	<b>090606</b> 0.71 kg	<b>090608</b> 0.79 kg	<b>090610</b> 0.81 kg	<b>090612</b> 0.86 kg
<b>DN 100</b> Weight/pc.	<b>090614</b> 0.92 kg	<b>090616</b> 1.04 kg	<b>090618</b> 1.08 kg	<b>090620</b> 1.23 kg	<b>090622</b> 1.38 kg	<b>090624</b> 1.42 kg	<b>090626</b> 1.53 kg
<b>DN 125</b> Weight/pc.	<b>090628</b> 1.09 kg	<b>090630</b> 1.24 kg	<b>090632</b> 1.28 kg	<b>090634</b> 1.46 kg	<b>090636</b> 1.65 kg	<b>090638</b> 1.71 kg	<b>090640</b> 1.84 kg
<b>DN 150</b> Weight/pc.	<b>090642</b> 1.30 kg	<b>090644</b> 1.47 kg	<b>090646</b> 1.52 kg	<b>090648</b> 1.73 kg	<b>090650</b> 1.95 kg	<b>090652</b> 2.01 kg	<b>090654</b> 2.16 kg
<b>DN 200</b> Weight/pc.	<b>090656</b> 1.79 kg	<b>090658</b> 2.05 kg	<b>090660</b> 2.12 kg	<b>090662</b> 2.44 kg	<b>090664</b> 2.77 kg	<b>090666</b> 2.87 kg	<b>090668</b> 3.10 kg
<b>DN 250</b> Weight/pc.	<b>090670</b> 2.27 kg	<b>090672</b> 2.59 kg	<b>090674</b> 2.68 kg	<b>090676</b> 3.08 kg	<b>090678</b> 3.49 kg	<b>090680</b> 3.61 kg	<b>090682</b> 3.90 kg
<b>DN 300</b> Weight/pc.	<b>090684</b> 3.28 kg	<b>090686</b> 3.78 kg	<b>090688</b> 3.91 kg	<b>090690</b> 4.53 kg	<b>090692</b> 5.15 kg	<b>090694</b> 5.34 kg	<b>090696</b> 5.77 kg

Any intermediate lengths can be supplied  
Lengths up to 3000 mm are available

**We recommend installation with the closure plug**





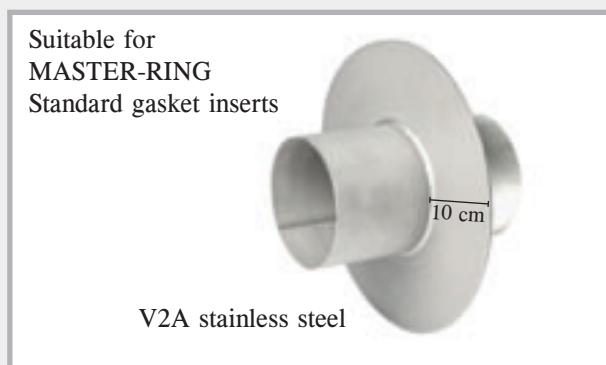


# STEELO stainless steel lining pipe

with watertight centre flange against  
pressurised and non-pressurised water

STEELO lining pipes are manufactured from V2A or V4A stainless steel. The centre flange is welded watertight.

The lining pipes are installed in locations where high stresses, e.g. chemical or thermal, are anticipated.



Dimensions

Always supplied with 2 closure plugs with inner diameter up to 400 mm

## STEELO V2A lining pipe

STEELO inner Ø mm	Standard lengths always with closure plugs							Further lengths
	200 mm	240 mm	250 mm	300 mm	350 mm	365 mm	400 mm	
<b>DN 80</b> Weight/pc.	<b>081200</b> 2.18 kg	<b>081240</b> 2.34 kg	<b>081250</b> 2.37 kg	<b>081300</b> 2.56 kg	<b>081350</b> 2.76 kg	<b>081365</b> 2.79 kg	<b>081400</b> 2.92 kg	on request
<b>DN 100</b> Weight/pc.	<b>082200</b> 2.55 kg	<b>082240</b> 2.75 kg	<b>082250</b> 2.82 kg	<b>082300</b> 3.05 kg	<b>082350</b> 3.30 kg	<b>082365</b> 3.38 kg	<b>082400</b> 3.54 kg	on request
<b>DN 125</b> Weight/pc.	<b>083200</b> 2.96 kg	<b>083240</b> 3.21 kg	<b>083250</b> 3.27 kg	<b>083300</b> 3.52 kg	<b>083350</b> 3.80 kg	<b>083365</b> 3.87 kg	<b>083400</b> 4.07 kg	on request
<b>DN 150</b> Weight/pc.	<b>084200</b> 3.43 kg	<b>084240</b> 3.72 kg	<b>084250</b> 3.84 kg	<b>084300</b> 4.06 kg	<b>084350</b> 4.42 kg	<b>084365</b> 4.68 kg	<b>084400</b> 4.78 kg	on request
<b>DN 200</b> Weight/pc.	<b>085200</b> 4.37 kg	<b>085240</b> 4.82 kg	<b>085250</b> 4.85 kg	<b>085300</b> 5.35 kg	<b>085350</b> 5.79 kg	<b>085365</b> 5.96 kg	<b>085400</b> 6.35 kg	on request
<b>DN 250</b> Weight/pc.	<b>086200</b> 5.40 kg	<b>086240</b> 5.65 kg	<b>086250</b> 6.01 kg	<b>086300</b> 6.54 kg	<b>086350</b> 6.87 kg	<b>086365</b> 7.44 kg	<b>086400</b> 7.80 kg	on request
<b>DN 300</b> Weight/pc.	<b>087200</b> 7.54 kg	<b>087240</b> 8.40 kg	<b>087250</b> 8.55 kg	<b>087300</b> 9.62 kg	<b>087350</b> 10.70 kg	<b>087365</b> 11.04 kg	<b>087400</b> 11.80 kg	on request
<b>DN 400</b> Weight/pc.	<b>088200</b> on request	<b>088240</b> on request	<b>088250</b> on request	<b>088300</b> on request	<b>088350</b> on request	<b>088365</b> on request	<b>088400</b> on request	on request
<b>DN 500</b> Weight/pc.	<b>089200</b> on request	<b>089240</b> on request	<b>089250</b> on request	<b>089300</b> on request	<b>089350</b> on request	<b>089365</b> on request	<b>089400</b> on request	on request
<b>DN 600</b> Weight/pc.	<b>089520</b> on request	<b>089524</b> on request	<b>089525</b> on request	<b>089530</b> on request	<b>089535</b> on request	<b>089536</b> on request	<b>089540</b> on request	on request

**V4A = on request**

# MASTERTEC MKD 150 cable bushing

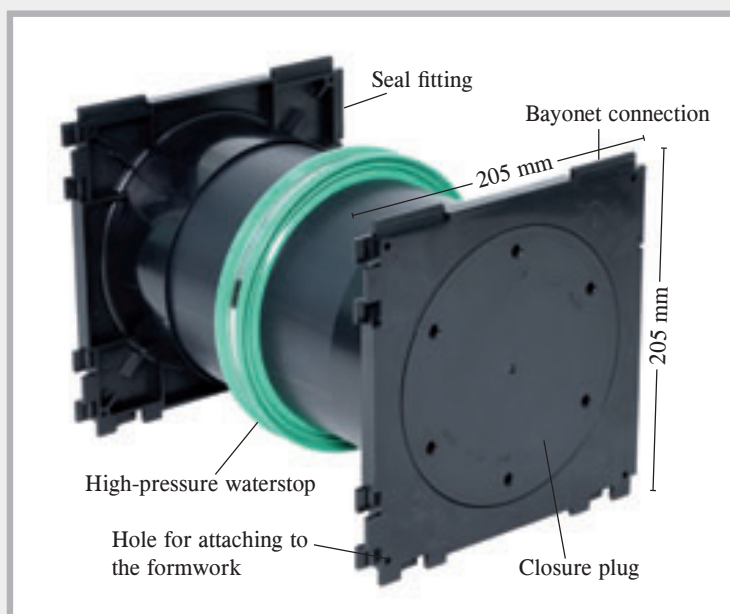
Stay flexible with the MKD 150 cable bushing

## Product description

The MKD 150 cable bushing is manufactured in the corresponding wall thickness and consists of 2 seal fittings, a factory-installed high-pressure waterstop and a closure plug which is pressure-tight up to 3 bar. The bayonet connections are compatible with all standard systems.

- Flexible connection of cables in new buildings
- Sealed with the MASTERTEC high-pressure collar
- Stable design due to solid wall material
- Compatible with all standard systems

We recommend using gasket inserts for the waterproofing. You can achieve maximum pressure resistance using this system.





Seal fitting on both sides



Seal fitting on one side; closure plug on the other side

## Product range

MKD 150 – double version				MKD 150 – single version			
Art. no.	Wall thickness	PU	Weight per pc.	Art. no.	Wall thickness	PU	Weight per pc.
162410	180 mm	1 pc.	1.30 kg	162460	180 mm	1 pc.	1.10 kg
162415	200 mm	1 pc.	1.40 kg	162465	200 mm	1 pc.	1.20 kg
162420	240 mm	1 pc.	1.50 kg	162470	240 mm	1 pc.	1.30 kg
162425	250 mm	1 pc.	1.60 kg	162475	250 mm	1 pc.	1.30 kg
162430	300 mm	1 pc.	1.70 kg	162480	300 mm	1 pc.	1.50 kg
162435	350 mm	1 pc.	1.90 kg	162485	350 mm	1 pc.	1.70 kg
162440	365 mm	1 pc.	2.00 kg	162490	365 mm	1 pc.	1.70 kg
162445	400 mm	1 pc.	2.10 kg	162495	400 mm	1 pc.	1.90 kg
162400	Key for opening the closure plug			 			

Other wall thicknesses are available on request

MASTER-RING gasket inserts are available on request. You will need to let us know the outer diameters of the cables and pipes to be led through.

# Sewage pipe bushing systems

## Double socket type (DM)



### Advantages of the Base and Novo double socket

- Delivered as solid wall version
- With lip seal
- Manufactured for corresponding wall thickness
- Radon-tight
- incl. 2 covers as installation aid
- Pre-installed water barrier

KG DM Base type  
KG 2000 DM Base type



■ Pressure water tested up to **7 bar**

**NEW!**

KG DM Novo type  
KG 2000 DM Novo type



■ Pressure water tested up to **8 bar**

## KG DM type product range

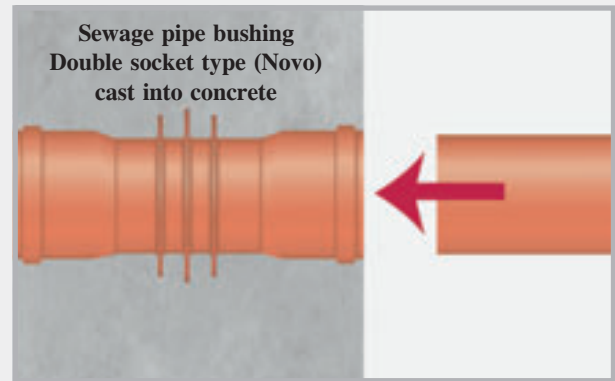
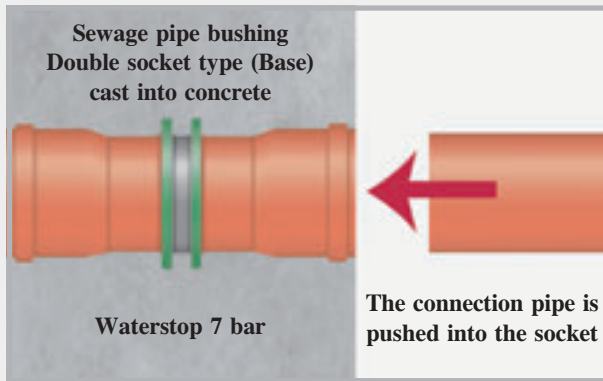
Sewage pipe Ø DN mm	Wall thicknesses						
	180 mm	200 mm	240 mm	250 mm	300 mm	365 mm	400 mm
	Base double socket		<b>NEW!</b> Novo double socket				
<b>DN 110</b> Weight/pc.	<b>080404</b> 0.75 kg	<b>080405</b> 0.80 kg	<b>080350</b> 0.60 kg	<b>080351</b> 0.62 kg	<b>080352</b> 0.70 kg	<b>080353</b> 0.77 kg	<b>080354</b> 0.81 kg
<b>DN 125</b> Weight/pc.	<b>080419</b> 1.00 kg	<b>080420</b> 1.00 kg	<b>080355</b> 0.77 kg	<b>080356</b> 0.82 kg	<b>080357</b> 0.91 kg	<b>080358</b> 0.98 kg	<b>080359</b> 1.04 kg
<b>DN 160</b> Weight/pc.	not producible	<b>080433</b> 1.75 kg	<b>080434</b> 1.85 kg	<b>080436</b> 1.85 kg	<b>080438</b> 2.05 kg	<b>080440</b> 2.25 kg	<b>080442</b> 2.50 kg
<b>DN 200</b> Weight/pc.	not producible	<b>080443</b> 2.80 kg	<b>080444</b> 3.00 kg	<b>080445</b> 3.00 kg	<b>080446</b> 3.35 kg	<b>080448</b> 3.60 kg	<b>080450</b> 3.70 kg

## KG 2000 DM type product range

KG 2000-Ø DN mm	Wall thicknesses					
	200 mm	240 mm	250 mm	300 mm	365 mm	400 mm
	Base double socket	<b>NEW!</b> Novo double socket				
<b>DN 110</b> Weight/pc.	<b>080750</b> 0.80 kg	<b>080800</b> 0.60 kg	<b>080801</b> 0.62 kg	<b>080802</b> 0.68 kg	<b>080803</b> 0.77 kg	<b>080804</b> 0.81 kg
<b>DN 125</b> Weight/pc.	<b>080762</b> 1.10 kg	<b>080805</b> 0.77 kg	<b>080806</b> 0.82 kg	<b>080807</b> 0.91 kg	<b>080808</b> 0.98 kg	<b>080809</b> 1.04 kg
<b>DN 160</b> Weight/pc.	<b>080774</b> 1.60 kg	<b>080776</b> 1.80 kg	<b>080778</b> 2.00 kg	<b>080780</b> 2.30 kg	<b>080782</b> 2.60 kg	<b>080784</b> 2.80 kg
<b>DN 200</b> Weight/pc.	<b>080786</b> 2.80 kg	<b>080788</b> 3.00 kg	<b>080790</b> 3.20 kg	<b>080792</b> 3.40 kg	<b>080794</b> 3.70 kg	<b>080796</b> 3.85 kg

The Base double socket version is available for further wall thicknesses.

## Function of KG type Base and Novo double socket



The double socket is cast into concrete. After concreting, the closure plugs are removed and the seals inserted. The next pipe can be connected.

## KG type Base double socket on the construction site



Front view, pipe bushing installed



Side view in the formwork



# Sewage pipe bushing systems

## Flow direction (FR) type

Sewage pipe bushing  
KG FR type



KG 2000 pipe bushing  
KG 2000 FR type



The flow direction types are manufactured in one piece for the corresponding wall thickness. You can also manufacture any wall thickness yourself on the building site with a ground drain and socket ring. The FR type conveys the wastewater flow in one direction.

## KG FR type product range

Sewage pipe Ø DN mm	Wall thicknesses						
	180 mm	200 mm	240 mm	250 mm	300 mm	365 mm	400 mm
<b>DN 110</b> Weight/pc.	<b>090710</b> 0.75 kg	<b>090713</b> 0.80 kg	<b>090716</b> 0.90 kg	<b>090719</b> 0.90 kg	<b>090722</b> 1.00 kg	<b>090725</b> 1.10 kg	<b>090728</b> 1.20 kg
<b>DN 125</b> Weight/pc.	<b>090731</b> 1.00 kg	<b>090734</b> 1.00 kg	<b>090737</b> 1.10 kg	<b>090740</b> 1.10 kg	<b>090743</b> 1.25 kg	<b>090749</b> 1.45 kg	<b>090752</b> 1.60 kg
<b>DN 160</b> Weight/pc.	<b>not producible</b>	<b>not producible</b>	<b>090758</b> 1.85 kg	<b>090761</b> 1.85 kg	<b>090764</b> 2.05 kg	<b>090770</b> 2.25 kg	<b>090773</b> 2.50 kg
<b>DN 200</b> Weight/pc.	<b>not producible</b>	<b>not producible</b>	<b>090779</b> 3.00 kg	<b>090782</b> 3.00 kg	<b>090785</b> 3.35 kg	<b>090788</b> 3.60 kg	<b>090791</b> 3.70 kg

Other wall thicknesses available

## KG 2000 FR type product range

KG 2000-Ø DN mm	Wall thicknesses					
	200 mm	240 mm	250 mm	300 mm	365 mm	400 mm
<b>DN 110</b> Weight/pc.	<b>080820</b> 0.80 kg	<b>080825</b> 0.85 kg	<b>080830</b> 0.90 kg	<b>080835</b> 1.10 kg	<b>080845</b> 1.30 kg	<b>080850</b> 1.40 kg
<b>DN 125</b> Weight/pc.	<b>080855</b> 1.10 kg	<b>080860</b> 1.20 kg	<b>080865</b> 1.20 kg	<b>080870</b> 1.30 kg	<b>080880</b> 1.50 kg	<b>080885</b> 1.65 kg
<b>DN 160</b> Weight/pc.	<b>not producible</b>	<b>080890</b> 1.80 kg	<b>080895</b> 2.00 kg	<b>080905</b> 2.30 kg	<b>080915</b> 2.60 kg	<b>080920</b> 2.80 kg
<b>DN 200</b> Weight/pc.	<b>not producible</b>	<b>080923</b> 3.10 kg	<b>080925</b> 3.20 kg	<b>080933</b> 3.20 kg	<b>080935</b> 3.70 kg	<b>080945</b> 3.85 kg

Other wall thicknesses available

# Sewage pipe bushing systems

**NEW!** Flow direction Universal (FRU) type

The product for stock keeping

## KG FRU type product range

Sewage pipe Ø DN mm	Art. no.	Marked cutting lengths / mm (400 mm = standard version)								PU	Weight per pc.
DN 110	090800	180	200	240	250	300	350	365	400	1 pc.	1.20 kg
DN 125	090801	180	200	240	250	300	350	365	400	1 pc.	1.60 kg
DN 160	090802	*	*	240	250	300	350	365	400	1 pc.	2.50 kg
DN 200	090803	*	*	240	250	300	350	365	400	1 pc.	3.70 kg

\* = cannot be produced

## KG 2000 FRU type product range

KG 2000-Ø DN mm	Art. no.	Marked cutting lengths / mm (400 mm = standard version)								PU	Weight per pc.
DN 110	080360	180	200	240	250	300	350	365	400	1 pc.	1.40 kg
DN 125	080362	180	200	240	250	300	350	365	400	1 pc.	1.65 kg
DN 160	080364	*	*	240	250	300	350	365	400	1 pc.	2.80 kg
DN 200	080365	*	*	240	250	300	350	365	400	1 pc.	3.85 kg

\* = cannot be produced



1

The flow direction universal pipe bushing is pre-produced for the wall thickness 400 mm.



2

A length scale is affixed to the pipe bushing so it can be cut to the required wall thickness on site.



3

The adhesive label containing the length scale must be removed after cutting and the cut edge bevelled.



4

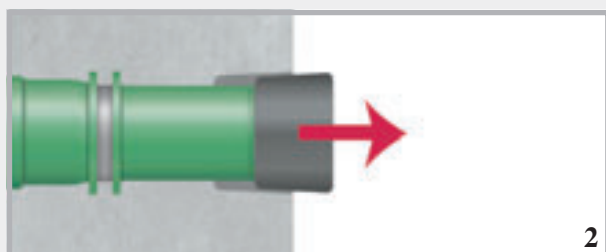
The pipe bushing is ready to install after pushing on the socket ring.

## FR + FRU type function

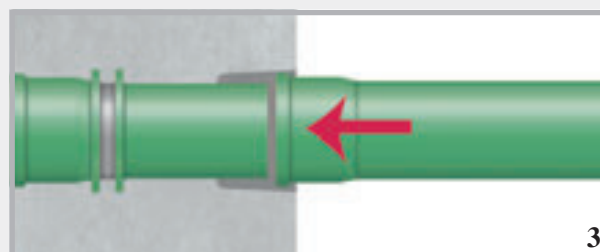
1. KG 2000 flow direction type pipe bushing, concreted into the wall
2. The socket ring is removed before the next pipe is connected.
3. The next pipe is connected. The flow direction of the water is retained.



1



2



3

# Sewage pipe bushing systems

## **NEW!** Foil flange (FFL) type

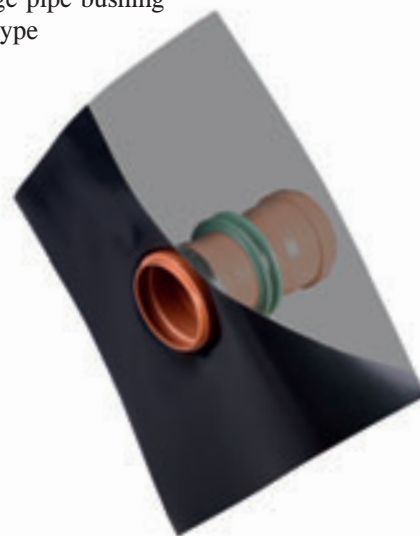
In addition to the pressure water and radon-resistant seal in the concrete provided by the RONDO

Base, the foil flange enables the pipe bushing to be integrated into an outer sealing plane.

Foil flange made of 1.5 mm PVC foil, size: 60 x 60 cm, weldable with hot air gun, bondable with solvent welding agent, resistant to oil and bitumen



Sewage pipe bushing  
FFL type



## KG FFL type product range

Sewage pipe Ø DN mm	Wall thicknesses						
	180 mm	200 mm	240 mm	250 mm	300 mm	365 mm	400 mm
<b>DN 110</b>	<b>080810</b>	<b>080812</b>	<b>080814</b>	<b>080816</b>	<b>080818</b>	<b>080822</b>	<b>080824</b>
Weight/pc.	1.45 kg	1.50 kg	1.60 kg	1.60 kg	1.70 kg	1.80 kg	1.90 kg
<b>DN 125</b>	<b>080826</b>	<b>080832</b>	<b>080834</b>	<b>080836</b>	<b>080838</b>	<b>080840</b>	<b>080842</b>
Weight/pc.	1.70 kg	1.70 kg	1.80 kg	1.80 kg	1.95 kg	2.15 kg	2.35 kg
<b>DN 160</b>	<b>not producible</b>	<b>080844</b>	<b>080846</b>	<b>080848</b>	<b>080852</b>	<b>080854</b>	<b>080856</b>
Weight/pc.		2.45 kg	2.55 kg	2.55 kg	2.75 kg	2.95 kg	3.20 kg
<b>DN 200</b>	<b>not producible</b>	<b>080858</b>	<b>080862</b>	<b>080864</b>	<b>080866</b>	<b>080868</b>	<b>080872</b>
Weight/pc.		3.50 kg	3.70 kg	3.70 kg	4.05 kg	4.30 kg	4.40 kg

Other wall thicknesses available

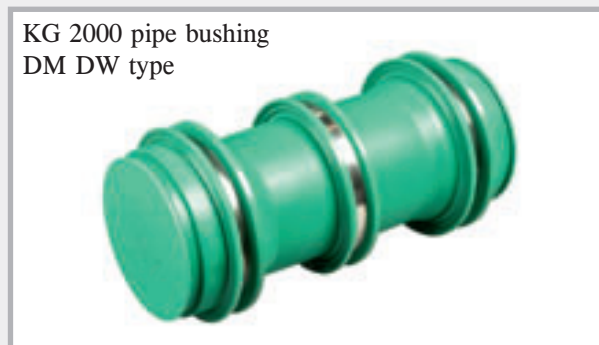
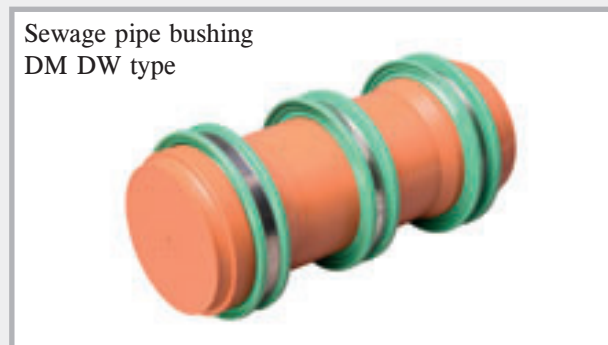
## KG 2000 FFL type product range

KG 2000-Ø DN mm	Wall thicknesses					
	200 mm	240 mm	250 mm	300 mm	365 mm	400 mm
<b>DN 110</b>	<b>080074</b>	<b>080075</b>	<b>080076</b>	<b>080077</b>	<b>080078</b>	<b>080079</b>
Weight/pc.	1.50 kg	1.55 kg	1.60 kg	1.80 kg	2.00 kg	2.10 kg
<b>DN 125</b>	<b>080080</b>	<b>080081</b>	<b>080082</b>	<b>080083</b>	<b>080084</b>	<b>080085</b>
Weight/pc.	1.80 kg	1.90 kg	1.90 kg	2.00 kg	2.20 kg	2.30 kg
<b>DN 160</b>	<b>080086</b>	<b>080087</b>	<b>080088</b>	<b>080089</b>	<b>080090</b>	<b>080091</b>
Weight/pc.	2.30 kg	2.50 kg	2.70 kg	3.00 kg	3.30 kg	3.50 kg
<b>DN 200</b>	<b>080092</b>	<b>080093</b>	<b>080094</b>	<b>080095</b>	<b>080096</b>	<b>080097</b>
Weight/pc.	3.50 kg	3.70 kg	3.90 kg	4.10 kg	4.40 kg	4.55 kg

Other wall thicknesses available

# Sewage pipe bushing systems

**NEW!** Double socket double wall (DM DW) type



The double-socket double-wall type sewage pipe bushing system is specially designed for use in double-wall elements. The waterstops in the edge zone prevent water permeation of the pipe bushing directly in the outer shells. The centrally mounted waterstop provides an additional seal in the core concrete.

## KG DM DW type product range

Sewage pipe Ø DN mm	Wall thicknesses						
	180 mm	200 mm	240 mm	250 mm	300 mm	365 mm	400 mm
<b>DN 110</b> Weight/pc.	<b>080480</b> 1.07 kg	<b>080482</b> 1.12 kg	<b>080484</b> 1.22 kg	<b>080486</b> 1.22 kg	<b>080488</b> 1.32 kg	<b>080490</b> 1.42 kg	<b>080492</b> 1.52 kg
<b>DN 125</b> Weight/pc.	<b>080494</b> 1.34 kg	<b>080496</b> 1.34 kg	<b>080498</b> 1.44 kg	<b>080502</b> 1.44 kg	<b>080504</b> 1.59 kg	<b>080506</b> 1.79 kg	<b>080508</b> 1.99 kg
<b>DN 160</b> Weight/pc.	<b>not producible</b>	<b>080512</b> 2.19 kg	<b>080514</b> 2.29 kg	<b>080516</b> 2.29 kg	<b>080518</b> 2.49 kg	<b>080522</b> 2.69 kg	<b>080524</b> 2.94 kg
<b>DN 200</b> Weight/pc.	<b>not producible</b>	<b>080526</b> 3.29 kg	<b>080528</b> 3.49 kg	<b>080532</b> 3.49 kg	<b>080534</b> 3.84 kg	<b>080536</b> 4.09 kg	<b>080538</b> 4.19 kg

Other wall thicknesses available

## KG 2000 DM DW type product range

KG 2000-Ø DN mm	Wall thicknesses					
	200 mm	240 mm	250 mm	300 mm	365 mm	400 mm
<b>DN 110</b> Weight/pc.	<b>080098</b> 1.12 kg	<b>080099</b> 1.17 kg	<b>080100</b> 1.22 kg	<b>080101</b> 1.42 kg	<b>080102</b> 1.62 kg	<b>080103</b> 1.72 kg
<b>DN 125</b> Weight/pc.	<b>080104</b> 1.42 kg	<b>080105</b> 1.54 kg	<b>080106</b> 1.54 kg	<b>080107</b> 1.64 kg	<b>080108</b> 1.84 kg	<b>080109</b> 1.94 kg
<b>DN 160</b> Weight/pc.	<b>080110</b> 1.94 kg	<b>080111</b> 2.14 kg	<b>080112</b> 2.44 kg	<b>080113</b> 2.74 kg	<b>080114</b> 3.04 kg	<b>080115</b> 3.24 kg
<b>DN 200</b> Weight/pc.	<b>080116</b> 3.24 kg	<b>080117</b> 3.44 kg	<b>080118</b> 3.69 kg	<b>080119</b> 3.89 kg	<b>080120</b> 4.19 kg	<b>080121</b> 4.34 kg

Other wall thicknesses available



# Ground drains



## Sewage ground drains – solid wall pipes

Sewage pipe, 0.5 m long, with waterstop and socket on one end

Art. no.	Type	Sewage pipe Ø DN mm	Length	Weight per pc.
<b>NEW!</b> 080366	DL 110/500	110	500 mm	0.76 kg
<b>NEW!</b> 080368	DL 125/500	125	500 mm	0.93 kg
080470	DL 160/500	160	500 mm	2.45 kg
080475	DL 200/500	200	500 mm	3.85 kg



## KG 2000 sewage ground drains – solid wall pipes

Sewage pipe, 0.5 m long, with waterstop and socket on one end

Art. no.	Type	Sewage pipe Ø DN mm	Length	Weight per pc.
<b>NEW!</b> 080827	DL 110/500	110	500 mm	0.76 kg
<b>NEW!</b> 080828	DL 125/500	125	500 mm	0.93 kg
080986	DL2000 160/500	160	500 mm	2.40 kg
080989	DL2000 200/500	200	500 mm	3.80 kg



## Sewage ground drains with foil flange

Foil flange made of PVC foil 1.5 mm, size: 50 x 50 cm, weldable with hot air gun, bondable with solvent welding agent, resistant to oil and bitumen

### KG sewage ground drains with foil flange – solid wall pipes

Sewage pipe, 0.5 m long, with waterstop and socket on one end

Art. no.	Type	Sewage pipe Ø DN mm	Length	Weight per pc.
080451	DLF 110/500	110	500 mm	1.70 kg
080452	DLF 125/500	125	500 mm	2.15 kg
080454	DLF 160/500	160	500 mm	3.00 kg
080456	DLF 200/500	200	500 mm	4.40 kg



### KG 2000 sewage ground drains with foil flange

KG 2000 pipe, 0.5 m long, with waterstop and socket on one end

Art. no.	Type	KG 2000-Ø DN mm	Length	Weight per pc.
080992	DLF2000 110/500	110	500 mm	1.70 kg
080994	DLF2000 125/500	125	500 mm	2.00 kg
080996	DLF2000 160/500	160	500 mm	2.90 kg
080998	DLF2000 200/500	200	500 mm	4.20 kg



# Sewage pipe bushing systems

## Universal type



The universal pipe bushing is supplied with an overall length of 40 cm. The pipe bushing can be shortened on-site to match the desired wall thickness.

Always supplied with plugs at both ends.

## KG Universal type product range

incl. plug (installation aid) and seal

Art. no.	Type	Sewage pipe Ø DN mm	Element length	for wall thickness from to	PU	Weight per pc.
160100	KGU 110	110	40 cm	20-40 cm	1 pc.	1.95 kg
160110	KGU 125	125	40 cm	20-40 cm	1 pc.	2.00 kg
160120	KGU 160	160	40 cm	24-40 cm	1 pc.	3.10 kg
160130	KGU 200	200	40 cm	24-40 cm	1 pc.	4.25 kg

## KG 2000 Universal type product range

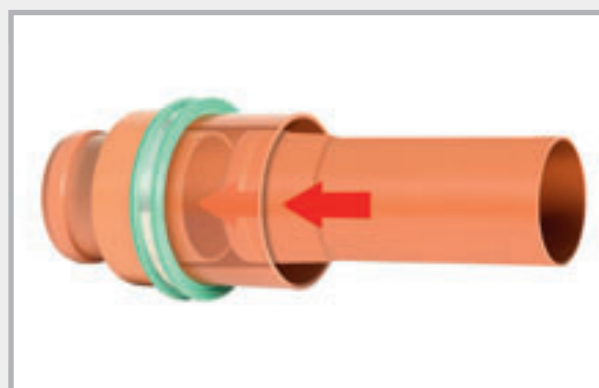
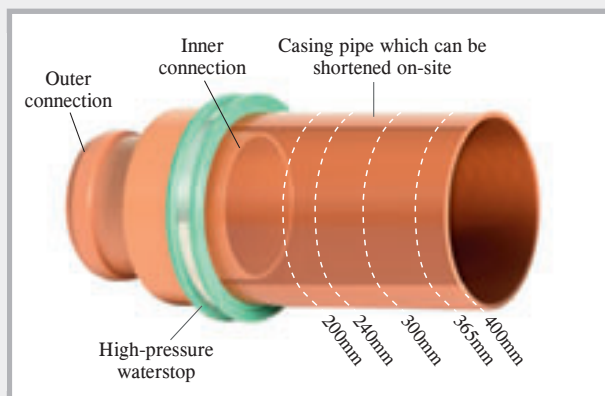
incl. plug (installation aid) and seal

Art. no.	Type	KG 2000-Ø DN mm	Element length	for wall thickness from to	PU	Weight per pc.
161100	KG2000 U110	110	40 cm	20-40 cm	1 pc.	1.70 kg
161110	KG2000 U125	125	40 cm	20-40 cm	1 pc.	1.80 kg
161120	KG2000 U160	160	40 cm	24-40 cm	1 pc.	2.80 kg

We will shorten the Universal sewage pipe bushing for you to suit the required wall thickness.

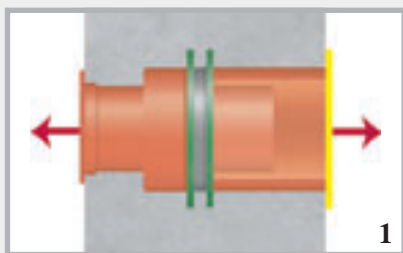
## Function

The illustration shows how the connection works. As the socket is pushed onto the spigot end, the flow of water is not interrupted.



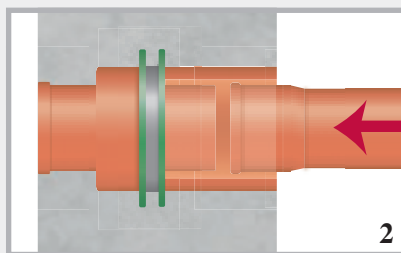
The casing pipe can be shortened on-site to match the desired wall thickness.

## Universal installation type



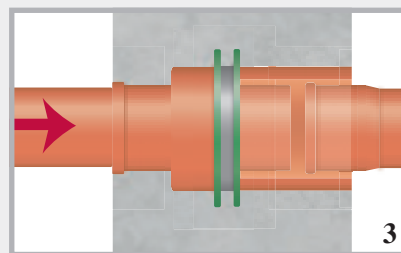
1

The universal pipe bushing is manufactured to match the corresponding wall thickness. It is sealed with plugs on the left and right.



2

The plugs are removed following placement of the concrete.



3

The connection pipes can be continued to the left and right. The flow direction of the water is retained.

## Accessories for lining pipes and pipe bushings

### Sewage socket ring for sewage pipe bushings

#### Flow direction type

Art. no.	Type	PU	Weight per pc.
<b>080476</b>	MFR 110	1 pc.	0.02 kg
<b>080477</b>	MFR 125	1 pc.	0.03 kg
<b>080478</b>	MFR 160	1 pc.	0.04 kg
<b>080479</b>	MFR 200	1 pc.	0.07 kg

Socket ring



Socket ring on RDF



### Closure plug + installation aid for lining pipes

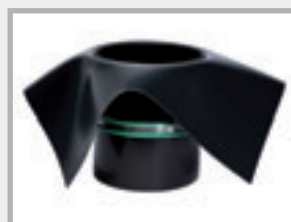
DN	Art. no.	PU	Weight per pc.
50	<b>090403</b>	1 pc.	0.02 kg
80	<b>090401</b>	1 pc.	0.02 kg
100	<b>090400</b>	1 pc.	0.02 kg
125	<b>090402</b>	1 pc.	0.04 kg
150	<b>090404</b>	1 pc.	0.04 kg
200	<b>090406</b>	1 pc.	0.10 kg
250	<b>090408</b>	1 pc.	0.16 kg
300	<b>090410</b>	1 pc.	0.24 kg
350	<b>090412</b>	1 pc.	0.39 kg
400	<b>090414</b>	1 pc.	0.45 kg

Reusable



### Foil flange for lining pipes incl. mounting strap

DN	Art. no.	Flange dimensions	PU	Weight per pc.
50	<b>090388</b>	40 x 40 cm	1 pc.	0.19 kg
80	<b>090389</b>	40 x 40 cm	1 pc.	0.20 kg
100	<b>090390</b>	50 x 50 cm	1 pc.	0.43 kg
125	<b>090391</b>	50 x 50 cm	1 pc.	0.45 kg
150	<b>090392</b>	50 x 50 cm	1 pc.	0.47 kg
200	<b>090393</b>	60 x 60 cm	1 pc.	0.70 kg
250	<b>090394</b>	60 x 60 cm	1 pc.	0.70 kg
300	<b>090395</b>	70 x 70 cm	1 pc.	1.00 kg



Foil flange made of 1.5 mm PVC foil, resistant to oil and bitumen, weldable with hot air gun, bondable with solvent welding agent

# MASTER-RING

## Stainless steel V2A gasket inserts

Gasket inserts for lining pipes and core drill holes

- One seal against pressurised and non-pressurised water
- Pressure-tight up to 30 m water column, in fixed and secure position up to 50 m
- Rubber thickness 40 mm
- Temperature range -30°C to +120°C
- Steel parts and screws made of V2A stainless steel
- Satisfy the requirements of the FHRK testing principles GE 101



**Installation:** Once the gasket insert has been inserted and the medium pipe has been led through, the screws are tightened crosswise. Give each screw one turn and repeat this procedure several times so the rubber is pressed out uniformly. Maximum torque M6 = 5 Nm, M8 = 10 Nm, M10 = 15 Nm, M12 = 20 Nm. Retighten the nuts after 2-3 hours.

Core drill hole mm Lining pipe FASO/ WELLO/DURO Plus	Art. no.	Medium pipe in mm		PU	Weight per pc.
		from	to		
50	120080	6	12	1	0.38 kg
80	120100	20	28	1	0.41 kg
80	120105	32	40	1	0.42 kg
80	120095	48	50	1	0.41 kg
100	120107	15	22	1	0.59 kg
100	120110	20	28	1	0.59 kg
100	120112	25	32	1	0.59 kg
100	120115	32	40	1	0.64 kg
100	120120	36	44	1	0.64 kg
100	120125	46	56	1	0.54 kg
100	120130	55	65	1	0.52 kg
125	120140	45	54	1	1.05 kg
125	120145	55	64	1	0.84 kg
125	120150	70	78	1	0.75 kg
150	120152	46	54	1	1.37 kg
150	120153	56	66	1	1.32 kg
150	120155	69	78	1	1.22 kg
150	120160	79	91	1	1.18 kg
150	120165	85	94	1	1.07 kg
150	120170	98	110	1	0.96 kg
200	120172	88	103	1	2.00 kg
200	120175	108	115	1	1.96 kg
200	120180	116	126	1	1.88 kg
200	120185	132	141	1	1.63 kg
200	120190	135	144	1	1.46 kg
200	120192	150	160	1	1.40 kg
250	120195	135	144	1	2.90 kg
250	120197	140	149	1	2.90 kg
250	120200	150	159	1	2.60 kg
250	120205	157	162	1	2.60 kg
250	120210	174	181	1	2.55 kg
250	120215	178	187	1	2.15 kg
250	120216	197	202	1	2.10 kg
250	120218	204	210	1	2.05 kg
300	120225	193	204	1	3.50 kg
300	120230	218	226	1	3.15 kg
350	120235	224	233	1	5.25 kg
350	120240	249	258	1	4.85 kg
350	120242	270	282	1	4.55 kg
400	120245	270	280	1	5.70 kg
400	120250	279	288	1	5.65 kg
400	120255	304	313	1	5.10 kg
400	120260	314	323	1	4.60 kg
400	120265	320	330	1	4.20 kg

**Note:**

Additional supply options:

Split version available for additional charge.

Steel parts + screws in V4A stainless steel; rubber made of NBR or compliant with potable water quality standards



# MASTER-RING Multi

## Gasket inserts with “onion ring” technology

A large number of installation options with only 4 sizes

YouTube



### Product description of MASTER-RING Multi



Pressure-resistant: 30 metre water column = 3 bar

Pressure plate material: V2A

Screws and nuts: V2A

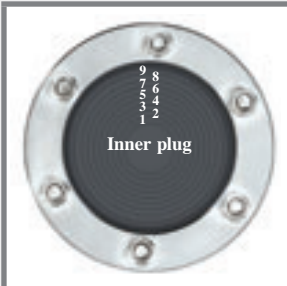
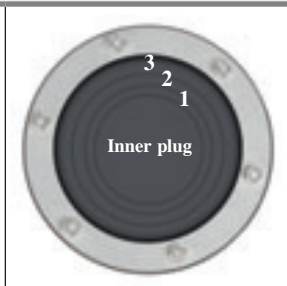
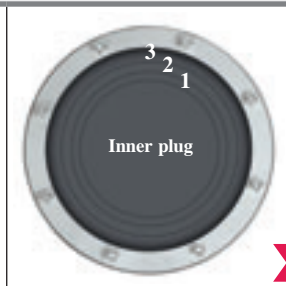
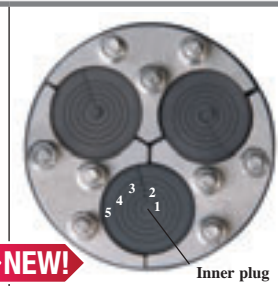
Design: Closed ring

Rubber material: EPDM

Width of rubber: 40 mm

Temperature range: -30°C to +120°C

Resistances: Excellent resistance to ageing, weathering and ozone

				
	MASTER-RING Multi 100 Art. no. 120135 Medium pipe in mm from to	MASTER-RING Multi 150 Art. no. 120171 Medium pipe	MASTER-RING Multi 200 Art. no. 120193 Medium pipe	MASTER-RING Multiple Multi 100 Art. no. 120270 Split version
After removing the inner plug	18-20 mm	63 mm	110 mm	4 mm
1st ring	21-25 mm	76 mm	125 mm	11 mm
2nd ring	26-30 mm	90 mm	140 mm	15 mm
3rd ring	31-35 mm	110 mm	160 mm	20 mm
4th ring	36-40 mm			25 mm
5th ring	41-45 mm			32 mm (without break-off rings)
6th ring	46-50 mm			
7th ring	51-55 mm			
8th ring	56-60 mm			
9th ring	61-65 mm			
Weight/pc.	0.64 kg	1.35 kg	2.20 kg	0.90 kg

### Protection of the core drill hole with epoxy resin

- PROTECT EP resin ensures lasting preservation of the core drill hole
- Application on dry substrate



# Installation of MASTER-RING Multi

Once you have determined the outer diameter of the pipe to be waterproofed, prepare the MASTER-RING Multi for installation.

Example for DN 100 core drill hole and medium pipe outer diameter 18 mm



1

Only remove the inner plug

Example for DN 100 core drill hole and medium pipe outer diameter 23 mm



2

After removing the inner plug, release the first ring ...

**Example: Multi 100**



3

... and push it through the gasket insert.



4

Pushed-through 1st ring



5

Simply cut off the pushed-through ring using a cutter



6

Multi 100 ready for installation

Example for DN 200 core drill hole and medium pipe outer diameter 110 mm



1

Only remove the inner plug

Example for DN 200 core drill hole and medium pipe outer diameter 125 mm



2

Release the first ring and push it through the gasket

**Example: Multi 200**



3

Cut off the pushed-through ring using a cutter – the gasket is now ready for installation.

Example for DN 100 core drill hole and medium pipe outer diameter 15 mm



1

Open the split gasket insert and take out the required segmented stopper.



2

Pull out the ring segment you want to remove and sever it with a cutter.

**Example Multiple Multi**



3

After cutting the stopper to the required size, reinsert it and the gasket insert can be installed.

# MASTER-RING Multiple

## V2A stainless steel multiple wall duct gasket inserts for cables and pipes

- Pressure-tight up to 10 m water column
- Rubber thickness 40 mm
- Steel parts and screws made of V2A stainless steel



Split version



Mounted

Core drill hole Lining pipe FASO/ WELLO/DURO Plus	Art. no.	Outer diameter Medium pipe in mm	Weight per pc.
50	<b>120515</b>	4 to 20	0.39 kg
80	<b>120410</b>	4 to 33 or 40 or 42	0.43 kg
100	<b>120415</b>	4 to 33 or 40 or 42 or 50	0.62 kg
125	<b>120420</b>	4 to 33 or 40 or 42 or 50	0.93 kg
150	<b>120425</b>	4 to 33 or 40 or 42 or 50	1.31 kg
	<b>120495</b>	Additional borehole	

As a basic rule, the technical feasibility of the combination of number and diameter of the media in relation to the minimum diameter of the core drill hole or lining pipe must be checked. Please contact our sales office for assistance.

## Stainless steel V2A blind plugs

### for core drill hole and lining pipe

- Pressure-tight: 80-200 mm = 30 m water column  
250-300 mm = 10 m water column
- Rubber thickness 40 mm
- Steel parts and screws made of V2A stainless steel



DN	Art. no.	PU	Weight/kg
80	<b>120520</b>	1 pc.	0.49 kg
100	<b>120525</b>	1 pc.	0.75 kg
125	<b>120530</b>	1 pc.	1.25 kg
150	<b>120535</b>	1 pc.	2.10 kg
200	<b>120540</b>	1 pc.	3.40 kg
250	<b>120545</b>	1 pc.	6.10 kg
300	<b>120550</b>	1 pc.	8.80 kg

Blind plugs up to DN 1500 mm available on request

## Tightening the MASTER-RING Multi

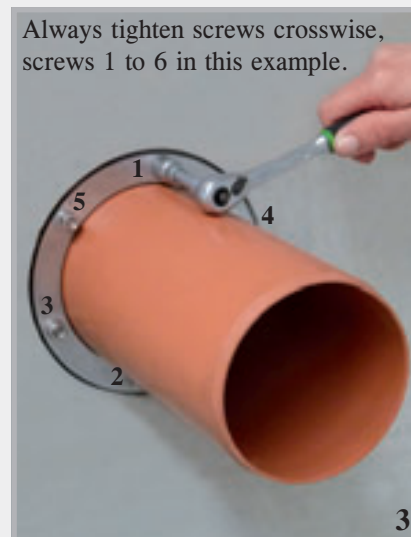
All 3 types of screw should be tightened to a torque of 5 Nm.

1. Insert the gasket insert into the lining pipe or the core drill hole.
2. Push the medium pipe through



3. Tighten the screws crosswise through one turn. Repeat this process until all screws are tightened to 5 Nm. Retighten the screws after 24 hours.

Always tighten screws crosswise, screws 1 to 6 in this example.



# FLEX 2000

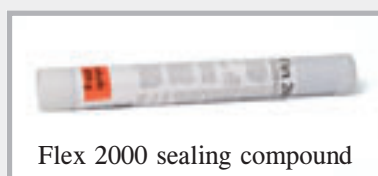


Plastic, vapour and waterproof sealing compound for waterproofing of pipe and cable ducts below ground level. Also suitable for leakage sealing in case of inflowing water.

**Annular gap sealing (tested by MFPA Leipzig)  
up to 7.5 m water column**



Art. no.	Description	PU	Secondary packaging	Weight
<b>120610</b>	<b>Flex 2000 sealing compound</b> cartridge 850 g	1 cartridge	Carton of 20 cartridges	0.94 kg
<b>120620</b>	<b>Cartridge applicator</b> with flexible attachment	1 pc.		1.07 kg
<b>120630</b>	<b>Flexible nozzle</b>	1 pc.		0.06 kg

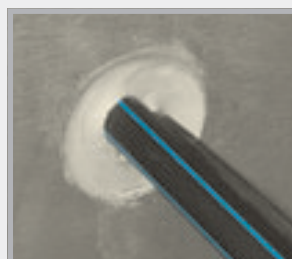
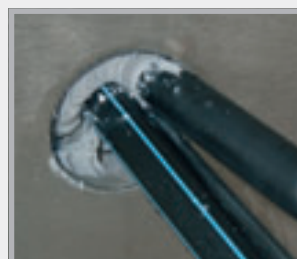


## Technical data

Consistency	Paste-like, non-sagging
Heat resistance	+50°C
Processing temperature	+5°C to +35°C
Usage	approx. 1.6 kg per litre void
Storage	2 years at 20°C

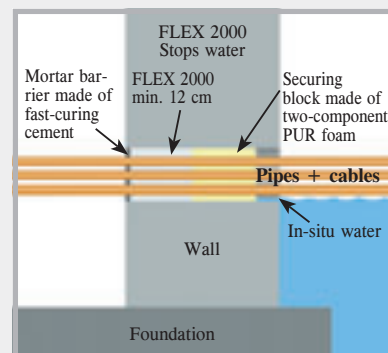
## Substrate

The substrate may be dry, damp or wet. The substrate must be free from grease, tar, oil and loose particles. Suitable substrates are: concrete, brick, mortar, plaster and all other mineral construction materials as well as ceramics, PVC, polyethylene and polypropylene.



## Application

Prior to application, Flex 2000 is heated to approx. 30-40°C by placing it in warm water for at least 30 minutes to ensure optimum consistency and workability. Clean the inside of the duct using a suitable brush to remove dust, sand, and any loose particles. Before applying Flex 2000, a securing block of a two-component PUR foam is applied at a depth of approx. 10 cm. The Flex 2000 cartridge is then placed in the cartridge applicator and the material is pressed through the flexible nozzle into the duct from back to front so that the resulting layer is at least 12 cm thick. After sealing cable ducts, jiggle the cable slightly and press Flex 2000 into any voids that form. Always ensure that the cable is free of tension and strain after sealing. Finally, the sealing compound set back approx. 1 cm is pressed in well and smoothed with a metal filler knife. As an additional safeguard, the opening of the duct is closed with fast-curing cement. If a new cable is to be installed later on, the mortar barrier is removed and the cable is pushed through the sealing compound. The duct is subsequently sealed using Flex 2000.





# MASTER-SEAL

## Modular seal



- Preassembled
- Fast and easy installation
- Tested up to 30 m water column
- Can be retrofitted (all gasket inserts are also separable)

Area of installation Core drill hole mm Lining pipe FASO/ WELLO/DURO Plus	Medium pipe outer Ø mm		Type	Weight	Stainless steel	Galvanised
	from	to			Art. no.	Art. no.
50	11	19	4 x 275	0.08 kg	110250	110600
50	20	25	4 x 200	0.08 kg	110255	110605
80	20	33	4 x 350	0.32 kg	110260	110610
80	34	44	5 x 300	0.30 kg	110265	110615
80	45	49	6 x 250	0.14 kg	110267	110617
80	50	55	7 x 200	0.14 kg	110268	110618
100	27	38	4 x 375	0.52 kg	110270	110620
100	39	50	6 x 350	0.48 kg	110275	110625
100	56	64	6 x 300	0.36 kg	110280	110630
100	65	69	8 x 250	0.16 kg	110281	110631
100	70	75	9 x 200	0.18 kg	110282	110632
125	41	44	4 x 475	1.04 kg	110283	110633
125	45	52	4 x 415	0.96 kg	110284	110634
125	53	63	5 x 375	0.65 kg	110285	110635
125	64	78	7 x 350	0.56 kg	110290	110640
125	79	90	8 x 300	0.48 kg	110295	110645
125	90	94	11 x 250	0.22 kg	110296	110646
125	96	100	11 x 200	0.22 kg	110297	110647
150	58	69	5 x 475	1.30 kg	110298	110648
150	63	76	5 x 415	1.20 kg	110300	110650
150	75	82	6 x 375	0.75 kg	110305	110655
150	88	103	9 x 350	0.68 kg	110310	110660
150	106	115	10 x 300	0.60 kg	110315	110665
150	113	118	14 x 250	0.28 kg	110316	110666
150	120	124	14 x 200	0.28 kg	110317	110667
200	88	107	6 x 575	2.50 kg	110320	110670
200	108	118	7 x 475	1.82 kg	110325	110675
200	115	122	7 x 415	1.68 kg	110330	110680
200	125	138	9 x 375	1.17 kg	110335	110685
200	140	153	13 x 350	0.98 kg	110340	110690
200	156	165	14 x 300	0.84 kg	110345	110695
200	164	168	19 x 250	0.38 kg	110346	110696
200	171	174	19 x 200	0.38 kg	110347	110697



Place MASTER-SEAL around the medium pipe and seal



Push MASTER-SEAL into the annular gap



Tighten each screw one by one in a circular direction by turning once until all modules are evenly tightened.



MASTER-SEAL installation complete

# MASTER-SEAL

## Modular seal

YouTube



Area of installation Core drill hole mm Lining pipe FASO/ WELLO/DURO Plus	Medium pipe outer Ø mm		Type	Weight	Stainless steel	Galvanised
	from	to			Art. no.	Art. no.
250	114	130	6 x 500	3.72 kg	110350	110700
250	137	158	8 x 575	3.32 kg	110355	110705
250	159	166	9 x 475	2.34 kg	110360	110710
250	166	178	7 x 400	2.17 kg	110365	110715
250	178	185	12 x 375	1.50 kg	110370	110720
250	182	189	7 x 425	1.75 kg	110371	110721
250	192	200	17 x 350	1.28 kg	110372	110722
250	194	202	9 x 325	1.22 kg	110373	110723
250	208	213	18 x 300	1.08 kg	110374	110724
300	188	204	10 x 575	4.18 kg	110375	110725
300	206	217	12 x 475	3.12 kg	110380	110730
300	215	226	12 x 415	2.88 kg	110385	110735
300	228	236	15 x 375	1.88 kg	110386	110736
300	232	242	9 x 425	2.25 kg	110387	110737
300	244	253	11 x 325	1.49 kg	110388	110738
300	258	263	22 x 300	1.32 kg	110389	110739
350	219	231	9 x 500	5.58 kg	110390	110740
350	239	253	12 x 575	4.98 kg	110395	110745
350	265	275	14 x 415	3.36 kg	110400	110750
350	276	286	18 x 375	2.25 kg	110405	110755
350	314	317	35 x 250	0.70 kg	110408	110758
400	239	256	10 x 650	9.50 kg	110410	110760
400	265	274	11 x 500	6.82 kg	110415	110765
400	314	328	12 x 400	3.66 kg	110420	110770
400	343	350	15 x 325	2.03 kg	110425	110775
450	358	370	19 x 475	4.94 kg	110430	110780
450	366	379	14 x 400	4.27 kg	110435	110785
450	393	405	17 x 325	2.30 kg	110440	110790
500	311	326	8 x 600	14.56 kg	110443	110793
500	340	358	13 x 650	12.38 kg	110445	110795
500	390	407	18 x 575	7.47 kg	110450	110800
500	409	419	21 x 475	5.46 kg	110455	110805
550	390	408	14 x 650	13.30 kg	110460	110810
550	415	435	15 x 500	9.30 kg	110465	110815
550	440	457	20 x 575	8.30 kg	110470	110820
550	457	470	23 x 475	5.98 kg	110475	110825
600	410	440	10 x 600	18.20 kg	110480	110830
600	440	458	16 x 650	15.20 kg	110485	110835
600	490	505	22 x 575	9.13 kg	110490	110840
600	515	528	19 x 400	5.80 kg	110495	110845

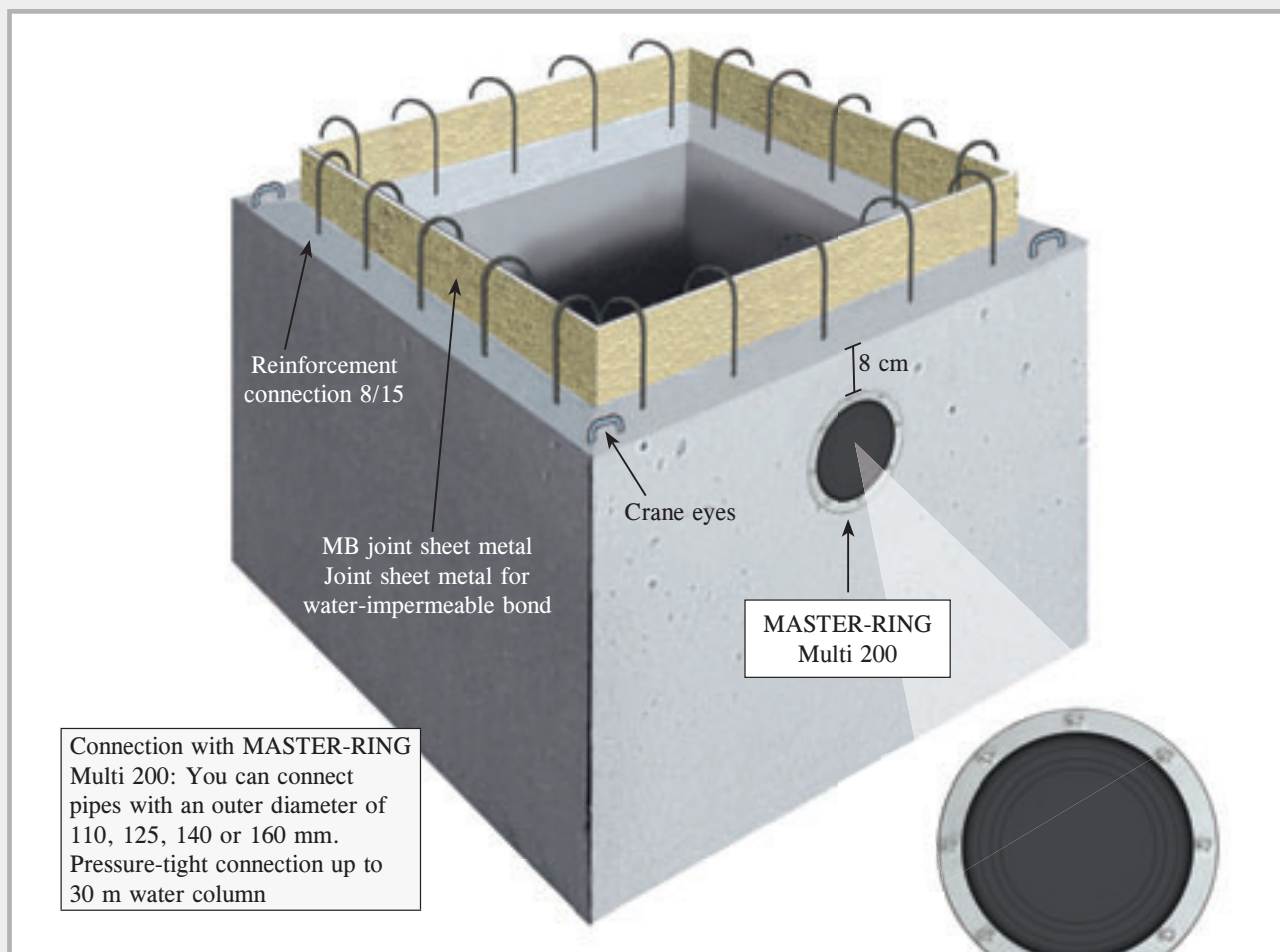
Additional sizes available immediately ex stock

**Installation:** After insertion of the modular seal and lead-through of the medium pipe, the screws are tightened one by one in a clockwise direction. Give each screw one turn and repeat this procedure several times so the rubber is pressed out uniformly.

Maximum torques	TYPE	200/250/275	3 Nm	500/525	60 Nm	650	85 Nm
		300/325/350/375	15 Nm	575	50 Nm	600	130 Nm
		400/415/425/475	35 Nm				

# PILO

## Pump sump Multi “Standard”



Pressure-tight and flexible with the MASTER RING Multi 200

The PILO pump sump is a precast concrete part made of water-impermeable concrete C 35/45.

- reduces the construction time
- eliminates difficult shuttering
- easy installation
- manufactured from water-impermeable concrete
- watertight connection thanks to use of MPA-tested joint sheet metal
- Connection reinforcement
- Crane eyes

### Sizes of PILO pump sump Multi “Standard”

Art. no.	Inner dimensions W x L x H	Wall thickness	Weight	Outer dimensions W x L x H	PU
090450	60 x 60 x 60 cm	12 cm	approx. 730 kg	84 x 84 x 72 cm	1 pc.
090452	80 x 80 x 80 cm	12 cm	approx. 1320 kg	104 x 104 x 92 cm	1 pc.
090454	100 x 100 x 80 cm	12 cm	approx. 1640 kg	124 x 124 x 92 cm	1 pc.
<b>NEW!</b> 090455	100 x 100 x 100 cm	12 cm	approx. 1890 kg	124 x 124 x 112 cm	1 pc.
090456	120 x 120 x 80 cm	12 cm	approx. 2050 kg	144 x 144 x 92 cm	1 pc.

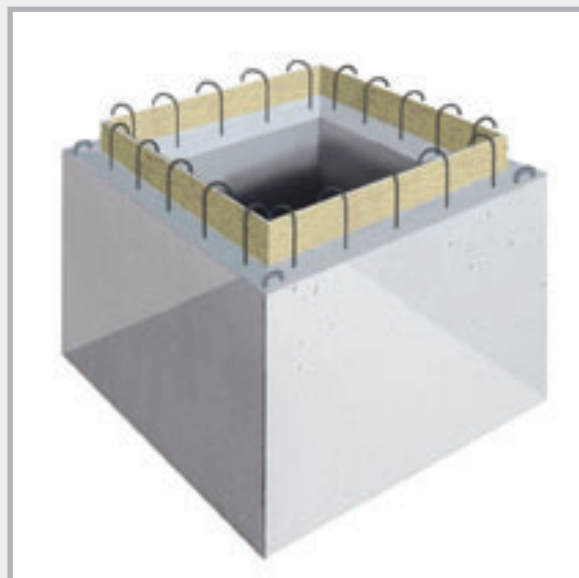
Due to the production process, the pump sumps are slightly tapered. The internal width-wise and length-wise dimensions reduce towards the base of the duct.

# PILO

## Pump sump “Spezial”

- ➔ Water-impermeable concrete C35/45
- ➔ with joint sheet metal MB
- ➔ Connection reinforcement

The PILO pump sump “Spezial” has no borehole. These are made at the last minute according to your specifications.



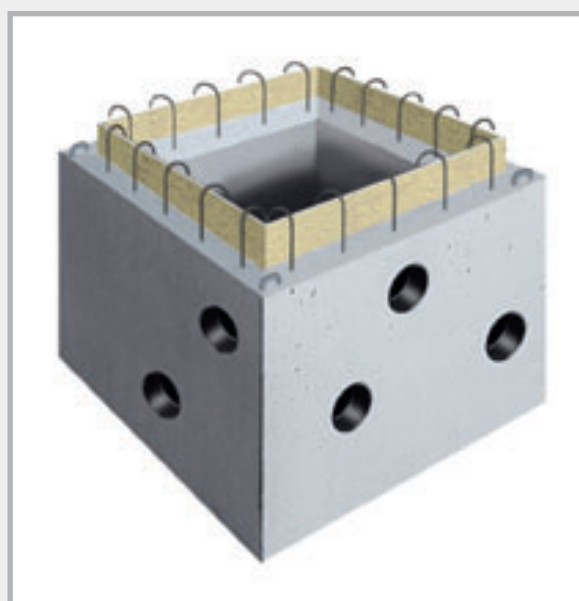
### Sizes of PILO pump sump without borehole

NEW!

Art. no.	Inner dimensions W x L x H	Wall thickness	Weight	Outer dimensions W x L x H	PU
090443	60 x 60 x 60 cm	12 cm	approx. 730 kg	84 x 84 x 72 cm	1 pc.
090445	80 x 80 x 80 cm	12 cm	approx. 1320 kg	104 x 104 x 92 cm	1 pc.
090447	100 x 100 x 80 cm	12 cm	approx. 1640 kg	124 x 124 x 92 cm	1 pc.
090448	100 x 100 x 100 cm	12 cm	approx. 1890 kg	124 x 124 x 112 cm	1 pc.
090449	120 x 120 x 80 cm	12 cm	approx. 2050 kg	144 x 144 x 92 cm	1 pc.

### Boreholes

Art. no.	
090440	Core drill hole DN 200, flexible connection 110, 125, 140 and 160 mm, incl. MASTER-RING Multi DN 200
090430	Connection for sewage pipe DN 110 incl. connection seal
090432	Additional connection for sewage pipe DN 125 incl. connection seal
090433	Additional connection for sewage pipe DN 160 incl. connection seal
090436	Additional connection for sewage pipe DN 200 incl. connection seal



The connection bores are made according to your specifications.  
The options are listed in the table.



# Shaft cover for pump sump

## Walkable covers, galvanised

Pump sump L x W x H Dimensions	60 x 60 x 60 cm	80 x 80 x 80 cm	100 x 100 x 80 cm	120 x 120 x 80 cm
clear dimension	65.5 x 65.5 cm	85.5 x 85.5 cm	105.5 x 105.5 cm	122 x 122 cm
cover size	70 x 70 cm	90 x 90 cm	110 x 110 cm	126.5 x 126.5 cm
frame outer dimension	71 x 71 cm	91 x 91 cm	111 x 111 cm	131 x 131 cm
<b>can withstand loads up to 750 kg</b> Art. no. Weight/pc.	<b>090532</b> 15.0 kg	<b>090534</b> 24.0 kg	<b>090536</b> 44.0 kg	<b>090538</b> 66.0 kg
<b>can be bolted down tightly to exclude surface water and odours, can withstand loads up to 750 kg</b> Art. no. Weight/pc.	<b>090542</b> 26.0 kg	<b>090544</b> 39.0 kg	<b>090546</b> 55.0 kg	<b>090548</b> 74.0 kg

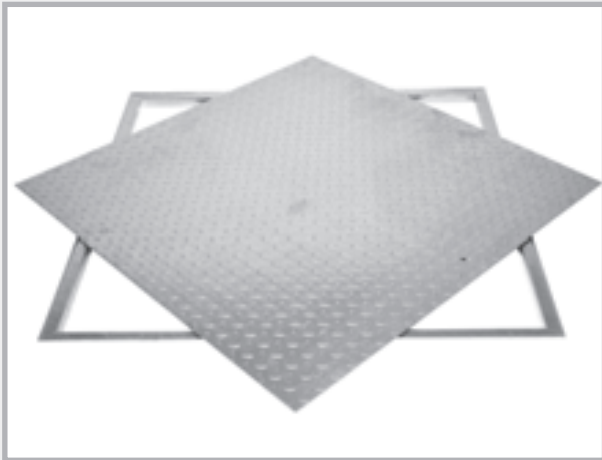
## Traffic-bearing covers, galvanised

Pump sump L x W x H Dimensions	60 x 60 x 60 cm	80 x 80 x 80 cm	100 x 100 x 80 cm	120 x 120 x 80 cm
clear dimension	63 x 63 cm	83 x 83 cm	103 x 103 cm	120 x 120 cm
cover size	70 x 70 cm	90 x 90 cm	110 x 110 cm	126.5 x 126.5 cm
frame outer dimension	74 x 74 cm	94 x 94 cm	114 x 114 cm	131 x 131 cm
<b>traffic-bearing up to 5000 kg</b> <b>wheel pressure up to 1250 kg</b> Art. no. Weight/pc.	<b>090552</b> 32.0 kg	<b>090554</b> 51.0 kg	<b>090556</b> 70.0 kg	<b>090558</b> 112.0 kg
<b>traffic-bearing up to 15000 kg</b> <b>wheel pressure up to 3750 kg</b> Art. no. Weight/pc.	<b>090562</b> 43.0 kg	<b>090564</b> 70.0 kg	<b>090566</b> 97.0 kg	<b>090568</b> 137.0 kg

# Shaft cover for pump sump

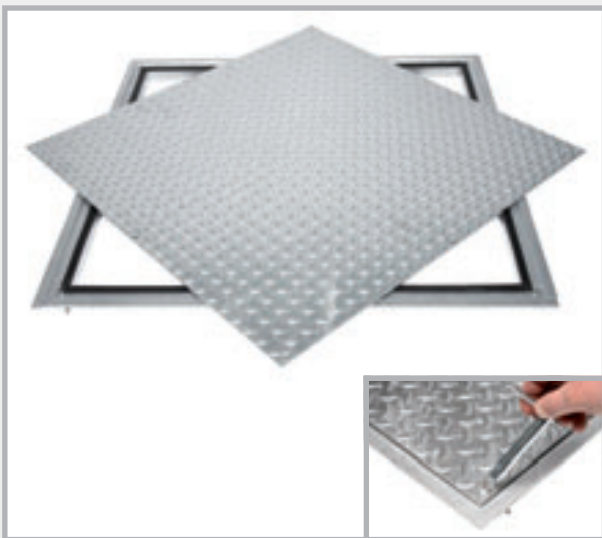
## walkable

Frame and cover galvanised, with 1 borehole as lifting opening



## walkable

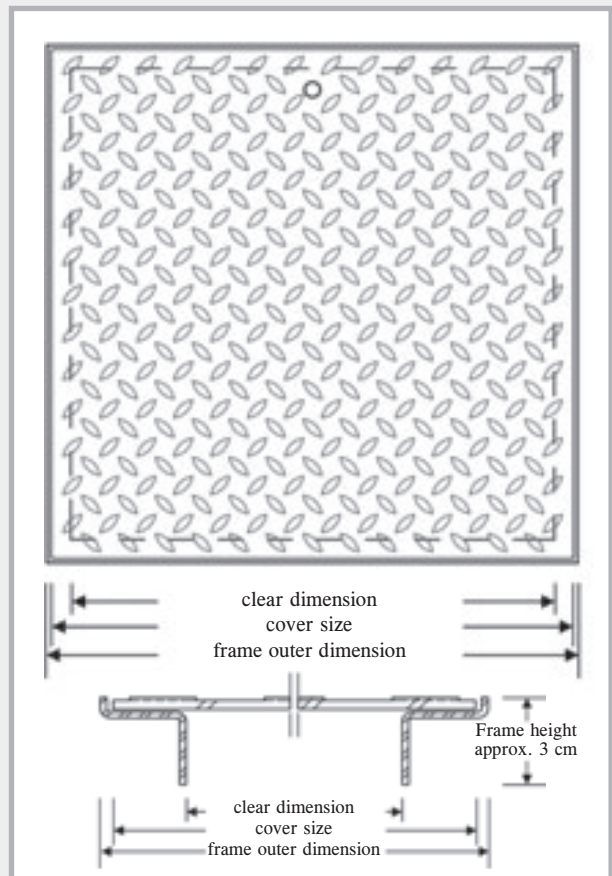
Can be bolted down tightly to exclude surface water and odours, galvanised frame and cover, EPDM cellular-rubber seal in frame, cover can be screwed



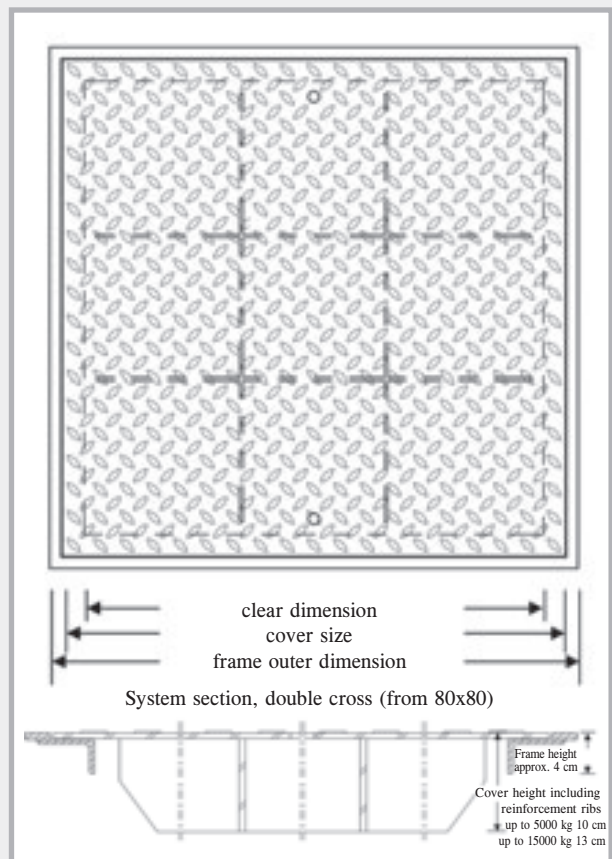
## traffic-bearing, galvanised



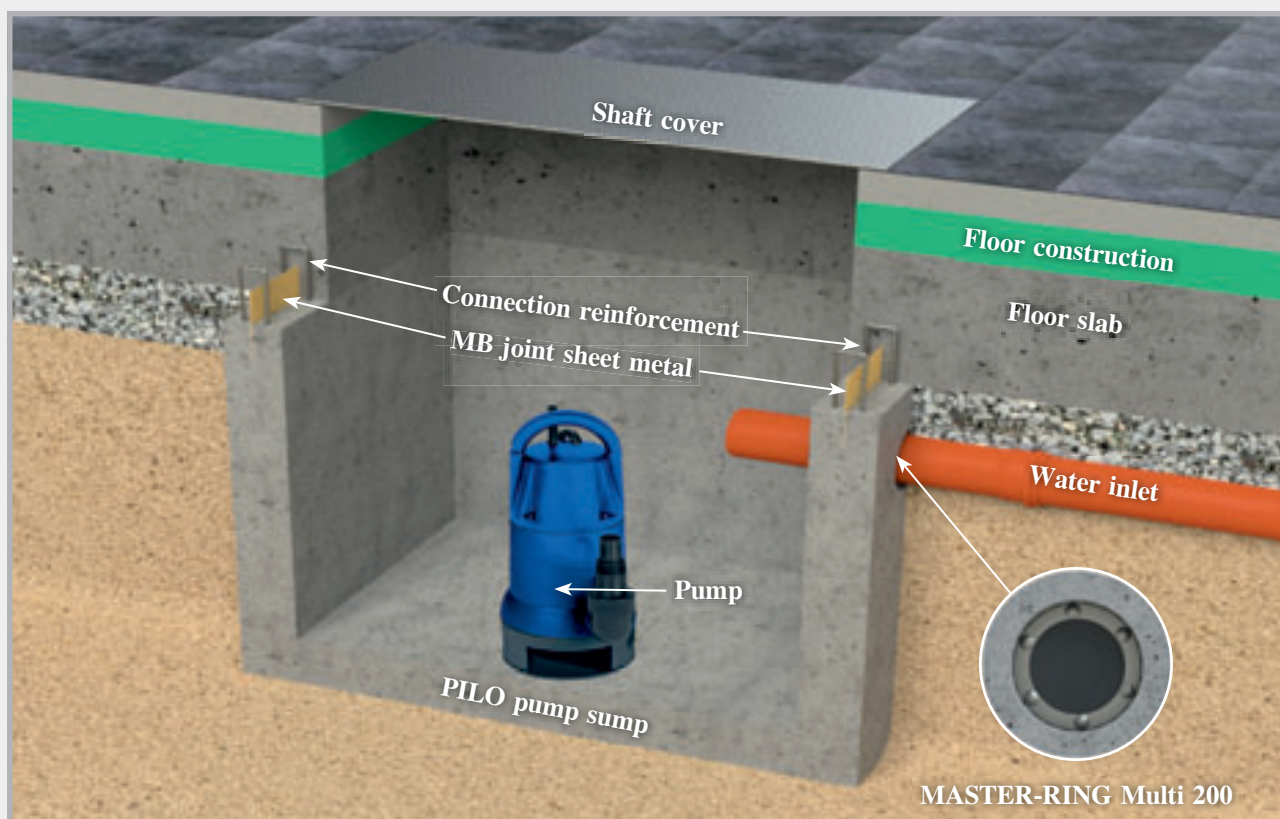
## Dimensions, walkable



## Dimensions, traffic-bearing



# Principle of operation of the PILO pump sump



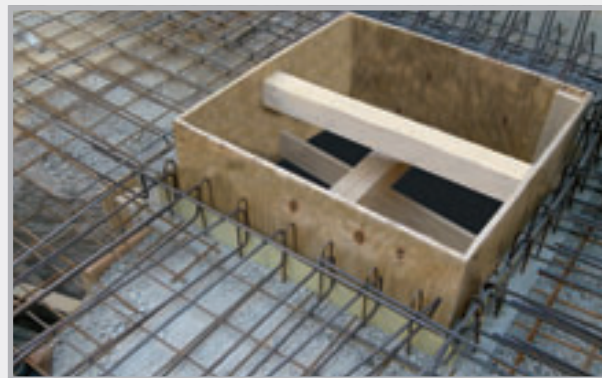
## At the construction site



PILO pump sump with connected inlet.



Following concreting: illustration shows the pump sump (light grey) and concreted foundation (dark grey).



PILO pump sump prior to concreting of foundation. The illustration shows the joint sheet metal which forms a pressure water-tight seal at the transition to the foundation. The connection reinforcement of the pump sump is connected to the foundation reinforcement.

**Compared to in-situ concrete construction you can save between 200 and 500 euro, depending on the size of the pump sump.**



# LIGHTNING PROTECTION



**Earth conductors**  
pages 108 – 110



**Connectors**  
pages 111 – 116



**Fixed earthing terminals, wall bushings + accessories**  
pages 117 – 128



# Earth conductors

Dimensions and materials according to DIN EN 62561-2

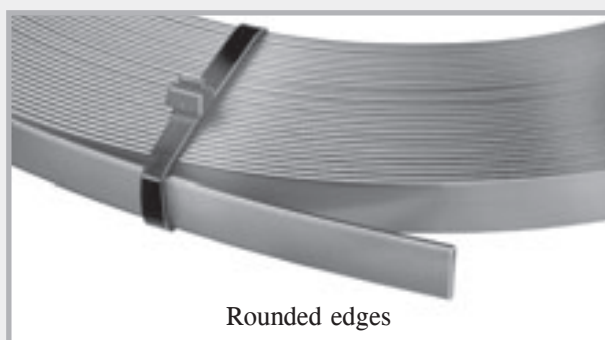
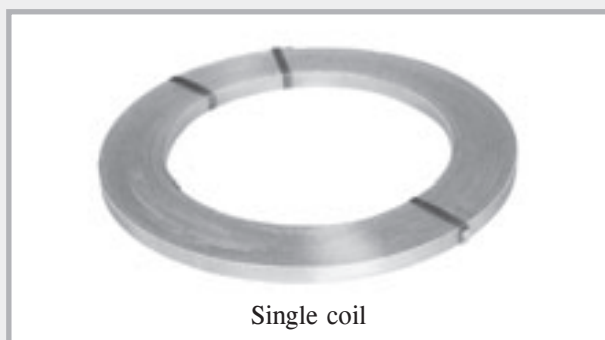
## Earthing straps

### Galvanised

Art. no.	Size	Material	PU	Secondary packaging
<b>100014</b>	30 x 3.5 mm	Galvanised steel Z 500	Roll 25 kg = approx. 30 m	40 rolls per pallet
<b>100016</b>	30 x 3.5 mm	Galvanised steel Z 500	Roll 50 kg = approx. 60 m	20 rolls per pallet
<b>100022</b>	40 x 4.0 mm	Galvanised steel Z 500	Roll 50 kg = approx. 39 m	20 rolls per pallet
<b>100024</b>	40 x 5.0 mm	Galvanised steel Z 500	Roll 50 kg = approx. 32 m	20 rolls per pallet

### Stainless steel

Art. no.	Size	Material	PU	Secondary packaging
<b>100028</b>	30 x 3.5 mm	A2 stainless steel according to DIN EN 62561-2	Roll 25 kg = approx. 30 m	40 rolls per pallet
<b>100030</b>	30 x 3.5 mm	A2 stainless steel according to DIN EN 62561-2	Roll 50 kg = approx. 60 m	20 rolls per pallet
<b>100031</b>	30 x 3.5 mm	A4 stainless steel according to DIN EN 62561-2	Roll 25 kg = approx. 30 m	40 rolls per pallet
<b>100032</b>	30 x 3.5 mm	A4 stainless steel according to DIN EN 62561-2	Roll 50 kg = approx. 60 m	20 rolls per pallet
<b>100035</b>	40 x 4.0 mm	A4 stainless steel according to DIN EN 62561-2	Roll 50 kg = approx. 39 m	20 rolls per pallet



# Round wires



Single coil



Packaging

## Galvanised

Art. no.	Size	Material	PU	Secondary packaging
<b>100040</b>	Ø 8 mm	Galvanised steel Z 350	Roll 40 kg = approx. 100 m	24 rolls per pallet
<b>100041</b>	Ø 10 mm	Galvanised steel Z 350	Roll 25 kg = approx. 40.5 m	40 rolls per pallet
<b>100042</b>	Ø 10 mm	Galvanised steel Z 350	Roll 50 kg = approx. 81 m	20 rolls per pallet



Single coil



Packaging

## Stainless steel standard

Art. no.	Size	Material	PU	Secondary packaging
<b>100051</b>	Ø 10 mm	A2 according to DIN EN 62561-2	Roll 25 kg = approx. 40.5 m	20 rolls per pallet
<b>100052</b>	Ø 10 mm	A2 according to DIN EN 62561-2	Roll 50 kg = approx. 81 m	10 rolls per pallet
<b>100055</b>	Ø 10 mm	A4 according to DIN EN 62561-2	Roll 25 kg = approx. 40.5 m	20 rolls per pallet
<b>100056</b>	Ø 10 mm	A4 according to DIN EN 62561-2	Roll 50 kg = approx. 81 m	10 rolls per pallet
<b>NEW 100062</b>	Ø 10 mm	A4 according to DIN EN 62561-2	Roll 31 kg = approx. 50 m	16 rolls per pallet

## Stainless steel SUPER-SOFT

A special manufacturing procedure ensures uniformly soft quality of the wire. SUPER-SOFT can be unrolled very easily and lies flat without undulation.



Single coil



Packaging

Art. no.	Size	Material	PU	Secondary packaging
<b>100061</b>	Ø 10 mm	SUPER-SOFT A4 according to DIN EN 62561-2, ID 900 mm	25 kg = approx. 40.5 m	40 rolls per pallet
<b>100059</b>	Ø 10 mm	SUPER-SOFT A4 according to DIN EN 62561-2, ID 900 mm	50 kg = approx. 81 m	20 rolls per pallet

# Round wires

## Aluminium



Single coil



Packaging

Art. no.	Size	Material	PU	Secondary packaging
<b>100084</b>	Ø 8 mm	ALU AlMgSi medium hard	20 kg = approx. 148 m	18 rolls per pallet
<b>100080</b>	Ø 8 mm	ALU AlMgSi soft-twistable	20 kg = approx. 148 m	18 rolls per pallet
<b>100082</b>	Ø 8/11 mm	ALU AlMgSi soft-twistable with halogen-free plastic coating	20 kg = approx. 100 m	18 rolls per pallet
<b>100088</b>	Ø 10 mm	ALU AlMgSi soft	20 kg = approx. 95 m	18 rolls per pallet



Single coil



Packaging

## Copper

Art. no.	Size	Material	PU	Secondary packaging
<b>100090</b>	Ø 8 mm	F 22 soft	50 kg = approx. 111 m	10 rolls per pallet
<b>100092</b>	Ø 8 mm	F 25 medium hard	50 kg = approx. 111 m	10 rolls per pallet



Single coil



Packaging

## Steel with plastic coating

Art. no.	Size	Material	PU	Secondary packaging
<b>100060</b>	Ø 10/13 mm	Galvanised steel Z 350 with plastic coating	50 kg = approx. 75 m	10 rolls per pallet
<b>100065</b>	Ø 10/13 mm	Galvanised steel Z 350 with plastic coating	35 kg = approx. 52 m	15 rolls per pallet

# Connectors

## Multi-purpose connecting clamps with mushroom head bolt and protection against twisting



with mushroom head bolt and protection against twisting

Art. no.	Description	PU	Weight
100147	Galvanised steel, 2-part, round/round clamping range: Ø 8 - 10 mm, M10 with mushroom head bolt and protection against twisting	1 carton of 50 pcs.	5.00 kg per carton
100149	V2A, 2-part, round/round clamping range: Ø 8 - 10 mm, M10 with mushroom head bolt and protection against twisting	1 carton of 50 pcs.	4.60 kg per carton
100150	V4A, 2-part, round/round clamping range: Ø 8 - 10 mm, M10 with mushroom head bolt and protection against twisting	1 carton of 50 pcs.	4.60 kg per carton

## Multi-purpose connecting clamps with thread in lower part



Thread in lower part

Art. no.	Description	PU	Weight
100157	Galvanised steel, 2-part, round/round clamping range: Ø 8 - 10 mm, M10 Thread in lower part	1 carton of 50 pcs.	4.50 kg per carton
100158	V2A, 2-part, round/round clamping range: Ø 8 - 10 mm, M10 Thread in lower part	1 carton of 50 pcs.	3.90 kg per carton
100159	V4A, 2-part, round/round clamping range: Ø 8 - 10 mm, M10 Thread in lower part	1 carton of 50 pcs.	3.80 kg per carton
100153	Aluminium, 2-part, round/round clamping range: 8-10 mm NIRO M10 screw Thread in lower part	1 carton of 50 pcs.	3.00 kg per carton
100154	Aluminium with spring washer, 2-part, round/round, clamping range 8-10 mm NIRO M10 screw Thread in lower part	1 carton of 50 pcs.	3.00 kg per carton
100155	Copper, 2-part, round/round clamping range: 8 mm NIRO M10 screw Thread in lower part	1 carton of 50 pcs.	6.00 kg per carton



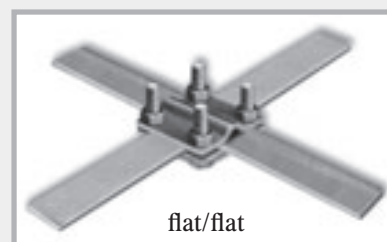
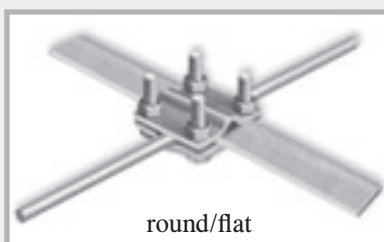
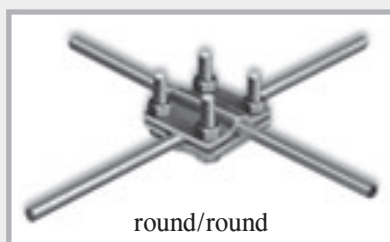
# Connectors

## Stainless steel cross connectors, round/round

Clamping range: round cond. Ø 8 + 10 mm, flat cond. up to 30 mm

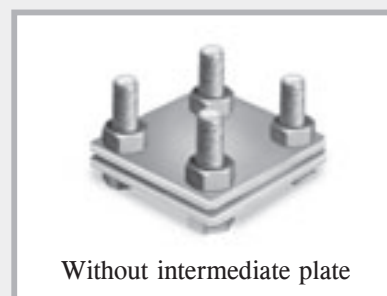
Universal for flat/flat, flat/round and round/round

Art. no.	Description	PU	Weight
<b>100143</b>	<b>V4A</b> , 2-part, round/round universal heavy duty version, M8 screws	1 carton of 50 pcs.	9.60 kg per carton
<b>100145</b>	<b>V4A</b> , 2-part, round/round universal light version, M6 screws	1 carton of 50 pcs.	6.90 kg per carton



## Galvanised cross connectors, flat/flat

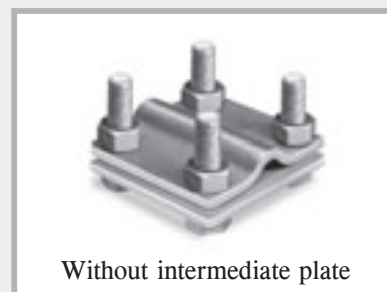
for earthing strap up to 30 mm wide



Art. no.	Description	PU	Weight
<b>100100</b>	<b>Galvanised steel</b> , 2-part, flat/flat heavy duty version, M8 screws	1 carton of 50 pcs.	10.50 kg per carton
<b>100106</b>	<b>Galvanised steel</b> , 2-part, flat/flat light version, M6 screws	1 carton of 50 pcs.	7.50 kg per carton

## Galvanised cross connectors, flat/round

for round conductors Ø 8 + 10 mm and earthing strap up to 30 mm width

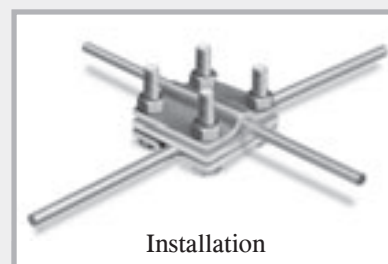
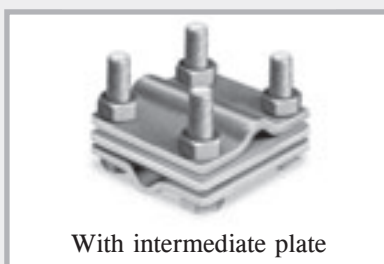
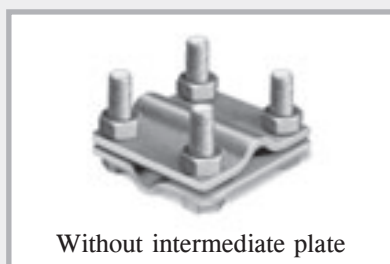


Art. no.	Description	PU	Weight
<b>100115</b>	<b>Galvanised steel</b> , 2-part, flat/round heavy duty version, M8 screws	1 carton of 50 pcs.	10.70 kg per carton
<b>100121</b>	<b>Galvanised steel</b> , 2-part, flat/round light version, M6 screws	1 carton of 50 pcs.	7.60 kg per carton

# Connectors

## Galvanised cross connectors, round/round for round conductors Ø 8 + 10 mm

Art. no.	Description	PU	Weight
<b>100127</b>	<b>Galvanised steel</b> , 2-part, round/round heavy duty version, M8 screws	1 carton of 50 pcs.	10.90 kg per carton
<b>100130</b>	<b>Galvanised steel</b> , 3-part, round/round heavy duty version, M8 screws With intermediate plate	1 carton of 50 pcs.	14.50 kg per carton
<b>100133</b>	<b>Galvanised steel</b> , 2-part, round/round light version, M6 screws	1 carton of 50 pcs.	7.70 kg per carton

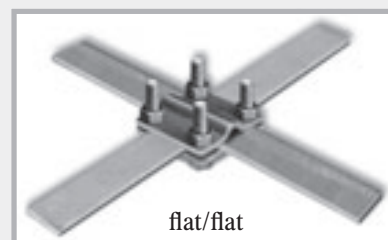
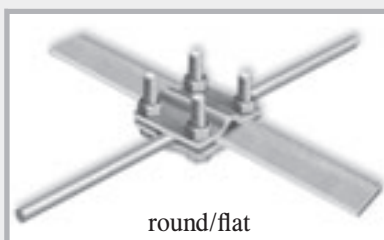
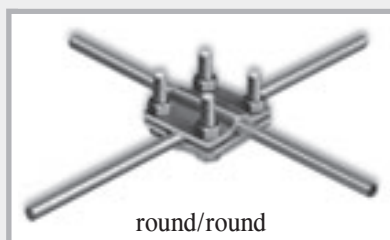


## Galvanised cross connectors, round/round

Clamping range: round cond. Ø 8 + 10 mm, flat cond. 30 + 40 mm

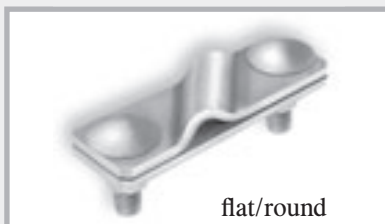
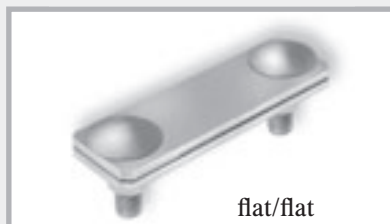
Universal for flat/flat, flat/round and round/round

Art. no.	Description	PU	Weight
<b>100129</b>	<b>Galvanised steel</b> , 2-part Round/round heavy duty version, M8 screws	1 carton of 50 pcs.	17.80 kg per carton



# Connectors

## Double clamps



## Stainless steel double clamps

for earthing strip up to 40 mm width and round conductors 8-12 mm

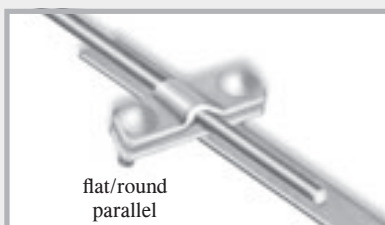
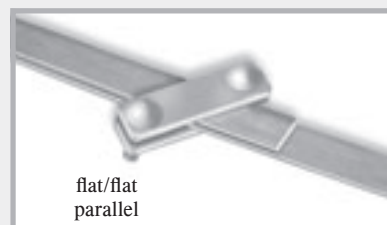
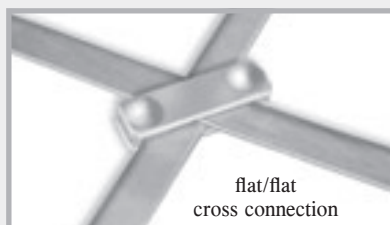
Art. no.	Description	PU	Weight
100273	V4A, 2-part, flat/flat heavy duty version, M10 screws	1 carton of 50 pcs.	10.00 kg per carton
100279	V4A, 2-part, flat/round heavy duty version, M10 screws	1 carton of 50 pcs.	9.50 kg per carton
100282	V2A, 2-part, round/round heavy duty version, M10 screws	1 carton of 50 pcs.	9.50 kg per carton
100285	V4A, 2-part, round/round heavy duty version, M10 screws	1 carton of 50 pcs.	9.50 kg per carton

## Galvanised double clamps

for earthing strip up to 40 mm width and round conductors 8-12 mm

Art. no.	Description	PU	Weight
100220	Galvanised steel, 2-part, flat/flat heavy duty version, M10 screws	1 carton of 50 pcs.	12.20 kg per carton
100225	Galvanised steel, 2-part, flat/round heavy duty version, M10 screws	1 carton of 50 pcs.	11.60 kg per carton
100230	Galvanised steel, 2-part, round/round heavy duty version, M10 screws	1 carton of 50 pcs.	11.60 kg per carton

## Possible clamping connections



# Connectors

## Single clamps

Art. no.	Description	PU	Weight
<b>100163</b>	<b>Galvanised steel</b> , 1 M10 screw flat conductor up to 30 mm round conductor 8 + 10 mm for T, cross and parallel connections	1 carton of 50 pcs.	6.20 kg per carton
<b>100162</b>	<b>V4A stainless steel</b> , 1 M10 screw flat conductor up to 30 mm round conductor 8 + 10 mm for T, cross and parallel connections	1 carton of 50 pcs.	5.30 kg per carton



Single clamp



flat/flat  
parallel connection



flat/flat  
cross connection



flat/round  
parallel connection




flat/flat/round  
connection




## Parallel connectors

Art. no.	Description	PU	Weight
<b>100240</b>	<b>Galvanised steel</b> , 1 M10 screw 2-part, Ø 8-10 mm	1 carton of 50 pcs.	7.20 kg per carton
<b>100243</b>	<b>V4A</b> , 1 M10 screw 2-part, Ø 8-10 mm	1 carton of 50 pcs.	6.20 kg per carton

## Wedge connector

Art. no.	Description	PU	Weight	
<b>100160</b>	<b>Galvanised steel</b> round conductor Ø 10 mm flat conductor up to 40 mm with lock-in position in the wedge	1 carton of 50 pcs.	11.0 kg per carton	 Wedge connector



**NEW!** **MAXI multi-purpose connecting clamp**  
for connection of round conductors to the reinforcement and conductive connection  
of reinforcing steel with up to 25 mm dia.

Art. no.	Description	PU	Weight	
<b>100148</b>	<b>Galvanised steel</b> , round/round Round cond. Ø 8-16 mm / 15-25 mm Mushroom head bolt and protection against twisting	1 carton of 25 pcs.	11.25 kg per carton	 Multi-purpose connecting clamp MAXI
<b>100152</b>	<b>V4A</b> , round/round Round cond. Ø 8-16 mm / 15-25 mm Mushroom head bolt and protection against twisting	1 carton of 25 pcs.	11.25 kg per carton	





# Connectors


## Connecting clamps for connection of flat conductor to reinforcement

Art. no.	Description	PU	Weight	
100250	<b>Galvanised steel</b> , M10 screw flat conductor up to 30 mm constructional steel 6-22 mm	1 carton of 50 pcs.	6.60 kg per carton	 Art. no. 100250 Art. no. 100251
100251	<b>Bright steel</b> , M10 screw flat conductor up to 30 mm constructional steel 6-22 mm	1 carton of 50 pcs.	6.60 kg per carton	
100253	<b>Galvanised steel</b> , M10 screw flat conductor up to 40 mm constructional steel 6-22 mm	1 carton of 50 pcs.	6.60 kg per carton	 Art. no. 100252 Art. no. 100253
100252	<b>V4A stainless steel</b> , M10 screw flat conductor up to 40 mm constructional steel 6-22 mm	1 carton of 50 pcs.	5.40 kg per carton	

## Connecting clamps for connection of flat and round conductors to reinforcement

Art. no.	Description	PU	Weight	
100255	<b>Galvanised steel</b> , M10 screw flat conductor up to 30 mm, round conductor 8 + 10 mm constructional steel 6-22 mm	1 carton of 50 pcs.	9.40 kg per carton	 Art. no. 100255 Art. no. 100256 Art. no. 100257
<b>NEW!</b> 100256	<b>Bright steel</b> , M10 screw flat conductor up to 30 mm, round conductor 8 + 10 mm constructional steel 6-22 mm	1 carton of 50 pcs.	9.40 kg per carton	
100257	<b>V4A stainless steel</b> , M10 screw flat conductor up to 30 mm, round conductor 8 + 10 mm constructional steel 6-22 mm	1 carton of 50 pcs.	8.20 kg per carton	
<b>NEW!</b> 100146	<b>Universal connecting clamp with pressure plate</b> <b>Galvanised steel</b> , M10 screw flat conductor up to 30 mm, round conductor 8 + 10 mm constructional steel 6-22 mm	1 carton of 50 pcs.	7.50 kg per carton	 Pressure plate Art. no. 100146 Art. no. 100254
<b>NEW!</b> 100254	<b>Universal connecting clamp with pressure plate</b> <b>V4A</b> , M10 screw flat conductor up to 30 mm round conductor 8 + 10 mm constructional steel 6-22 mm	1 carton of 50 pcs.	7.00 kg per carton	

## Connecting clamps for connection of round conductor to reinforcement

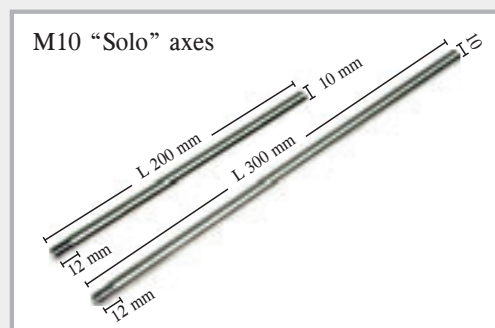
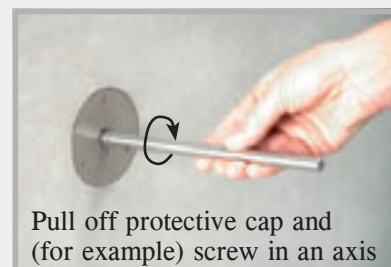
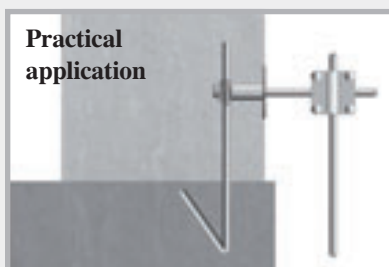
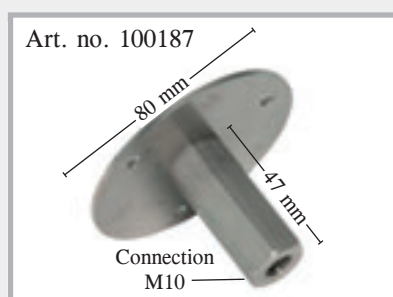
Art. no.	Description	PU	Weight	
100259	<b>Galvanised steel</b> , M10 screw round conductor 8 + 10 mm constructional steel 6-22 mm	1 carton of 50 pcs.	5.80 kg per carton	 Art. no. 100259 Art. no. 100260 Art. no. 100261
<b>NEW!</b> 100261	<b>Bright steel</b> , M10 screw round conductor 8 + 10 mm constructional steel 6-22 mm	1 carton of 50 pcs.	5.80 kg per carton	
100260	<b>V4A stainless steel</b> , M10 screw round conductor 8 + 10 mm constructional steel 6-22 mm	1 carton of 50 pcs.	5.10 kg per carton	

# Fixed earthing terminals, wall bushings + accessories

## Fixed earthing terminal M10/M12

to connect the equipotential bonding conductors to the foundation earth, reinforcement and lightning protection system

Art. no.	Description	PU	Weight
100187	Fixed earthing terminal M10/M12 V4A without axis, with yellow protective cap connection M10 + M12	1 carton of 10 pcs.	1.90 kg per carton
100202	Fixed earthing terminal M10/M12 V4A with mounted, galvanised axis, L 200 mm with yellow protective cap	1 carton of 10 pcs.	3.10 kg per carton
100200	Fixed earthing terminal M10/M12 V4A with mounted A2 multi-purpose connecting clamp with yellow protective cap	1 carton of 10 pcs.	2.50 kg per carton



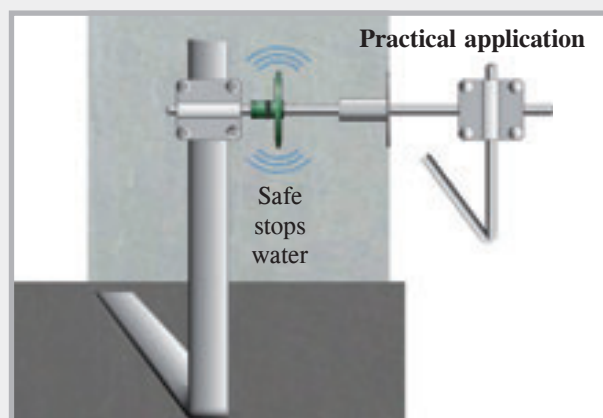
## M10 "Solo" axes for fixed earthing terminal

Art. no.	Description	PU	Weight
100183	galvanised, length 200 mm	Carton of 50 pcs.	6.50 kg/carton
100185	galvanised, length 300 mm	Carton of 50 pcs.	9.80 kg/carton
100184	V4A, length 200 mm	Carton of 50 pcs.	6.50 kg/carton
100186	V4A, length 300 mm	Carton of 50 pcs.	9.80 kg/carton

## M10 “Safe” axes for fixed earthing terminal Pressure water-tight

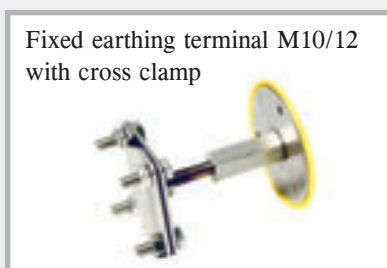


Art. no.	Description	PU	Weight
100177	galvanised, length 200 mm	1 pc.	0.15 kg/pc.
100178	galvanised, length 300 mm	1 pc.	0.21 kg/pc.
100179	V4A, length 200 mm	1 pc.	0.15 kg/pc.
100180	V4A, length 300 mm	1 pc.	0.21 kg/pc.



## Cross clamps for fixed earthing terminals M10/12

Art. no.	Description	PU	Weight
100188	<b>Cross clamp for fixed earthing terminal M10/12, galvanised</b> Thread M10, round 8 + 10 mm flat up to 40 mm, thread length 70 mm	Carton of 10 pcs.	3.90 kg per carton
100189	<b>Cross clamp for fixed earthing terminal M10/12, A4 stainless steel</b> Thread M10, round 8 + 10 mm flat up to 40 mm, thread length 70 mm	Carton of 10 pcs.	3.20 kg per carton



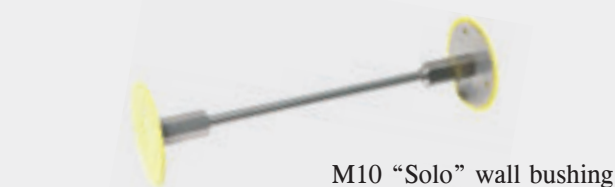
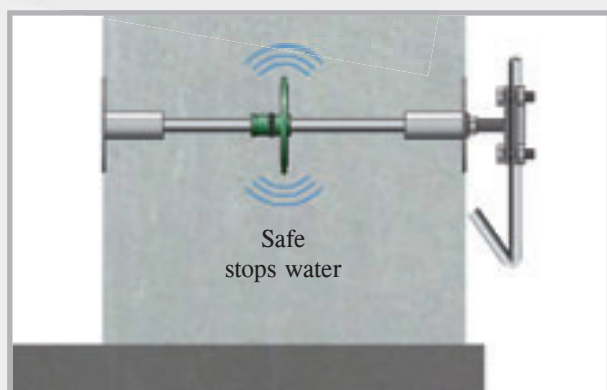
Fixed earthing terminal with  
screwed in cross clamp.  
Round and flat conductors can be  
connected.

## M10 wall bushings with pre-assembled fixed earthing terminals

The M10 wall bushings are pre-assembled and supplied in the exact wall thickness. Time-consuming adjustments are not required.

Fixed earthing terminal in stainless steel V4A, connection axes 10 mm stainless steel

Wall thickness	Art. no.	Weight	Art. no.	Weight
200 mm	100394	0.45 kg	100444	0.43 kg
240 mm	100396	0.46 kg	100446	0.44 kg
250 mm	100398	0.47 kg	100448	0.45 kg
300 mm	100400	0.50 kg	100450	0.48 kg
350 mm	100402	0.53 kg	100452	0.51 kg
365 mm	100404	0.54 kg	100454	0.52 kg
400 mm	100406	0.57 kg	100456	0.55 kg



## M10 connection axis for wall bushings

Stainless steel, diameter 10 mm, M10 thread at both ends,  
length of thread 12 mm

 <p>"Safe" connection axis</p>			 <p>"Solo" connection axis</p>	
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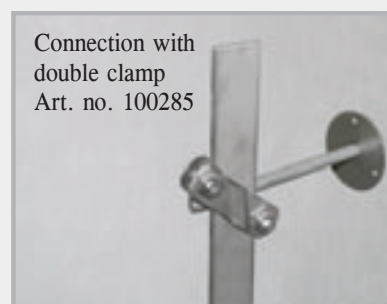
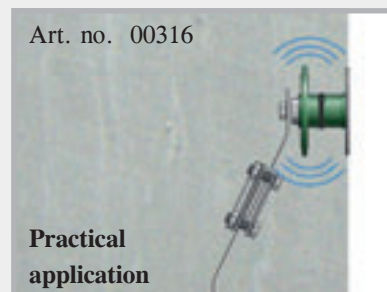
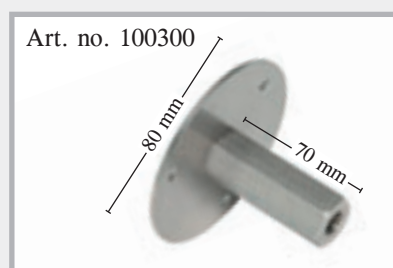
Wall thickness	Art. no.	Weight	Art. no.	Weight
200 mm	100360	0.12 kg	100410	0.10 kg
240 mm	100365	0.13 kg	100415	0.11 kg
250 mm	100370	0.14 kg	100420	0.11 kg
300 mm	100375	0.17 kg	100425	0.14 kg
350 mm	100380	0.20 kg	100430	0.17 kg
365 mm	100385	0.21 kg	100435	0.18 kg
400 mm	100390	0.23 kg	100440	0.20 kg



## Fixed earthing terminal M12

**NEW!** to connect the equipotential bonding conductors to the foundation earth, reinforcement and lightning protection system

Art. no.	Description	PU	Weight
100300	Fixed earthing terminal M12 V4A with yellow protective cap Connection M12	1 carton of 10 pcs.	2.00 kg per carton
100304	M12 "Safe" fixed earthing terminal with yellow protective cap and waterstop Connection M12	1 carton of 10 pcs.	2.40 kg per carton
100308	Connecting plate 40 x 4 mm incl. screw M12 x 25	1 carton of 10 pcs.	2.00 kg per carton
100312	Fixed earthing terminal M12 with connecting plate and yellow protective cap Connection M12	1 carton of 10 pcs.	4.00 kg per carton
100316	Fixed earthing terminal M12 "Safe" with connecting plate and yellow protective cap Connection M12	1 carton of 10 pcs.	4.40 kg per carton



**NEW!** M12 "Solo" axes for fixed earthing terminal

Art. no.	Description	PU	Weight
101170	galvanised, length 200 mm	Carton of 50 pcs.	8.00 kg/carton
101172	galvanised, length 300 mm	Carton of 50 pcs.	12.0 kg/carton
101174	V4A, length 200 mm	Carton of 50 pcs.	8.00 kg/carton
101176	V4A, length 300 mm	Carton of 50 pcs.	12.0 kg/carton

**NEW!** M12 “Safe” axes  
for fixed earthing terminal  
Pressure water-tight

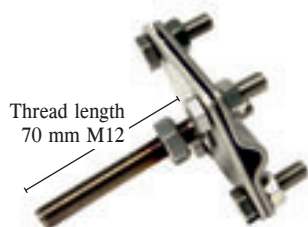


Art. no.	Description	PU	Weight
101180	galvanised, length 200 mm	1 pc.	0.19 kg/pc.
101182	galvanised, length 300 mm	1 pc.	0.27 kg/pc.
101184	V4A, length 200 mm	1 pc.	0.19 kg/pc.
101186	V4A, length 300 mm	1 pc.	0.27 kg/pc.

**NEW!** Cross clamps for fixed earthing terminals M12

Art. no.	Description	PU	Weight
100460	Cross clamp for fixed earthing terminal M12, galvanised Thread M12, thread length 70 mm Clamping range: round 8 + 10 mm, flat up to 40 mm	Carton of 10 pcs.	3.90 kg per carton
100462	Cross clamp for fixed earthing terminal M12, V4A Thread M12, thread length 70 mm Clamping range: round 8 + 10 mm, flat up to 40 mm	Carton of 10 pcs.	3.90 kg per carton
100464	Cross clamp for fixed earthing terminal M12, V4A Thread M12, thread length 200 mm Clamping range: round 8 + 10 mm, flat up to 40 mm	Carton of 10 pcs.	4.25 kg per carton

Art. no. 100460 + 100462



Art. no. 100464



## M12 wall bushings with pre-assembled fixed earthing terminals

**NEW!** The M12 wall bushings are pre-assembled and supplied in the exact wall thickness. Time-consuming adjustments are not required.

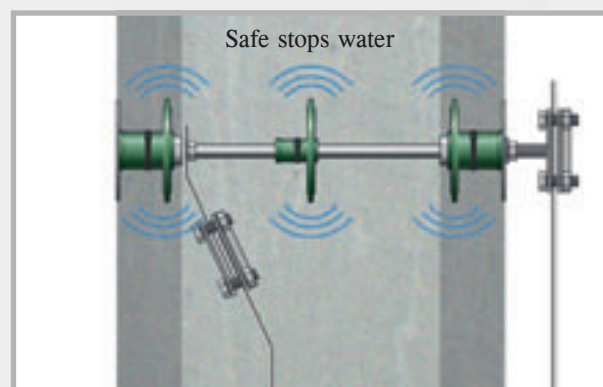
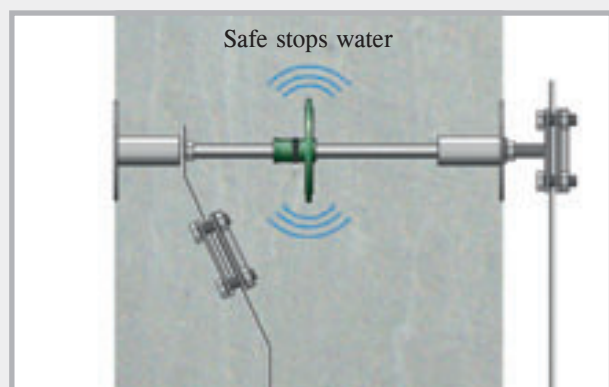
Fixed earthing terminal in stainless steel V4A, connection axes 12 mm stainless steel incl. connecting plate 4 x 40 mm

Wall thickness	Art. no.	Weight	Art. no.	Weight
200 mm	100334	0.53 kg	100348	0.61 kg
240 mm	100336	0.57 kg	100350	0.65 kg
250 mm	100338	0.58 kg	100352	0.66 kg
300 mm	100340	0.62 kg	100354	0.70 kg
350 mm	100342	0.67 kg	100356	0.75 kg
365 mm	100344	0.68 kg	100358	0.76 kg
400 mm	100346	0.72 kg	100359	0.80 kg

M12 "Safe" wall bushing

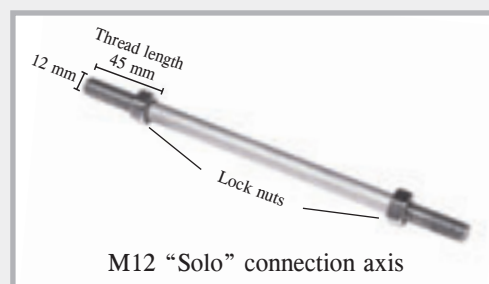


M12 "DW Safe" wall bushing



## M12 connection axis for wall bushings

**NEW!** Stainless steel,  
diameter 12 mm,  
M12 thread at both ends, length of thread 45 mm,  
incl. 2 lock nuts



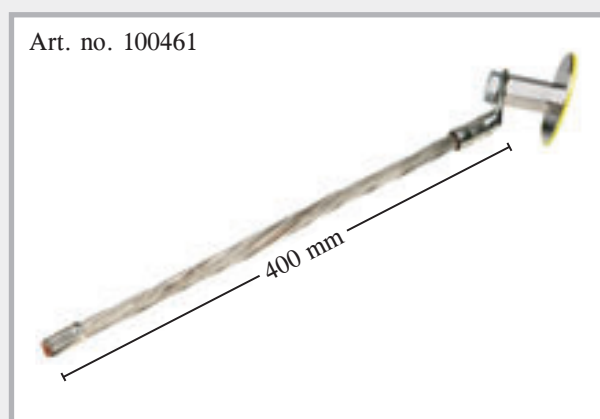
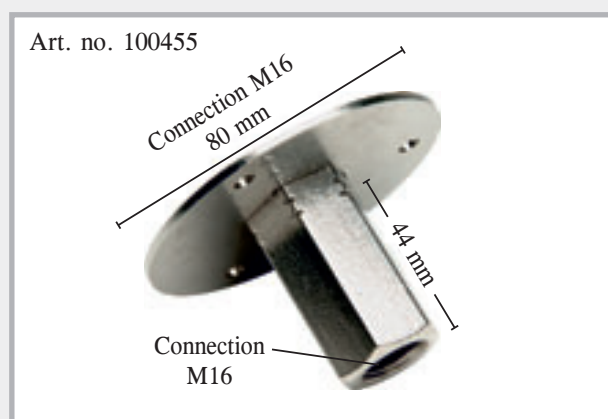
M12 "Solo" connection axis

Art. no.	Wall thickness	PU	Weight
100320	200 mm	1 pc.	0.10 kg
100322	240 mm	1 pc.	0.14 kg
100324	250 mm	1 pc.	0.15 kg
100326	300 mm	1 pc.	0.19 kg
100328	350 mm	1 pc.	0.24 kg
100330	365 mm	1 pc.	0.25 kg
100332	400 mm	1 pc.	0.29 kg

## Fixed earthing terminal M16

to connect the equipotential bonding conductors to the foundation earth electrode, reinforcement and lightning protection system

Art. no.	Description	PU	Weight
100455	<b>Fixed earthing terminal M16 V4A without axis with yellow protective cap</b> Connection M16	Carton of 10 pcs.	2.00 kg per carton
100461	<b>Fixed earthing terminal M16 V4A with flexible connection conductor</b> Connection conductor CU/SN 95 mm <sup>2</sup> Conductor length 400 mm	1 pc.	0.75 kg per pc.




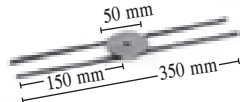
## Cross clamps for fixed earthing terminals M16

Art. no.	Description	PU	Weight
100458	<b>Cross clamp for fixed earthing terminal M16, A4 stainless steel</b> Thread M16, round 8 + 10 mm flat up to 40 mm Thread length 30 mm	Carton of 10 pcs.	3.20 kg per carton





## Accessories for fixed earthing terminal

Art. no.	Description	PU	Weight	
<b>100198</b>	<b>Plastic foam for fixed earthing terminal</b> self-adhesive on one side Ø 76 mm, thickness 20 mm	Bag of 10 pcs.	0.10 kg	
<b>100196</b>	<b>Fixing spider for fixed earthing terminal</b> steel/bright	1 pc.	0.13 kg	

### Installation



1  
Remove protective cap of  
fixed earthing terminal



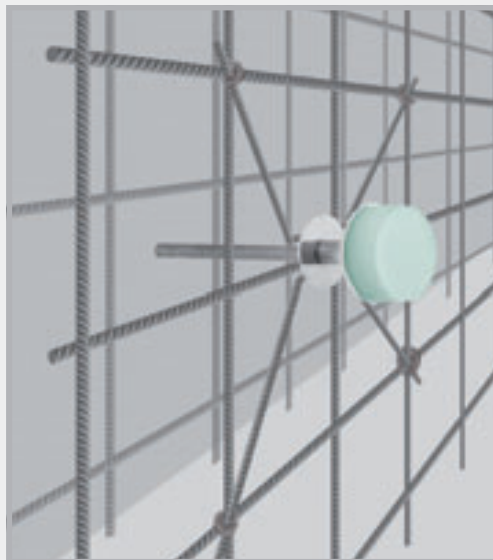
2  
Stick on plastic foam



3  
Screw axis through the fix-  
ing spider and fasten fixed  
earthing terminal



4  
Installation complete



Fixed earthing terminal with fixing spider on  
the reinforcement

# Lightning protection accessories

## MultiCap

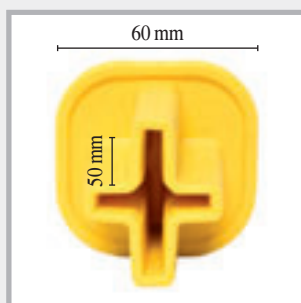
Protective cap  
to DIN 18014

PVC protective cap  
for round and flat conductors

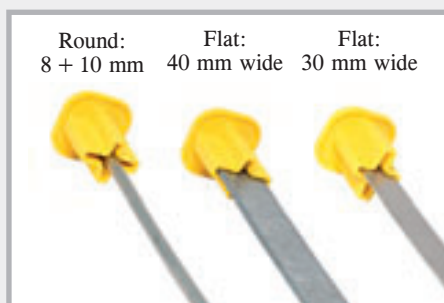


Art. no.	Description	PU	Weight
100500	<b>MultiCap</b> , colour: yellow area of application: round conductor: 8 + 10 mm flat conductor: 30 x 3.5 mm 40 x 4.0 mm 30 x 3.0 mm 40 x 5.0 mm	Bag of 100 pcs.	5.10 kg per bag

### Technical data



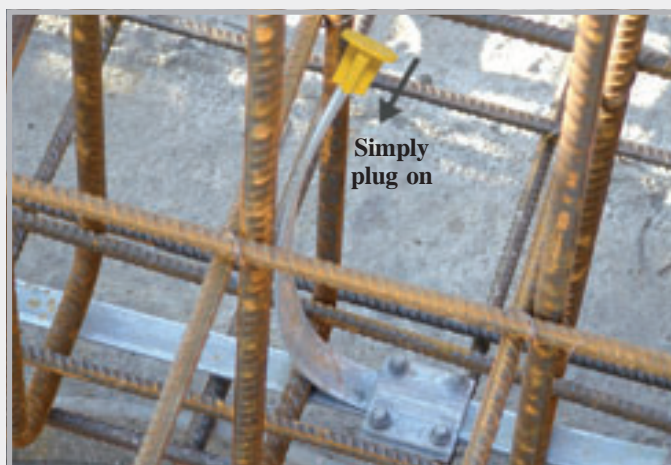
Material: PVC,  
large labelled safety cap  
60 x 60 mm,  
long mounting slot 50 mm



Round: 8 + 10 mm  
Flat: 40 mm wide  
Flat: 30 mm wide



MultiCap can be used universally



### Description

- No risk of injury
- Simply plug on
- Yellow signal colour
- One protection cap for 6 sizes

 YouTube



Excerpt from DIN 18014

Foundation earth electrode:

For safety reasons, the terminal lugs must be prominently marked during the construction phase.

# Lightning protection accessories

## Terminal lugs

### Round conductor rods, bevelled



Round conductor rods, bevelled

Art. no.	Description	Length	Packaging	Weight
100555	A4 round conductor Ø 10 mm	1.50 m	Bundle of 10 pcs.	9.40 kg/bundle
100560	A4 round conductor Ø 10 mm	2.00 m	Bundle of 10 pcs.	12.40 kg/bundle
100565	A4 round conductor Ø 10 mm	2.50 m	Bundle of 10 pcs.	15.60 kg/bundle
100570	A4 round conductor Ø 10 mm	3.00 m	Bundle of 10 pcs.	18.80 kg/bundle

## RONDO

### Sealing collars for lightning protection wire and earthing strap

RONDO sealing collars form pressure water-tight seals for lightning protection wires and earthing straps passing through concrete walls, floor slabs and shafts.



Art. no.	Description	PU	Secondary packaging	Weight
090890	RONDO RO 10 for lightning protection conductor 8 + 10 mm	1 pc.	Carton of 100 pcs.	0.13 kg
090892	RONDO RO flat for earthing strap 30x3.5 + 30x3.0 mm	1 pc.		0.17 kg
<b>NEW!</b> 090988	RONDO EFP For hexagon fixed earthing terminal	1 pc.		0.04 kg



RONDO RO 10



RONDO RO flat



RONDO EFP



RONDO RO 10, mounted



RONDO RO flat, mounted

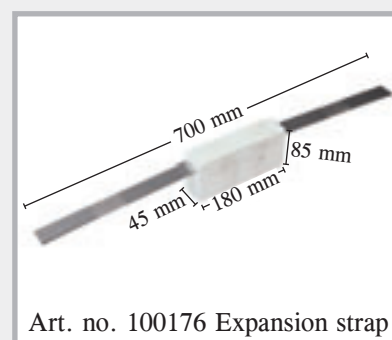
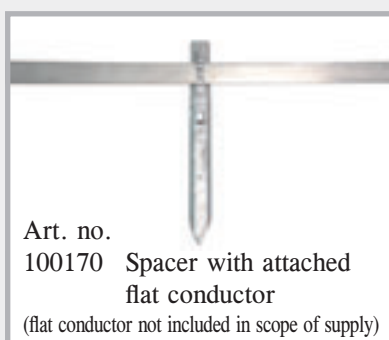
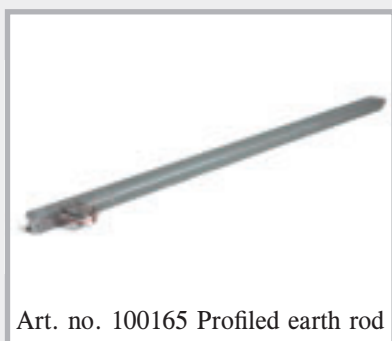


RONDO EFP, mounted

The sealing collars are supplied with fastening straps, ready for installation

# Lightning protection accessories

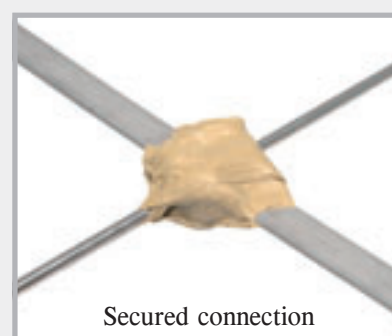
Art. no.	Description	PU	Weight
<b>100165</b>	<b>Profiled earth rod, 1.5 m long, galvanised</b> cross profile 50 x 50 mm with cross clamp welded on	1 pc.	4.30 kg per pc.
<b>100170</b>	<b>Spacer for foundation earth electrode galvanised</b> , for round conductors Ø 8-10 mm earthing strap 30 x 3.5 mm length 280 mm, installation spacing 1-1.5 m	Carton of 100 pcs.	10.30 kg per carton
<b>NEW! 100176</b>	<b>Expansion strap with polystyrene body, V2A</b> Leading of foundation earth electrode through expansion joints	1 pc.	0.68 kg per pc.



## Anti-corrosive tapes

For wrapping of overground and underground connections.

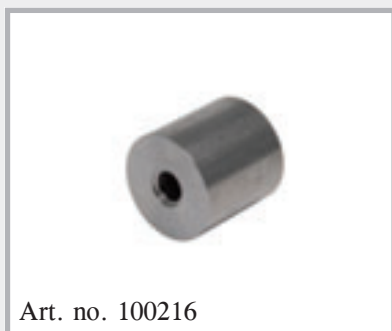
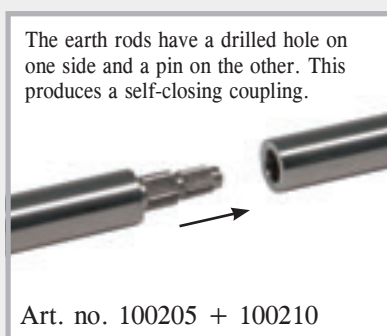
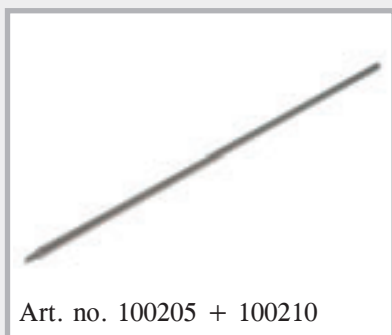
Art. no.	Description	PU	Weight
	Anti-corrosive tapes Roll length 10 m certified by DVGW		
<b>100190</b>	Size: 1.5 x 50 mm	Carton of 24 rolls	1.00 kg/roll
<b>100193</b>	Size: 1.5 x 100 mm	Carton of 12 rolls	2.10 kg/roll






## Earth rod for use in earthing systems

Art. no.	Design	PU	Weight
<b>100205</b>	<b>Earth rod for the installation of earthing systems</b> galvanised material Length: 1500 mm Ø 20 mm	1 pc.	3.60 kg per pc.
<b>100210</b>	<b>Earth rod for the installation of earthing systems</b> A4 stainless steel Length: 1500 mm Ø 20 mm	1 pc.	3.60 kg per pc.
<b>100215</b>	<b>Impact tip to drive in the first earth rod</b> bright steel	1 pc.	0.04 kg per pc.
<b>100216</b>	<b>Drive-in aid for earth rod</b> bright steel	1 pc.	0.55 kg per pc.
<b>100218</b>	<b>Connecting clamp for earth rod</b> galvanised material round 8 + 10 mm flat up to 40 mm	1 pc.	0.38 kg per pc.
<b>100217</b>	<b>Connecting clamp for earth rod</b> A4 stainless steel round 8 + 10 mm flat up to 40 mm	1 pc.	0.30 kg per pc.

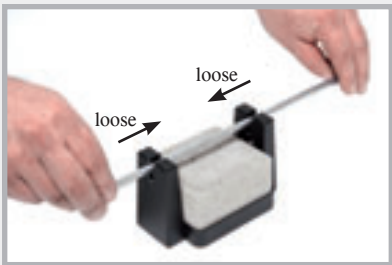
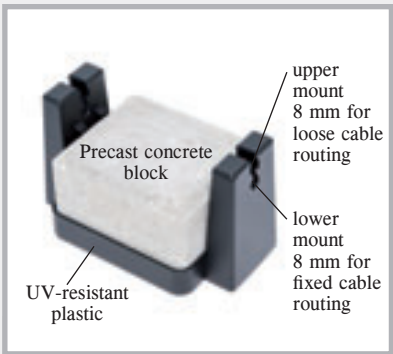


# MultiClip roof conductor holder

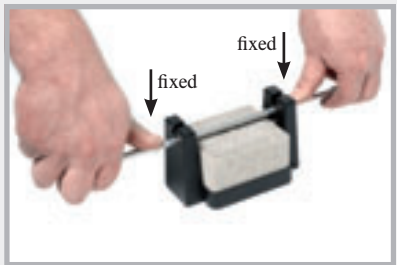
For loose and fixed wire routing

Art. no.	Design	PU	Secondary packaging	Weight	
100470	<b>MultiClip roof conductor holder for flat roofs</b> mount 8 mm holder made of UV-resistant plastic stone made of concrete	10 pcs.	1000 pcs. per pallet	1.00 kg per pc.	 Roof conductor holder

## Product description

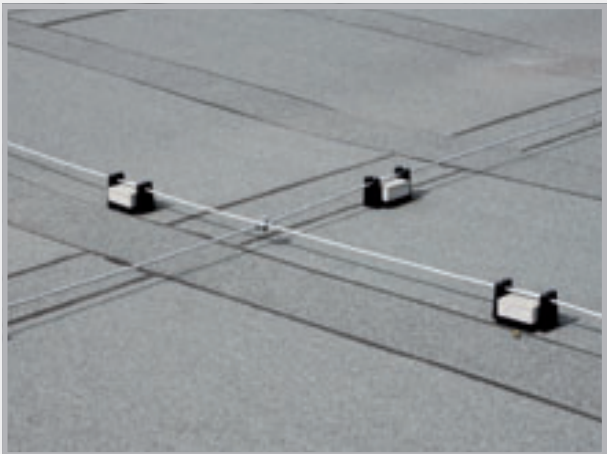


Pushing the round conductor into the upper mount. The wire is locked in place but can be moved.



Pushing the wire through into the lower mount. The wire is permanently locked in place.

## At the construction site



# Basic principles of the installation of lightning protection conductors and connectors

## FOUNDATION EARTH ELECTRODE

- Installation location: In the concrete of the foundation and floor slab with minimum of 5 cm concrete cover on all sides
- Material: Galvanised or non-galvanised steel as flat conductor 30 x 3.5 mm or round conductor DN 10 mm

## CONNECTION PARTS ON FOUNDATION EARTH ELECTRODE

- Installation location: In subsoil
- Material: Galvanised steel with plastic sheathing or A4 stainless steel material grades 1.4401, 1.4404, 1.4571  
Flat conductor 30 x 3.5 mm or round conductor DN 10 mm

## RING EARTH ELECTRODE AND CONNECTION PARTS ON RING EARTH ELECTRODE

- Installation location: Outside the foundation in the subsoil
- Material: A4 stainless steel material grades 1.4401, 1.4404, 1.4571 as 30 x 3.5 mm flat conductor or DN 10 mm round conductor  
**Galvanised material is not permitted in this area**

## CONNECTORS

- Installation location: In subsoil, connectors made of A4 stainless steel, galvanised in foundation
- Design: Wedge connectors are not permitted: unless installed in non-vibrated concrete.  
4 x M 6 screws only above ground and for arrester lines and down conductors,  
4 x M 8 or 2 x M 10 screws as well as the M 10 multi-purpose connecting clamp for the following areas: subsoil, concrete, above ground, down conductors and arrester lines.

- DIN STANDARDS DIN EN 62561-1 and 62561-2

- COSTS The cost of stainless steel round conductors is up to 33% less than stainless steel flat conductors. The round conductor, which can be installed as an alternative to the flat conductor, is easier to handle and therefore has a significantly higher workability.

# FORMWORK ACCESSORIES



**STOPPER SCREW + STOPPER**  
pages 132 – 135



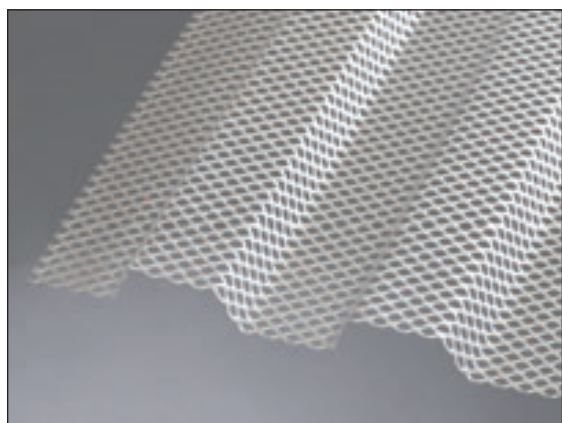
**ActiveRings + RONDO MINI**  
pages 137 – 140



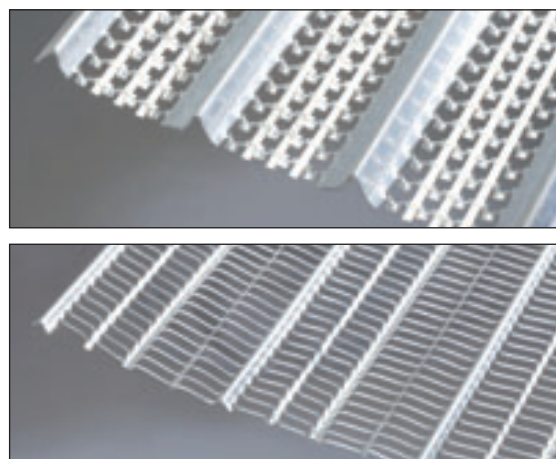
**Damp proof courses**  
pages 141 – 143



**Impact sound insulation +  
corrugated bearings**  
pages 144 – 147



**LinkFix stopend panel**  
Profile according to DIN 1045-1 and EC 2  
page 148



**Rib laths**  
pages 148 – 149



# STOPPER SCREW



**NEW!** Screwed inner seals for pressure water and gas-tight sealing of formwork tie points

■ Water pressure tight up to 50 m water column

■ Radon-tight

## STOPPER SCREW

Technical details page 136

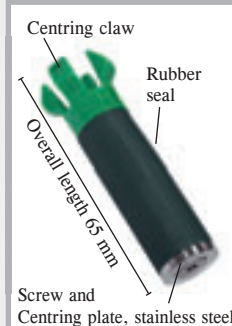
Art. no.	Description	Tie point inner diameter	PU	Weight
046230	<b>STOPPER SCREW Type 3 in</b> Overall length: 65 mm	17 to 19.5 mm	100 pcs. incl. 2 bits	2.60 kg per 100 pcs.
046240	<b>STOPPER SCREW Type 4 in</b> Overall length: 65 mm	19.5 to 22 mm	100 pcs. incl. 2 bits	3.10 kg per 100 pcs.
046210	<b>STOPPER SCREW Type 1 in</b> Overall length: 65 mm	21.5 to 23 mm	100 pcs. incl. 2 bits	3.55 kg per 100 pcs.
046220	<b>STOPPER SCREW Type 2 in</b> Overall length: 65 mm	22.3 to 25.4 mm	100 pcs. incl. 2 bits	3.80 kg per 100 pcs.
046250	<b>STOPPER SCREW Type 5 in</b> Overall length: 65 mm	25 to 28 mm	100 pcs. incl. 2 bits	4.55 kg per 100 pcs.
046330	<b>STOPPER SCREW Type 3 covered</b> Cover plate 28 mm Overall length: 65 mm	17 to 19.5 mm	100 pcs. incl. 2 bits	3.70 kg per 100 pcs.
046340	<b>STOPPER SCREW Type 4 covered</b> Cover plate 28 mm Overall length: 65 mm	19.5 to 22 mm	100 pcs. incl. 2 bits	4.60 kg per 100 pcs.
046310	<b>STOPPER SCREW Type 1 covered</b> Cover plate 28 mm Overall length: 65 mm	21.5 to 23 mm	100 pcs. incl. 2 bits	4.70 kg per 100 pcs.
046320	<b>STOPPER SCREW Type 2 covered</b> Cover plate 32 mm Overall length: 65 mm	22.3 to 25.4 mm	100 pcs. incl. 2 bits	4.95 kg per 100 pcs.
046350	<b>STOPPER SCREW Type 5 covered</b> Cover plate 32 mm Overall length: 65 mm	25 to 28 mm	100 pcs. incl. 2 bits	6.10 kg per 100 pcs.
046170	<b>Cleaning brush</b> for tube 21.5-26 mm		1 pc.	0.11 kg per pc.
046181	<b>STOPPER SCREW positioning aid</b>		1 pc.	0.27 kg per pc.



STOPPER SCREW  
Type 1 in



STOPPER SCREW  
Type 1 covered



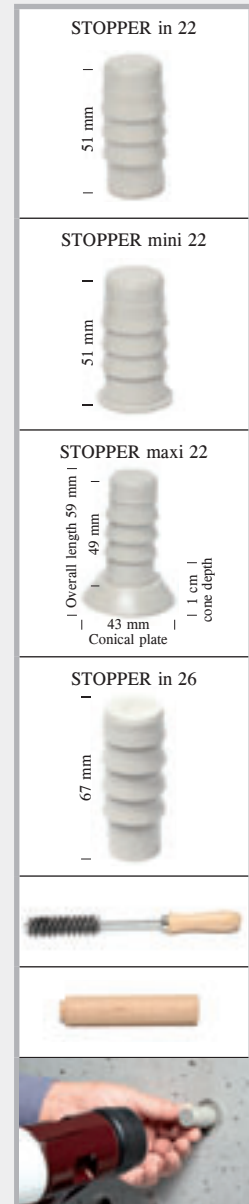
# STOPPER

Inner seals for plastic and  
fibre cement distance tubes

## STOPPER



Art. no.	Description	PU	Weight
046140	<b>STOPPER in 22</b> for distance tubes inner diameter 21.5-23 mm	Bucket of 250 pcs.	6.00 kg per bucket
046150	<b>STOPPER mini 22</b> for distance tubes inner diameter 21.5-23 mm	Bucket of 250 pcs.	6.00 kg per bucket
046160	<b>STOPPER maxi 22</b> for distance tubes inner diameter 21.5-23 mm	Bucket of 250 pcs.	9.00 kg per bucket
046163	<b>STOPPER in 26</b> for distance tubes Inner diameter 26 mm	Bucket of 250 pcs.	10.50 kg per bucket
046170	<b>Cleaning brush</b> for tube 21.5-26 mm	1 pc.	0.11 kg per pc.
046180	<b>Drive-in aid</b> for STOPPER 22 + 26 mm	1 pc.	0.10 kg per pc.



Use a 1500-2000 g hard rubber mallet to drive in the STOPPER.

## Product description

- STOPPERS are plugs which were developed for pressure-tight sealing of fibre cement and plastic distance tubes.
- Highly resistant plastic specially developed for this application
- Temperature range -35°C to +70°C  
If the plugs are installed at ambient temperatures below 0°C, they have to be stored above freezing point for a better installation.
- All-weather installation
- Just drive them in and they are tight
- Little storage space required

YouTube



# Tests

## Water



Tube type	STOPPER maxi 22 water column	STOPPER mini 22 water column	STOPPER in 22 water column	STOPPER in 26 water column	Result when sealed on both sides
Plastic distance tube inner diameter approx. 21.5-23 mm	50 m	50 m	30 m	–	No water flow
Fibre cement distance tube inner diameter approx. 22 mm, round	40 m	40 m	20 m	–	No water flow
Steel distance tube inner diameter approx. 22.45 mm, round	40 m	40 m	20 m	–	No water flow
Steel distance tube inner diameter approx. 23 mm, round	30 m	30 m	20 m	–	No water flow
Plastic distance tube Inner diameter 26 mm	–	–	–	50 m	No water flow

## Fire



- Fire resistance class EI 120 to DIN EN 13501-2 (STOPPER mini/STOPPER maxi)  
Room closure test with fibre cement distance tubes  
For the duration of the test (120 minutes), no cracks or gaps developed on the room side.  
During this time, no flames were visible on the side facing away from the fire.
- Construction material class      DIN EN    13501-1      E = normally flammable  
   DIN        4102-1      B2 = normally flammable

## Resistance



As well as undergoing a comprehensive slurry/liquid manure/silage effluent test, the plastic is also resistant to several media:

- |   |                           |           |
|---|---------------------------|-----------|
| ■ Slurry  | ■ Fermentation mash       | ■ Ozone   |
| ■ Liquid manure   | ■ Radon + methane gas     | ■ Bitumen |
| ■ Silage effluent   | ■ UV radiation            |           |
| Depending on the concentration<br>(Please consult our team) | ■ Diluted acids + alkalis | ■ Oils    |

## Sound insulation



**Standard sound level differential testing**  
MFPA testing to DIN EN ISO 10140-2

A distance tube installed in concrete and sealed at both ends with the STOPPER achieves exactly the same standard sound level as monolithic concrete with the same component thickness.

# **Installation STOPPER in**



The STOPPER in is pushed into the distance tube.



The STOPPER in is driven in with a 1500-2000 g hard rubber mallet.



Flush seal for distance tubes with lip.



Flush seal for distance tubes with cone.



The STOPPER in can be inserted to any depth.



After inserting the STOPPER in, a cone can be glued in.

## **STOPPER mini**



Position and drive in the STOPPER mini



Sealing of distance tube with lip



Sealing of distance tube with cone

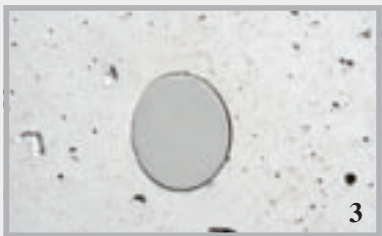
## **STOPPER maxi**



Push the STOPPER maxi into the distance tube



Drive in with rubber mallet



Pressure-tight and flush seal



## STOPPER SCREW in



Flush seal for  
distance tubes  
with lip.



Flush seal for  
distance tubes  
with cone.

## STOPPER SCREW covered



Sealing of  
distance tube  
with lip.



Sealing of  
distance tube  
with cone.

# ActiveRing + RONDO Mini

Outer seals for plastic and fibre cement distance tubes

## ActiveRing external waterproofing



Art. no.	Description	PU	Weight
<b>047200</b>	<b>ActiveRing mini</b> for outer pipe diameters 25-32 mm e.g. plastic distance tubes 22/26 26/31 26/32	Bag of 250 pcs.	1.70 kg per bag
<b>047250</b>	<b>ActiveRing maxi</b> for outer pipe diameters 38-42 mm e.g. fibre cement distance tubes	Bag of 250 pcs.	2.40 kg per bag



## RONDO MINI



Technical details page 140

Art. no.	Type	Description	PU	Weight
<b>090870</b>	<b>RONDO MINI 26</b> Suitable for outer dia. 25-27 mm	for plastic distance tubes 22/26 mm Waterstop 2 cm Bearing width 2.7 cm	Bag of 50 pcs. incl. plastic fastening straps	0.030 kg
<b>090873</b>	<b>RONDO MINI 40</b> Suitable for outer dia. 38-42 mm	for fibre cement distance tubes 22/40 mm Waterstop 2 cm Bearing width 2.7 cm	Bag of 50 pcs. incl. plastic fastening straps	0.040 kg



# ActiveRing



## The swelling external high-pressure seal for plastic and fibre cement distance tubes



High-pressure seal for up to 8 bar

The ActiveRings mini and maxi ensure reliable and durable external waterproofing for plastic and fibre cement distance tubes.

- Pressure test performed by MFPA Leipzig
- Easy and secure installation
- Good chemical resistance
- Very cost-effective
- Push on and seal

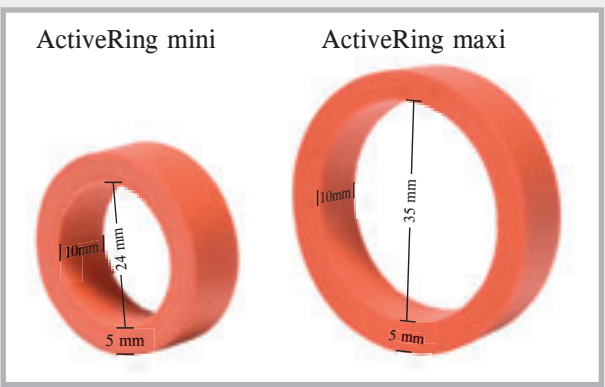
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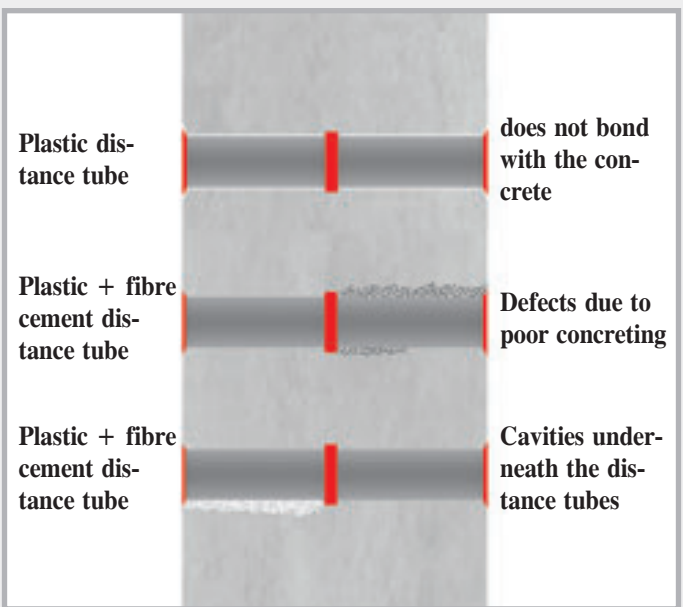
ActiveRing on plastic distance tubes

## Product description for ActiveRings

The ActiveRings mini and maxi are made of a highly swellable TPE mixture. When the rings come into contact with water, they activate, swell up and reliably stop the flow of water.



## Causes of leaking distance tubes

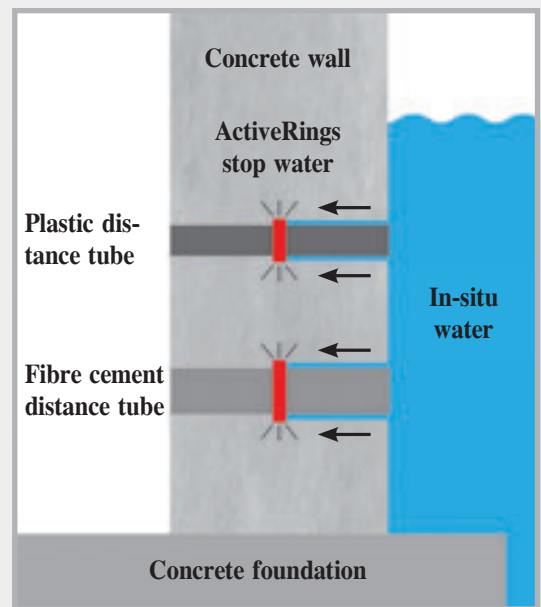


There are many causes which lead to leaking distance tubes. Plastic generally does not bond with concrete. The plastic breaks off and opens the way for water. The second main reason is poor concreting. Not only are plastic distance tubes affected, but also those made of fibre cement.

## Technical data

Chemical basis:	Modified TPE
Colour:	Red
Finish:	Smooth
Dimensions:	Width 10 mm, thickness 5 mm
For outer pipe dia. 25–32:	mini version
For outer pipe dia. 38–42:	maxi version
Temperature range:	-30°C to +60°C
Storage:	Dry and protected
Function:	Highly swellable

## ActiveRings provide security



This is how ActiveRings work: when the rings come into contact with water, they activate and stop the flow of water. The waterproofing remains permanently active when in contact with water.

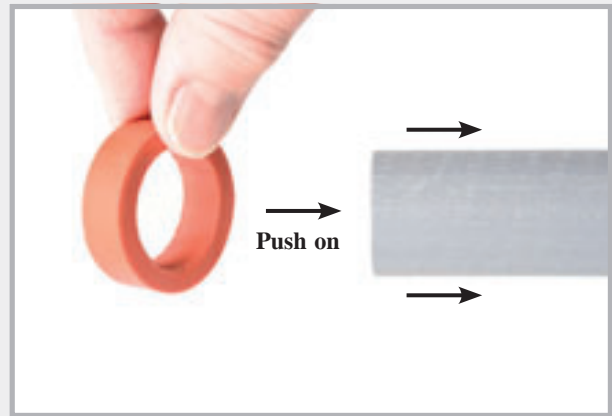
## Resistance

- Diluted acids and alkalis
- Salt water
- Methane gas + radon
- Liquid manure + slurry
- Fermentation mash + biogas
- Concrete alkalinity
- Liquid aggressive to concrete

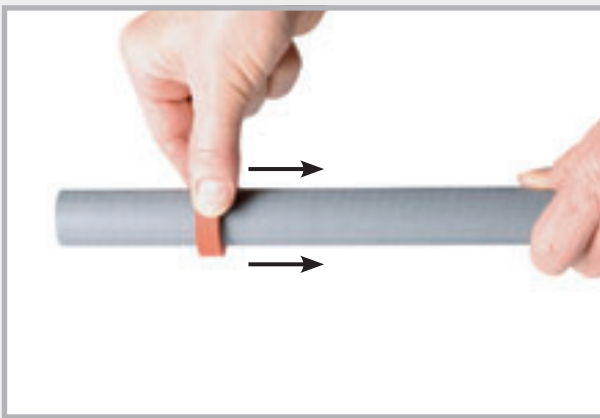
## Quick and secure installation



The surfaces of the pipes must be clean.



The ActiveRing is pushed onto the distance tube which requires waterproofing.



Position the ActiveRing towards the middle



ActiveRings on different distance tubes

Plastic pipe 22/26 and 26/32

Fibre cement pipe 22/40

## At the construction site



Wall formwork from above



Concreting in the distance tube with ActiveRing.



# RONDO MINI sealing collars



## for waterproofing of plastic or fibre cement distance tubes

RONDO MINI sealing collars can be mounted onto plastic or fibre cement distance tubes quickly and easily at the construction site.



## Product description

Material: TPE polymer compound

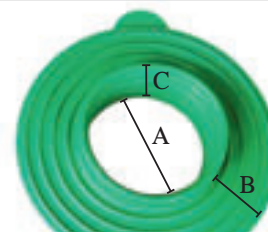
Installation: Temperature range  $-35^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$

Resistance:

- Diluted acids + alkalis
- Liquid manure + slurry
- Fermentation mash
- Oils and bitumen
- Radon + methane gas



MINI 26



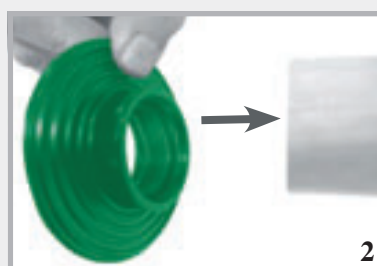
MINI 40

- A Pipe slot with additional waterstops
- B Waterstop 2 cm
- C Bearing width 2.7 cm

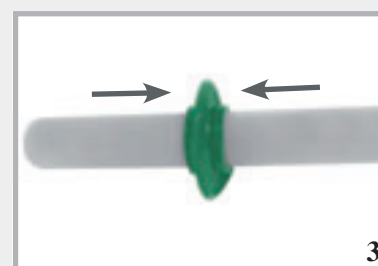
## Quick and easy installation



Fibre cement distance tube, Rondo Mini, 2 fastening straps



Slide the Rondo Mini onto the distance tube



Position Rondo Mini in the centre before fastening



Tighten both fastening straps by hand



The fastening straps can also be tightened using pliers



RONDO MINI installation complete

# MURO-Top

## Damp proof course



The barrier against rising damp.

### MURO-Top damp proof courses

- made of the highly-resistant material polyolefin
- protect foundation walls and masonry reliably and permanently against rising damp
- profiled on both sides
- resistant to many media
- installed in a single layer with only 20 cm overlap at joint
- foils with a thickness of less than 1.2 mm are not suitable for applications requiring a General Building Supervisory Test Certificate

# MURO-Top damp proof course



## Sizes MURO-Top

Art. no.	Roll width	Roll length	Roll area	PU	Secondary packaging	Roll weight
041115	11.5 cm	50 m	5.75 m <sup>2</sup>	1 roll	Pallet of 500 rolls	approx. 1.65 kg
041150	15.0 cm	50 m	7.50 m <sup>2</sup>	1 roll	Pallet of 400 rolls	approx. 2.10 kg
041175	17.5 cm	50 m	8.75 m <sup>2</sup>	1 roll	Pallet of 350 rolls	approx. 2.45 kg
041200	20.0 cm	50 m	10.00 m <sup>2</sup>	1 roll	Pallet of 300 rolls	approx. 2.80 kg
041240	24.0 cm	50 m	12.00 m <sup>2</sup>	1 roll	Pallet of 240 rolls	approx. 3.40 kg
041250	25.0 cm	50 m	12.50 m <sup>2</sup>	1 roll	Pallet of 240 rolls	approx. 3.50 kg
041300	30.0 cm	50 m	15.00 m <sup>2</sup>	1 roll	Pallet of 200 rolls	approx. 4.20 kg
041365	36.5 cm	50 m	18.25 m <sup>2</sup>	1 roll	Pallet of 160 rolls	approx. 5.15 kg
041425	42.5 cm	50 m	21.25 m <sup>2</sup>	1 roll	Pallet of 150 rolls	approx. 5.95 kg
041500	50.0 cm	50 m	25.00 m <sup>2</sup>	1 roll	Pallet of 120 rolls	approx. 7.00 kg
041750	75.0 cm	50 m	37.50 m <sup>2</sup>	1 roll	Pallet of 100 rolls	approx. 10.50 kg
041000	100.0 cm	50 m	50.00 m <sup>2</sup>	1 roll	Pallet of 80 rolls	approx. 14.00 kg

## MURO-Top technical data

Material: Polyolefin, roughly textured on both sides

Thickness: 0.3 mm, 0.35 mm including profile

Weight: approx. 280 g/m<sup>2</sup>

Temperature range: -30°C to +60°C

Resistance:

- water-impermeable
- bitumen-compatible
- petrol-resistant
- ground water-resistant
- alkali-resistant
- rotproof
- diesel-resistant
- ground water-neutral

# MURO-Premium

## Damp proof course



### Sizes MURO-Premium

Art. no.	Roll width	Roll length	Roll area	PU	Secondary packaging	Roll weight
042115	11.5 cm	25 m	2.88 m <sup>2</sup>	1 roll	Pallet of 200 rolls	approx. 5.5 kg
042175	17.5 cm	25 m	4.38 m <sup>2</sup>	1 roll	Pallet of 120 rolls	approx. 8.3 kg
042200	20.0 cm	25 m	5.00 m <sup>2</sup>	1 roll	Pallet of 100 rolls	approx. 9.5 kg
042250	25.0 cm	25 m	6.25 m <sup>2</sup>	1 roll	Pallet of 80 rolls	approx. 11.9 kg
042300	30.0 cm	25 m	7.50 m <sup>2</sup>	1 roll	Pallet of 80 rolls	approx. 14.3 kg
042365	36.5 cm	25 m	9.13 m <sup>2</sup>	1 roll	Pallet of 60 rolls	approx. 17.3 kg
042425	42.5 cm	25 m	10.63 m <sup>2</sup>	1 roll	Pallet of 60 rolls	approx. 20.2 kg
042500	50.0 cm	25 m	12.50 m <sup>2</sup>	1 roll	Pallet of 40 rolls	approx. 23.8 kg
042750	75.0 cm	25 m	18.75 m <sup>2</sup>	1 roll	Pallet of 40 rolls	approx. 35.6 kg
042999	100.0 cm	25 m	25.00 m <sup>2</sup>	1 roll	Pallet of 20 rolls	approx. 47.5 kg

### Technical data

Material: PVC foil 1.2 mm, not compatible with bitumen, textured

Weight: approx. 1.9 kg/m<sup>2</sup>

Resistance:

- water-tight 24 h/60 kPa
- water-tight during ageing
- water-tight in contact with alkalinity
- resistance to static loads  $\geq$  20 kg
- impact loading  $\geq$  300 mm
- tensile strength  $>$  50 kN

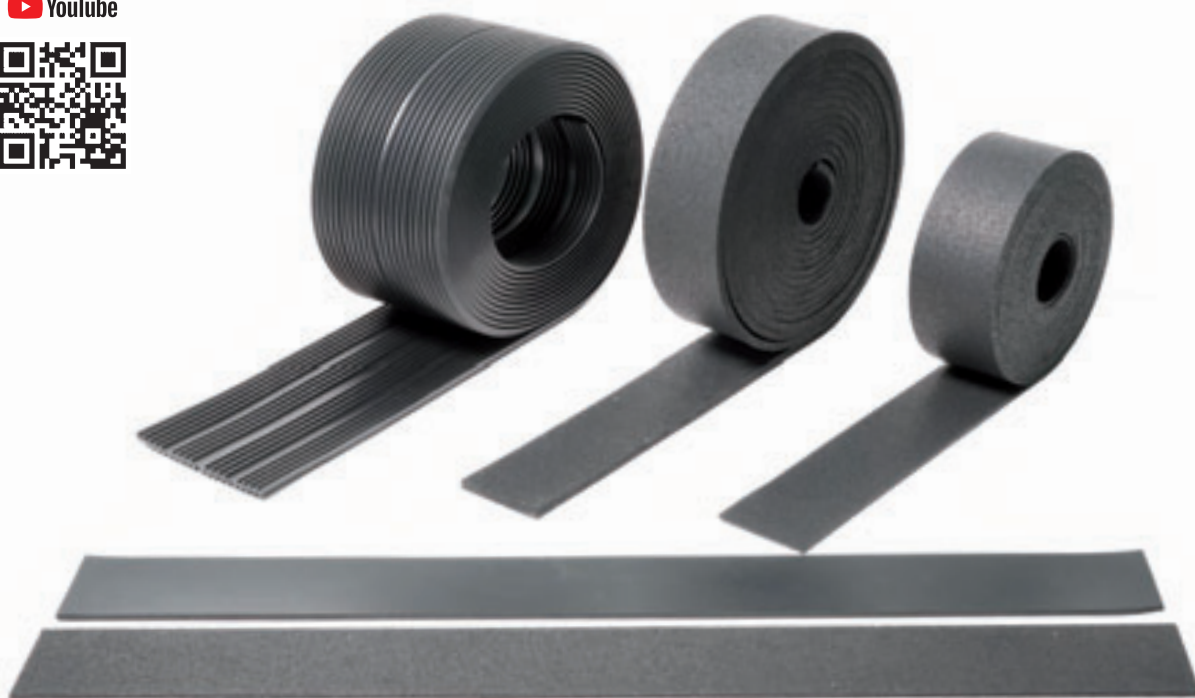
### Application

MURO-Premium damp proof courses are installed in a single layer with only 20 cm overlap at joint. The sheets can be joined using solvent welding agent.



# IMPACT SOUND INSULATION + CORRUGATED BEARINGS

YouTube

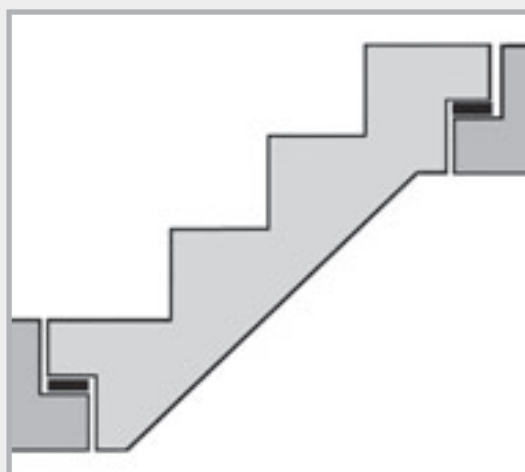


## Impact sound insulation T1

### Product description

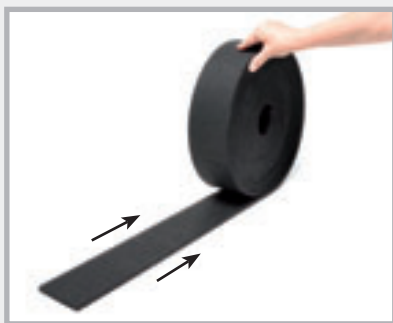


Material:	The impact sound insulation T1 is made of fine mixed elastomer fibres bonded with PUR.	
Application:	As bearing for stairs and slabs	
Presentation:	Rolls, strips and boards	
Testing:	Load test	for thickness 10 mm up to 5 N/mm <sup>2</sup>
	Impact sound reduction	up to 19 dB
Temperature resistance:	-40°C to +90°C	
Elongation at break:	> 70%	
Reaction to fire:	Class E	
Environmental aspects:	UV-resistant	



Impact sound insulation T1, e.g. for bearing of staircases

## Installation without offcuts



Unroll T1



Measure required length



Simply cut off with the cutter.

## Impact sound insulation T1

### Rolls

Art. no.	Description	PU	Secondary packaging	Weight
<b>060240</b>	<b>Impact sound insulation roll T1</b> Size: 10000 x 100 x 5 mm	1 roll		4.40 kg per roll
<b>060230</b>	<b>Impact sound insulation roll T1</b> Size: 10000 x 100 x 10 mm	1 roll	60 rolls per pallet	9.70 kg per roll
<b>060115</b>	<b>Impact sound insulation roll T1</b> Size: 10000 x 1250 x 10 mm	1 roll		8.60 kg per m <sup>2</sup>

### Strips

Art. no.	Description	PU	Secondary packaging	Weight
<b>060200</b>	<b>Impact sound insulation strip T1</b> Size: 1000 x 100 x 5 mm	1 strip		0.44 kg per strip
<b>060210</b>	<b>Impact sound insulation strip T1</b> Size: 1000 x 100 x 10 mm	1 strip	750 strips per pallet	0.90 kg per strip

### Boards

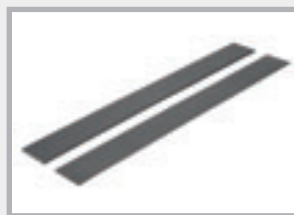
Art. no.	Description	PU	Weight
<b>060100</b>	<b>Sound insulation board T1</b> Size: 1000 x 1000 x 5 mm	1 board	4.60 kg per board
<b>060110</b>	<b>Sound insulation board T1</b> Size: 1000 x 1000 x 10 mm	1 board	9.00 kg per board
<b>060113</b>	<b>Sound insulation board T1</b> Size: 1000 x 1000 x 20 mm	1 board	18.00 kg per board



Art. no. 060240  
Art. no. 060230



Art. no. 060115



Art. no. 060200  
Art. no. 060210



Art. no. 060100  
Art. no. 060110  
Art. no. 060113

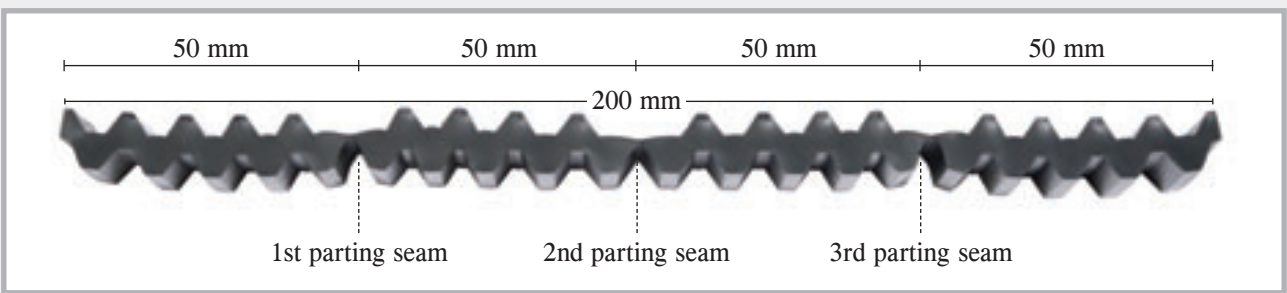
# Corrugated bearings



## Product description

**Material:** The corrugated bearing is a profiled bearing based on EPDM.

**Application:** As bearing for stairs and slabs  
Bearing of prefabricated elements



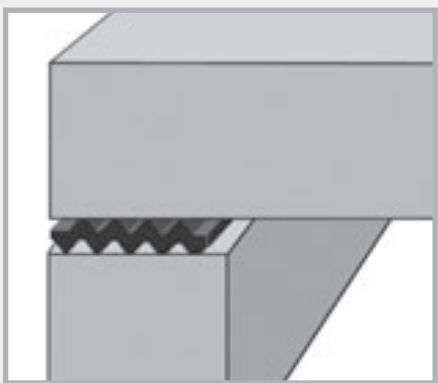
**Presentation:** Rolls

**Testing:** Load test up to 5 N/mm<sup>2</sup>  
Impact sound reduction up to 20 dB

**Temperature resistance:** -40°C to +90°C

**Elongation at break:** > 300 %

**Environmental aspects:** UV-resistant, halogen-free



Corrugated bearing between two constructional elements

## Product range - corrugated bearing

Art. no.	Description	PU	Weight
060010	Corrugated bearing 10 mm Size: 10000 x 200 x 10 mm with 3 parting seams	1 roll	16.0 kg per roll

## Application



Corrugated bearings



The corrugated bearings can be cut with a cutter. Cut into the parting seam, the corrugated bearing can then be processed.

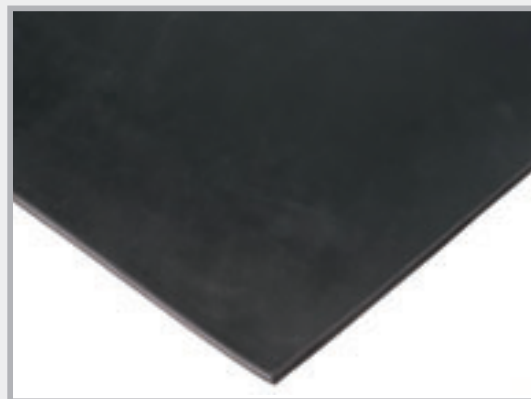


Over a width of 20 cm the corrugated bearing has 3 parting seams. This enables bearing widths of 5, 10, 15 and 20 cm.

# Construction bearing R1

## Product description

Material:	NR-SBR copolymer
Application:	Separation of 2 components Bearing of stairs Levelling out of unevenness
Presentation:	Boards + strips
Temperature resistance:	-25°C to +70°C
Elongation at break:	> 200 %



## Product range - construction bearing R1

### Strips

Art. no.	Description	PU	Weight
060340	Construction bearing strip R1 Size: 1000 x 100 x 5 mm	1 strip	0.75 kg per strip
060330	Construction bearing strip R1 Size: 1000 x 100 x 10 mm	1 strip	1.60 kg per strip

### Boards

Art. no.	Description	PU	Weight
060310	Construction bearing board R1 Size: 1200 x 1000 x 5 mm	1 board	9.50 kg per board
060300	Construction bearing board R1 Size: 1200 x 1000 x 10 mm	1 board	18.00 kg per board

Tailor-made sizes available at short notice

Art. no. 060340 + 060330



Art. no. 060310 + 060300







# Rib laths

## Lost formwork for construction joints in concrete

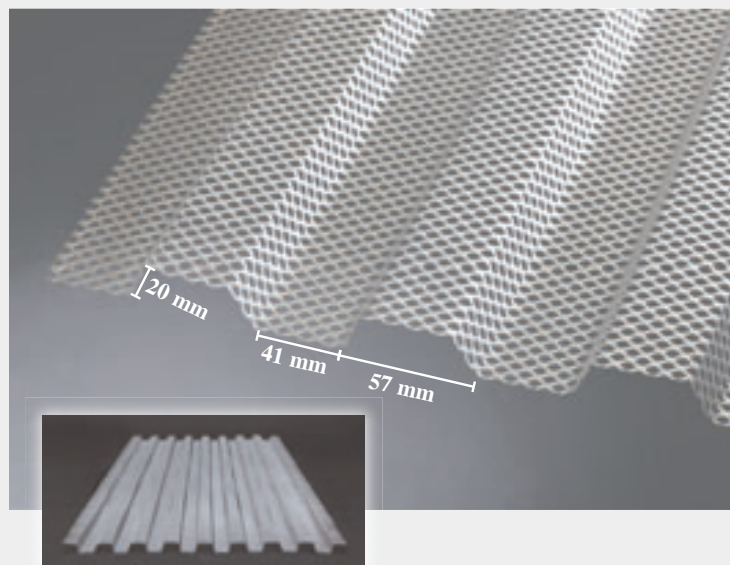
### LinkFix stopend panel

Profiled rib lath formwork as stopend panel for construction joints

Material: Profiled rib lath formwork of bright steel, thickness 0.75 mm. The profile corresponds to DIN 1045-1 and EC2 and is therefore to be classified as a toothed construction joint.

Profile: 57 x 41 x 20 mm

Sheet size: Length 240 cm  
Width 80 cm



Art. no.	Description	PU	Weight kg
020050	<b>LinkFix</b> <b>Thickness 0.75 mm</b> Size: 240 x 80 cm	Pallet of 100 pcs. = 192 m <sup>2</sup>	530 kg/pallet m <sup>2</sup> approx. 2.6 kg

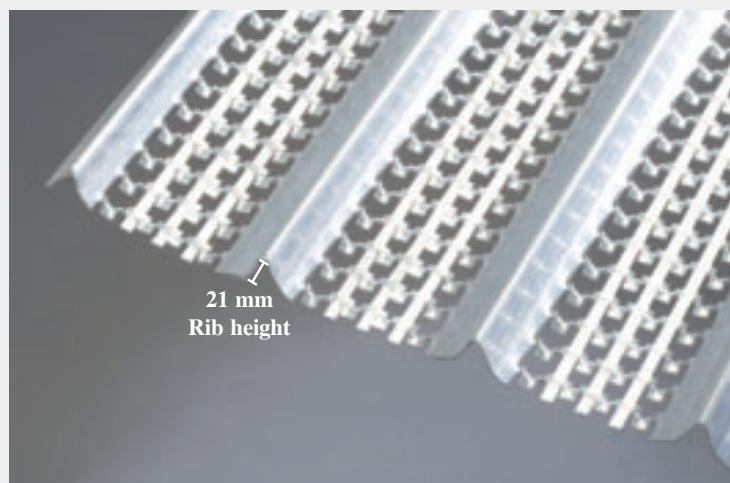
### Rib lath formwork, high-ribbed

Lost formwork for construction joints

- Developed for concrete construction
- Extremely stable
- Perfect bond between concrete segments
- Very good malleability

Material: Galvanised

Rib height: 21 mm



Art. no.	Description	PU	Secondary packaging	Weight
020005	<b>High-ribbed</b> <b>Thickness 0.3 mm</b> , galvanised Size: 200 x 45 cm, rib height 21 mm Identification colour: green	Pallet of 200 pcs. = 180 m <sup>2</sup>	3 pallets	480 kg per pallet m <sup>2</sup> approx. 2.7 kg
020010	<b>High-ribbed</b> <b>Thickness 0.4 mm</b> , galvanised Size: 200 x 45 cm, rib height 21 mm Identification colour: blue	Pallet of 100 pcs. = 90 m <sup>2</sup>	5 pallets	306 kg per pallet m <sup>2</sup> approx. 3.4 kg
020020	<b>High-ribbed</b> <b>Thickness 0.5 mm</b> , galvanised Size: 200 x 45 cm, rib height 21 mm Identification colour: red	Pallet of 100 pcs. = 90 m <sup>2</sup>	4 pallets	360 kg per pallet m <sup>2</sup> approx. 4 kg

## Rib lath formwork, medium-ribbed

Lost formwork for construction joints.

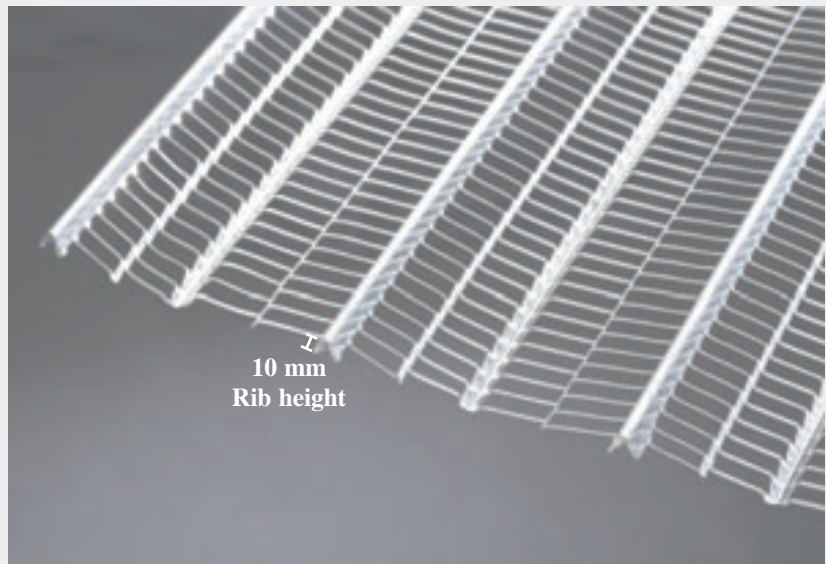


- Effective bond between concrete segments
- Good malleability

Material: Galvanised

Rib height: 10 mm

Sheet size: Length 250 cm  
Width 60 cm



Art. no.	Description	PU	Secondary packaging	Weight
<b>020040</b>	<b>Thickness 0.30 mm</b> , galvanised Size: 250 x 60 cm = 1.5 m <sup>2</sup> Rib height approx. 10 mm Identification colour: black	Package of 20 sheets = 30 m <sup>2</sup>	25 packages per pallet = 750 m <sup>2</sup>	approx. 36 kg per package  1.20 kg/m <sup>2</sup>

## Rib lath formwork, flat-ribbed



Lost formwork

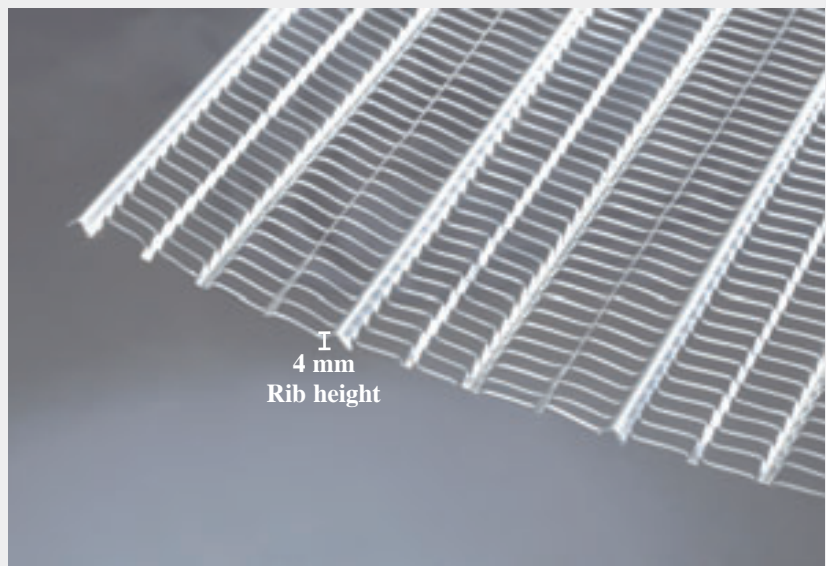
- Effective bond between concrete segments
- Highly malleable

Material: Galvanised

Rib height: 4 mm

Thickness: 0.25 mm

Sheet size: Length 250 cm  
Width 60 cm



Art. no.	Description	PU	Secondary packaging	Weight
<b>020045</b>	<b>Thickness 0.25 mm</b> , galvanised Size: 250 x 60 cm = 1.5 m <sup>2</sup> Rib height approx. 4 mm Identification colour: yellow	Package of 20 sheets = 30 m <sup>2</sup>	30 packages per pallet = 900 m <sup>2</sup>	approx. 24 kg per package  0.80 kg/m <sup>2</sup>



## Notes



## Notes





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