



**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**

---

**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

pages 5 – 20



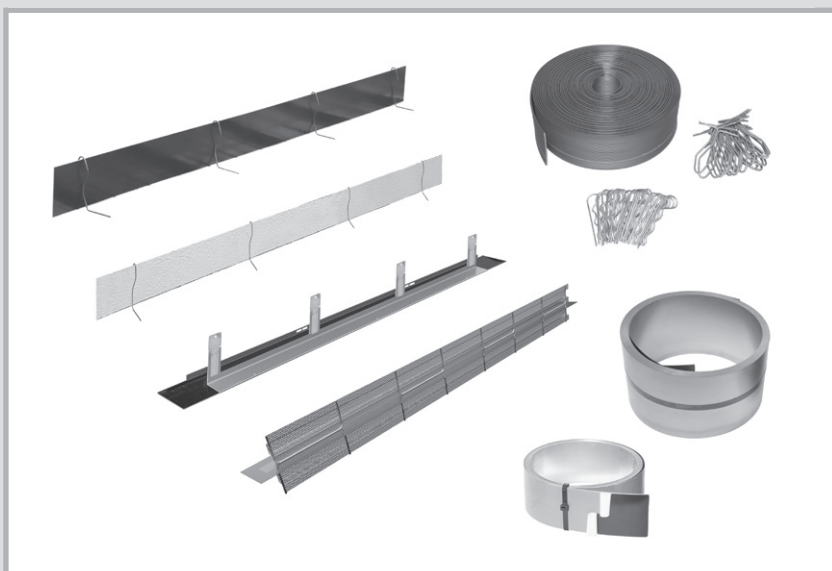
PRODUCT GROUP

## 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

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## Pressure water-tight service ducts

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

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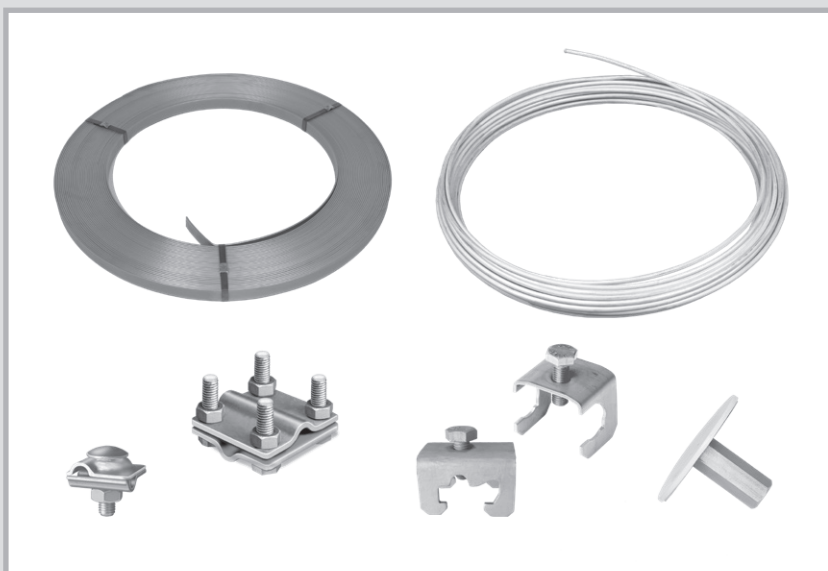
PRODUCT GROUP

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## Lightning protection

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

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PRODUCT GROUP

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## Formwork accessories

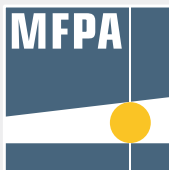
- Sealing plugs
- Distance tube seals
- Damp proof courses
- Impact sound insulation/bearings
- Corrugated bearings
- Rib laths

pages 131 – 149



## Product safety

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



**Dr. J. Kemski**

Sachverständigenbüro  
o.b.u.v. Sachverständiger für Radon (IHK Bonn/Rhein-Sieg)

## IAF - Radioökologie GmbH

Labor für Radionuklidanalytik  
Radiologische Gutachten  
Consulting



## 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**  
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# 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<br>Carton 30 m (6 rolls of 5 m each)<br><b>Pressure-tight up to 50 m water column</b>  | 1 carton | 36 cartons<br>per pallet | 22.80 kg<br>per carton |
| <b>010011</b> | Size: 25 x 20 mm, colour: black<br>Carton 30 m (6 rolls of 5 m each)<br><b>Pressure-tight up to 50 m water column</b>  | 1 carton | 36 cartons<br>per pallet | 22.80 kg<br>per carton |
| <b>010012</b> | <b>MASTERSTOP LONG TIME</b><br>coated bentonite swelling tape<br>Size: 25 x 20 mm, colour: black<br>Carton 30 m (6 rolls of 5 m each)<br><b>Pressure-tight up to 50 m water column</b> | 1 carton | 36 cartons<br>per pallet | 23.00 kg<br>per carton |
| <b>010020</b> | Size: 20 x 15 mm, colour: green<br>Carton 30 m (6 rolls of 5 m each)<br><b>Pressure-tight up to 20 m water column</b>  | 1 carton | 36 cartons<br>per pallet | 14.30 kg<br>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<br>Carton 90 m (9 rolls of 10 m each) | 1 carton | 36 cartons<br>per pallet | 21.00 kg<br>per carton |
| <b>010017</b> | Size: 20 x 10 mm, colour: black<br>Carton 54 m (9 rolls of 6 m each)  | 1 carton | 36 cartons<br>per pallet | 19.00 kg<br>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<br>Carton 90 m (5 rolls of 18 m each)<br><b>Pressure-tight up to 50 m water column</b> | 1 carton | 36 cartons per pallet | 16.00 kg per carton |



Sealing of a lining pipe with MASTERSTOP SK



## FLOWSTOP



High-pressure TPE swelling tapes  
for waterproofing of construction joints

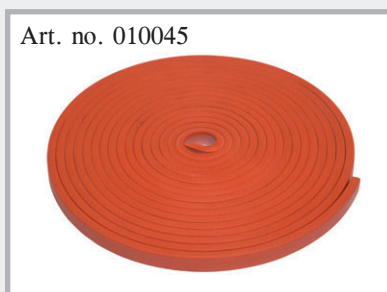
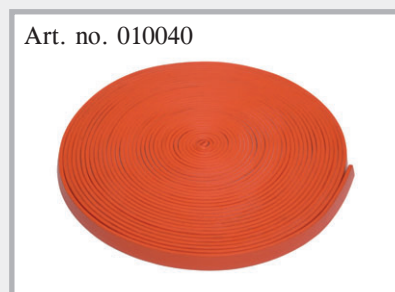
[Technical details pages 15 – 17](#)

YouTube





| Art. no.      | Description   | PU       | Secondary packaging   | Weight              |
|---------------|---|----------|-----------------------|---------------------|
| <b>010040</b> | Size 20 x 5 mm<br>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<br>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><br>Cartridge 310 ml<br>Usage: 1 cartridge = approx. 7 m<br>suitable for damp substrates  | 1 pc. | 20 cartridges<br>per carton | 11.60 kg<br>per carton |
| <b>010052</b> | <b>POWER swelling tape adhesive</b><br>High-pressure adhesive, for MASTERSTOP and<br>FLOWSTOP swelling tapes, cartridge 310 ml<br>Usage: 1 cartridge = approx. 7 m<br>suitable for damp substrates  | 1 pc. | 20 cartridges<br>per carton | 10.00 kg<br>per carton |
| <b>010030</b> | <b>MasterMastic PU swelling paste</b> <br>Polyurethane-based swelling paste,<br>for waterproofing of construction joints and<br>wall penetrations, cartridge 310 ml<br>Usage: Construction joint approx. 360 ml/m<br>Usage: Wall penetration approx. 80-100 ml/m           | 1 pc. | 12 cartridges<br>per carton | 5.90 kg<br>per carton  |
| <b>010033</b> | <b>MasterMastic PU swelling paste</b> <br>Polyurethane-based swelling paste,<br>for waterproofing of construction joints and<br>wall penetrations, 600 ml, aluminium foil bag<br>Usage: Construction joint approx. 360 ml/m<br>Usage: Wall penetration approx. 80-100 ml/m | 1 pc. | 12 foil bags<br>per carton  | 10.40 kg<br>per carton |
| <b>010038</b> | <b>Injection gun for 310 ml cartridge</b> ,<br>professional cartridge gun with aluminium casing,<br>hardened coupling and push rod  | 1 pc. |                             | 0.90 kg<br>per pc.     |
| <b>010039</b> | <b>Injection gun for 600 ml aluminium foil bag</b> ,<br>incl. 3 nozzles, professional cartridge gun with<br>ergonomic handle,<br>hardened coupling and push rod,<br>pipe and ring nuts made of aluminium  | 1 pc. |                             | 1.25 kg<br>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><br>Carton 30 m (30 grids of 1 m each)                          | 1 carton | 160 cartons<br>per pallet | 1.95 kg<br>per carton |
| <b>010060</b> | <b>Swelling tape grid for 25/20</b><br>Carton 30 m (30 grids of 1 m each)                          | 1 carton | 160 cartons<br>per pallet | 2.60 kg<br>per carton |
| <b>010065</b> | <b>Swelling tape grid for<br/>MASTERSTOP LONG TIME 25/20</b><br>Carton 30 m (30 grids of 1 m each) | 1 carton | 160 cartons<br>per pallet | 4.90 kg<br>per carton |



## Fastening nails

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

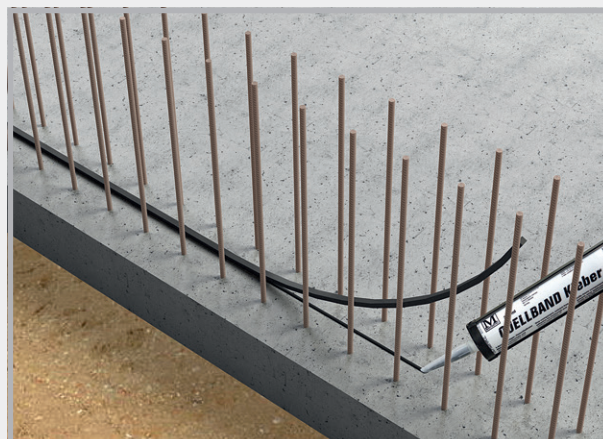


## Installation

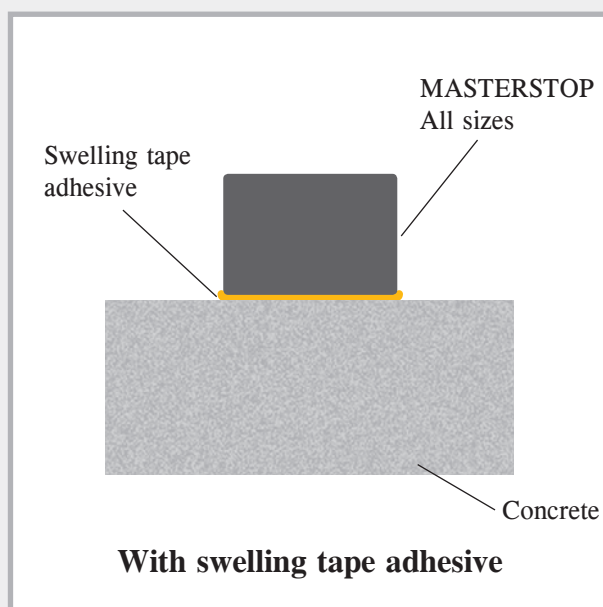
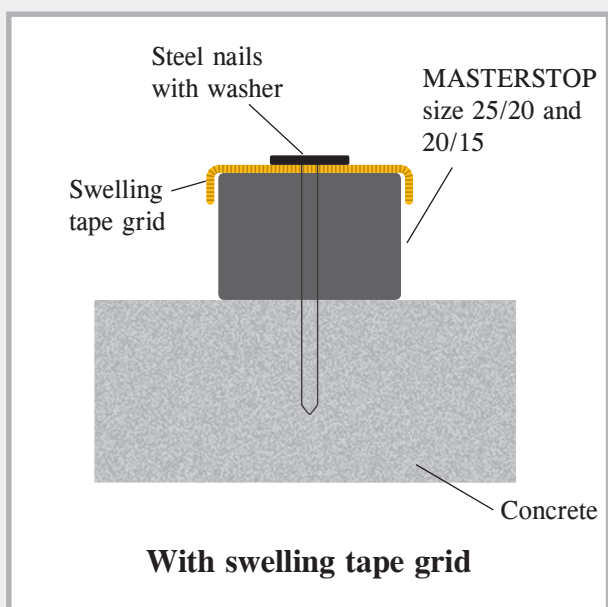
MASTERSTOP bentonite swelling tapes are fixed with a swelling tape grid or swelling tape adhesive. They are laid inside the reinforcement with a concrete cover of at least 8 cm.



Installation with fastening grid and nails

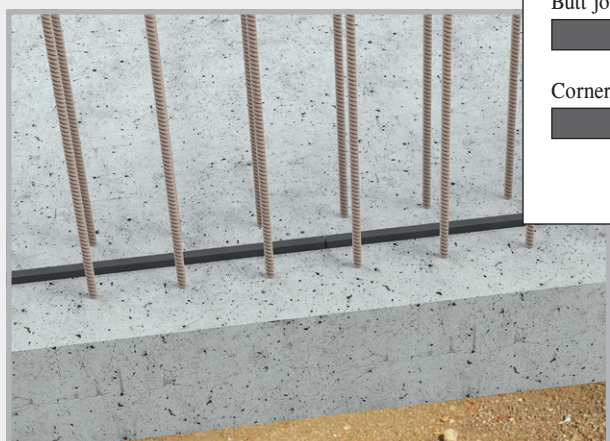


Installation with swelling tape adhesive

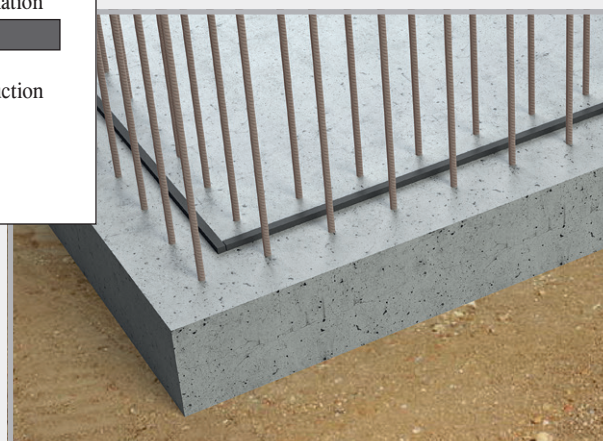
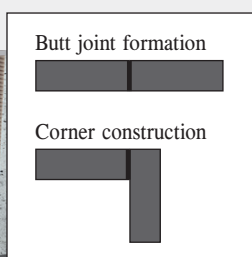


## Installation of MASTERSTOP

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

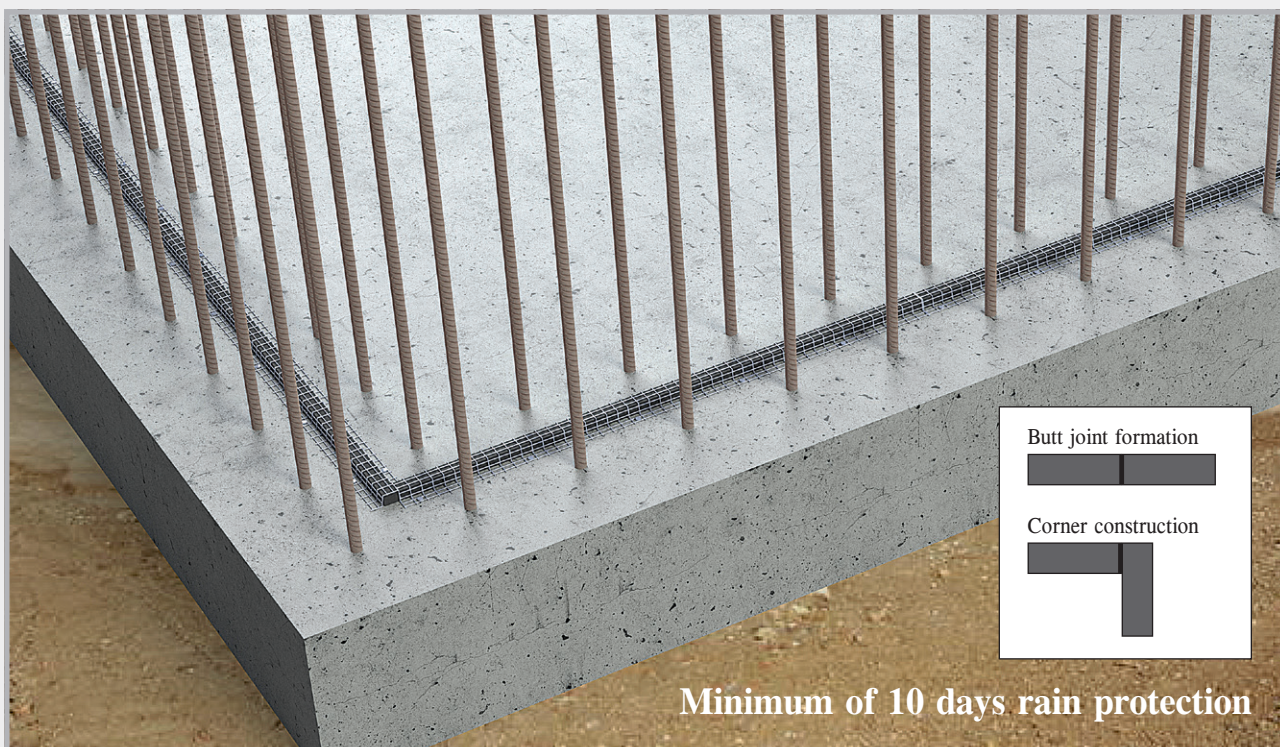
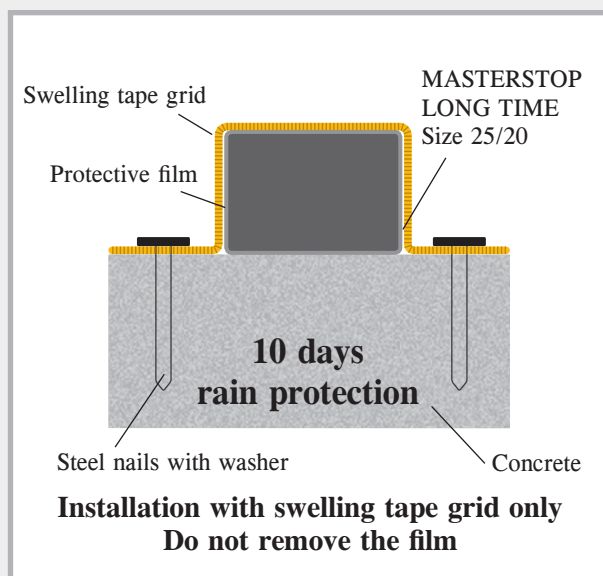
## The convincing advantages of MASTERSTOP LONG TIME

- 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

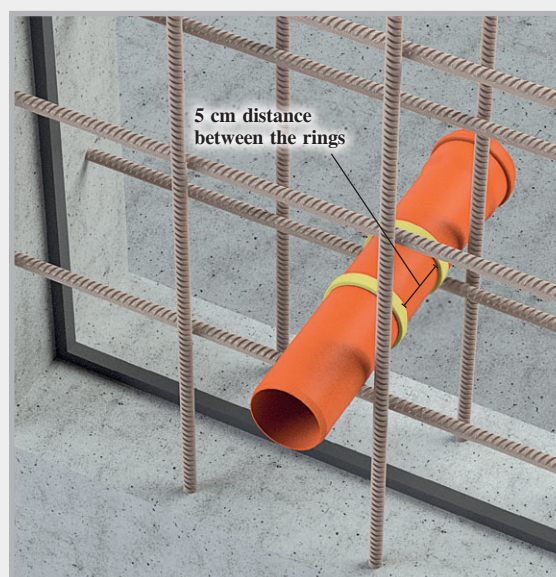
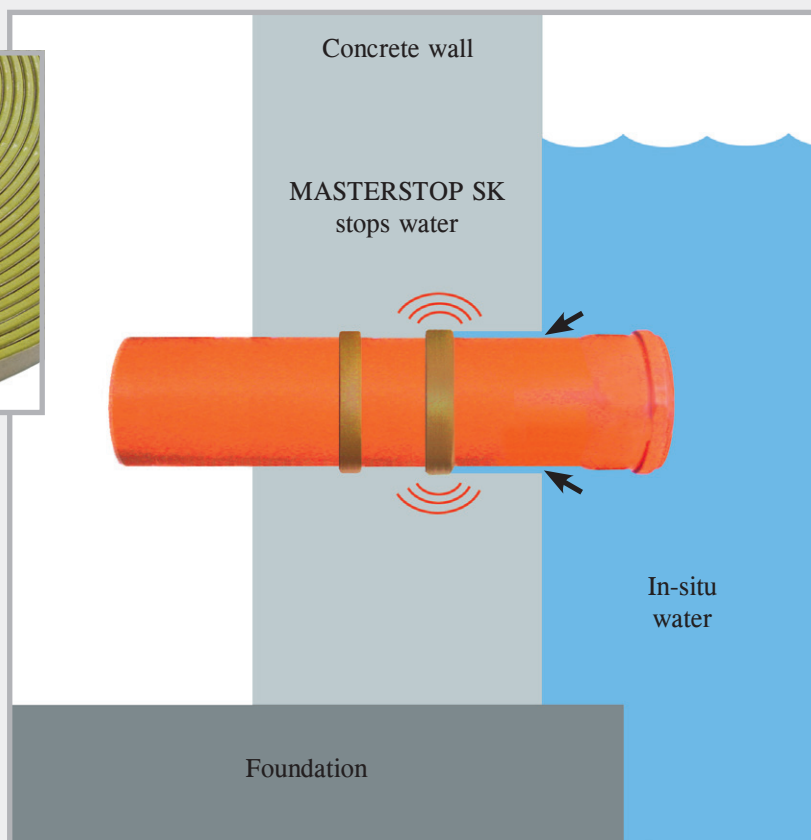
- Test report MFPA Leipzig, up to 50 m water column
- Environmentally friendly

### 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<br>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

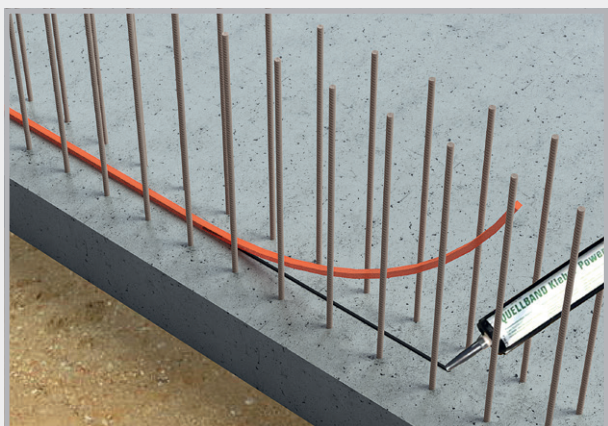
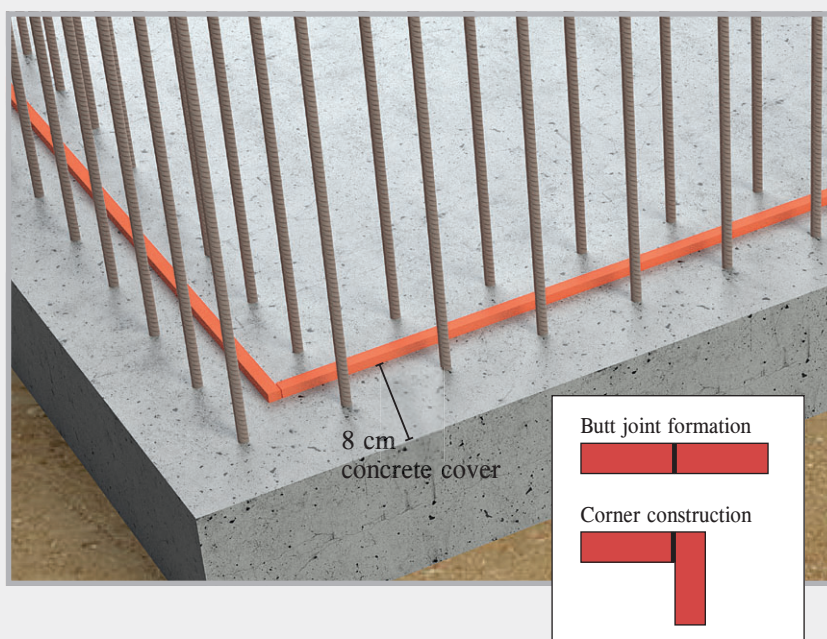


## Installation of FLOWSTOP

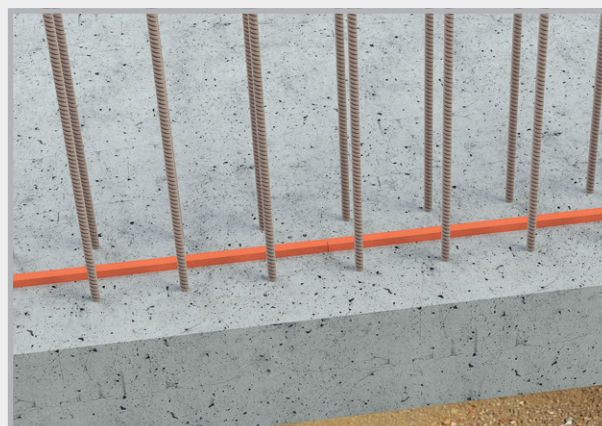
The substrate must be clean, dry and free of loose particles. Once the POWER swelling tape adhesive has been applied in the centre of the joint, the tape is placed on the adhesive and gently pressed in. A concrete cover of at least 8 cm inside the reinforcement must be ensured. Not suitable for installation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

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

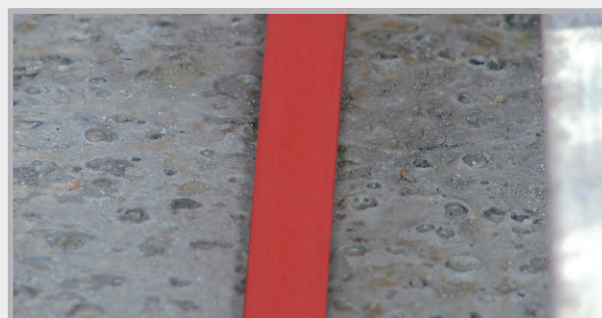
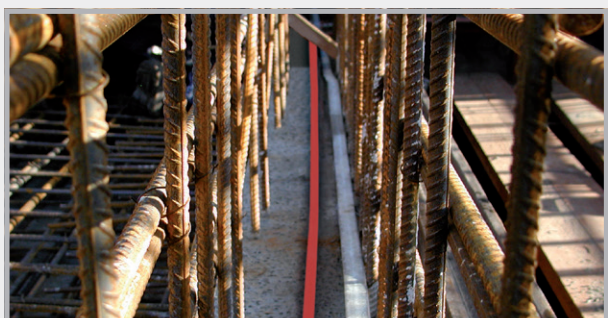
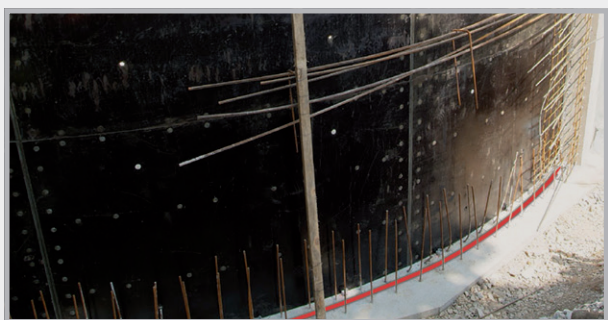
Rain water that runs off does not activate the swelling.



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



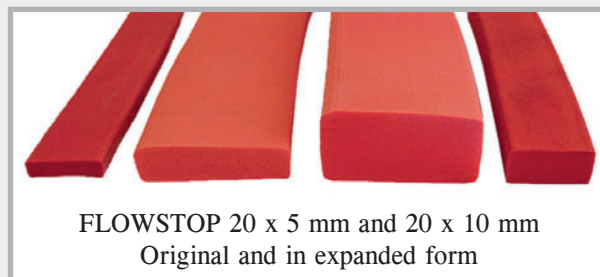
## Sealing of a construction joint



## 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<br>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                        |

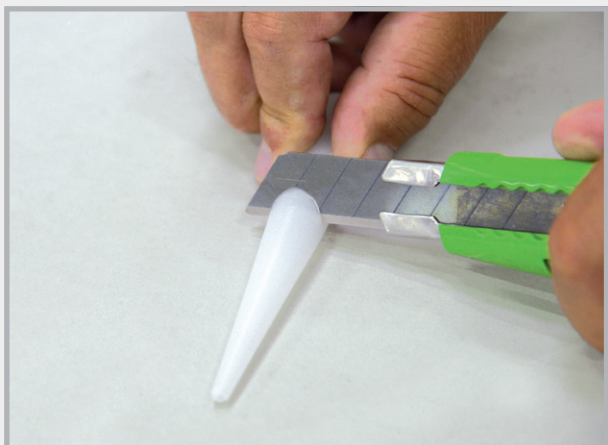


# Adhesives and swelling pastes

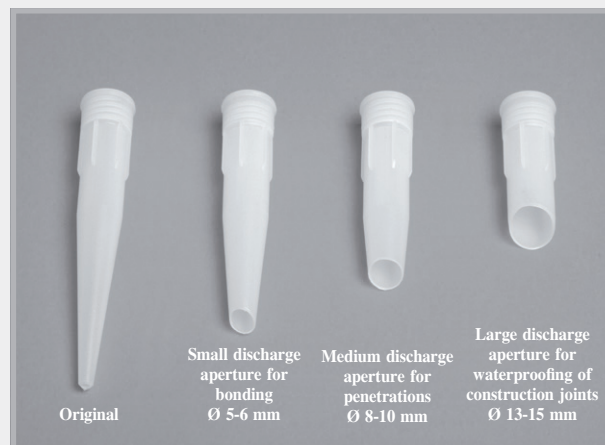
MASTERTEC produces adhesives for swelling tapes and swelling pastes for waterproofing various types and qualities of construction joints and wall penetrations.

## Preparatory work

### Cutting the cartridge tips

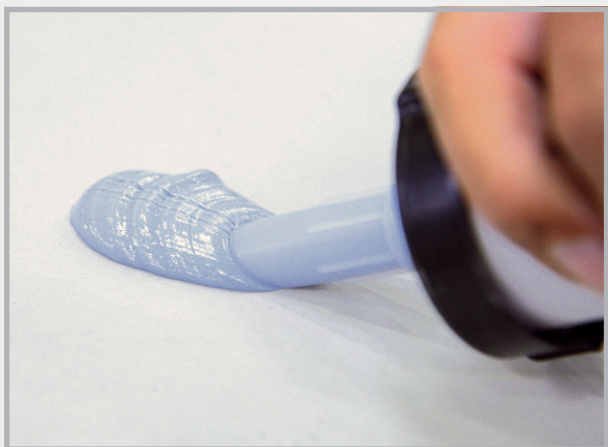


The nozzle is cut off to suit the various areas of application.

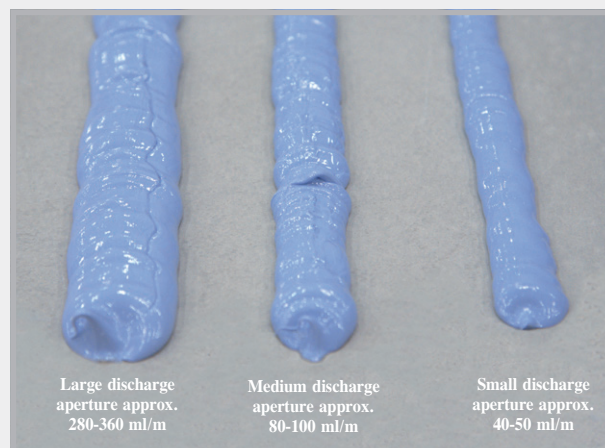


Cuts

### 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 $\triangle$ 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

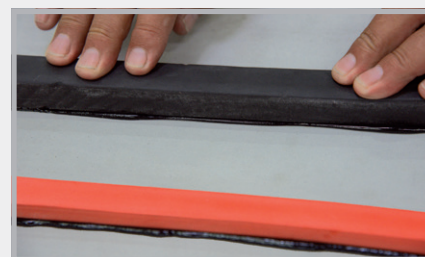
## POWER swelling tape adhesive

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



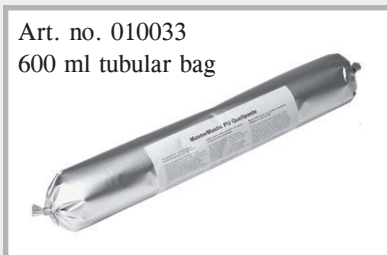
YouTube



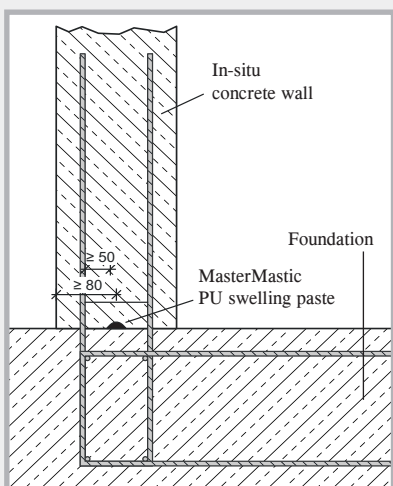
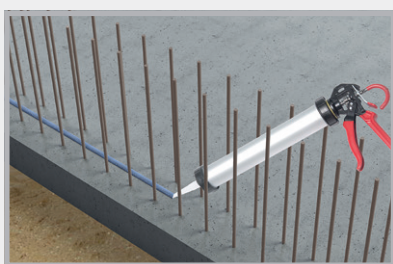
Single-component, swellable polyurethane paste, for waterproofing of wall penetrations and construction joints in water-impermeable concrete structures.

- 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)**

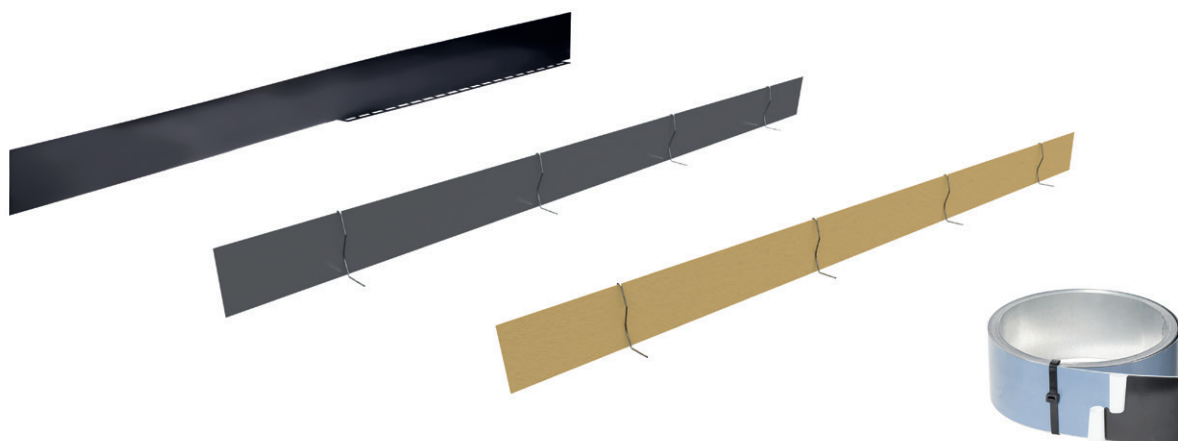
- Application: Circular Ø approx. 8-10 mm
- Usage: approx. 80-100 g/m
- Adheres to: Concrete, steel, stone, rigid PVC  
**Not suitable for polypropylene!**
- Installation: Inside the reinforcement with a concrete cover of at least 8 cm.  
**To prevent premature swelling, protect against moisture and rain.**

## Construction joints

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

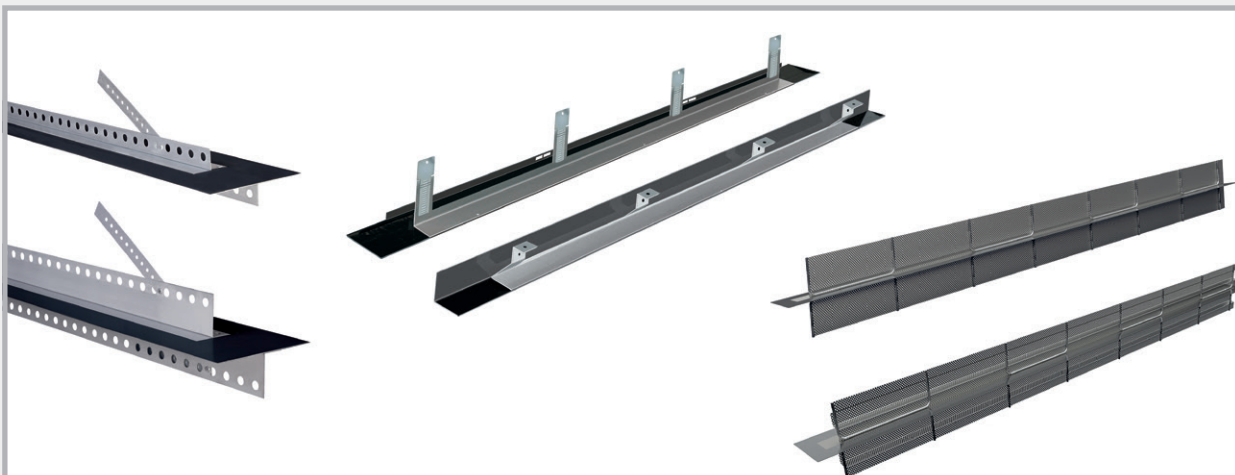
- Application: Bead approx. 35 x 12 mm
- Usage: approx. 380-420 g/m
- Adheres to: Dust-free, dry or matt damp concrete surfaces
- Installation: Inside the reinforcement with a concrete cover of at least 8 cm.  
**To prevent premature swelling, protect against moisture and rain.**

# 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**

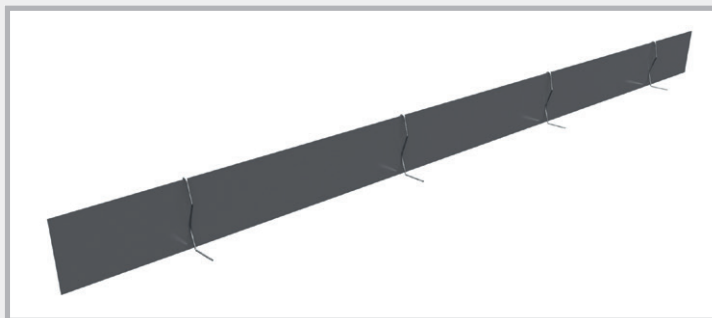
pages 32 – 34

# 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                 |
|---------------|--|--|-------------------------|------------------------|
| <b>070450</b> | <b>VB joint sheet metal<br/>length 2.4 m, width 160 mm</b><br>Crate 120 m (50 strips of 2.4 m each)<br>fully coated on both sides<br>incl. 55 fixing clips<br>and 150 mounting brackets<br><a href="#">Technical details page 35</a> | 1 crate<br>of 50 pcs.<br><br>incl. fastening<br>material | 12 crates<br>per pallet | 130.00 kg<br>per crate |
| <b>070452</b> | <b>VB joint sheet metal<br/>length 2.0 m, width 160 mm</b><br>Crate 100 m (50 strips of 2 m each)<br>fully coated on both sides<br>incl. 55 fixing clips<br>and 150 mounting brackets<br><a href="#">Technical details page 35</a>   | 1 crate<br>of 50 pcs.<br><br>incl. fastening<br>material | 12 crates<br>per pallet | 110.00 kg<br>per crate |
| <b>070455</b> | <b>Joint sheet metal 80<br/>length 2.4 m, width 80 mm</b><br>Crate 120 m (50 strips of 2.4 m each)<br>fully coated on both sides<br>incl. 55 fixing clips<br><a href="#">Technical details page 47</a>                               | 1 crate<br>of 50 pcs.<br><br>incl. fastening<br>material |                         | 74.00 kg<br>per crate  |

### VB joint sheet metal strips in carton



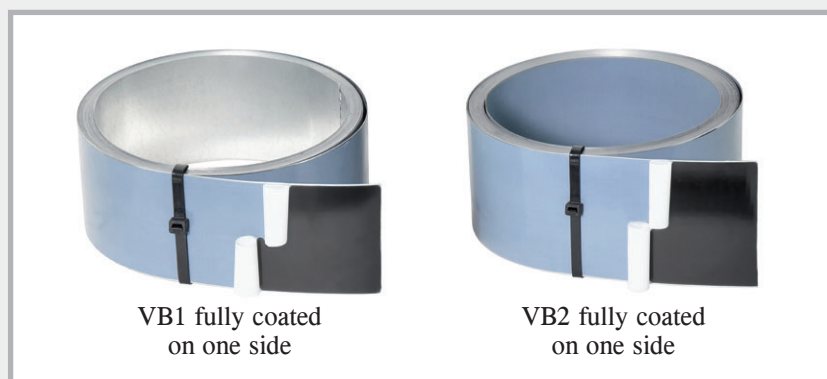
| Art. no.           | Description   | PU  | Secondary packaging      | Weight                 |
|--------------------|---|---|--------------------------|------------------------|
| <b>070470</b>      | <b>VB joint sheet metal<br/>length 2.0 m, width 160 mm</b><br>Carton 30 m (15 strips of 2 m each)<br>fully coated on both sides<br>incl. 20 fixing clips<br>and 40 mounting brackets<br><a href="#">Technical details page 35</a> | 1 carton<br>of 15 pcs.<br><br>incl. fastening<br>material | 32 cartons<br>per pallet | 30.50 kg<br>per carton |
| <b>NEW! 070400</b> | <b>Joint sheet metal 80<br/>length 2.4 m, width 80 mm</b><br>Carton 60 m (25 strips of 2.4 m each)<br>fully coated on both sides<br>incl. 30 fixing clips<br><a href="#">Technical details page 47</a>                            | 1 carton<br>of 25 pcs.<br><br>incl. fastening<br>material | 32 cartons<br>per pallet | 28.00 kg<br>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><br>Joint sheet metal fully coated on both sides<br>width 160 mm, roll length 20 m<br>incl. 30 mounting brackets<br>and 2 fixing clips<br><a href="#">Technical details page 35</a> | 1 roll<br>per carton<br><br>incl. fastening<br>material | 36 cartons<br>per pallet | 21.00 kg<br>per carton |
| <b>070460</b> | <b>Joint sheet metal roll 160 VB1</b><br>Joint sheet metal fully coated on one side<br>width 160 mm, roll length 20 m<br>incl. 30 mounting brackets<br>and 2 fixing clips<br><a href="#">Technical details page 35</a>   | 1 roll<br>per carton<br><br>incl. fastening<br>material | 36 cartons<br>per pallet | 19.00 kg<br>per carton |
| <b>070463</b> | <b>Joint sheet metal roll 120 VB1</b><br>Joint sheet metal fully coated on one side<br>width 120 mm, roll length 20 m<br>incl. 30 mounting brackets<br>and 2 fixing clips<br><a href="#">Technical details page 35</a>   | 1 roll<br>per carton<br><br>incl. fastening<br>material | 48 cartons<br>per pallet | 15.00 kg<br>per carton |
| <b>070462</b> | <b>Joint sheet metal roll 240 VB2</b><br>Joint sheet metal fully coated on both sides<br>width 240 mm, roll length 20 m<br>incl. 30 mounting brackets<br>and 4 fixing clips<br><a href="#">Technical details page 35</a> | 1 roll<br>per carton<br><br>incl. fastening<br>material | 24 cartons<br>per pallet | 31.00 kg<br>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

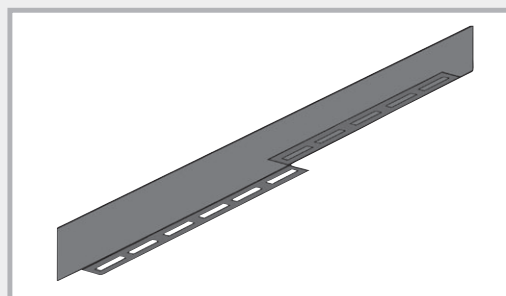


Pallet containing VB joint sheet metal rolls in cartons

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

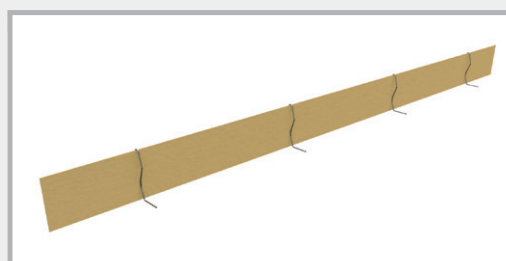
| Art. no. | Description   | PU                    | Secondary packaging     | Weight                 |
|----------|---|-----------------------|-------------------------|------------------------|
| 070200   | <b>MASTER joint sheet metal</b><br>length 2.5 m, width 160 mm<br>fully coated sealing element<br>with support rail, 20 mm perforated<br><a href="#">Technical details pages 36 – 37</a> | 1 crate<br>of 40 pcs. | 12 crates<br>per pallet | 155.00 kg<br>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><br>with full mineral coating on both sides<br>length 2.4 m, width 160 mm<br>incl. 150 mounting brackets<br>55 fixing clips<br><a href="#">Technical details page 38</a> | 1 crate<br>of 50 pcs.<br><br>incl. fastening<br>material | 12 crates<br>per pallet | 135.00 kg<br>per crate |
| 070486   | <b>Joint sheet metal MB 120, overlap type</b><br>with full mineral coating on both sides<br>length 2.4 m, width 120 mm<br>incl. 150 mounting brackets<br>55 fixing clips<br><a href="#">Technical details page 38</a> | 1 crate<br>of 50 pcs.<br><br>incl. fastening<br>material | 12 crates<br>per pallet | 100.00 kg<br>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><br>fully coated on one side with bentonite<br>width 160 mm, roll length 10 m<br>incl. 20 mounting brackets, 4 fixing clips<br>+ 1.5 m adhesive tape<br><a href="#">Technical details page 39</a> | 1 roll<br>per carton<br><br>incl. fastening<br>material | 36 cartons<br>per pallet | 15.00 kg<br>per carton |



# Crack-inducing profiles

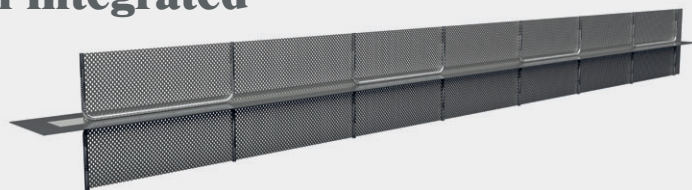
| Art. no. | Description  | PU    | Secondary packaging    | Weight             |
|----------|--|-------|------------------------|--------------------|
| 070250   |  <b>MASTER joint sheet metal SFG</b><br>Length: 2.5 m<br>Incl. 5 nail plugs 5/50 and 4 fixing clips, adjustable brackets<br>Extension at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

# Stopend panels ABS

Rough or toothed joint with integrated coated joint sheet metal



## ABS rough



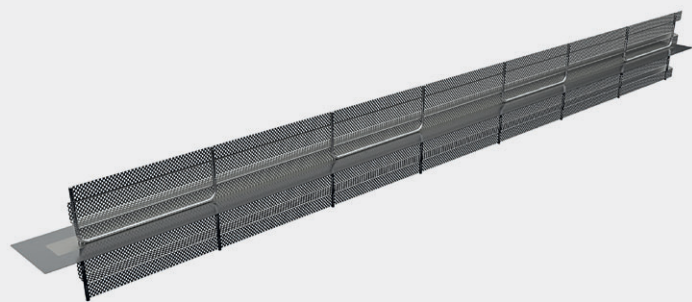
| Art. no. | Description    | Installation dimension<br>E = width of perforated plate | Length | PU    | Weight<br>per pc. |
|----------|----------------|---|--------|-------|-------------------|
| 070281   | ABS 130 rough  | Perforated plate 130 mm                                 | 2.50 m | 1 pc. | 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<br>E = width of perforated plate | Length | PU    | Weight<br>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

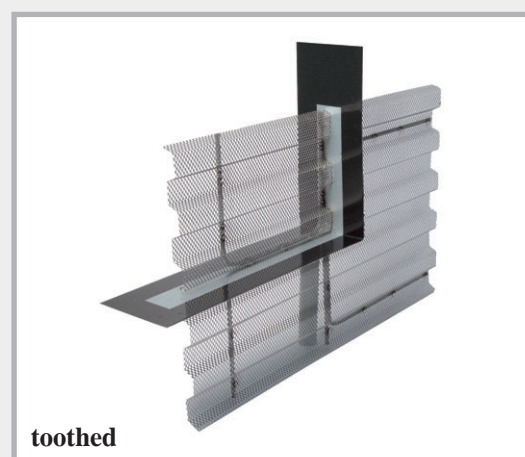
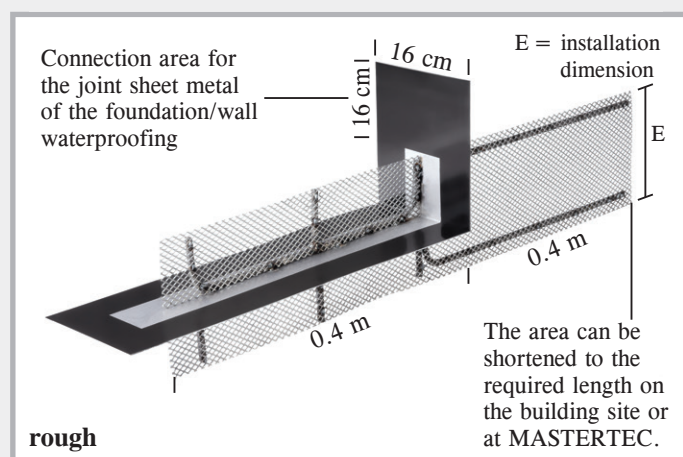
| Art. no. | Description   | Installation dimension<br>E = width of perforated plate | PU    | Weight<br>per pc. |
|----------|---------------|---|-------|-------------------|
| 070330   | UL 130 rough  | Perforated plate 130 mm                                 | 1 pc. | 1.70 kg           |
| 070333   | 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<br>E = width of perforated plate | PU    | Weight<br>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

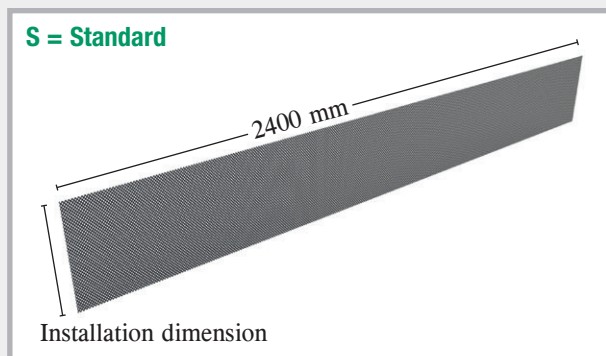


### ABS deflection profiles

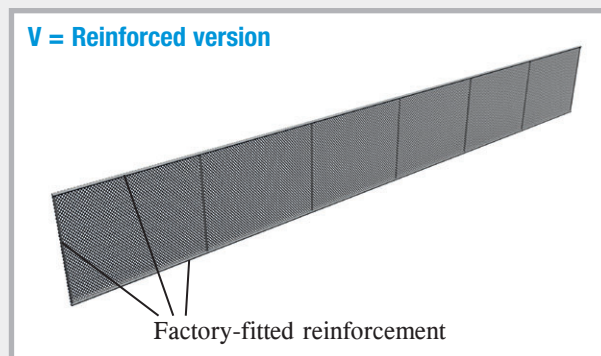
For a pressure water-tight transition from the foundation shuttering to the wall. We require the installation dimension E, which is the measurement between the reinforcement.

# LinkForm stopend panels

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



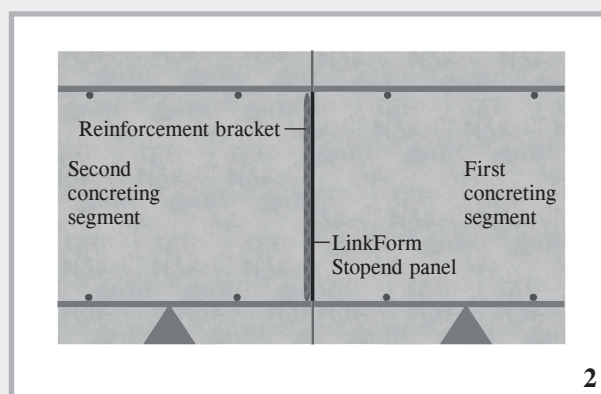
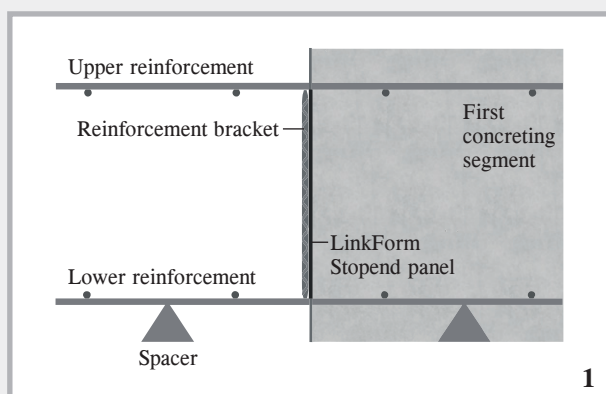
LinkForm rough stopend panels – standard



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. |

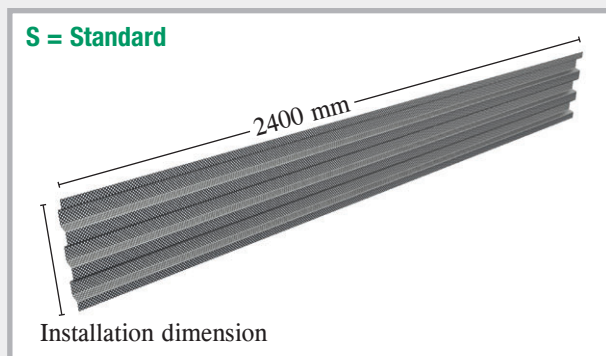
All intermediate sizes are available at short notice



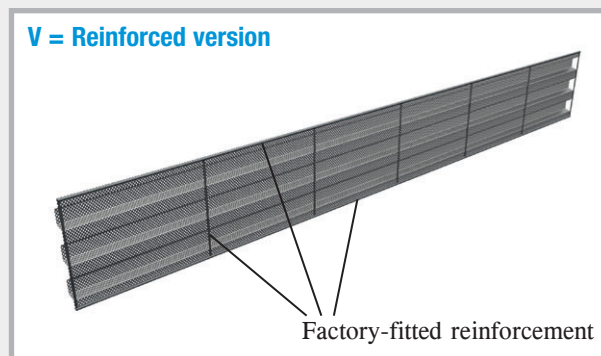


# LinkFix stopend panels

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



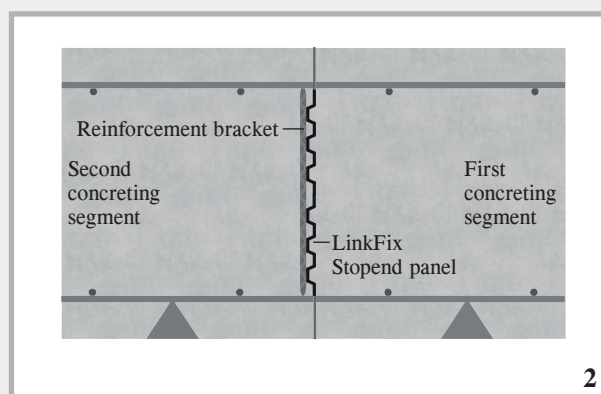
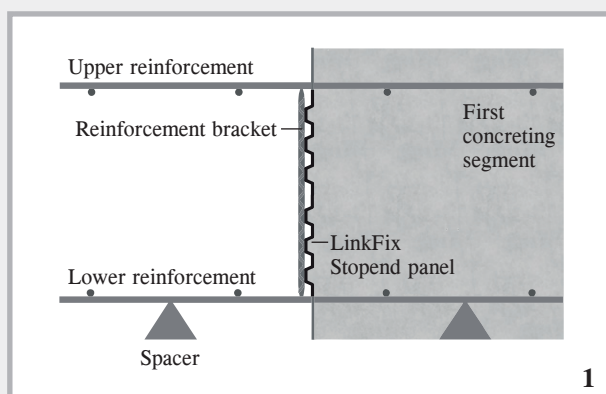
LinkFix toothed stopend panels – standard



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. |

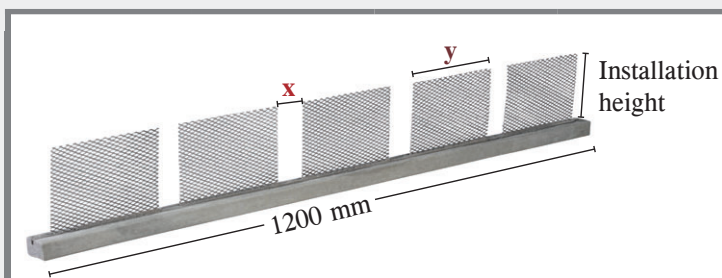
All intermediate sizes are available at short notice



# ABS spacer

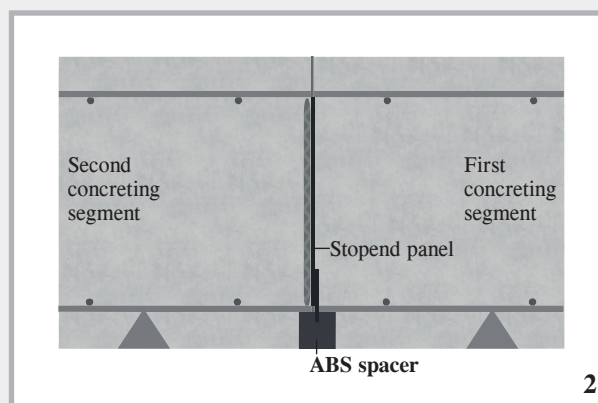
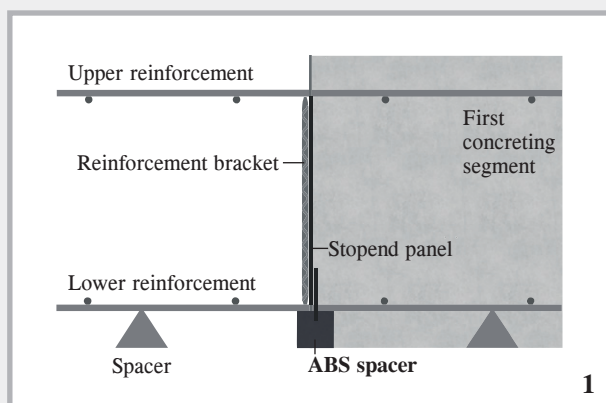
## **NEW!** Fibre cement square spacer with integrated rib lath

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<br>35 mm concrete cover<br>Installation height 120/150-x-y | 1.2 m  | 1 pc. | <b>070630</b>           | 3.20 kg<br>per pc. | <b>070636</b>           | 3.40 kg<br>per pc. |
| ABS spacer<br>40 mm concrete cover<br>Installation height 120/150-x-y | 1.2 m  | 1 pc. | <b>070632</b>           | 4.20 kg<br>per pc. | <b>070638</b>           | 4.40 kg<br>per pc. |
| ABS spacer<br>50 mm concrete cover<br>Installation height 120/150-x-y | 1.2 m  | 1 pc. | <b>070634</b>           | 6.50 kg<br>per pc. | <b>070640</b>           | 6.70 kg<br>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><br/>element length 2.5 m</p> <p><b>DSK 24/25</b><br/>for wall thickness 24 + 25 cm</p> <p><b>DSK 30</b><br/>for wall thickness 30 cm</p> <p><b>DSK 35/36.5</b><br/>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<br>= 2.5 m                            | 2.40 kg/m                                  |
| 070267                     |   | 1 element<br>= 2.5 m                            | 2.80 kg/m                                  |
| 070268                     |   | 1 element<br>= 2.5 m                            | 3.20 kg/m                                  |
|                            |   |   |  |
| 070269                     |  <p><b>Sound joint tape DSF</b><br/>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><br/>transition from joint sheet metal to joint tape</p> <p>Technical details page 47</p>    | 1 set<br>= 2 pcs.                               | 2.50 kg per set                            |
| 070240                     |  <p><b>MASTER adhesive tape for joint sheet metal</b><br/>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><br/>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><br/>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><br/>side length 25 x 25 cm<br/>height 160 mm</p>   | 1 pc.   | 0.45 kg per pc.                            |
| 070415<br>070421<br>070422 |  <p><b>Mounting bracket</b> for joint sheet metals<br/>up to height 160 mm<br/>height 161-205 mm<br/>height 206-330 mm</p>   | 150 pcs./sack<br>150 pcs./sack<br>150 pcs./sack | per sack<br>7.50 kg<br>8.60 kg<br>13.00 kg |
| 070410                     |  <p><b>Fixing clip</b><br/>for securing the element joints</p>   | 1 bag<br>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   | Joint sheet metal, black, 1.5 x 250 mm in accordance with the WU directive | 1 roll of 30 m | 12 rolls per pallet | 90.00 kg        |
| 070176   | Joint sheet metal, black, 1.5 x 300 mm in accordance with the WU directive | 1 roll of 30 m | 10 rolls per pallet | 108.00 kg       |
| 070177   | Joint sheet metal, black, 2.0 x 200 mm                                     | 1 roll of 30 m | 12 rolls per pallet | 96.00 kg        |
| 070178   | Joint sheet metal, black, 2.0 x 250 mm in accordance with the WU directive | 1 roll of 30 m | 10 rolls per pallet | 120.00 kg       |
| 070180   | Joint sheet metal, black, 2.0 x 300 mm in accordance with the WU directive | 1 roll of 30 m | 8 rolls per pallet  | 144.00 kg       |
| 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   | MASTER-Connect joint sheet metal F150 for joint sheet metal widths up to 150 mm | 1  | 2.00 kg |  |
| 070193   | MASTER-Connect joint sheet metal F250 for joint sheet metal widths up to 250 mm | 1  | 3.00 kg |  |
| 070194   | MASTER-Connect joint sheet metal F330 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   | MASTER-Connect joint tape B250 for joint tape widths up to 250 mm | 1  | 3.00 kg |  |
| 070620   | MASTER-Connect joint tape B330 for joint tape widths up to 330 mm | 1  | 4.00 kg |  |

Resistance:

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

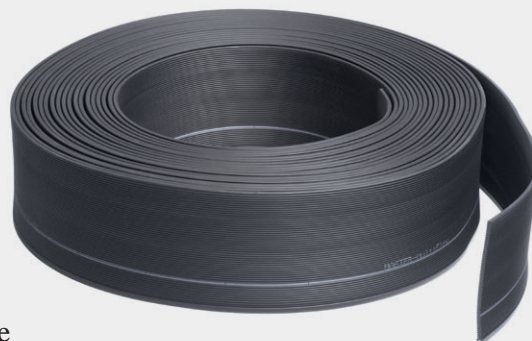


# MASTER-MultiFlex (MMF 140)

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.

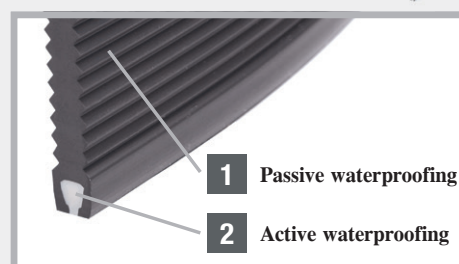


## 1. Passive waterproofing

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><br>Construction joint tape with additional swelling profile,<br>Width 140 mm<br>Roll length 25 m<br>including 50 mounting brackets | 1 carton             | 32 cartons<br>per pallet | 30.00 kg<br>per carton |  |
| 080645   | <b>MMF 140 Adhesive joining kit</b><br>6 fixing clips and 3 m special<br>adhesive tape<br>Width 75 mm  | 1 set                |                          | 0.90 kg<br>per set     |  |
| 080647   | <b>MMF 140 Mounting bracket</b><br>for attachment of joint tape to the<br>reinforcement  | 1 sack<br>of 50 pcs. |                          | 4.30 kg<br>per sack    |  |
| 080648   | <b>MMF 140 Fixing clips</b><br>for securing the adhesive bonded<br>joint   | 1 bag<br>of 25 pcs.  |                          | 1.50 kg<br>per bag     |  |
| 080649   | <b>MMF 140 Adhesive tape</b><br>Width 75 mm<br>Roll length 3 m<br>for bonding of joints  | 1 pc.                |                          | 0.45 kg<br>per roll    |  |
| 070605   | <b>MMF 140 MASTER-Connect "active"</b><br>Joint tape connector with additional<br>swelling tape protection   | 1 pc.                |                          | 2.00 kg<br>per pc.     |  |

# Joint tape, factory standard PVC

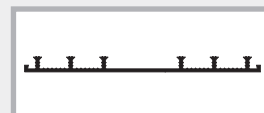
## Construction joint tape, internal

| 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>        |



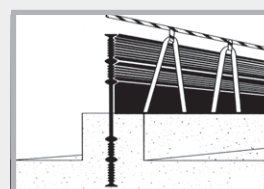
## Construction joint tape, external

|       |        |      |       |         |               |
|-------|--------|------|-------|---------|---------------|
| 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

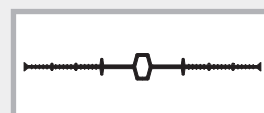
## Construction joint tape, internal, made of rigid PVC

|       |        |      |       |         |               |
|-------|--------|------|-------|---------|---------------|
| P 150 | 150 mm | 25 m | 1 pc. | 26.0 kg | <b>080640</b> |
|-------|--------|------|-------|---------|---------------|



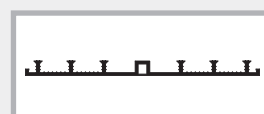
## Expansion joint tape, internal

|      |        |      |       |         |               |
|------|--------|------|-------|---------|---------------|
| 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> |



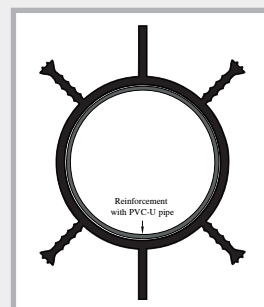
## Expansion joint tape, external

|       |        |      |       |         |               |
|-------|--------|------|-------|---------|---------------|
| 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

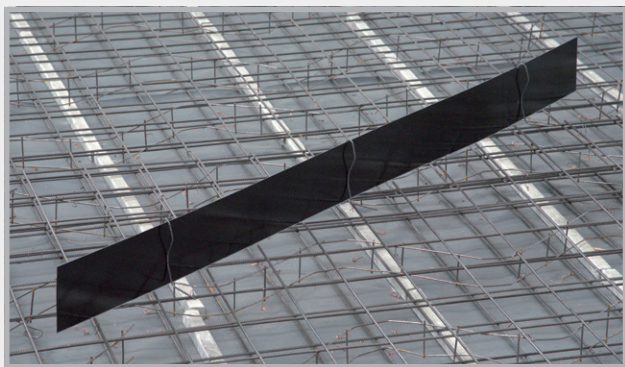
| Art. no.      | Description  | PU                      | Weight                |
|---------------|--|-------------------------|-----------------------|
| <b>070510</b> | <b>Joint tape clamp</b><br>3 pcs. per metre and side | 1 carton<br>of 200 pcs. | 1.50 kg<br>per carton |



# VB joint sheet metal High-pressure metal sheets



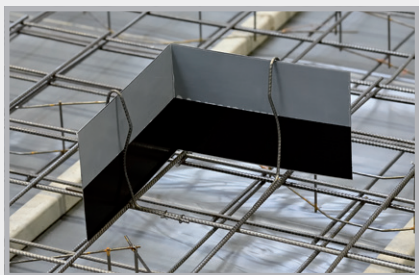
**Joint sheet metals with reactive, bitumen-free polymer coating for waterproofing of construction joints**



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





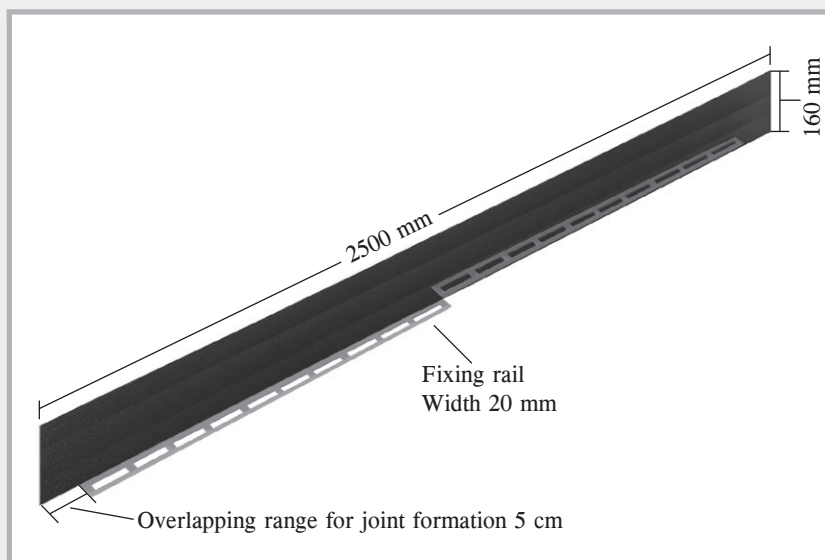
# MASTER joint sheet metal



## 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.

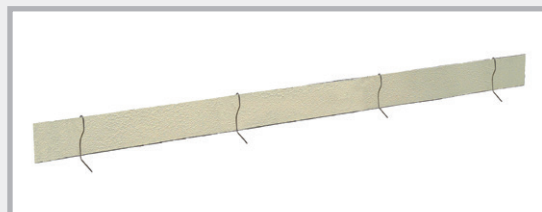


# Joint sheet metal MB Overlap

## 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.

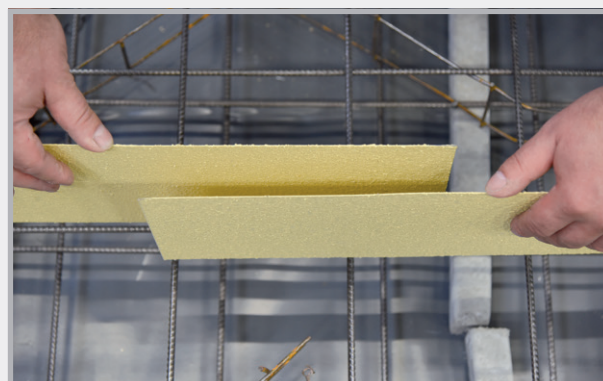


### Installation of MB joint sheet metal

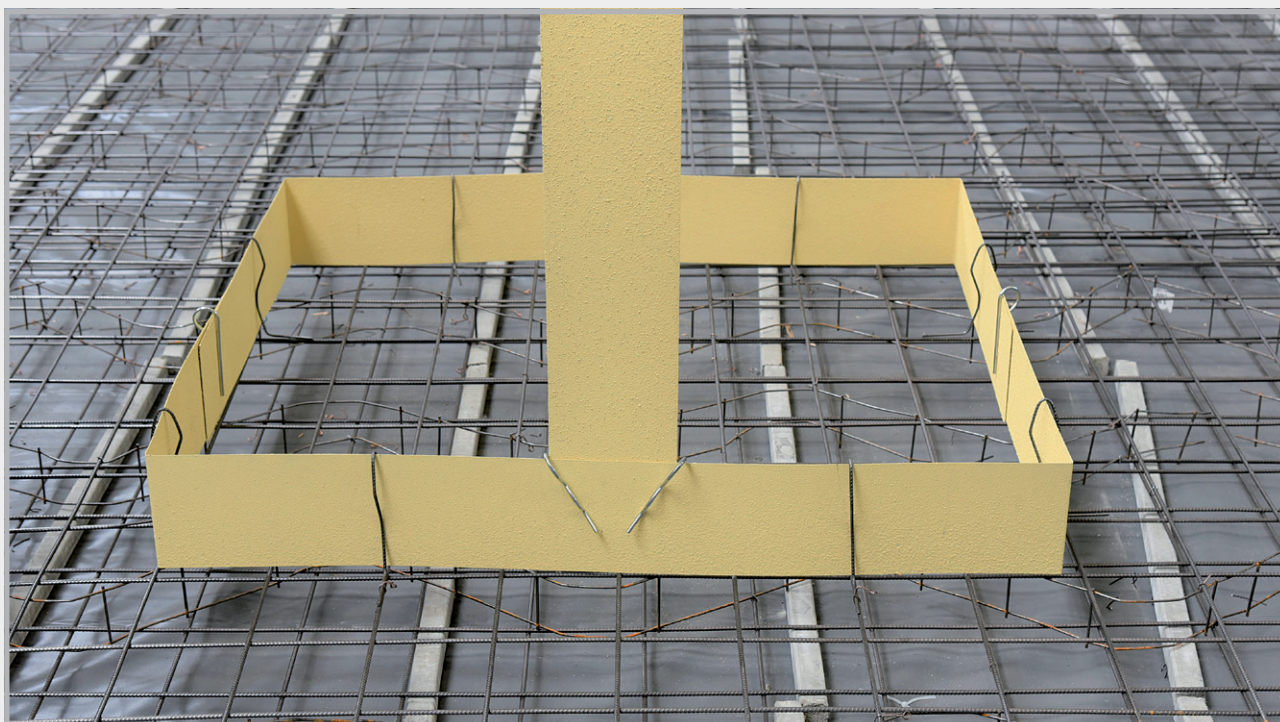
The joint sheet metal elements are supplied complete with installation accessories.



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



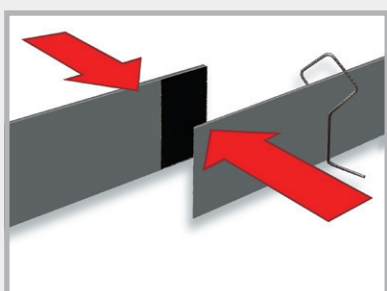
## Bentonite-coated joint sheet metal for waterproofing of construction joints.

### Presentation

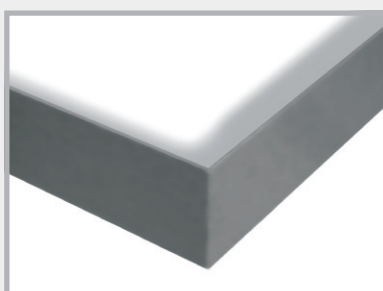
Joint sheet metal, fully coated on one side with bentonite  
Delivered complete with installation accessories.



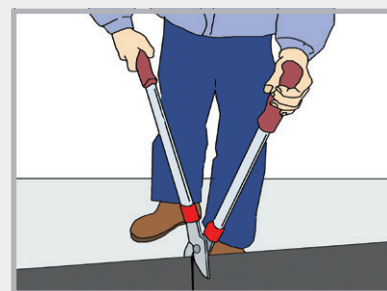
### Installation of AKTIV joint sheet metal



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



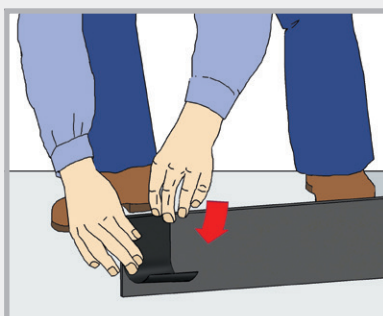
Corners are formed by simply bending the elements.



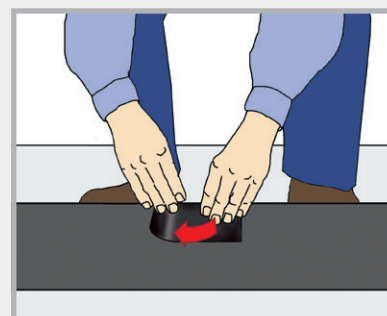
Cut the element to the required length.



Cut off strip of adhesive tape.

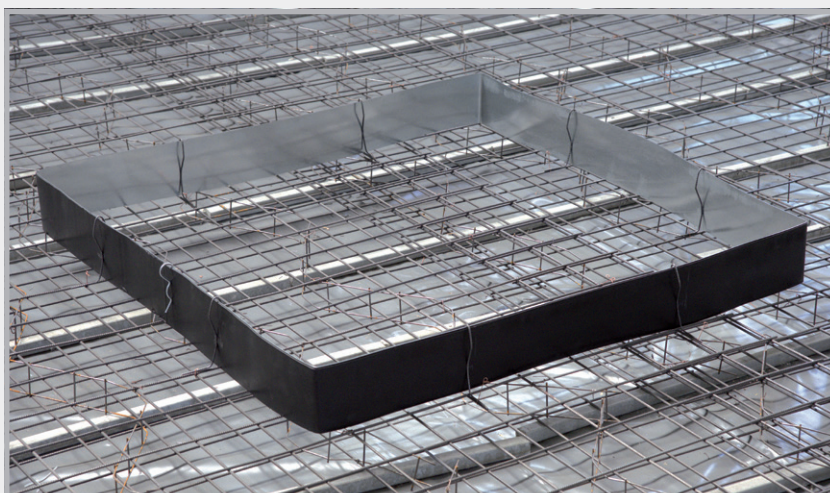


Apply the adhesive tape in the area where two elements are to be joined. The adhesive tape must be applied on both elements.



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!**

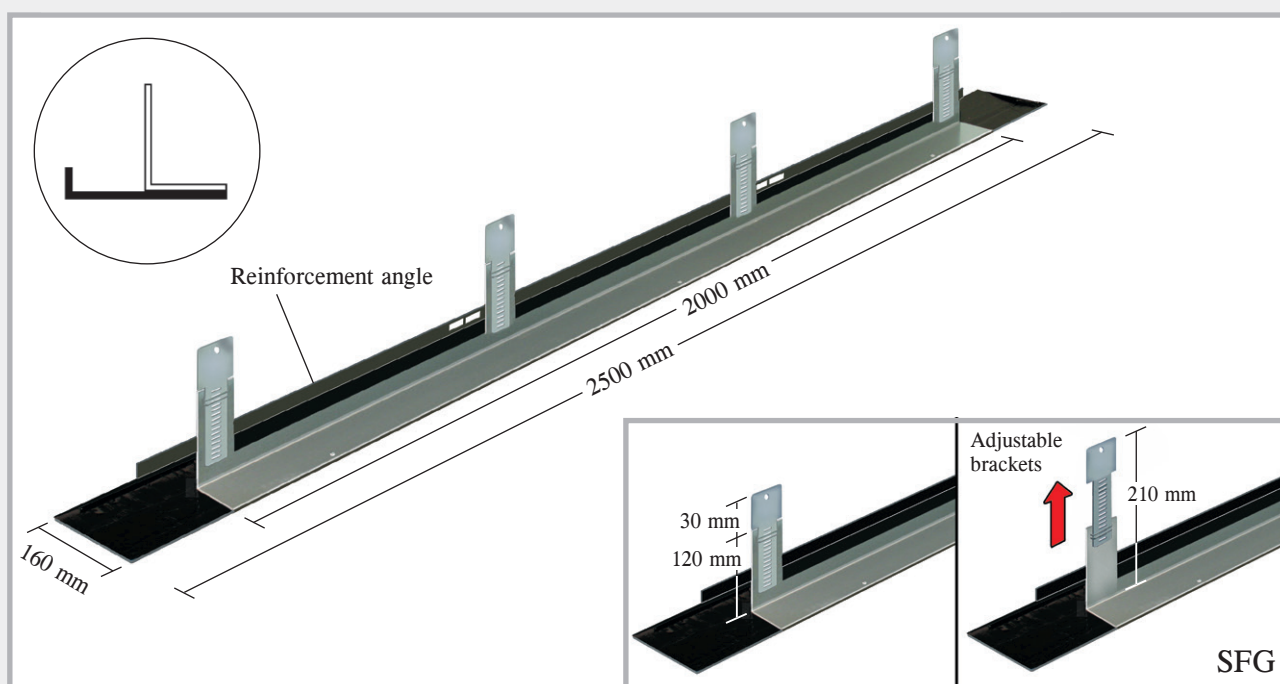
# Crack-inducing profiles



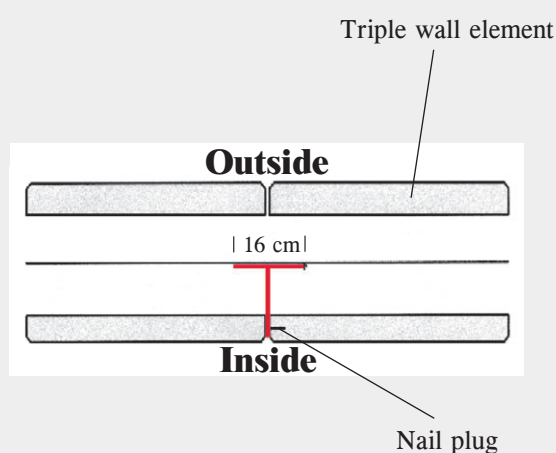
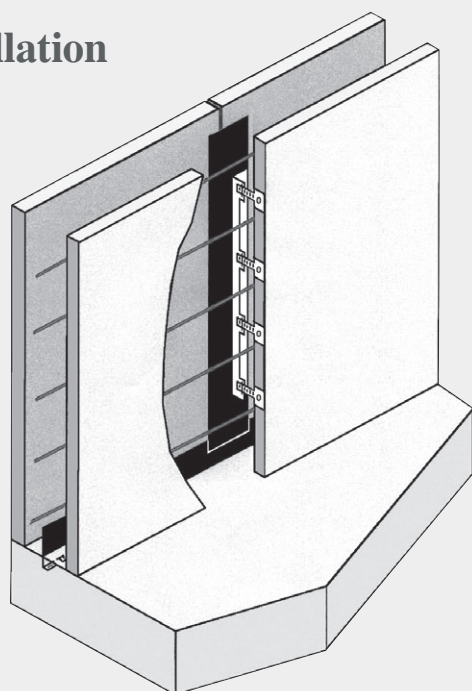
**MASTER joint sheet metal SFG adjustable**  
(prefabricated crack inducing element, straight) for straight butt joints

## Product description

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

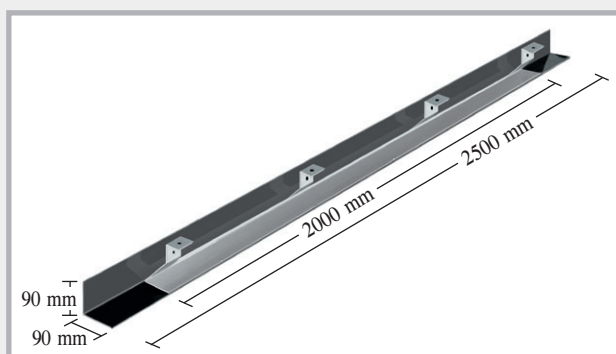


## Installation

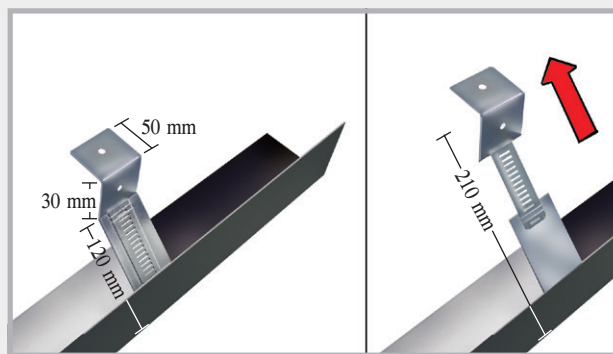


The elements supplied are completely prefabricated and are fixed to the internal formwork of the triple wall using the nail plugs provided. The lower part of the elements is bonded to the waterproofing element in the foundation area.

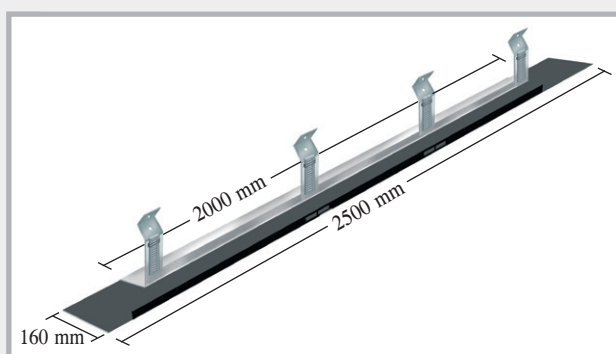
# Crack inducing elements for the corner area, SFE adjustable FE adjustable



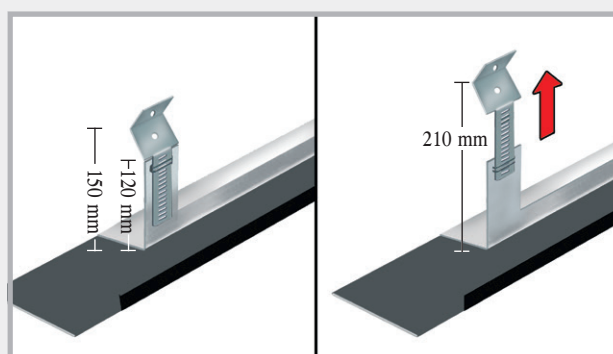
SFE profile



Adjustable brackets

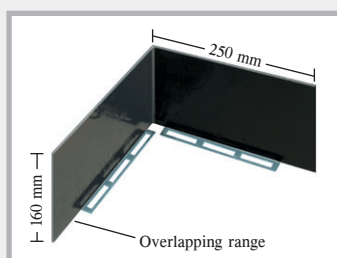
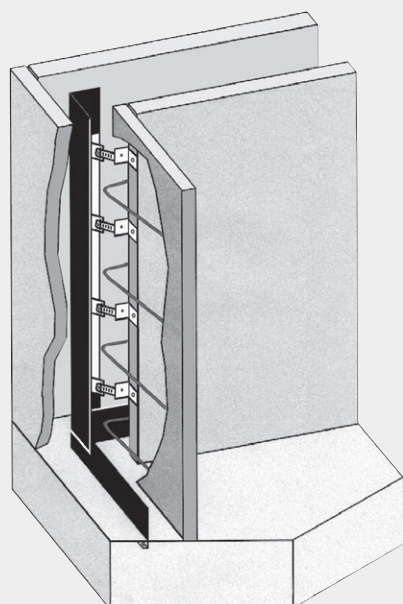


FE profile



Adjustable brackets

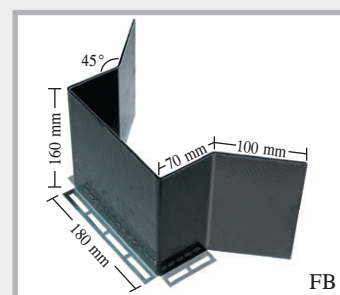
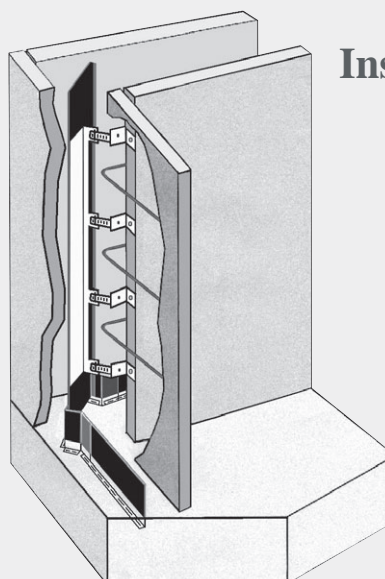
## Installation of SFE



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

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

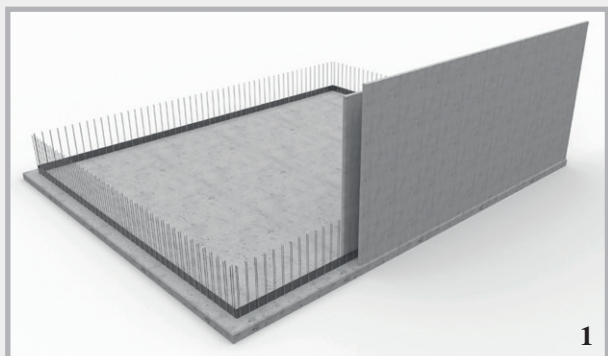
## Installation of FE



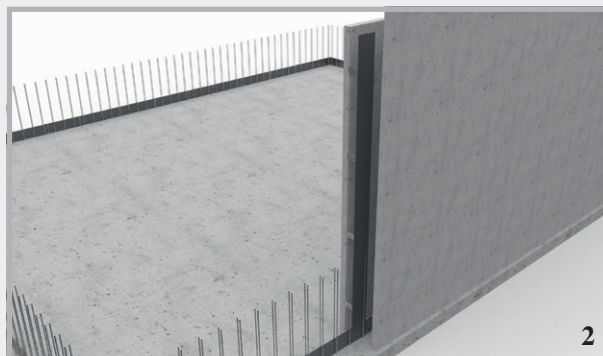
MASTER joint sheet metal  
corner element FB for connec-  
tion of FE profile



## At the construction site



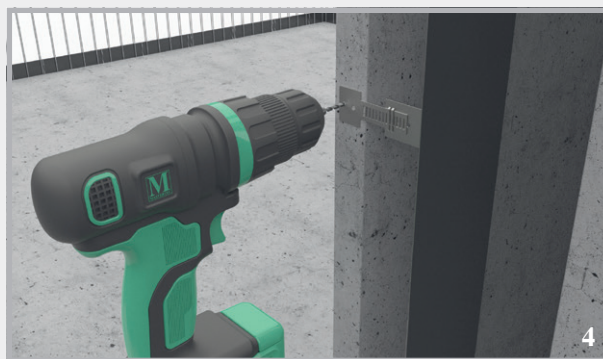
The first cavity wall element is positioned with VB joint sheet metal acting as the foundation/wall waterproofing element.



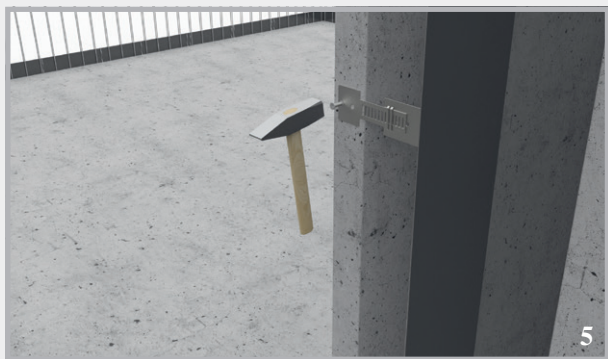
The SFG profile is set vertically and overlapped with the joint sheet metal (overlap  $\geq 5$  cm).



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



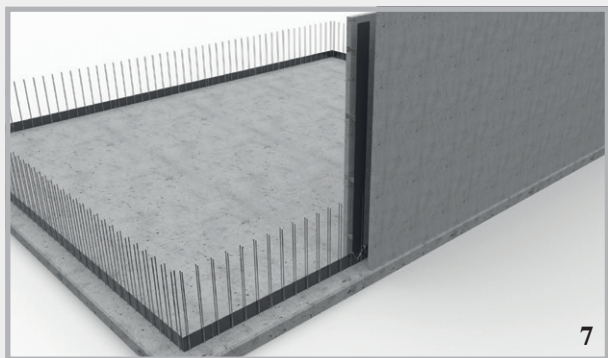
The wall formwork is drilled in order to fix the mounting bracket.



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.

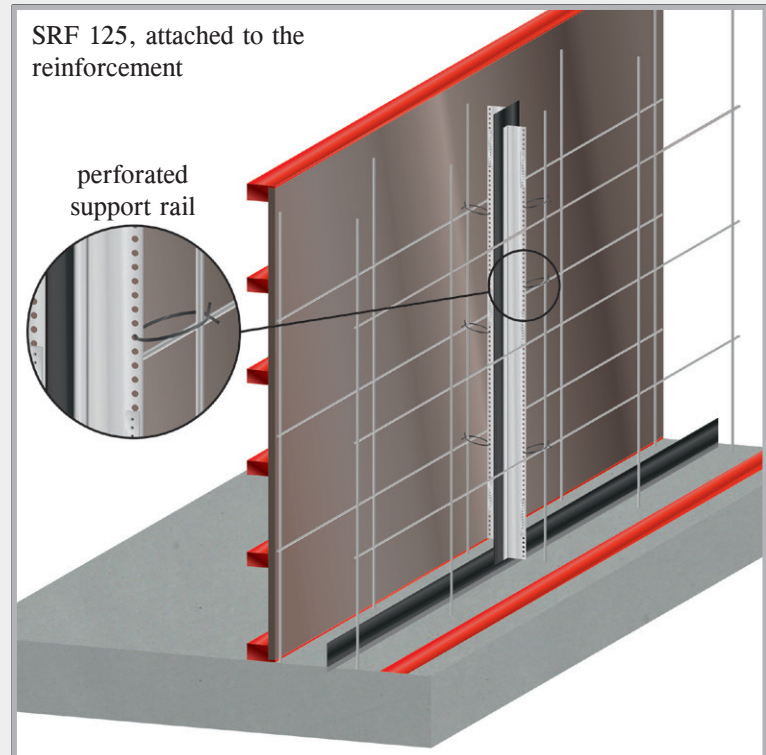
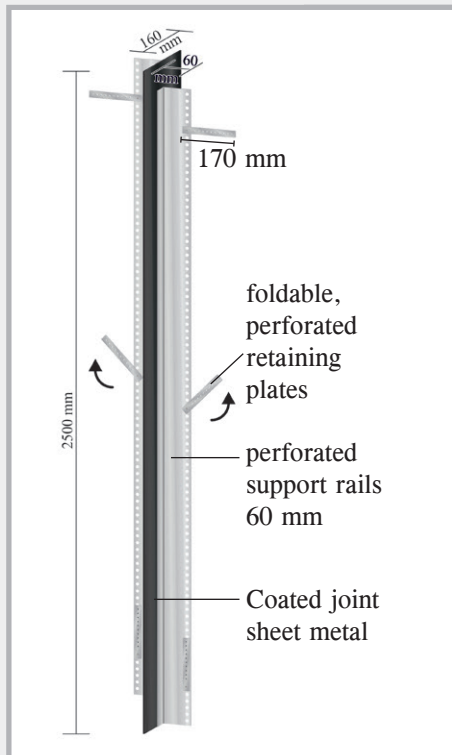
# Crack inducing profile SRF 125 Multi



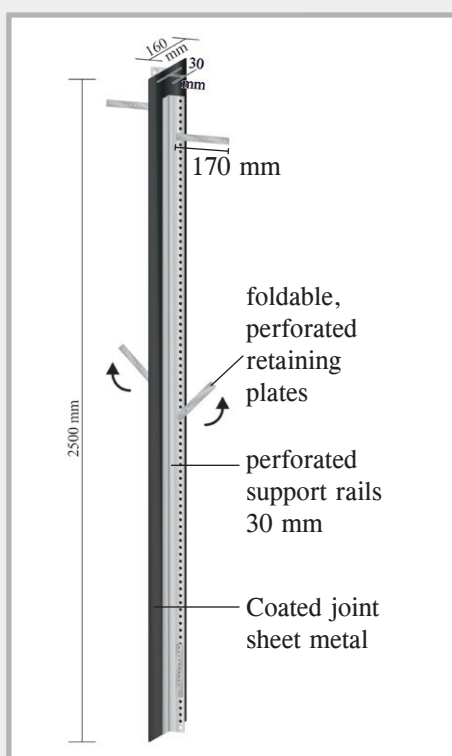
## Product description

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

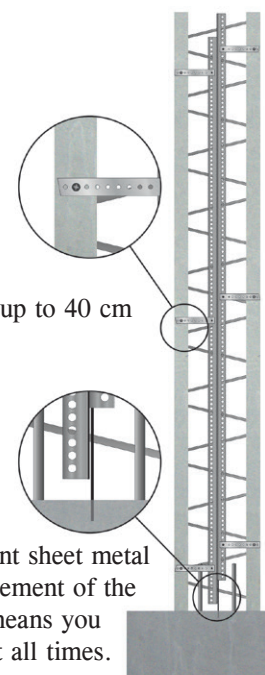


### Cavity wall installation

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.





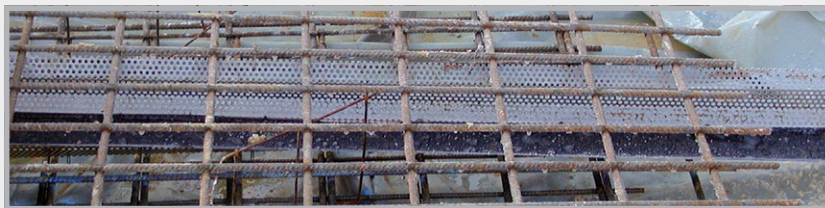
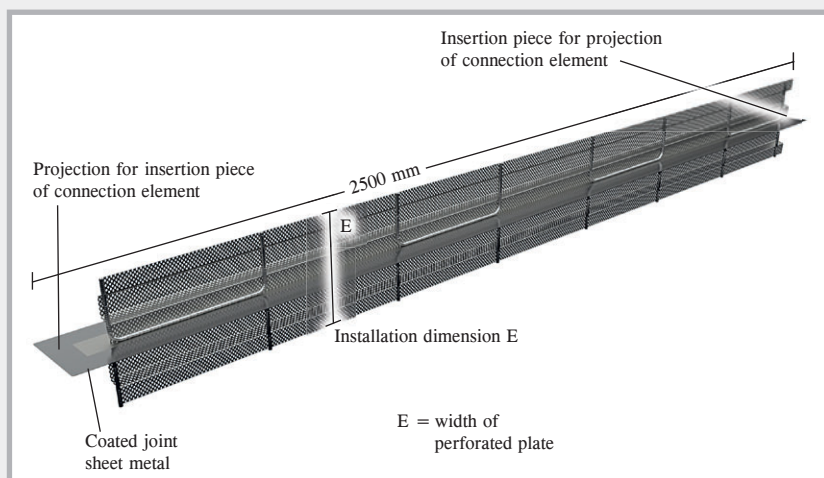
# Profiles for in-situ concrete

## 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

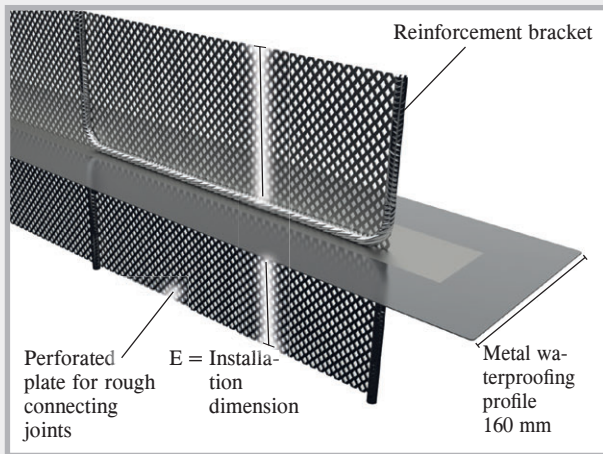
- Place the ABS elements between the reinforcement layers and fix them with tie wire
- Fit the individual elements into each other and glue the panels together
- Additional shuttering is recommended when using thick/high constructional elements.
- The elements remain in the concrete, i.e. no time-consuming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



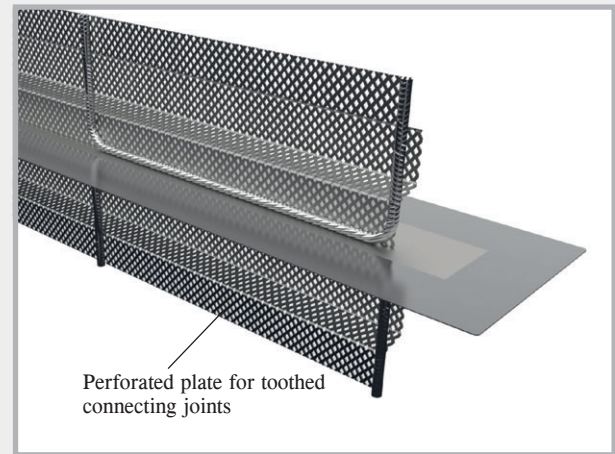
In your order, please specify the width within the reinforcement (please refer to the list of products).



## ABS rough



## ABS toothed

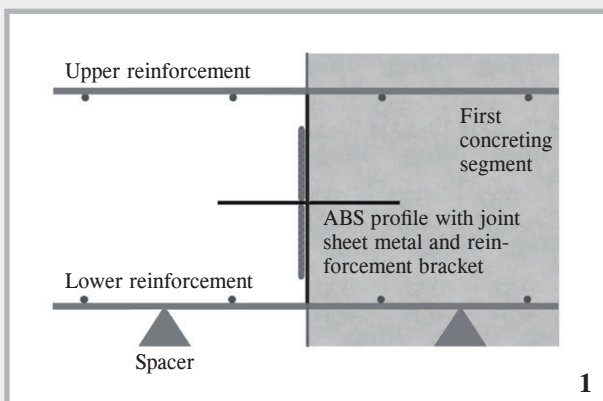


## ABS stopend panels for wall and foundation shuttering

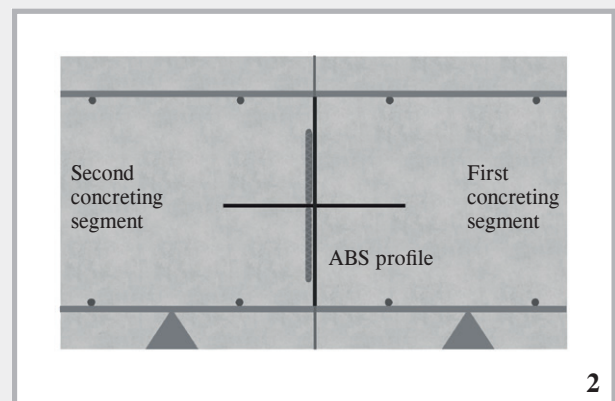
The ABS elements consist of perforated sheet metal with integrated coated joint sheet metal. The scope of delivery includes 2 fixing clips per element.

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

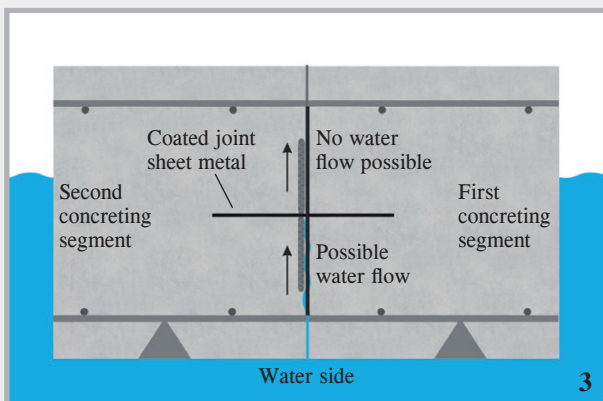
## Function of ABS stopend panels



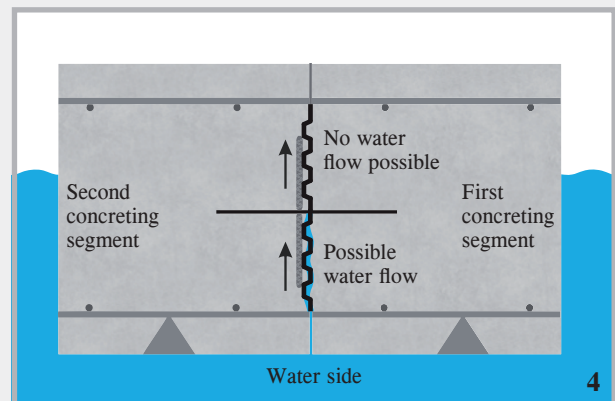
The ABS element serves as shuttering for the first concreting segment.



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



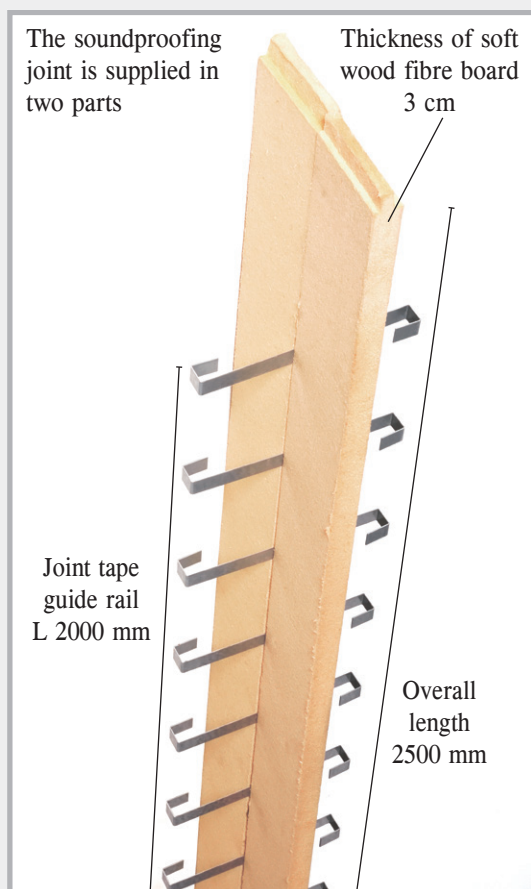
The coated joint sheet metal eliminates the possibility of water inflow.



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

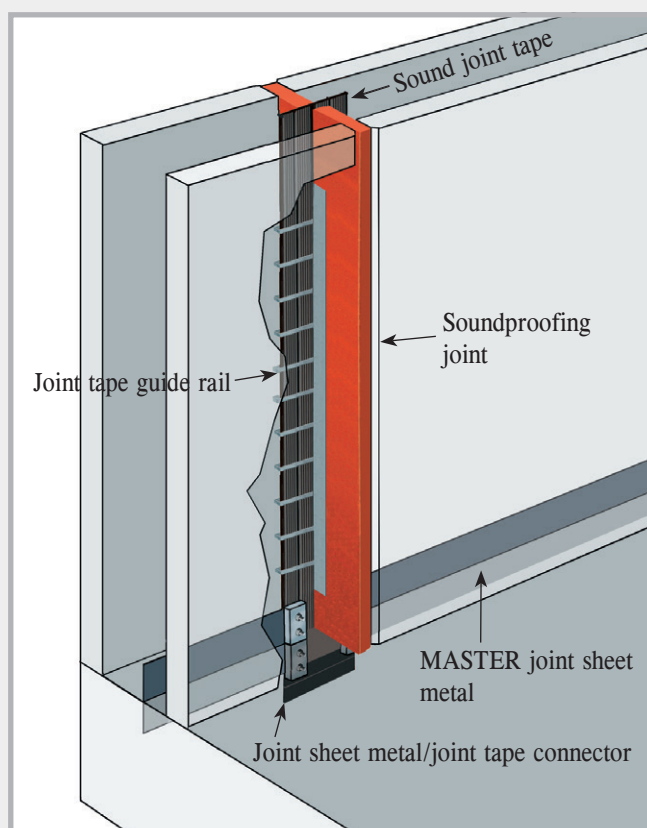
# Soundproofing joint DSK

## 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



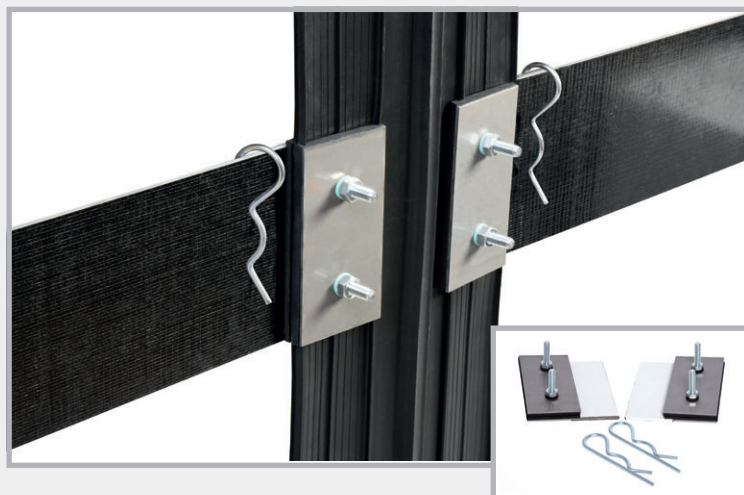
# Joint sheet metal/joint tape connector



## 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.



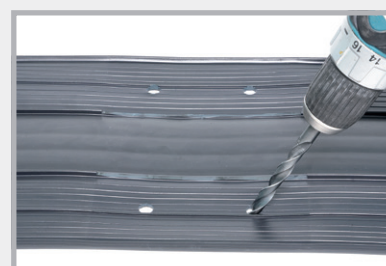
## Installation



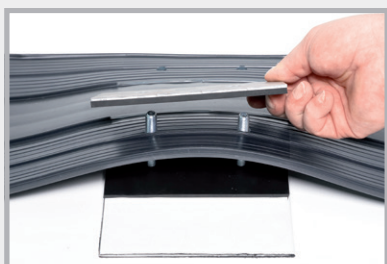
The ribs must be removed from the joint tape in the areas where the connectors are mounted.



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.

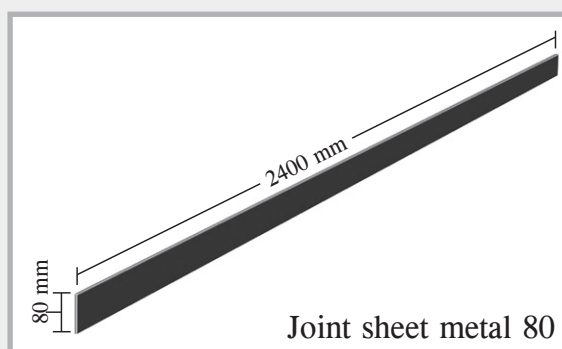
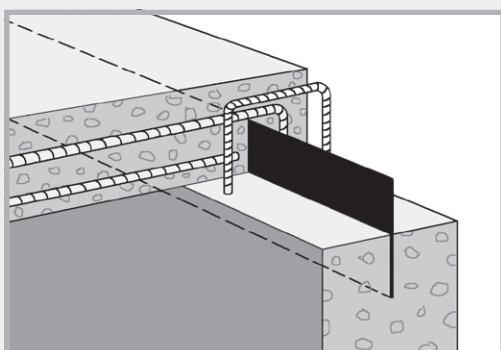
## Joint sheet metal 80

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.

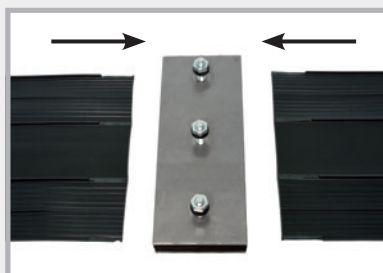
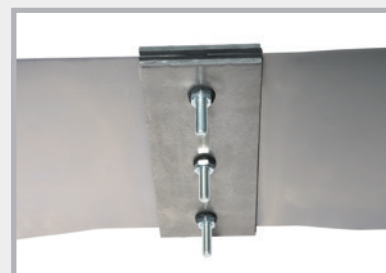
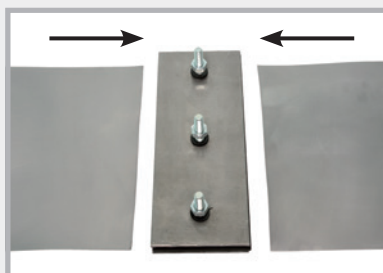


- No boreholes
- Supplied ready for installation
- No welding
- Completely pressure water-tight connection

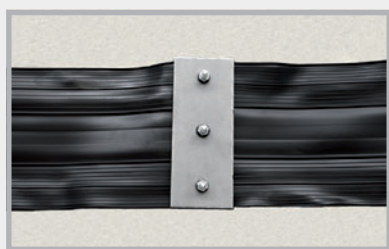


## MASTER-Connect technology

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



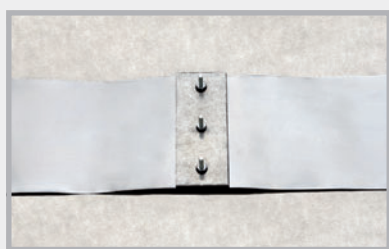
Butt joint



T piece



Junction



Butt joint



T piece



Junction

## Detailed information:

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

 YouTube



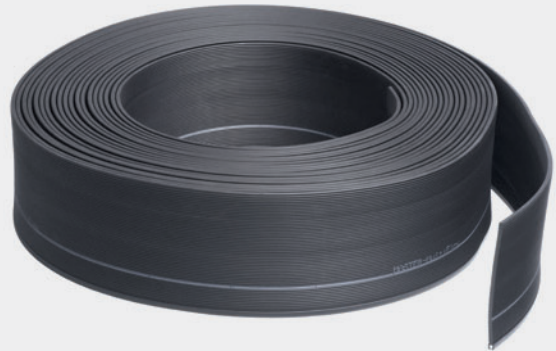
# MASTER-MultiFlex (MMF 140)

**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.



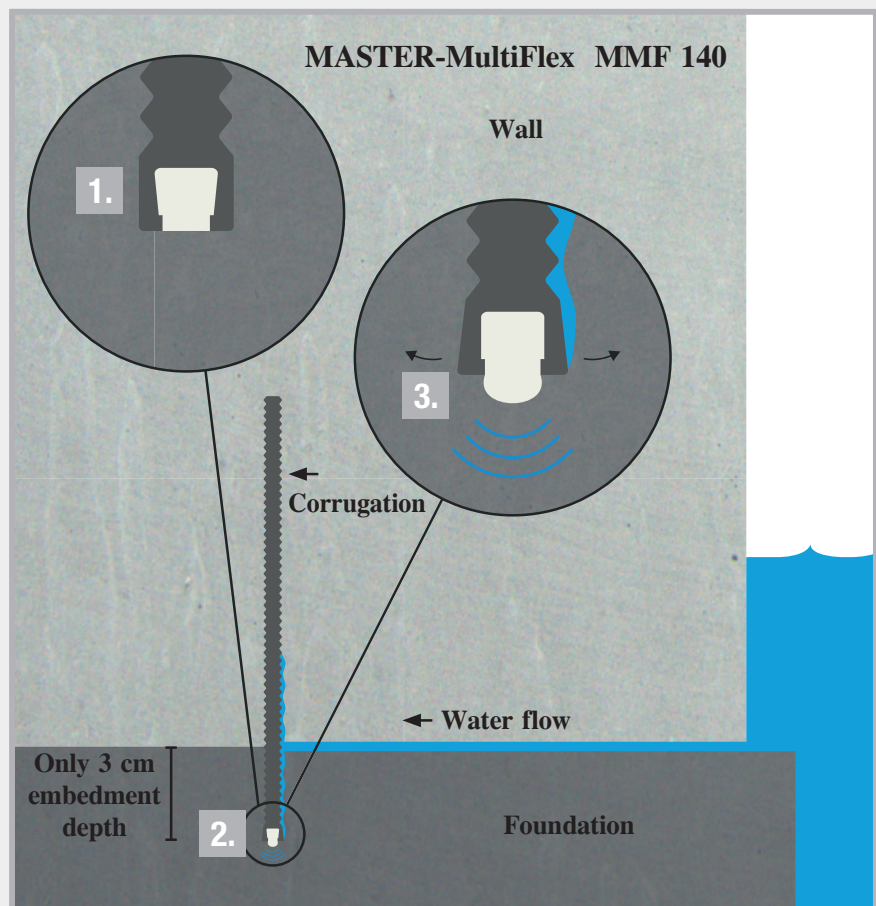
## MMF 140 product description

|                             |  |
|-----------------------------|--|
| <b>Material:</b>            | Soft PVC – free of cadmium, chrome and lead<br>MMF 140 does not contain any substances of very high concern (SVHCs) according to Annex XIV of the REACH Regulation.<br><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.



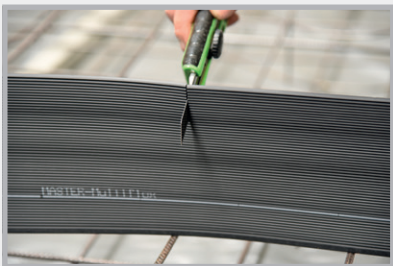


## Resistance

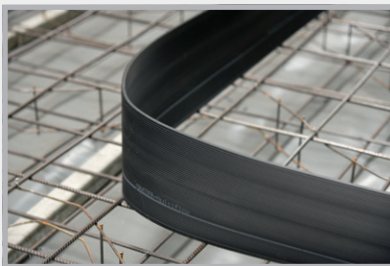
MMF 140 has a good to very good resistance to a number of chemicals.

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

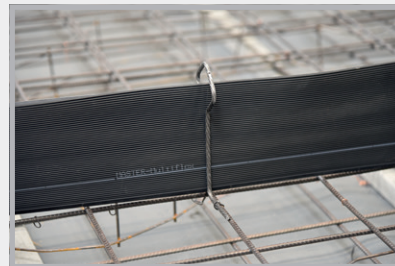
## Processing and installation of MMF 140



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



Non-sag but flexible.

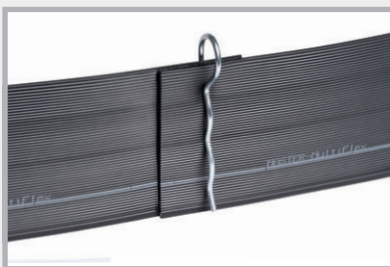


Fastened using the MMF 140 mounting bracket provided.

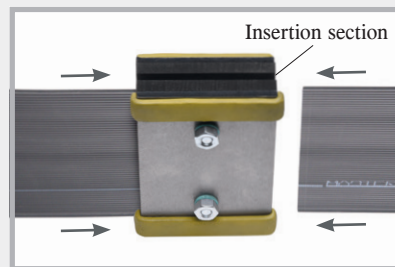
## Three bonding options



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



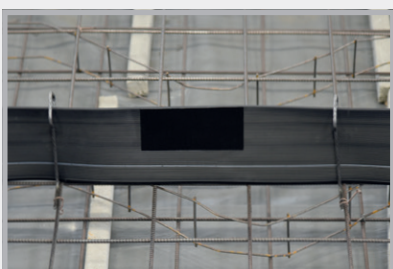
**2. Adhesive join:**  
Duration of approximately 10-15 min. at the construction site  
Secure the join area with the MMF 140 fixing clip.



**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



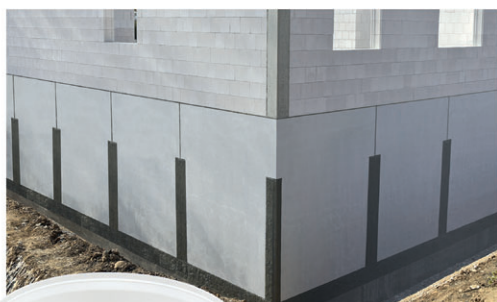
Apply the MMF 140 adhesive tape and remove the backing.



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**

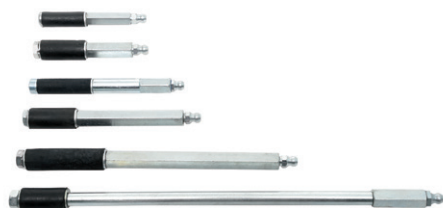


**MASTERTUBE  
Yellow**



**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





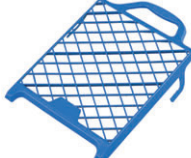



**NEW!** Single-component, solvent-free, water-free and bitumen-free structural waterproofing

Technical details pages 63 – 68



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><br><b>Single-component</b><br><b>high-pressure waterproofing</b><br>14 kg bucket | 14 kg bucket<br>(2 x 7 kg bag)<br><br>30 buckets<br>per pallet | 14.90 kg<br>per bucket |    |
| 050110   | <b>Mastertec EasySeal 1K non-woven</b><br>Roll length 100 m<br>Roll width 0.3 m                               | 1 pc.  | 3.80 kg<br>per roll    |   |
| 050120   | <b>Mastertec EasySeal 1K special roller</b><br>Width 18 cm<br><br><i>Professional quality</i>                 | 1 pc.  | 0.10 kg<br>per pc.     |  |
| 050130   | <b>Mastertec EasySeal 1K roller frame</b><br><br><i>Professional quality</i>                                  | 1 pc.  | 0.20 kg<br>per pc.     |  |
| 050140   | <b>Mastertec EasySeal 1K roller grid</b><br>Size 24 x 22 cm<br><br><i>Professional quality</i>                | 1 pc.  | 0.05 kg<br>per pc.     |  |
| 050150   | <b>Mastertec EasySeal 1K corner roller</b><br><br><i>Professional quality</i>                                 | 1 pc.  | 0.21 kg<br>per pc.     |  |
| 050160   | <b>Mastertec EasySeal 1K professional brush</b><br>Width 50 mm<br><br><i>Professional quality</i>             | 1 pc.  | 0.12 kg<br>per pc.     |  |
| 050170   | <b>Mastertec EasySeal 1K pressure roller</b><br>Width 15 cm<br><br><i>Professional quality</i>                | 1 pc.  | 0.19 kg<br>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><br>round, size: 6/12 mm<br>PVC injection hose                  | 1 roll<br>of 100 m | 11.20 kg<br>per roll |
| <b>030050</b> | <b>MASTERTUBE injection hose</b><br>round, size: 5/10 mm, red/yellow<br>with woven jacket | 1 roll<br>of 100 m | 10.00 kg<br>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












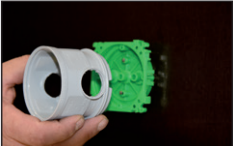
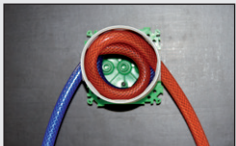



| Art. no.      | Description   | PU               | Weight             |
|---------------|---|------------------|--------------------|
| <b>030052</b> | <b>MASTERTUBE installation set</b><br>40 m MASTERTUBE injection hose<br>20 fastening packers<br>200 plastic fastening clips type A<br>100 metal clips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



# Injection hose and accessories

| Art. no.  | Description   | PU                         | Secondary packaging | Weight             |
|---|---|----------------------------|---------------------|--------------------|
| 030060<br>   | <b>Fastening packer</b> incl. nipple, for fastening of injection hose to the formwork,<br>Colour of packer: black,<br>10 red plugs, 10 white plugs, for resin injection   | 1 bag of 20 pcs.           | 25 bags per carton  | 0.50 kg per bag    |
| 030362<br>   | <b>Plastic foam for fastening packer</b><br>Diameter 35 mm, thickness 20 mm, self-adhesive,<br>10 pcs. white, 10 pcs. anthracite<br> | 1 bag of 20 pcs.           |                     | 0.05 kg per bag    |
| 030065<br>   | <b>Fixing spider</b> for fixing the fastening packer to the reinforcement<br>  | 1 pc.                      |                     | 0.11 kg per pc.    |
| 030075<br>  | <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<br> | <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<br> | <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<br> | <b>Metal clip without nail</b>  | 1 carton of 100 pcs.       |                     | 1.40 kg per carton |
| 030083<br> | <b>Nail plug 5 x 40 mm</b> borehole Ø 5 mm  | 1 carton of 200 pcs.       |                     | 0.60 kg per carton |
| 030072<br> | <b>Fastening grids for MASTERTUBE</b><br>25 m per carton (25 grids of 1 m)<br>   | 1 carton                   |                     | 1.80 kg per carton |

# Injection hose and accessories

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

# Injection hose and accessories

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



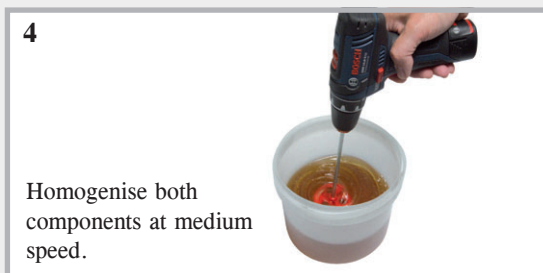
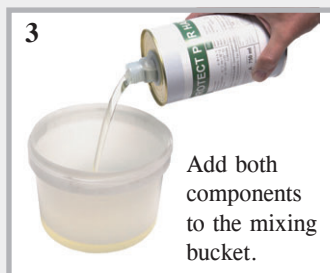
| Art. no. | Description       | PU   | Secondary packaging  | Weight                    |
|----------|-------------------|--|----------------------|---------------------------|
| 040015   | PROTECT PUR resin | 1 l combination can:<br>(750 ml component A +<br>250 ml component B) | 6 cans<br>per carton | 1.30 kg<br>per can        |
| 040018   | PROTECT PUR resin | 10 l container:<br>(7.5 l component A +<br>2.5 l component B)        |                      | 11.50 kg<br>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:<br>(875 ml component A +<br>125 ml component B) | 6 cans<br>per carton | 1.35 kg<br>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:<br>(800 ml component A +<br>200 ml component B) | 6 cans<br>per carton | 1.30 kg<br>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<br>1 l       | 12 cans per carton  | 1.10 kg<br>per can       |
| 040040   | PROTECT Clean | 1 canister<br>10 l |                     | 10.00 kg<br>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<br>in resealable aluminium bag | 1 set:<br>(3 x 800g aluminium bag +<br>1 x processing cup +<br>1 x fastening clip | 10 sets / carton<br><br>18 cartons<br>per pallet | 2.54 kg<br>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:**

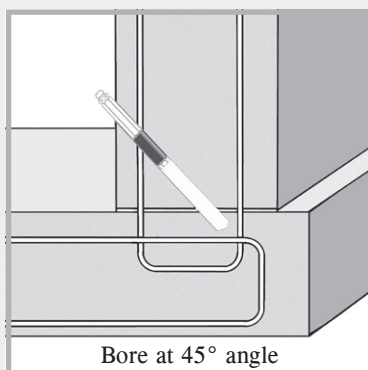
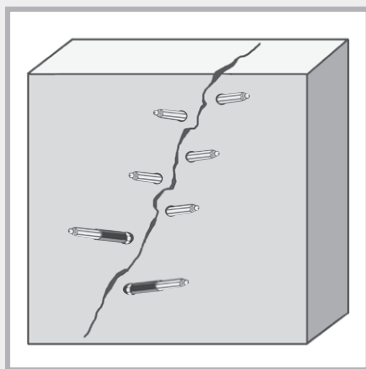
Diluted acids, mineral oil, lubricants and fuels, saltwater, wastewater, large number of  
alkalis and solvents, test of suitability for contact with drinking water.



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

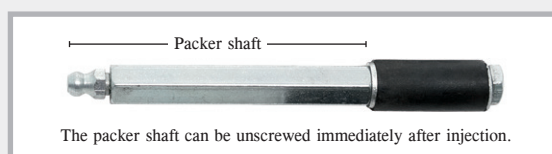
| Art. no. | Description  | PU  | Secondary packaging                                   | Weight             |
|----------|--|---|---|--------------------|
| 040100   | PROTECT BK<br>For pressure water-tight<br>sealing of fibre cement<br>distance tubes. | 1 kg combination can:<br>(0.5 kg component A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

# Injection packers + surface packers



| Art. no. | Screw injection packer<br>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



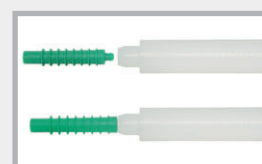
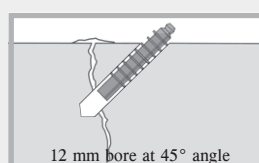
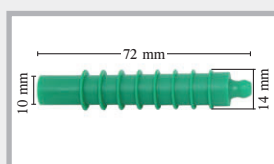
| Art. no. | One day site packer<br>incl. nipple/sizes | Drill bit Ø | PU                   | Weight       |
|----------|---|-------------|----------------------|--------------|
| 030188   | 10/110 mm                                 | 10 mm       | 1 carton of 100 pcs. | 3.80 kg/ctn. |
| 030189   | 13/115 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<br>of 100 pcs. | 1.75 kg<br>per bag |








## Plastic injector



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



# LIDOL concrete release agent

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

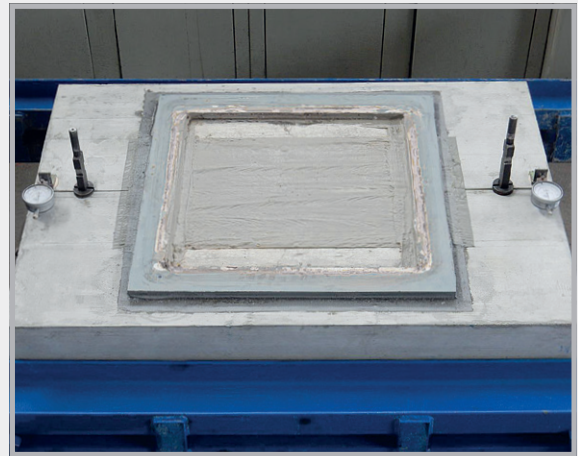
|                             |   |
|-----------------------------|---|
| Testing:                    | High-pressure<br>80 m water column  |
| Certificate:                | General Building<br>Supervisory Test<br>Certificate   |
| Crack width:                | Up to 3 mm  |
| Application<br>temperature: | 0°C to +35°C  |
| Component<br>temperature:   | min. +2°C   |
| Thermal resistance:         | up to +70°C   |
| Rain-proof:                 | immediately at +20°C<br>At lower temperatures after approximately 3 hours   |
| Completely dry:             | after approximately 24 hours at +20°C and 50% relative air humidity<br>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<br>32 cm in width; layer thickness: approximately 1.2 mm depending on<br>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:

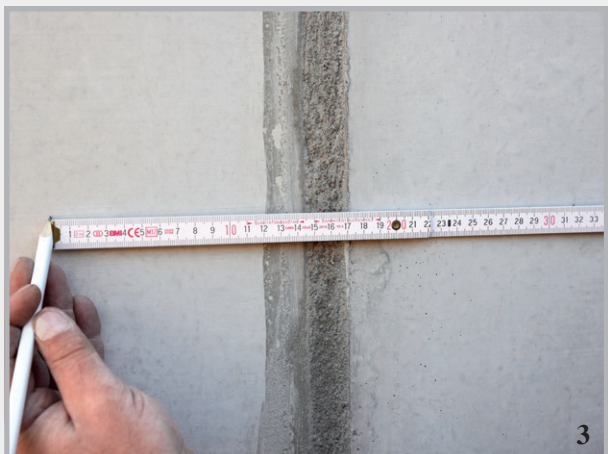
- Transition zone: 15-20 cm above and below the ground edge
- A thin coating of Mastertec EasySeal1K must be applied to this 30-40 cm area, and the full surface sprinkled with quartz sand.
- Tile adhesive can be used as the keying surface/plaster base, and is applied with a toothed spatula with 6-8 mm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

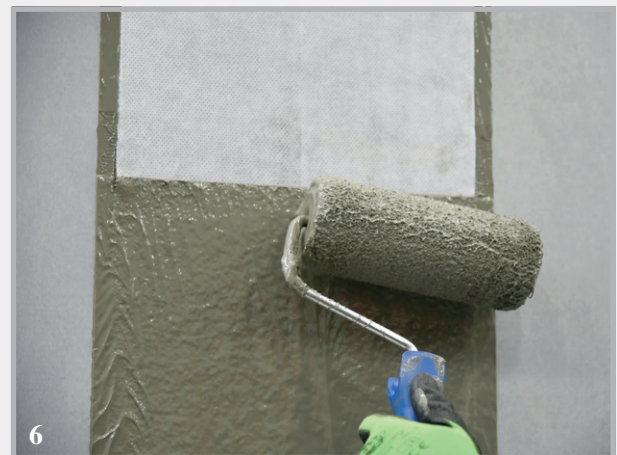


Align and gently press on the non-woven.



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

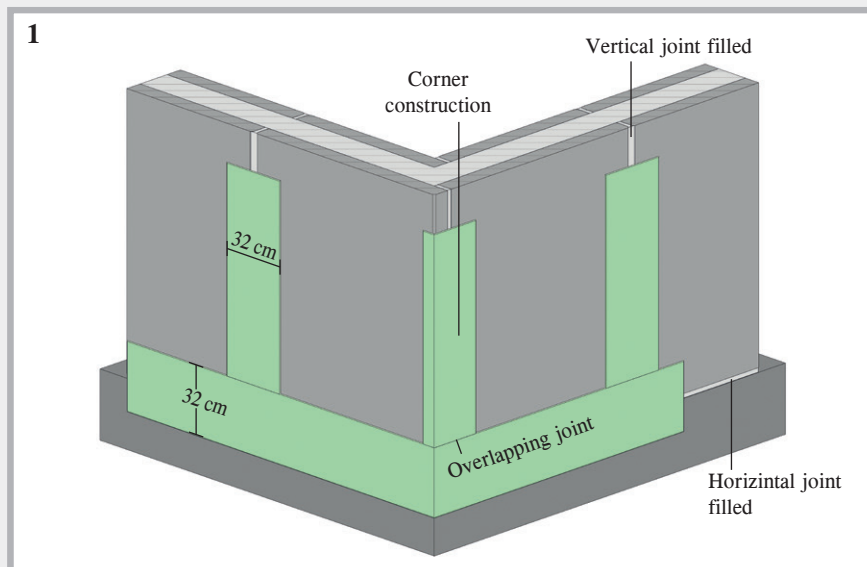
The edge area of the non-woven must be completely covered.

# Installation of Mastertec EasySeal 1K

## Mastertec EasySeal 1K

### Joint 1

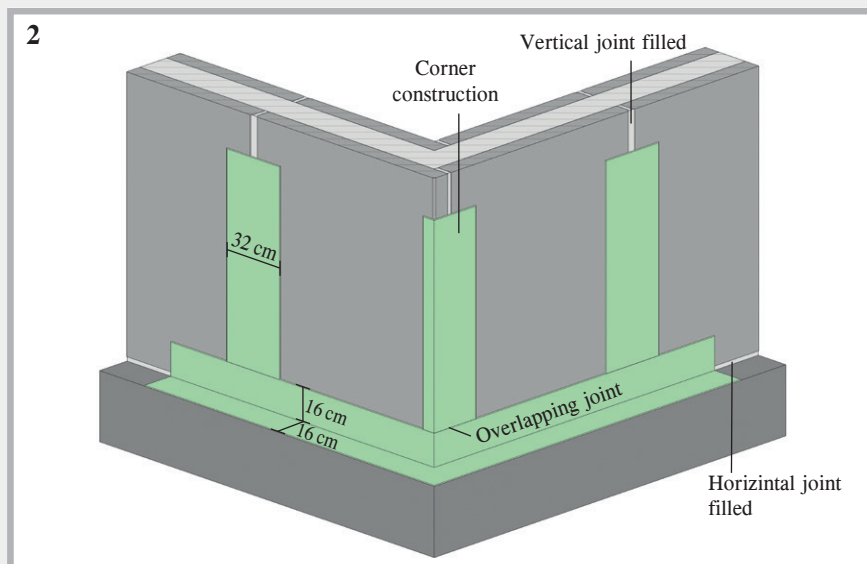
Foundation/wall connection  
without fillet



## Mastertec EasySeal 1K

### Joint 2

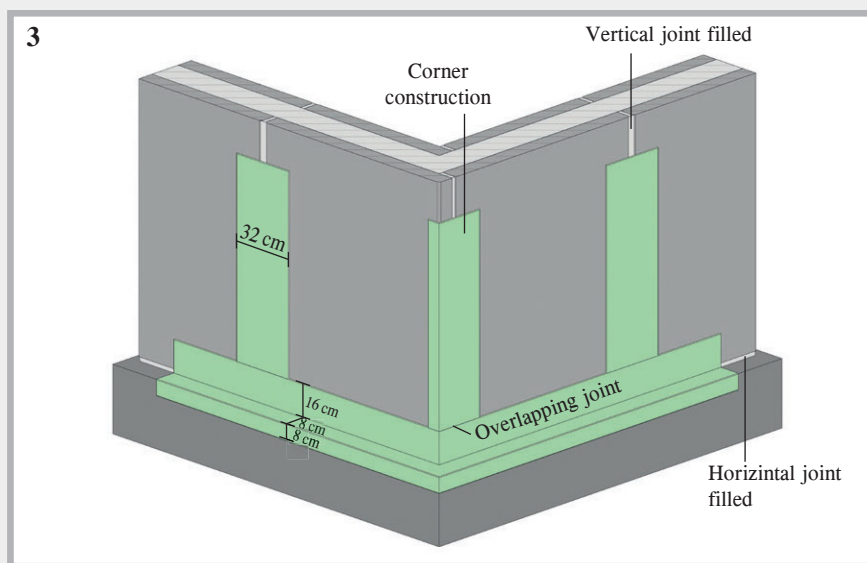
Foundation/wall connection  
with wide fillet



## Mastertec EasySeal 1K

### Joint 3

Foundation/wall connection  
with narrow fillet



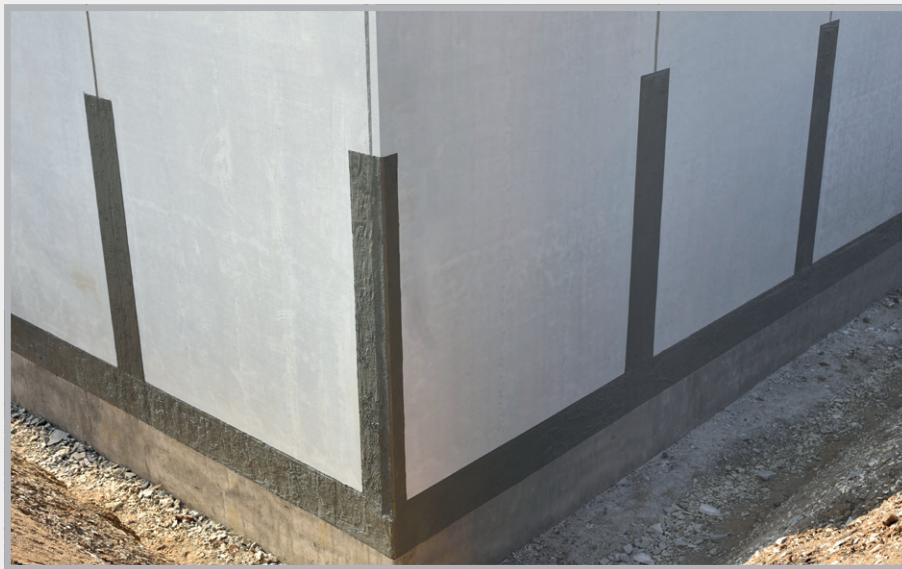
Every overlapping joint must be implemented with an overlap length of the non-woven webs of at least 10 cm. If the joints cross (T or cross joint), the vertical joints first have to be sealed off. The seal on the horizontal joints then overlays the overlap area of the vertical joint.



## At the construction site



Sealed horizontal joints  
and vertical joints



Sealed horizontal joint



# MASTERTUBE

## Injection hose systems



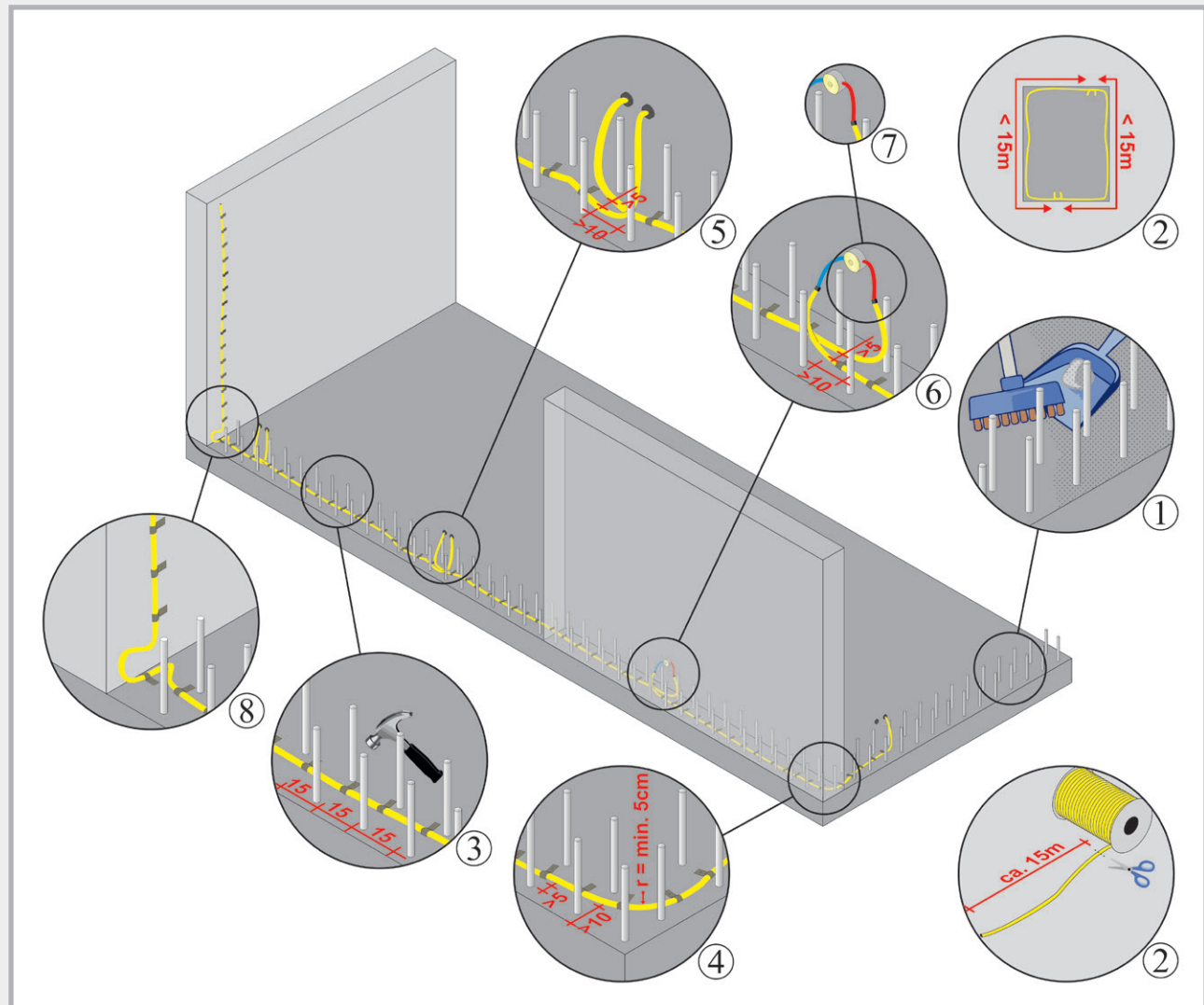
The MASTERTUBE “YELLOW” and MASTERTUBE injection hoses make construction joints watertight.

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



|   | MASTERTUBE<br>YELLOW                          | MASTERTUBE<br>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.

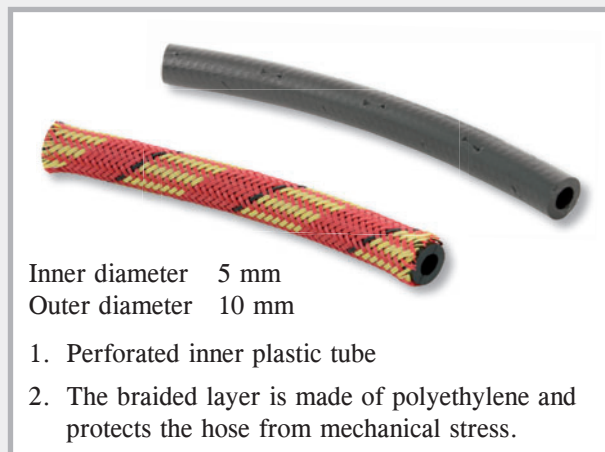
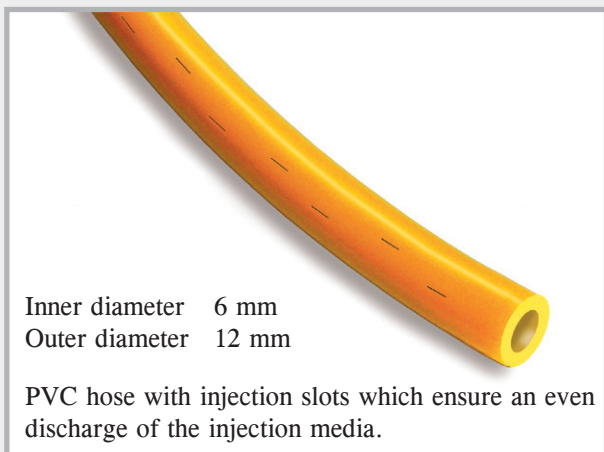
## Two systems with 100% reliability



Roll length 100 m



Roll length 100 m







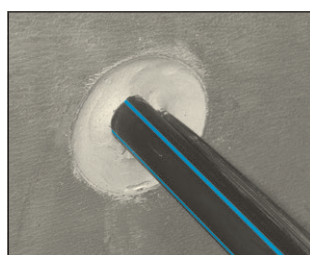
# PRESSURE WATER-TIGHT SERVICE DUCTS



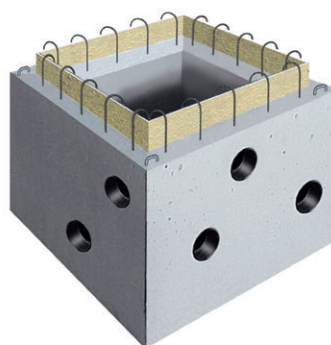
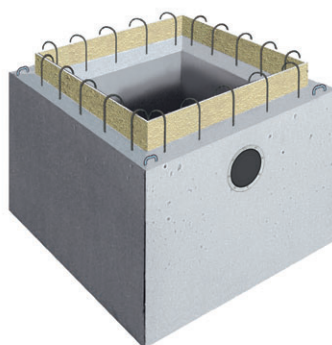
**RONDO sealing collars**  
pages 74 – 78



**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<br>mm            | Suitable for outer dia.<br>from (mm) to (mm) | PU    | Secondary<br>packaging | Weight<br>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

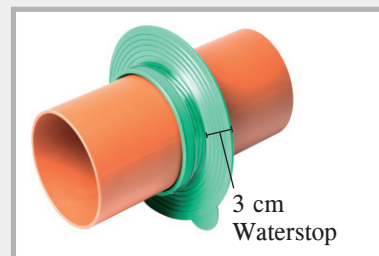
| Art. no. | Type       | for pipe outer diameters<br>mm            | Suitable for outer dia. from<br>(mm) to (mm) | PU    | Weight<br>per pc. |
|----------|------------|---|--|-------|-------------------|
| 091225   | ROPRO 10   | For lightning protection round conductors | 8 10   | 1 pc. | 0.13 kg           |
| 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



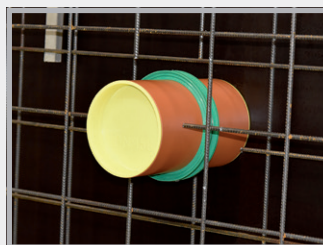
3 cm  
Waterstop

## Dimensions

Supplied ready for installation with  
stainless steel fastening straps

| Art. no. | Type        | Suitable for outer dia.<br>from to | PU    | Secondary packaging | Weight<br>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



High-pressure sealing  
collar

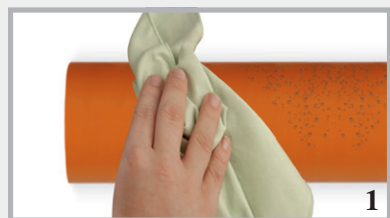


70 m water column with only  
one fastening strap

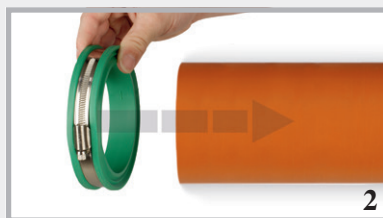
## Dimensions

| Art. no. | Type        | for pipe outer<br>diameters/mm | PU    | Secondary packaging | Weight<br>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



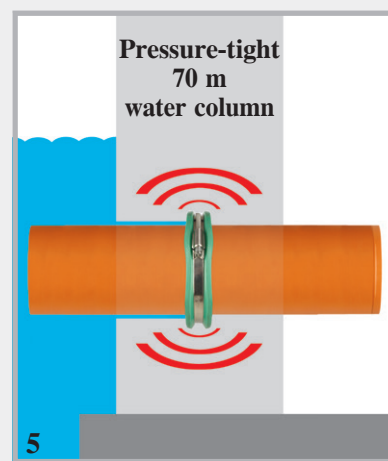
Pull on RONDO Base



Position sealing collar, ideally at  
centre of wall or foundation



Tighten fastening strap to approx.  
5-6 Nm.

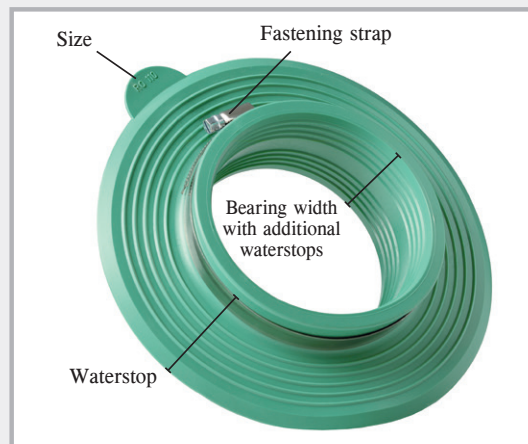


RONDO Base installation  
complete

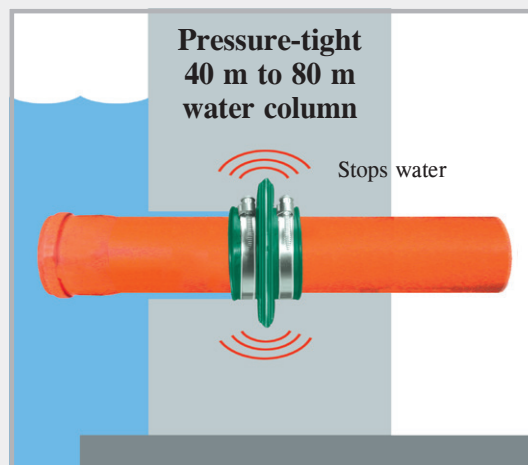
# RONDO + RONDO Protect Product description

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 |
| <b>Resistance</b>                            |                          |                   |                   |
| 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 |                          |                   |                   |



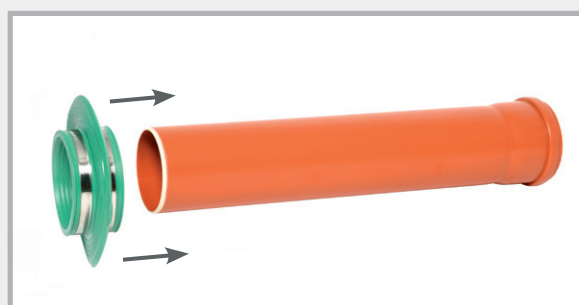
The sealing collar is supplied with fastening straps, ready for installation



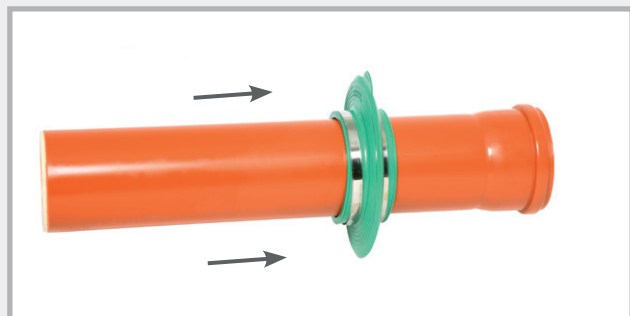
## Installation of RONDO sealing collars



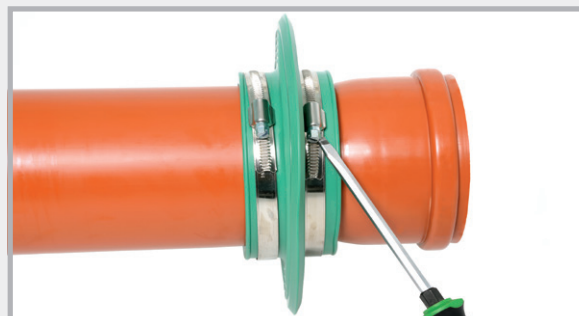
Sewage pipe and RONDO 110



Pushing on the sealing collar



Positioning the sealing collar

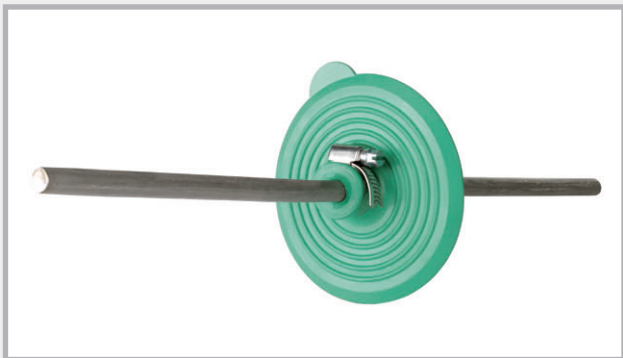


Securing by tightening the fastening straps

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



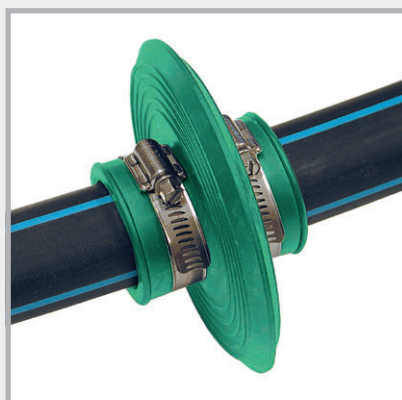
# RONDO Sealing Collars practical applications



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<br>inner Ø<br>mm | outer Ø<br>mm | Standard lengths  |                   |                   |                   |                   |                   |                   |                    |                    |                    |                    |                    |
|-----------------------|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|                       |               | 200<br>mm         | 240<br>mm         | 250<br>mm         | 300<br>mm         | 350<br>mm         | 365<br>mm         | 400<br>mm         | 500<br>mm          | 600<br>mm          | 800<br>mm          | 1000<br>mm         | 1250<br>mm         |
| DN 80<br>Weight/pc.   | 120           | 080210<br>2.4 kg  | 080211<br>2.8 kg  | 080212<br>3.0 kg  | 080213<br>3.5 kg  | 080214<br>4.1 kg  | 080215<br>4.3 kg  | 080216<br>4.7 kg  | 080217<br>5.9 kg   | 080218<br>7.0 kg   | 080918<br>9.4 kg   | 080950<br>11.7 kg  | 080219<br>14.6 kg  |
| DN 100<br>Weight/pc.  | 140           | 080220<br>2.9 kg  | 080221<br>3.4 kg  | 080222<br>3.6 kg  | 080223<br>4.3 kg  | 080224<br>5.0 kg  | 080225<br>5.2 kg  | 080226<br>5.7 kg  | 080227<br>7.1 kg   | 080228<br>8.5 kg   | 080921<br>11.4 kg  | 080952<br>14.2 kg  | 080229<br>17.8 kg  |
| DN 125<br>Weight/pc.  | 165           | 080230<br>3.6 kg  | 080231<br>4.3 kg  | 080232<br>4.5 kg  | 080233<br>5.4 kg  | 080234<br>6.3 kg  | 080235<br>6.6 kg  | 080236<br>7.2 kg  | 080237<br>9.0 kg   | 080238<br>10.7 kg  | 080922<br>14.3 kg  | 080954<br>17.9 kg  | 080239<br>22.4 kg  |
| DN 150<br>Weight/pc.  | 190           | 080240<br>4.1 kg  | 080241<br>4.9 kg  | 080242<br>5.1 kg  | 080243<br>6.1 kg  | 080244<br>7.1 kg  | 080245<br>7.4 kg  | 080246<br>8.1 kg  | 080247<br>10.1 kg  | 080248<br>12.1 kg  | 080924<br>16.2 kg  | 080956<br>20.1 kg  | 080249<br>25.1 kg  |
| DN 200<br>Weight/pc.  | 250           | 080250<br>6.5 kg  | 080251<br>7.8 kg  | 080252<br>8.1 kg  | 080253<br>9.7 kg  | 080254<br>11.3 kg | 080255<br>11.8 kg | 080256<br>12.9 kg | 080257<br>16.1 kg  | 080258<br>19.3 kg  | 080926<br>25.8 kg  | 080958<br>32.2 kg  | 080259<br>40.2 kg  |
| DN 250<br>Weight/pc.  | 300           | 080260<br>8.1 kg  | 080261<br>9.7 kg  | 080262<br>10.1 kg | 080263<br>12.1 kg | 080264<br>14.2 kg | 080265<br>14.8 kg | 080266<br>16.2 kg | 080267<br>20.2 kg  | 080268<br>24.2 kg  | 080928<br>32.3 kg  | 080960<br>40.1 kg  | 080269<br>50.2 kg  |
| DN 300<br>Weight/pc.  | 350           | 080270<br>9.8 kg  | 080271<br>11.8 kg | 080272<br>12.3 kg | 080273<br>14.7 kg | 080274<br>17.1 kg | 080275<br>17.9 kg | 080276<br>19.6 kg | 080277<br>24.4 kg  | 080278<br>29.3 kg  | 080930<br>39.1 kg  | 080962<br>48.9 kg  | 080279<br>61.1 kg  |
| DN 350<br>Weight/pc.  | 400           | 080280<br>11.2 kg | 080281<br>13.4 kg | 080282<br>14.0 kg | 080283<br>16.7 kg | 080284<br>19.5 kg | 080285<br>20.4 kg | 080286<br>22.3 kg | 080287<br>27.9 kg  | 080288<br>33.4 kg  | 080932<br>44.6 kg  | 080964<br>55.7 kg  | 080289<br>69.6 kg  |
| DN 400<br>Weight/pc.  | 460           | 080290<br>15.4 kg | 080291<br>18.5 kg | 080292<br>19.3 kg | 080293<br>23.1 kg | 080294<br>26.9 kg | 080295<br>28.1 kg | 080296<br>30.8 kg | 080297<br>38.5 kg  | 080298<br>46.1 kg  | 080934<br>61.5 kg  | 080966<br>76.9 kg  | 080299<br>96.1 kg  |
| DN 450<br>Weight/pc.  | 510           | 080300<br>17.5 kg | 080301<br>21.0 kg | 080302<br>21.9 kg | 080303<br>26.2 kg | 080304<br>30.6 kg | 080305<br>31.9 kg | 080306<br>35.0 kg | 080307<br>43.7 kg  | 080308<br>52.4 kg  | 080936<br>69.6 kg  | 080968<br>87.4 kg  | 080309<br>109.3 kg |
| DN 500<br>Weight/pc.  | 570           | 080310<br>22.4 kg | 080311<br>26.8 kg | 080312<br>28.0 kg | 080313<br>33.5 kg | 080314<br>39.1 kg | 080315<br>40.8 kg | 080316<br>44.7 kg | 080317<br>55.9 kg  | 080318<br>67.0 kg  | 080938<br>89.4 kg  | 080970<br>111.7 kg | 080319<br>139.6 kg |
| DN 600<br>Weight/pc.  | 670           | 080320<br>26.8 kg | 080321<br>32.1 kg | 080322<br>33.5 kg | 080323<br>40.1 kg | 080324<br>45.9 kg | 080325<br>48.8 kg | 080326<br>53.5 kg | 080327<br>66.9 kg  | 080328<br>80.2 kg  | 080940<br>107.0 kg | 080972<br>133.7 kg | 080329<br>167.1 kg |
| DN 700<br>Weight/pc.  | 780           | 080330<br>38.0 kg | 080331<br>45.6 kg | 080332<br>47.5 kg | 080333<br>57.0 kg | 080334<br>66.5 kg | 080335<br>69.4 kg | 080336<br>76.0 kg | 080337<br>95.0 kg  | 080338<br>114.0 kg | 080942<br>152.0 kg | 080974<br>190.0 kg | 080339<br>237.5 kg |
| DN 800<br>Weight/pc.  | 880           | 080340<br>42.5 kg | 080341<br>51.0 kg | 080342<br>53.2 kg | 080343<br>63.8 kg | 080344<br>74.7 kg | 080345<br>77.6 kg | 080346<br>85.0 kg | 080347<br>106.3 kg | 080348<br>127.5 kg | 080944<br>170.0 kg | 080976<br>212.5 kg | 080349<br>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<br>inner Ø<br>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><br>Weight/pc.  | <b>080130</b><br>0.28 kg | <b>080131</b><br>0.31 kg | <b>080132</b><br>0.32 kg | <b>080133</b><br>0.35 kg | <b>080134</b><br>0.39 kg | <b>080135</b><br>0.40 kg | <b>080136</b><br>0.43 kg | <b>080137</b><br>0.50 kg | <b>080138</b><br>0.57 kg |
| <b>DN 125</b><br>Weight/pc.  | <b>080140</b><br>0.33 kg | <b>080141</b><br>0.36 kg | <b>080142</b><br>0.37 kg | <b>080143</b><br>0.42 kg | <b>080144</b><br>0.46 kg | <b>080145</b><br>0.48 kg | <b>080146</b><br>0.51 kg | <b>080147</b><br>0.60 kg | <b>080148</b><br>0.69 kg |
| <b>DN 150</b><br>Weight/pc.  | <b>080150</b><br>0.44 kg | <b>080151</b><br>0.49 kg | <b>080152</b><br>0.51 kg | <b>080153</b><br>0.57 kg | <b>080154</b><br>0.64 kg | <b>080155</b><br>0.66 kg | <b>080156</b><br>0.70 kg | <b>080157</b><br>0.84 kg | <b>080158</b><br>1.01 kg |
| <b>DN 200</b><br>Weight/pc.  | <b>080160</b><br>0.67 kg | <b>080161</b><br>0.75 kg | <b>080162</b><br>0.77 kg | <b>080163</b><br>0.88 kg | <b>080164</b><br>0.99 kg | <b>080165</b><br>1.02 kg | <b>080166</b><br>1.10 kg | <b>080167</b><br>1.31 kg | <b>080168</b><br>1.53 kg |
| <b>*DN 250</b><br>Weight/pc. | <b>080170</b><br>0.94 kg | <b>080171</b><br>1.07 kg | <b>080172</b><br>1.10 kg | <b>080173</b><br>1.27 kg | <b>080174</b><br>1.43 kg | <b>080175</b><br>1.48 kg | <b>080176</b><br>1.59 kg | <b>080177</b><br>1.92 kg | <b>080178</b><br>2.24 kg |
| <b>DN 300</b><br>Weight/pc.  | <b>080180</b><br>1.19 kg | <b>080181</b><br>1.36 kg | <b>080182</b><br>1.41 kg | <b>080183</b><br>1.62 kg | <b>080184</b><br>1.83 kg | <b>080185</b><br>1.90 kg | <b>080186</b><br>2.04 kg | <b>080187</b><br>2.47 kg | <b>080188</b><br>2.89 kg |
| <b>*DN 350</b><br>Weight/pc. | <b>080190</b><br>1.70 kg | <b>080191</b><br>1.96 kg | <b>080192</b><br>2.02 kg | <b>080193</b><br>2.35 kg | <b>080194</b><br>2.67 kg | <b>080195</b><br>2.77 kg | <b>080196</b><br>3.00 kg | <b>080197</b><br>3.65 kg | <b>080198</b><br>4.30 kg |
| <b>DN 400</b><br>Weight/pc.  | <b>080200</b><br>2.14 kg | <b>080201</b><br>2.47 kg | <b>080202</b><br>2.56 kg | <b>080203</b><br>2.98 kg | <b>080204</b><br>3.40 kg | <b>080205</b><br>3.52 kg | <b>080206</b><br>3.82 kg | <b>080207</b><br>4.66 kg | <b>080208</b><br>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<br>inner Ø<br>mm | outer Ø<br>mm | Standard lengths  |                   |                   |                   |                   |                   |                   |                   |                   |                   |                    |                    |
|-----------------------|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|--------------------|
|                       |               | 200<br>mm         | 240<br>mm         | 250<br>mm         | 300<br>mm         | 350<br>mm         | 365<br>mm         | 400<br>mm         | 500<br>mm         | 600<br>mm         | 800<br>mm         | 1000<br>mm         | 1200<br>mm         |
| DN 50<br>Weight/pc.   | 54            | 090010<br>0.31 kg | 090013<br>0.37 kg | 090016<br>0.39 kg | 090019<br>0.46 kg | 090022<br>0.54 kg | 090025<br>0.56 kg | 090028<br>0.62 kg | 090031<br>0.78 kg | 090034<br>0.93 kg | 090037<br>1.24 kg | 090040<br>1.56 kg  | 090043<br>1.87 kg  |
| DN 80<br>Weight/pc.   | 85            | 090050<br>0.30 kg | 090053<br>0.36 kg | 090056<br>0.38 kg | 090059<br>0.45 kg | 090062<br>0.53 kg | 090065<br>0.55 kg | 090068<br>0.60 kg | 090071<br>0.76 kg | 090074<br>0.91 kg | 090077<br>1.21 kg | 090080<br>1.52 kg  | 090083<br>1.82 kg  |
| DN 100<br>Weight/pc.  | 110           | 090110<br>0.60 kg | 090113<br>0.72 kg | 090116<br>0.76 kg | 090119<br>0.91 kg | 090122<br>1.06 kg | 090125<br>1.10 kg | 090128<br>1.21 kg | 090131<br>1.52 kg | 090134<br>1.82 kg | 090137<br>2.43 kg | 090140<br>3.04 kg  | 090143<br>3.64 kg  |
| DN 125<br>Weight/pc.  | 137           | 090150<br>0.75 kg | 090153<br>0.90 kg | 090156<br>0.94 kg | 090159<br>1.12 kg | 090162<br>1.31 kg | 090165<br>1.37 kg | 090168<br>1.50 kg | 090171<br>1.88 kg | 090174<br>2.25 kg | 090177<br>3.00 kg | 090180<br>3.76 kg  | 090183<br>4.51 kg  |
| DN 150<br>Weight/pc.  | 162           | 090210<br>0.86 kg | 090213<br>1.03 kg | 090216<br>1.08 kg | 090219<br>1.29 kg | 090222<br>1.51 kg | 090225<br>1.57 kg | 090228<br>1.72 kg | 090231<br>2.16 kg | 090234<br>2.59 kg | 090237<br>3.45 kg | 090240<br>4.32 kg  | 090243<br>5.18 kg  |
| DN 200<br>Weight/pc.  | 214           | 090250<br>1.31 kg | 090253<br>1.57 kg | 090256<br>1.64 kg | 090259<br>1.96 kg | 090262<br>2.29 kg | 090265<br>2.39 kg | 090268<br>2.62 kg | 090271<br>3.28 kg | 090274<br>3.93 kg | 090277<br>5.24 kg | 090280<br>6.56 kg  | 090283<br>7.87 kg  |
| DN 250<br>Weight/pc.  | 264           | 090310<br>1.63 kg | 090313<br>1.95 kg | 090316<br>2.04 kg | 090319<br>2.44 kg | 090322<br>2.85 kg | 090325<br>2.97 kg | 090328<br>3.26 kg | 090331<br>4.08 kg | 090334<br>4.89 kg | 090337<br>6.52 kg | 090340<br>8.16 kg  | 090343<br>9.79 kg  |
| DN 300<br>Weight/pc.  | 316           | 090350<br>2.48 kg | 090353<br>2.98 kg | 090356<br>3.11 kg | 090359<br>3.73 kg | 090362<br>4.35 kg | 090365<br>4.54 kg | 090368<br>4.97 kg | 090371<br>6.22 kg | 090374<br>7.46 kg | 090377<br>9.95 kg | 090380<br>12.44 kg | 090383<br>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

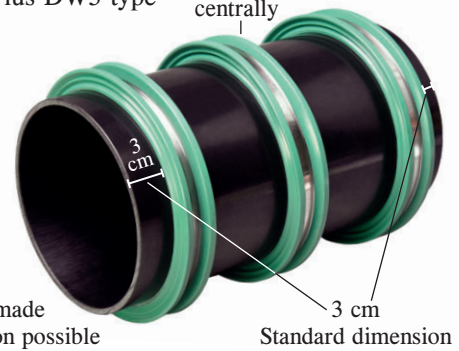
**NEW!** Double-wall (DW) type



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 pipe bushing  
DURO Plus DW3 type



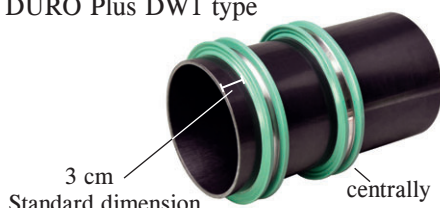
## DURO Plus DW3 type product range

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

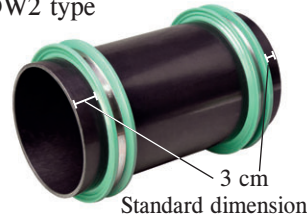
Any intermediate lengths can be supplied  
Lengths up to 3000 mm are available

**We recommend installation with the closure plug**

Additional version:  
DURO Plus DW1 type



Additional version:  
DURO Plus DW2 type





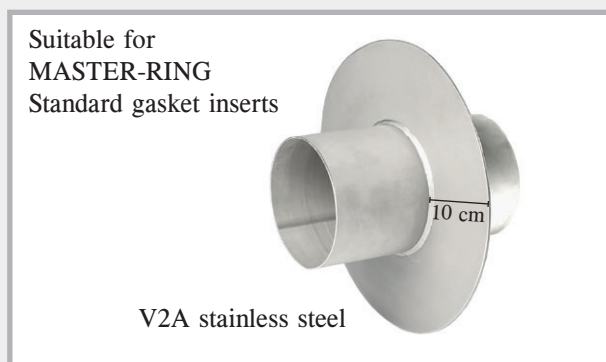
# STEELO stainless steel lining pipe

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

**V4A = on request**

# MASTERTEC MKD 150 cable bushing

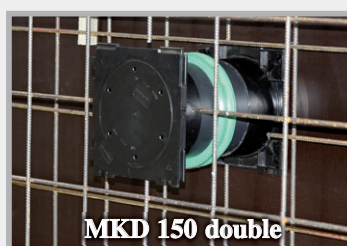
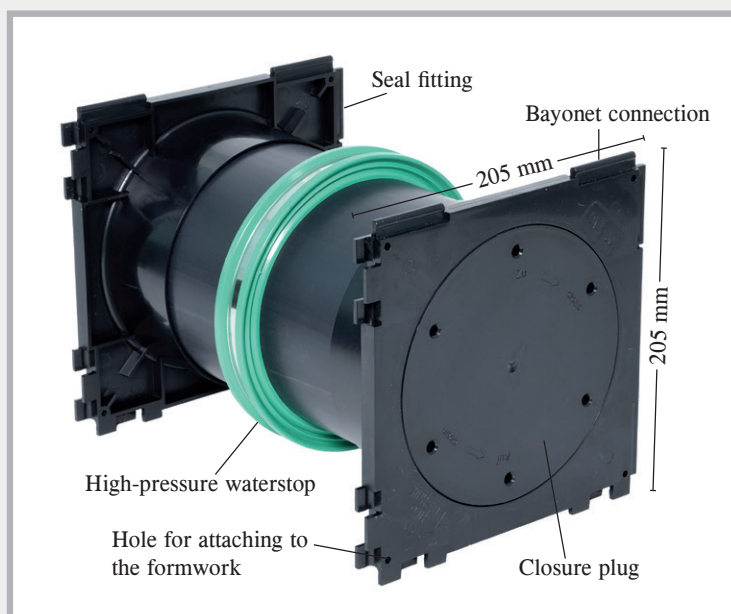
Stay flexible with the MKD 150 cable bushing

## 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<br>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><br>Weight/pc. | <b>080404</b><br>0.75 kg | <b>080405</b><br>0.80 kg | <b>080350</b><br>0.60 kg       | <b>080351</b><br>0.62 kg | <b>080352</b><br>0.70 kg | <b>080353</b><br>0.77 kg | <b>080354</b><br>0.81 kg |
| <b>DN 125</b><br>Weight/pc. | <b>080419</b><br>1.00 kg | <b>080420</b><br>1.00 kg | <b>080355</b><br>0.77 kg       | <b>080356</b><br>0.82 kg | <b>080357</b><br>0.91 kg | <b>080358</b><br>0.98 kg | <b>080359</b><br>1.04 kg |
| <b>DN 160</b><br>Weight/pc. | not<br>producible        | <b>080433</b><br>1.75 kg | <b>080434</b><br>1.85 kg       | <b>080436</b><br>1.85 kg | <b>080438</b><br>2.05 kg | <b>080440</b><br>2.25 kg | <b>080442</b><br>2.50 kg |
| <b>DN 200</b><br>Weight/pc. | not<br>producible        | <b>080443</b><br>2.80 kg | <b>080444</b><br>3.00 kg       | <b>080445</b><br>3.00 kg | <b>080446</b><br>3.35 kg | <b>080448</b><br>3.60 kg | <b>080450</b><br>3.70 kg |

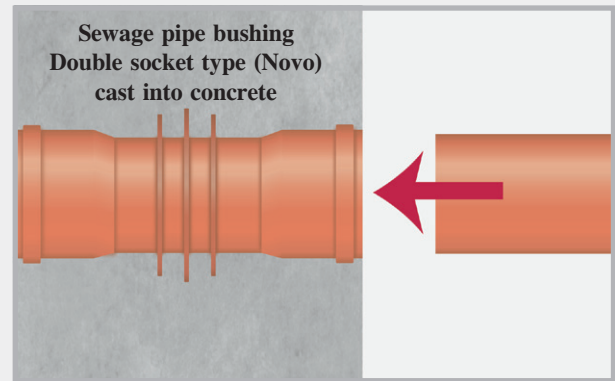
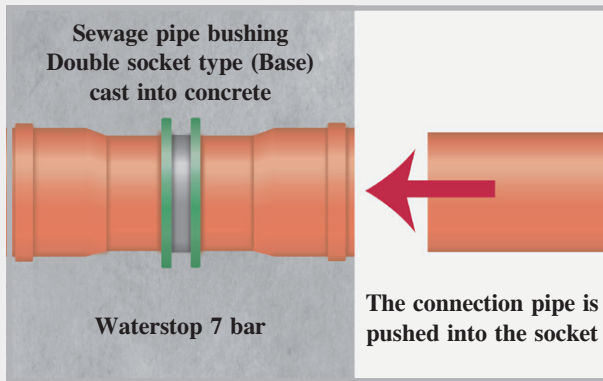
## KG 2000 DM type product range

| KG 2000-Ø<br>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><br>Weight/pc. | <b>080750</b><br>0.80 kg | <b>080800</b><br>0.60 kg       | <b>080801</b><br>0.62 kg | <b>080802</b><br>0.68 kg | <b>080803</b><br>0.77 kg | <b>080804</b><br>0.81 kg |
| <b>DN 125</b><br>Weight/pc. | <b>080762</b><br>1.10 kg | <b>080805</b><br>0.77 kg       | <b>080806</b><br>0.82 kg | <b>080807</b><br>0.91 kg | <b>080808</b><br>0.98 kg | <b>080809</b><br>1.04 kg |
| <b>DN 160</b><br>Weight/pc. | <b>080774</b><br>1.60 kg | <b>080776</b><br>1.80 kg       | <b>080778</b><br>2.00 kg | <b>080780</b><br>2.30 kg | <b>080782</b><br>2.60 kg | <b>080784</b><br>2.80 kg |
| <b>DN 200</b><br>Weight/pc. | <b>080786</b><br>2.80 kg | <b>080788</b><br>3.00 kg       | <b>080790</b><br>3.20 kg | <b>080792</b><br>3.40 kg | <b>080794</b><br>3.70 kg | <b>080796</b><br>3.85 kg |

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



## Function of KG type Base and Novo double socket

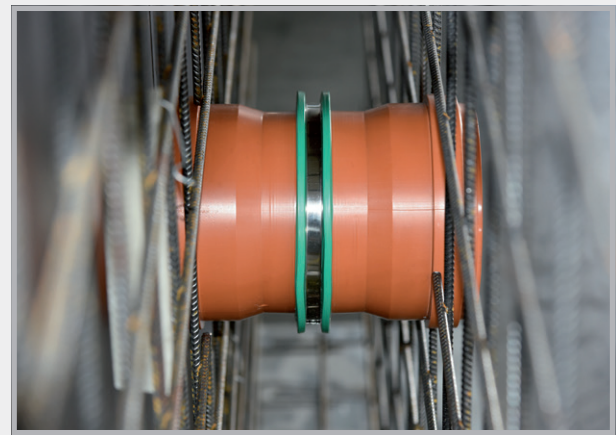


The double socket is cast into concrete. After concreting, the closure plugs are removed and the seals inserted. The next pipe can be connected.

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

Other wall thicknesses available

## KG 2000 FR type product range

| KG 2000-Ø<br>DN mm | Wall thicknesses          |               |               |               |               |               |
|--------------------|---------------------------|---------------|---------------|---------------|---------------|---------------|
|                    | 200 mm                    | 240 mm        | 250 mm        | 300 mm        | 365 mm        | 400 mm        |
| <b>DN 110</b>      | <b>080820</b>             | <b>080825</b> | <b>080830</b> | <b>080835</b> | <b>080845</b> | <b>080850</b> |
| Weight/pc.         | 0.80 kg                   | 0.85 kg       | 0.90 kg       | 1.10 kg       | 1.30 kg       | 1.40 kg       |
| <b>DN 125</b>      | <b>080855</b>             | <b>080860</b> | <b>080865</b> | <b>080870</b> | <b>080880</b> | <b>080885</b> |
| Weight/pc.         | 1.10 kg                   | 1.20 kg       | 1.20 kg       | 1.30 kg       | 1.50 kg       | 1.65 kg       |
| <b>DN 160</b>      | <b>not<br/>producible</b> | <b>080890</b> | <b>080895</b> | <b>080905</b> | <b>080915</b> | <b>080920</b> |
| Weight/pc.         |                           | 1.80 kg       | 2.00 kg       | 2.30 kg       | 2.60 kg       | 2.80 kg       |
| <b>DN 200</b>      | <b>not<br/>producible</b> | <b>080923</b> | <b>080925</b> | <b>080933</b> | <b>080935</b> | <b>080945</b> |
| Weight/pc.         |                           | 3.10 kg       | 3.20 kg       | 3.20 kg       | 3.70 kg       | 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<br>DN mm | Art. no. | Marked cutting lengths / mm<br>(400 mm = standard version) |     |     |     |     |     |     |     | PU    | Weight<br>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<br>DN mm | Art. no. | Marked cutting lengths / mm<br>(400 mm = standard version) |     |     |     |     |     |     |     | PU    | Weight<br>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.

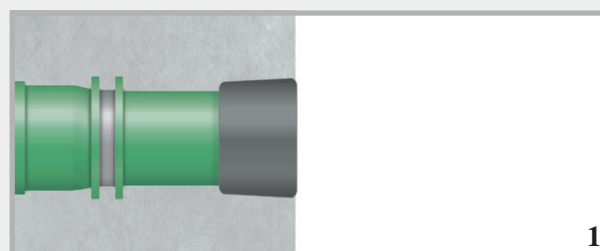


4

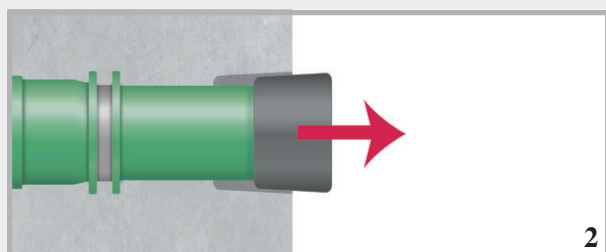
The pipe bushing is ready to install after pushing on the socket ring.

## FR + FRU type function

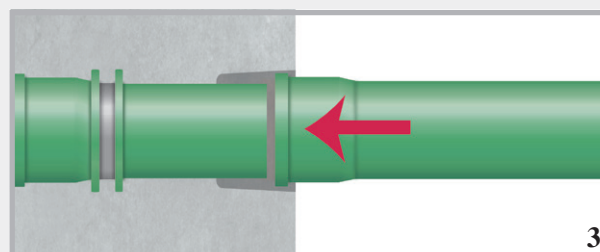
1. KG 2000 flow direction type pipe bushing, concreted into the wall
2. The socket ring is removed before the next pipe is connected.
3. The next pipe is connected. The flow direction of the water is retained.



1



2



3



# Sewage pipe bushing systems

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

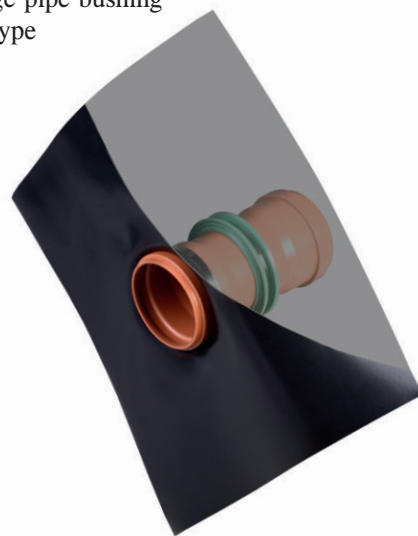
In addition to the pressure water and radon-resistant seal in the concrete provided by the RONDO

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<br>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<br/>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<br/>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

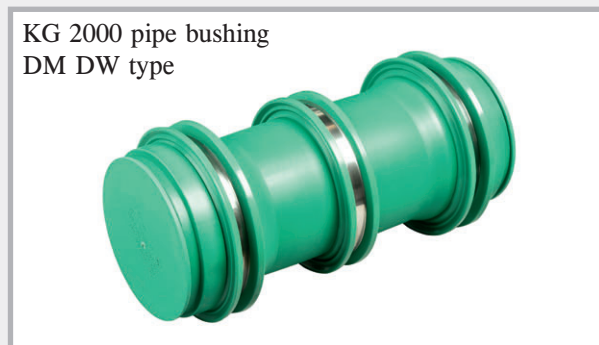
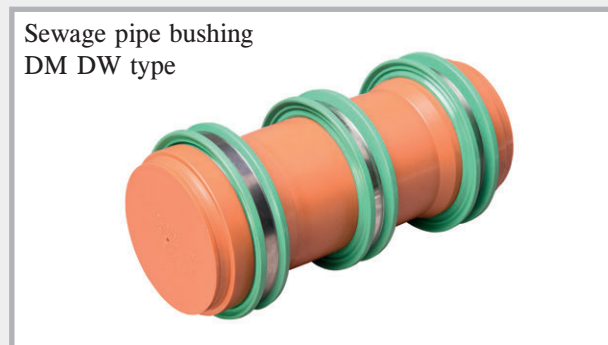
## KG 2000 FFL type product range

| KG 2000-Ø<br>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<br>DN mm      | Wall thicknesses          |                          |                          |                          |                          |                          |                          |
|-----------------------------|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                             | 180 mm                    | 200 mm                   | 240 mm                   | 250 mm                   | 300 mm                   | 365 mm                   | 400 mm                   |
| <b>DN 110</b><br>Weight/pc. | <b>080480</b><br>1.07 kg  | <b>080482</b><br>1.12 kg | <b>080484</b><br>1.22 kg | <b>080486</b><br>1.22 kg | <b>080488</b><br>1.32 kg | <b>080490</b><br>1.42 kg | <b>080492</b><br>1.52 kg |
| <b>DN 125</b><br>Weight/pc. | <b>080494</b><br>1.34 kg  | <b>080496</b><br>1.34 kg | <b>080498</b><br>1.44 kg | <b>080502</b><br>1.44 kg | <b>080504</b><br>1.59 kg | <b>080506</b><br>1.79 kg | <b>080508</b><br>1.99 kg |
| <b>DN 160</b><br>Weight/pc. | <b>not<br/>producible</b> | <b>080512</b><br>2.19 kg | <b>080514</b><br>2.29 kg | <b>080516</b><br>2.29 kg | <b>080518</b><br>2.49 kg | <b>080522</b><br>2.69 kg | <b>080524</b><br>2.94 kg |
| <b>DN 200</b><br>Weight/pc. | <b>not<br/>producible</b> | <b>080526</b><br>3.29 kg | <b>080528</b><br>3.49 kg | <b>080532</b><br>3.49 kg | <b>080534</b><br>3.84 kg | <b>080536</b><br>4.09 kg | <b>080538</b><br>4.19 kg |

Other wall thicknesses available

## KG 2000 DM DW type product range

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

Other wall thicknesses available

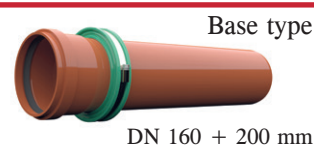
# Ground drains



## Sewage ground drains – solid wall pipes

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

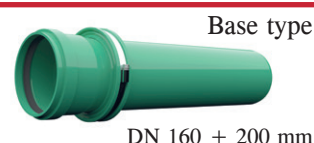
| Art. no.           | Type       | Sewage pipe Ø<br>DN mm | Length | Weight<br>per pc. |
|--------------------|------------|------------------------|--------|-------------------|
| <b>NEW!</b> 080366 | DL 110/500 | 110                    | 500 mm | 0.76 kg           |
| <b>NEW!</b> 080368 | DL 125/500 | 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<br>DN mm | Length | Weight<br>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

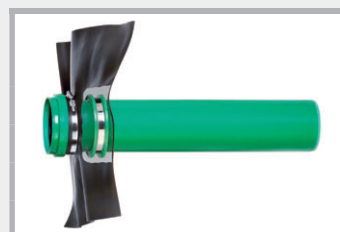
| Art. no. | Type        | Sewage pipe Ø<br>DN mm | Length | Weight<br>per pc. |
|----------|-------------|------------------------|--------|-------------------|
| 080451   | DLF 110/500 | 110                    | 500 mm | 1.70 kg           |
| 080452   | DLF 125/500 | 125                    | 500 mm | 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<br>DN mm | Length | Weight<br>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<br>DN mm | Element<br>length | for wall thickness<br>from to | PU    | Weight<br>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           |

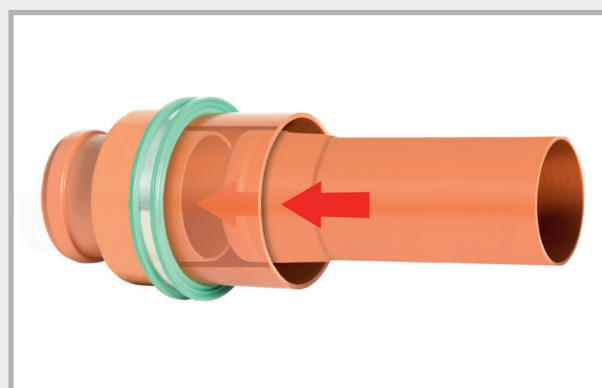
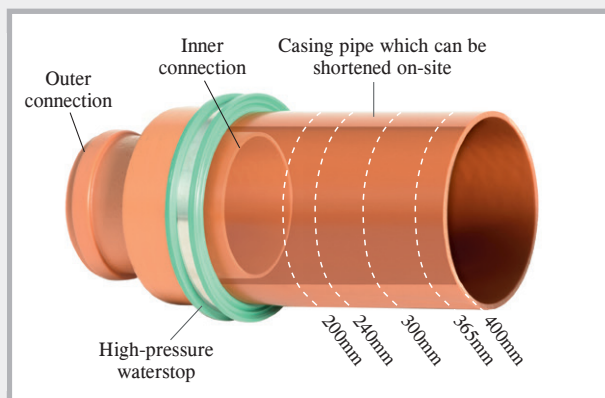
## KG 2000 Universal type product range incl. plug (installation aid) and seal

| Art. no. | Type        | KG 2000-Ø<br>DN mm | Element<br>length | for wall thickness<br>from to | PU    | Weight<br>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.

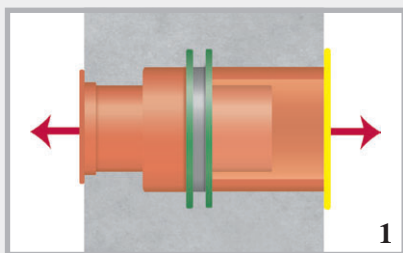
## Function

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

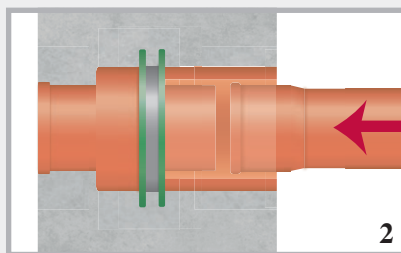


The casing pipe can be shortened on-site to match the desired wall thickness.

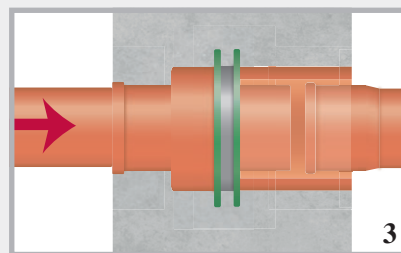
## Universal installation type



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



The plugs are removed following placement of the concrete.



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

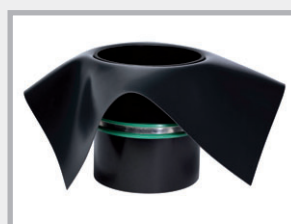
| DN  | Art. no.      | PU    | Weight per pc. |
|-----|---------------|-------|----------------|
| 50  | <b>090403</b> | 1 pc. | 0.02 kg        |
| 80  | <b>090401</b> | 1 pc. | 0.02 kg        |
| 100 | <b>090400</b> | 1 pc. | 0.02 kg        |
| 125 | <b>090402</b> | 1 pc. | 0.04 kg        |
| 150 | <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<br>Lining pipe FASO/<br>WELLO/DURO Plus | Art. no. | Medium pipe<br>in mm |     | PU | Weight<br>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

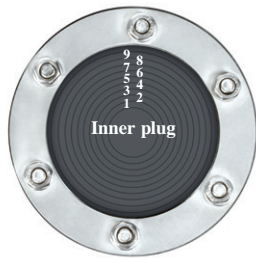
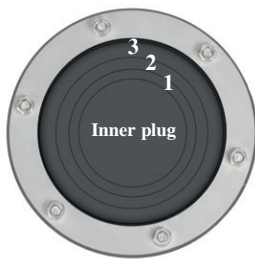
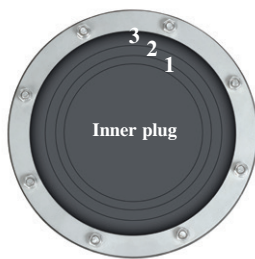

Design: Closed ring

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<br>Multi 100<br>Art. no. 120135<br>Medium pipe in mm<br>from to        | MASTER-RING<br>Multi 150<br>Art. no. 120171<br>Medium pipe                         | MASTER-RING<br>Multi 200<br>Art. no. 120193<br>Medium pipe                          | MASTER-RING<br>Multiple Multi 100<br>Art. no. 120270<br>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<br>(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



Only remove the inner plug

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



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

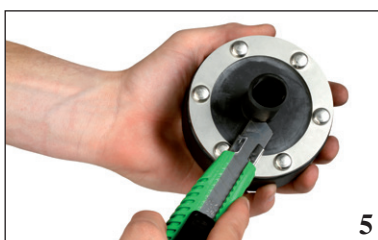
## Example: Multi 100



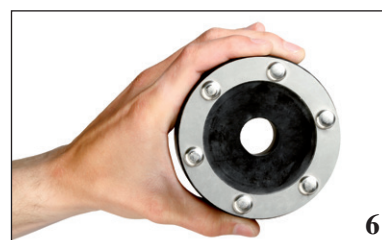
... and push it through the gasket insert.



Pushed-through 1st ring



Simply cut off the pushed-through ring using a cutter



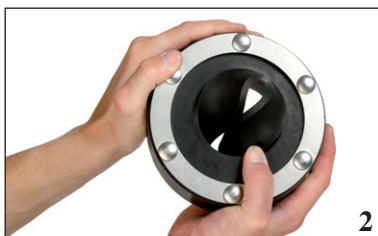
Multi 100 ready for installation

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



Only remove the inner plug

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



Release the first ring and push it through the gasket

## Example: Multi 200



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



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

## Example Multiple Multi



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

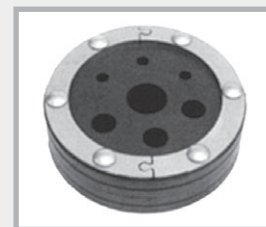


After cutting the stopper to the required size, reinsert it and the gasket insert can be installed.

# 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<br>Lining pipe FASO/<br>WELLO/DURO Plus | Art. no.      | Outer diameter<br>Medium pipe<br>in mm | Weight<br>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



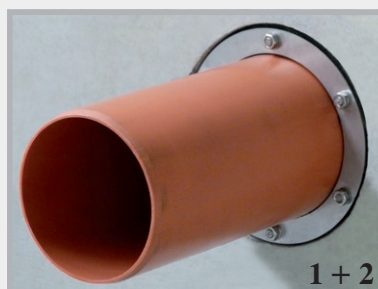
| DN  | Art. no.      | PU    | Weight/kg |
|-----|---------------|-------|-----------|
| 80  | <b>120520</b> | 1 pc. | 0.49 kg   |
| 100 | <b>120525</b> | 1 pc. | 0.75 kg   |
| 125 | <b>120530</b> | 1 pc. | 1.25 kg   |
| 150 | <b>120535</b> | 1 pc. | 2.10 kg   |
| 200 | <b>120540</b> | 1 pc. | 3.40 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

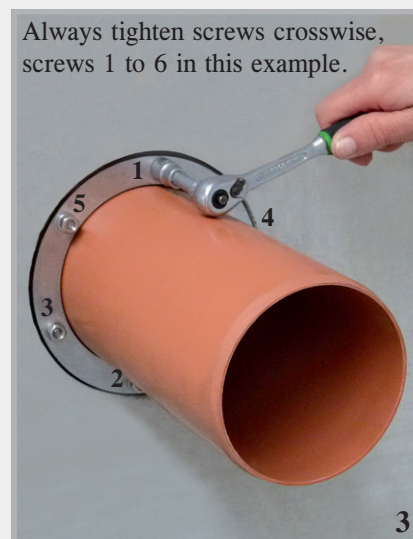
All 3 types of screw should be tightened to a torque of 5 Nm.

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

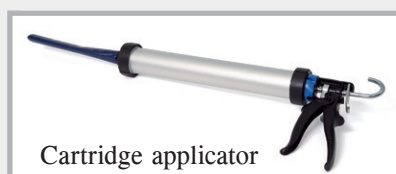


Plastic, vapour and waterproof sealing compound for waterproofing of pipe and cable ducts below ground level. Also suitable for leakage sealing in case of inflowing water.

**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><br>cartridge 850 g | 1 cartridge | Carton<br>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 |

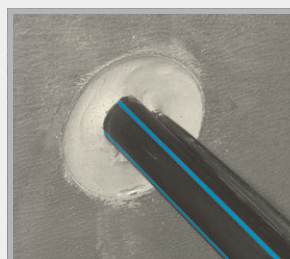
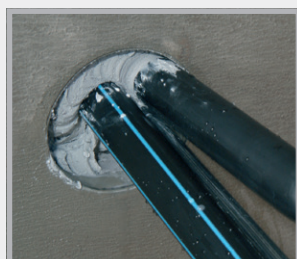


## Technical data

|                        |                               |
|------------------------|-------------------------------|
| 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               |

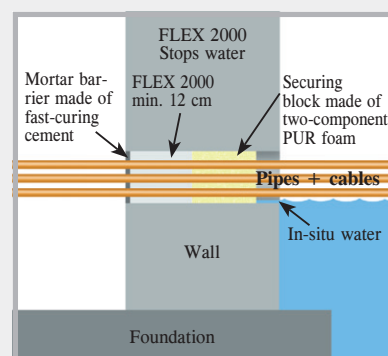
## Substrate

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<br>Core drill hole mm<br>Lining pipe FASO/<br>WELLO/DURO Plus | Medium pipe<br>outer Ø<br>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<br>Core drill hole mm<br>Lining pipe FASO/<br>WELLO/DURO Plus | Medium pipe<br>outer Ø<br>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

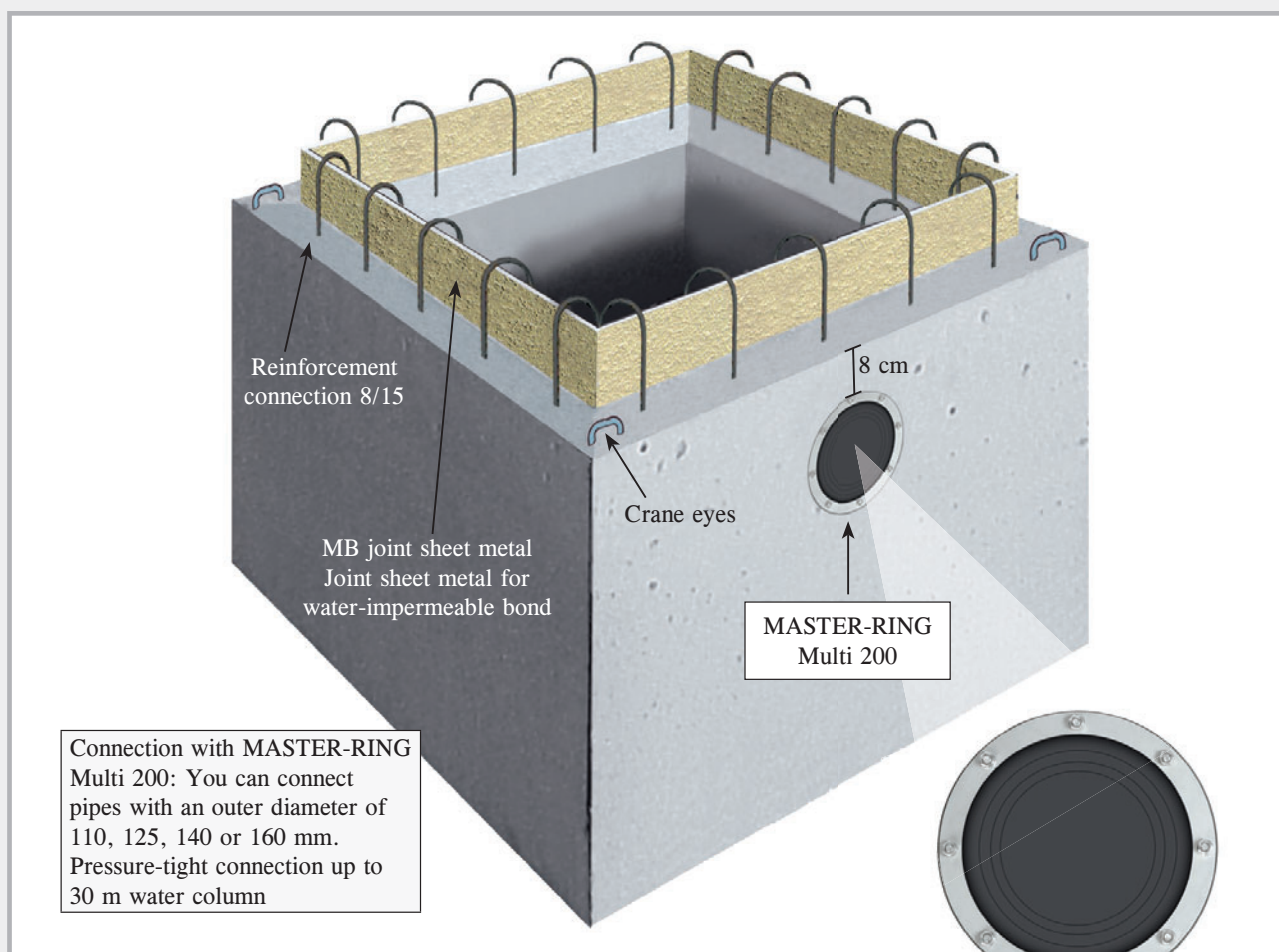
**Installation:** After insertion of the modular seal and lead-through of the medium pipe, the screws are tightened one by one in a clockwise direction. Give each screw one turn and repeat this procedure several times so the rubber is pressed out uniformly.

|                 |      |                 |       |         |       |     |        |
|-----------------|------|-----------------|-------|---------|-------|-----|--------|
| 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<br>W x L x H | Wall<br>thickness | Weight          | Outer dimensions<br>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.

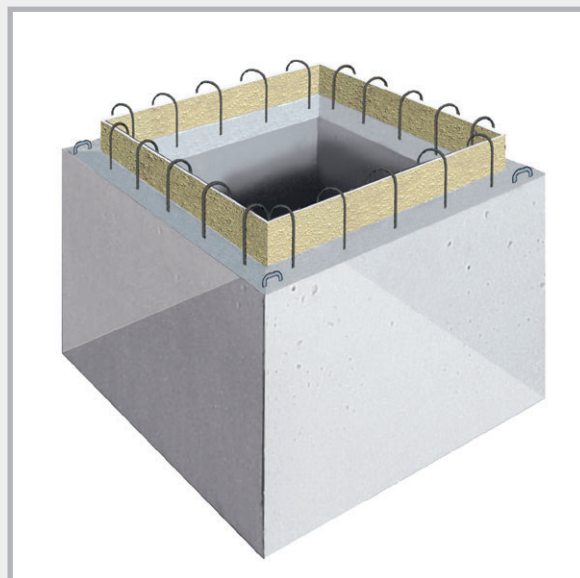
# PILO

## 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.



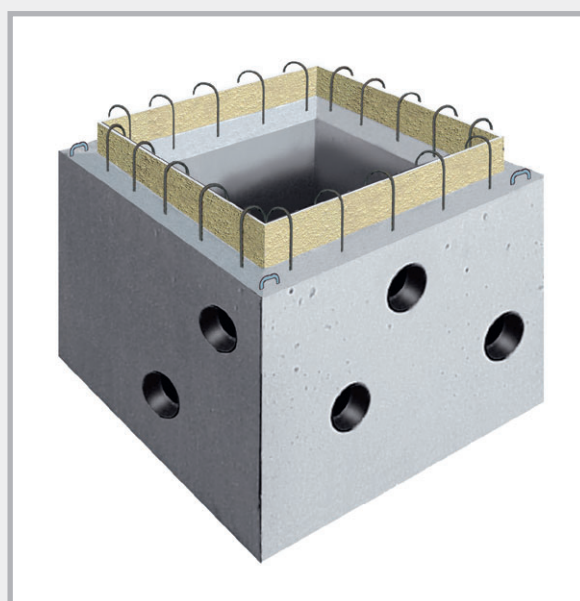
## Sizes of PILO pump sump without borehole

NEW!

| Art. no. | Inner dimensions<br>W x L x H | Wall<br>thickness | Weight          | Outer dimensions<br>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<br>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><br>Art. no.<br>Weight/pc.   | <b>090532</b><br>15.0 kg | <b>090534</b><br>24.0 kg | <b>090536</b><br>44.0 kg | <b>090538</b><br>66.0 kg |
| <b>can be bolted down tightly to<br/>exclude surface water and odours,<br/>can withstand loads up to 750 kg</b><br>Art. no.<br>Weight/pc. | <b>090542</b><br>26.0 kg | <b>090544</b><br>39.0 kg | <b>090546</b><br>55.0 kg | <b>090548</b><br>74.0 kg |

## Traffic-bearing covers, galvanised

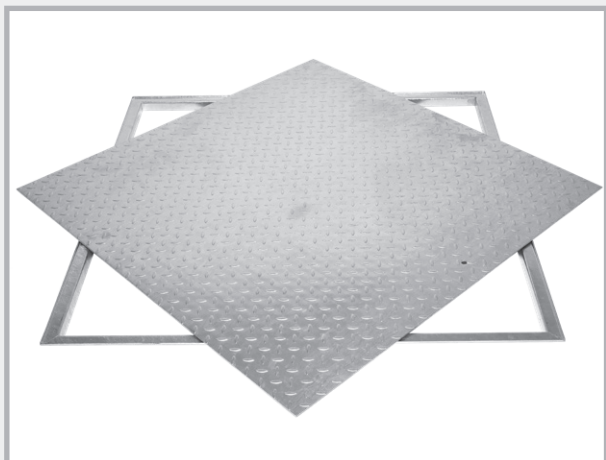
| Pump sump L x W x H<br>Dimensions  | 60 x 60 x 60 cm          | 80 x 80 x 80 cm          | 100 x 100 x 80 cm        | 120 x 120 x 80 cm         |
|--|--------------------------|--------------------------|--------------------------|---------------------------|
| clear dimension  | 63 x 63 cm               | 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><br><b>wheel pressure up to 1250 kg</b><br>Art. no.<br>Weight/pc.  | <b>090552</b><br>32.0 kg | <b>090554</b><br>51.0 kg | <b>090556</b><br>70.0 kg | <b>090558</b><br>112.0 kg |
| <b>traffic-bearing up to 15000 kg</b><br><b>wheel pressure up to 3750 kg</b><br>Art. no.<br>Weight/pc. | <b>090562</b><br>43.0 kg | <b>090564</b><br>70.0 kg | <b>090566</b><br>97.0 kg | <b>090568</b><br>137.0 kg |



# Shaft cover for pump sump

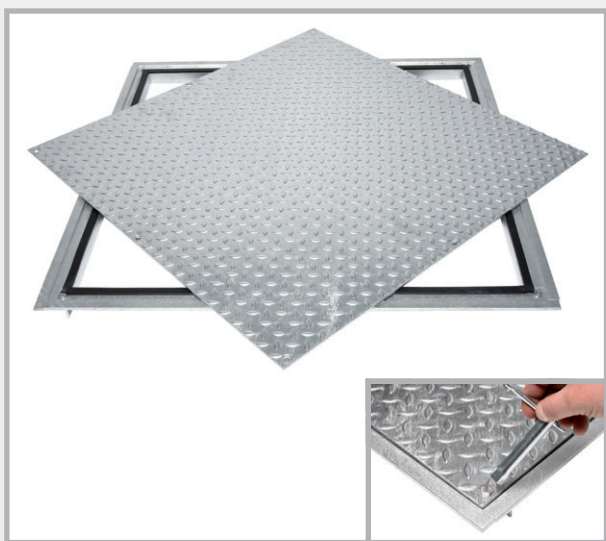
## walkable

Frame and cover galvanised, with 1 borehole as lifting opening



## walkable

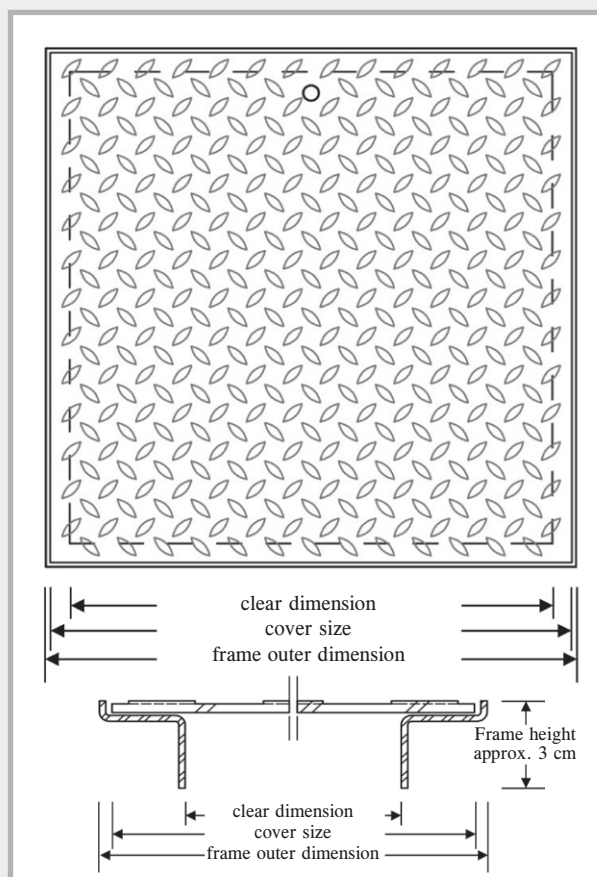
Can be bolted down tightly to exclude surface water and odours, galvanised frame and cover, EPDM cellular-rubber seal in frame, cover can be screwed



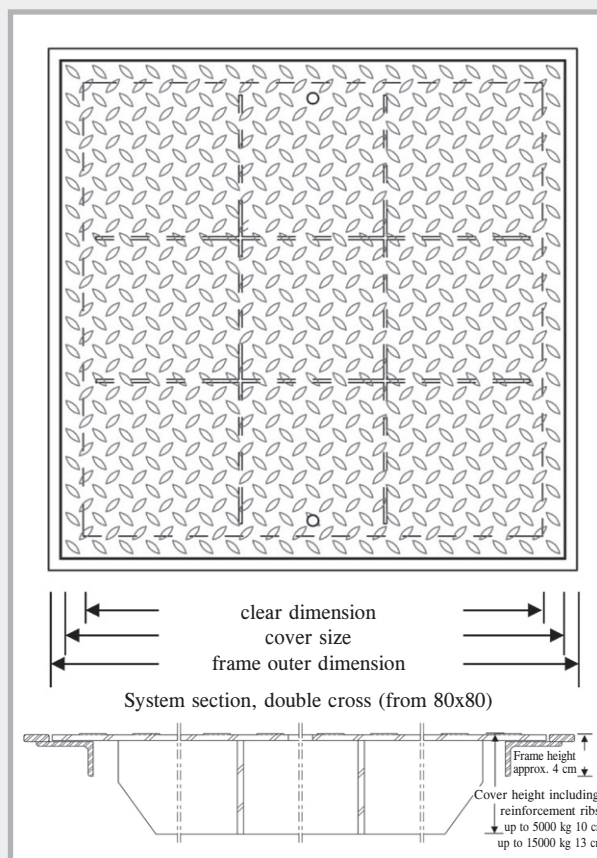
## traffic-bearing, galvanised



## Dimensions, walkable

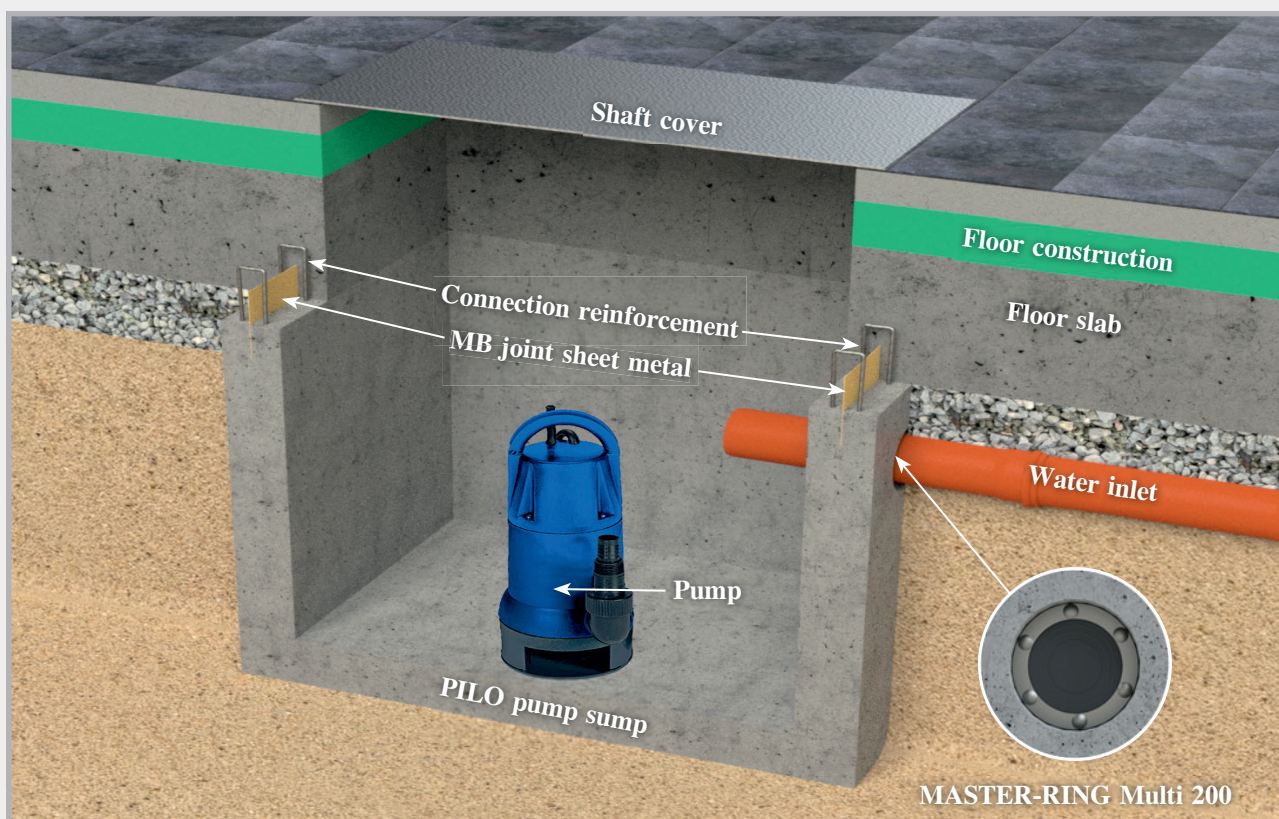


## Dimensions, traffic-bearing

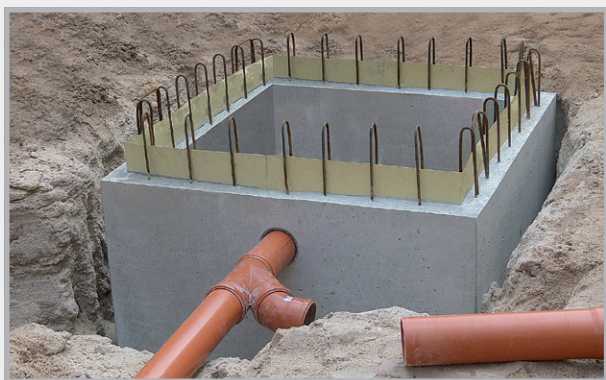




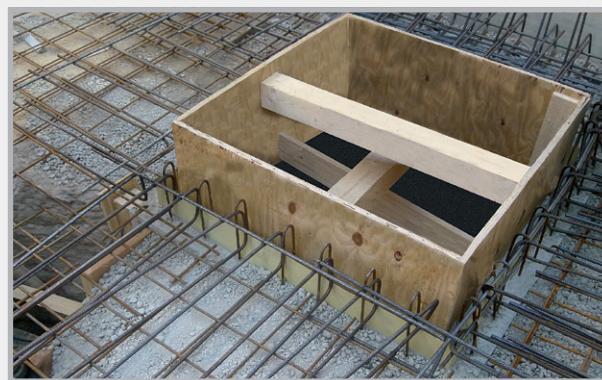
# Principle of operation of the PILO pump sump



## At the construction site



PILO pump sump with connected inlet.



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.



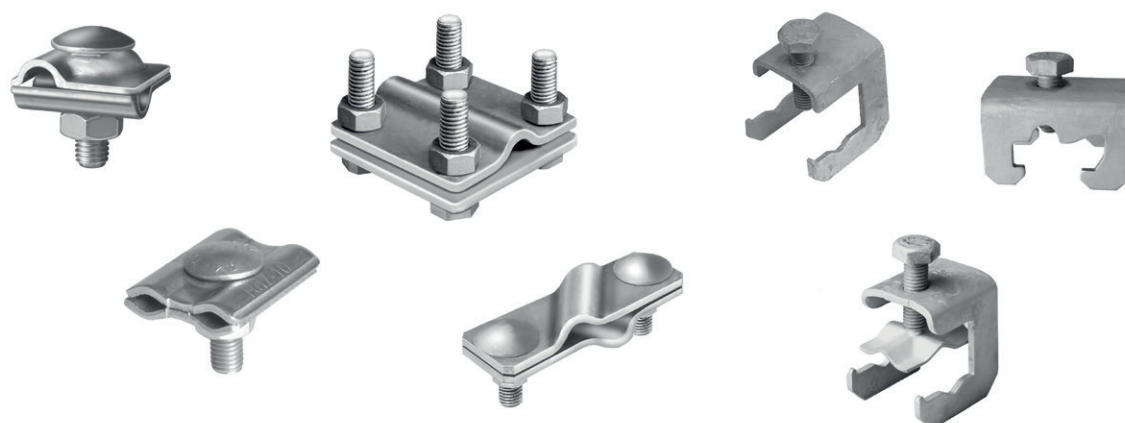
Following concreting: illustration shows the pump sump (light grey) and concreted foundation (dark grey).

**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

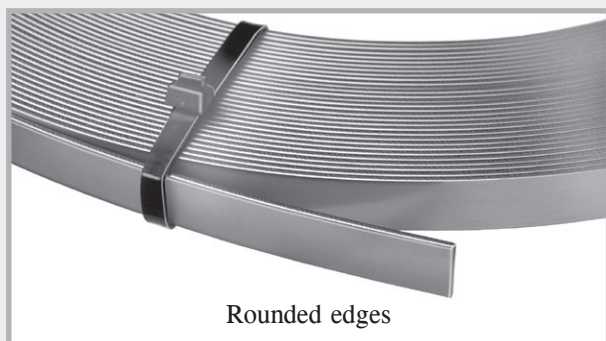
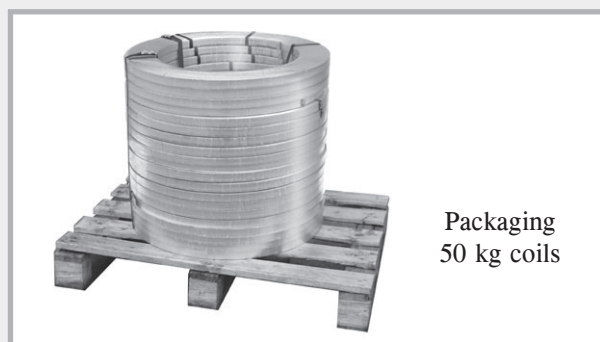
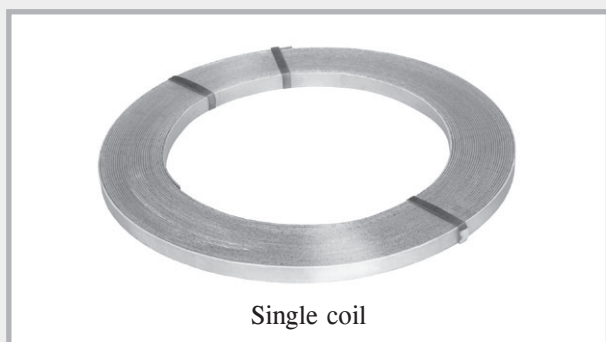
## Earthing straps

### Galvanised

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

### Stainless steel

| Art. no.      | Size        | Material  | PU                           | Secondary packaging    |
|---------------|-------------|---|------------------------------|------------------------|
| <b>100028</b> | 30 x 3.5 mm | A2 stainless steel<br>according to DIN EN 62561-2 | Roll 25 kg<br>= approx. 30 m | 40 rolls<br>per pallet |
| <b>100030</b> | 30 x 3.5 mm | A2 stainless steel<br>according to DIN EN 62561-2 | Roll 50 kg<br>= approx. 60 m | 20 rolls<br>per pallet |
| <b>100031</b> | 30 x 3.5 mm | A4 stainless steel<br>according to DIN EN 62561-2 | Roll 25 kg<br>= approx. 30 m | 40 rolls<br>per pallet |
| <b>100032</b> | 30 x 3.5 mm | A4 stainless steel<br>according to DIN EN 62561-2 | Roll 50 kg<br>= approx. 60 m | 20 rolls<br>per pallet |
| <b>100035</b> | 40 x 4.0 mm | A4 stainless steel<br>according to DIN EN 62561-2 | Roll 50 kg<br>= approx. 39 m | 20 rolls<br>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<br>= approx. 100 m  | 24 rolls<br>per pallet |
| <b>100041</b> | Ø 10 mm | Galvanised steel Z 350 | Roll 25 kg<br>= approx. 40.5 m | 40 rolls<br>per pallet |
| <b>100042</b> | Ø 10 mm | Galvanised steel Z 350 | Roll 50 kg<br>= approx. 81 m   | 20 rolls<br>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<br>= approx. 40.5 m | 20 rolls<br>per pallet |
| <b>100052</b>     | Ø 10 mm | A2 according to DIN EN 62561-2 | Roll 50 kg<br>= approx. 81 m   | 10 rolls<br>per pallet |
| <b>100055</b>     | Ø 10 mm | A4 according to DIN EN 62561-2 | Roll 25 kg<br>= approx. 40.5 m | 20 rolls<br>per pallet |
| <b>100056</b>     | Ø 10 mm | A4 according to DIN EN 62561-2 | Roll 50 kg<br>= approx. 81 m   | 10 rolls<br>per pallet |
| <b>NEW 100062</b> | Ø 10 mm | A4 according to DIN EN 62561-2 | Roll 31 kg<br>= approx. 50 m   | 16 rolls<br>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<br>= approx. 40.5 m | 40 rolls<br>per pallet |
| <b>100059</b> | Ø 10 mm | SUPER-SOFT A4 according to DIN EN 62561-2, ID 900 mm | 50 kg<br>= approx. 81 m   | 20 rolls<br>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 =<br>approx. 148 m | 18 rolls<br>per pallet |
| <b>100080</b> | Ø 8 mm    | ALU AlMgSi soft-twistable                                      | 20 kg =<br>approx. 148 m | 18 rolls<br>per pallet |
| <b>100082</b> | Ø 8/11 mm | ALU AlMgSi soft-twistable<br>with halogen-free plastic coating | 20 kg =<br>approx. 100 m | 18 rolls<br>per pallet |
| <b>100088</b> | Ø 10 mm   | ALU AlMgSi soft  | 20 kg =<br>approx. 95 m  | 18 rolls<br>per pallet |



Single coil



Packaging

## Copper

| Art. no.      | Size   | Material         | PU                       | Secondary packaging    |
|---------------|--------|------------------|--------------------------|------------------------|
| <b>100090</b> | Ø 8 mm | F 22 soft        | 50 kg =<br>approx. 111 m | 10 rolls<br>per pallet |
| <b>100092</b> | Ø 8 mm | F 25 medium hard | 50 kg =<br>approx. 111 m | 10 rolls<br>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<br>with plastic coating | 50 kg =<br>approx. 75 m | 10 rolls<br>per pallet |
| <b>100065</b> | Ø 10/13 mm | Galvanised steel Z 350<br>with plastic coating | 35 kg =<br>approx. 52 m | 15 rolls<br>per pallet |



# Connectors

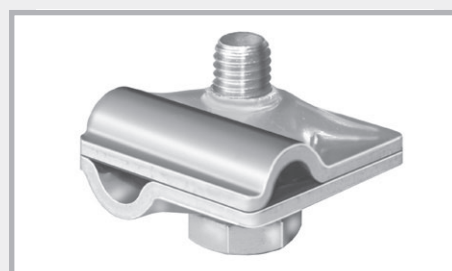
## Multi-purpose connecting clamps with mushroom head bolt and protection against twisting



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 |

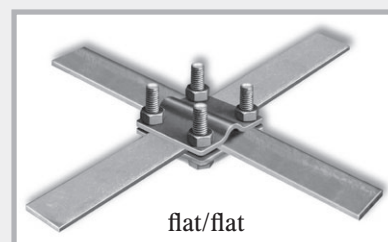
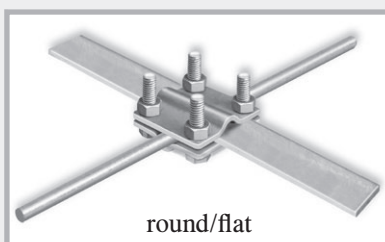
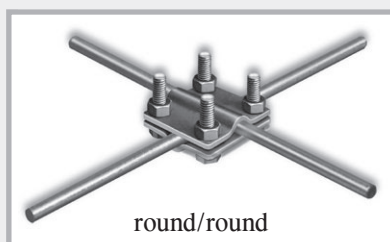
# Connectors

## Stainless steel cross connectors, round/round

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

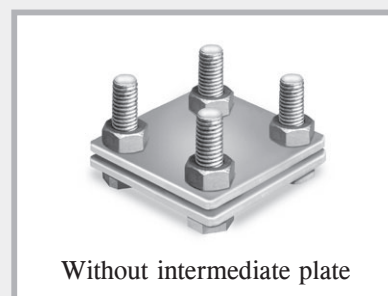
Universal for flat/flat, flat/round and round/round

| 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

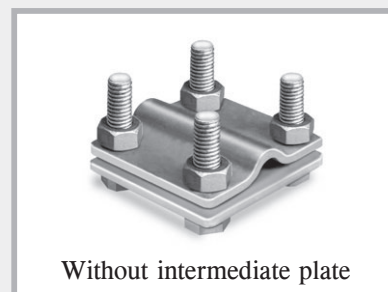
for earthing strap up to 30 mm wide



| 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

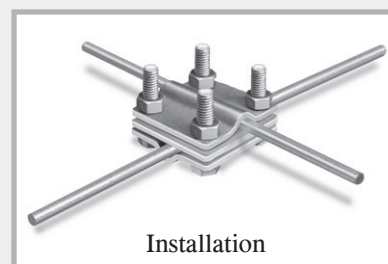
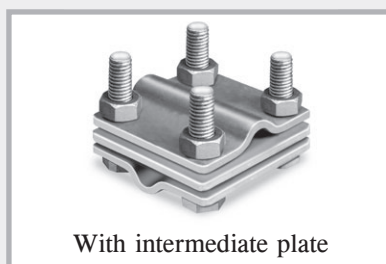
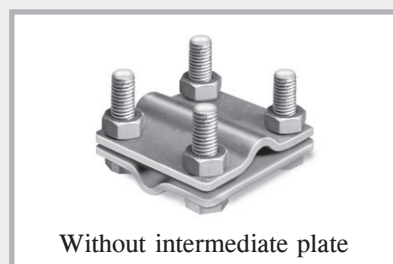


| Art. no.      | Description  | PU                  | Weight              |
|---------------|--|---------------------|---------------------|
| <b>100115</b> | <b>Galvanised steel</b> , 2-part, flat/round heavy duty version, M8 screws | 1 carton of 50 pcs. | 10.70 kg per carton |
| <b>100121</b> | <b>Galvanised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

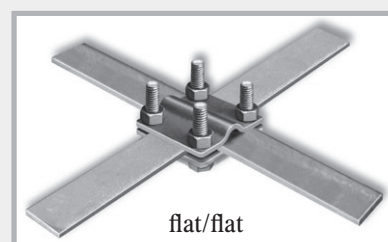
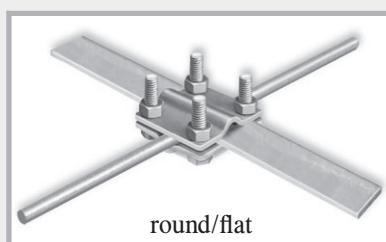
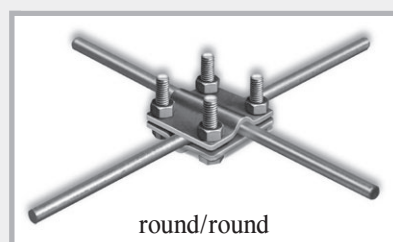


## Galvanised cross connectors, round/round

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

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

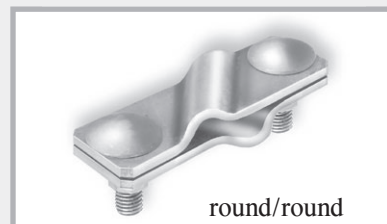
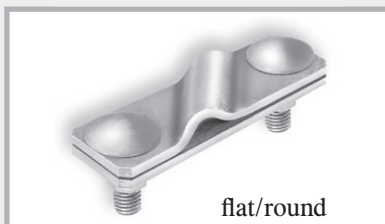
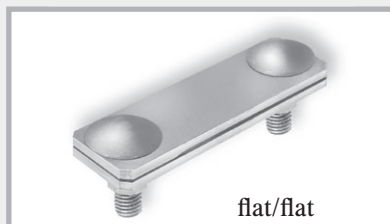
| Art. no.      | Description   | PU                  | Weight              |
|---------------|---|---------------------|---------------------|
| <b>100129</b> | <b>Galvanised steel</b> , 2-part<br>Round/round heavy duty version, M8 screws | 1 carton of 50 pcs. | 17.80 kg per carton |





# Connectors

## Double clamps



## Stainless steel double clamps

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

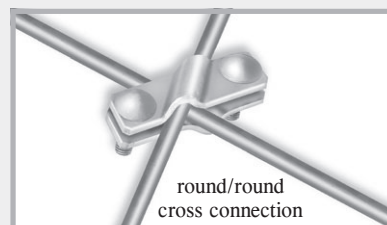
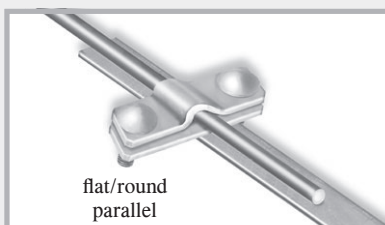
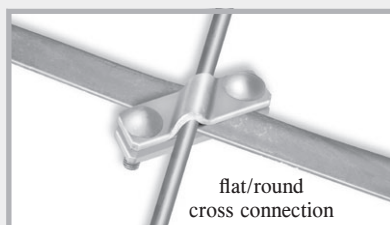
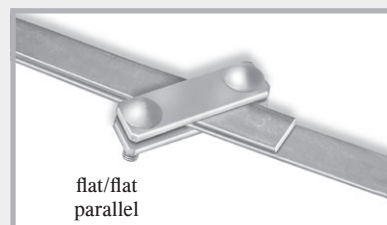
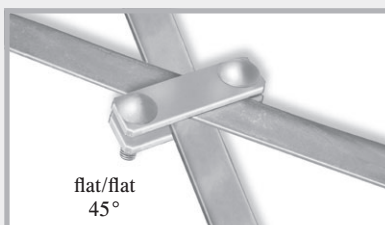
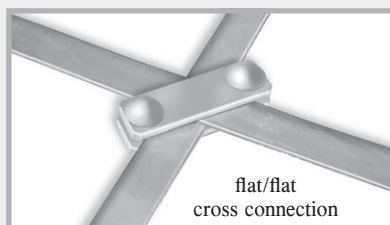
| Art. no. | Description   | PU                  | Weight              |
|----------|---|---------------------|---------------------|
| 100273   | V4A, 2-part, flat/flat heavy duty version, M10 screws   | 1 carton of 50 pcs. | 10.00 kg per carton |
| 100279   | V4A, 2-part, flat/round heavy duty version,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

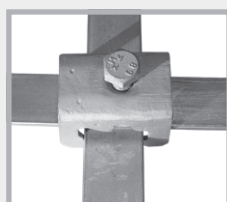
| Art. no.      | Description  | PU                     | Weight                |
|---------------|--|------------------------|-----------------------|
| <b>100163</b> | <b>Galvanised steel</b> , 1 M10 screw<br>flat conductor up to 30 mm<br>round conductor 8 + 10 mm<br>for T, cross and parallel connections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



Single clamp



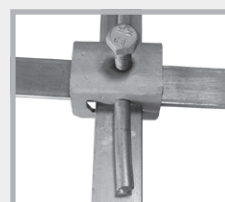
flat/flat  
parallel connection



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<br>2-part, Ø 8-10 mm | 1 carton<br>of 50 pcs. | 7.20 kg<br>per carton |
| <b>100243</b> | <b>V4A</b> , 1 M10 screw<br>2-part, Ø 8-10 mm              | 1 carton<br>of 50 pcs. | 6.20 kg<br>per carton |

## Wedge connector



| Art. no.      | Description  | PU                     | Weight                |  |
|---------------|--|------------------------|-----------------------|--|
| <b>100160</b> | <b>Galvanised steel</b><br>round conductor Ø 10 mm<br>flat conductor up to 40 mm<br>with lock-in position in the wedge | 1 carton<br>of 50 pcs. | 11.0 kg<br>per carton | <br>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<br>Round cond. Ø 8-16 mm / 15-25 mm<br>Mushroom head bolt and protection against twisting | 1 carton<br>of 25 pcs. | 11.25 kg<br>per carton | <br>Multi-purpose<br>connecting clamp<br>MAXI |
| <b>100152</b> | <b>V4A</b> , round/round<br>Round cond. Ø 8-16 mm / 15-25 mm<br>Mushroom head bolt and protection against twisting              | 1 carton<br>of 25 pcs. | 11.25 kg<br>per carton |  |

# Connectors

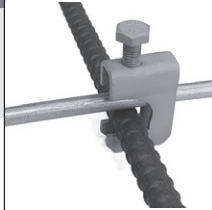
## Connecting clamps for connection of flat conductor to reinforcement

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

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

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

## Connecting clamps for connection of round conductor to reinforcement

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

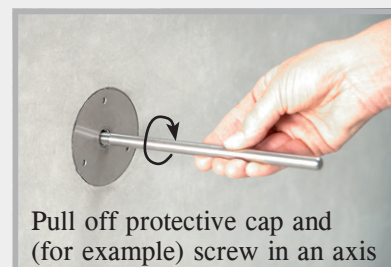
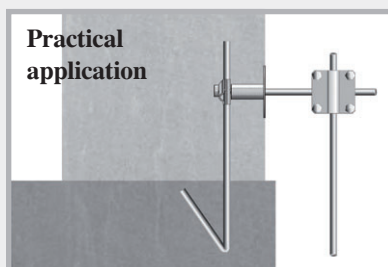
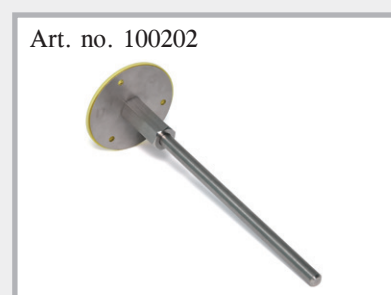
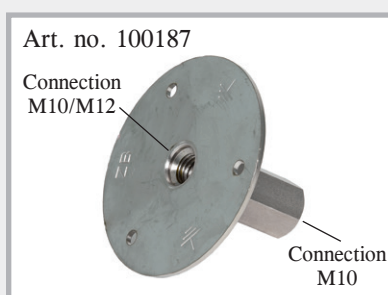
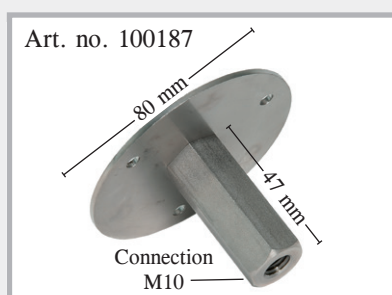


# Fixed earthing terminals, wall bushings + accessories

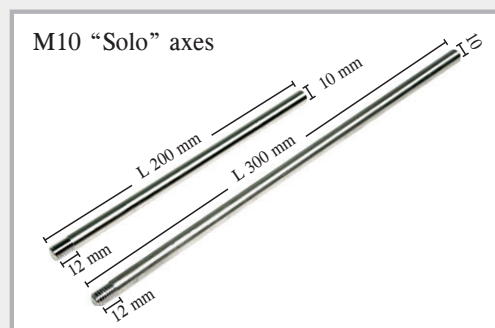
## Fixed earthing terminal M10/M12

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 |

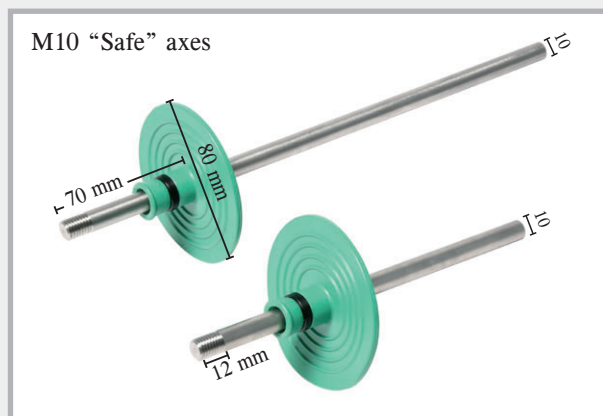


## M10 “Solo” axes for fixed earthing terminal

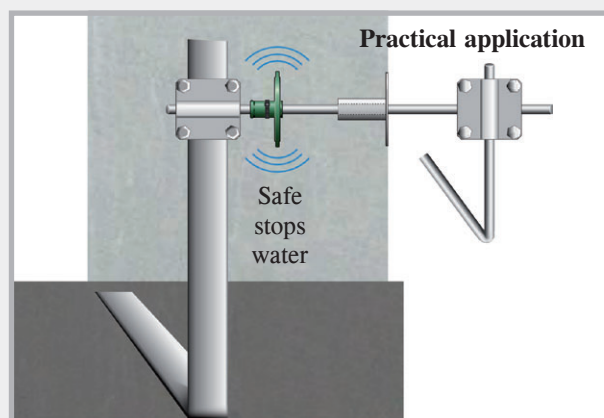


| Art. no. | Description               | PU                | Weight         |
|----------|---------------------------|-------------------|----------------|
| 100183   | galvanised, length 200 mm | Carton of 50 pcs. | 6.50 kg/carton |
| 100185   | galvanised, length 300 mm | Carton of 50 pcs. | 9.80 kg/carton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

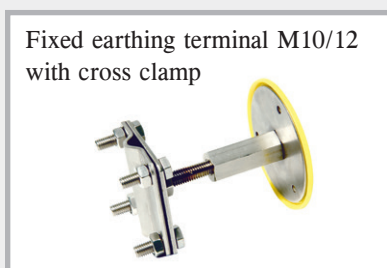


| Art. no. | Description               | PU    | Weight      |
|----------|---------------------------|-------|-------------|
| 100177   | galvanised, length 200 mm | 1 pc. | 0.15 kg/pc. |
| 100178   | galvanised, length 300 mm | 1 pc. | 0.21 kg/pc. |
| 100179   | V4A, length 200 mm        | 1 pc. | 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><br>Thread M10, round 8 + 10 mm<br>flat up to 40 mm, thread length 70 mm         | Carton<br>of 10 pcs. | 3.90 kg<br>per carton |
| 100189   | <b>Cross clamp for fixed earthing terminal M10/12, A4 stainless steel</b><br>Thread M10, round 8 + 10 mm<br>flat up to 40 mm, thread length 70 mm | Carton<br>of 10 pcs. | 3.20 kg<br>per carton |



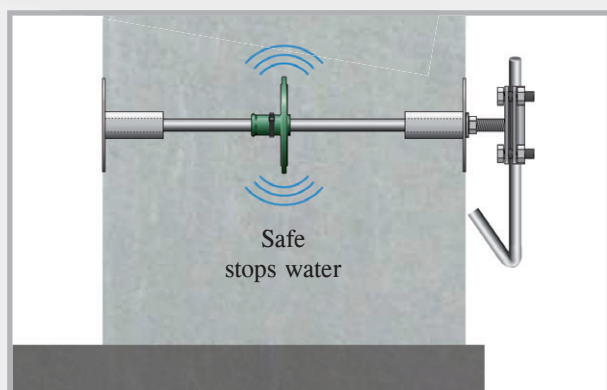
Fixed earthing terminal with  
screwed in cross clamp.  
Round and flat conductors can be  
connected.

## 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> |  |
|---|--|--|--|--|

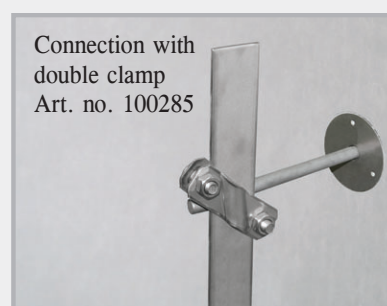
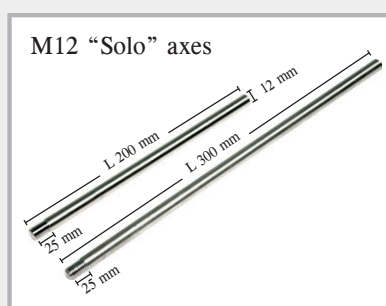
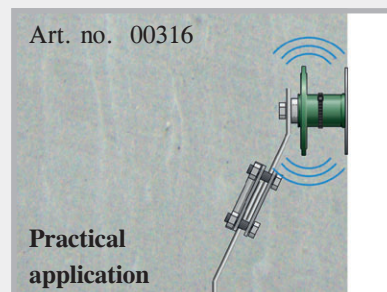
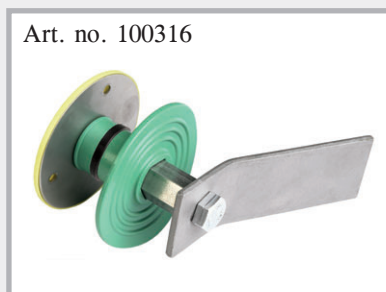
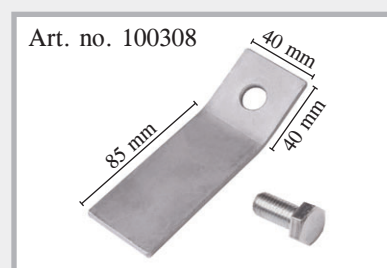
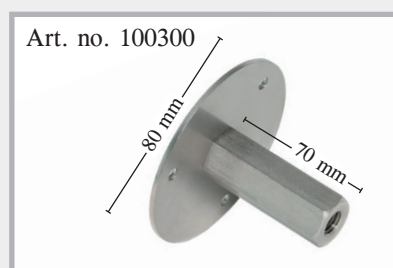
| Wall thickness | Art. no. | Weight  | Art. no. | Weight  |
|----------------|----------|---------|----------|---------|
| 200 mm         | 100360   | 0.12 kg | 100410   | 0.10 kg |
| 240 mm         | 100365   | 0.13 kg | 100415   | 0.11 kg |
| 250 mm         | 100370   | 0.14 kg | 100420   | 0.11 kg |
| 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<br>Connection M12                         | 1 carton of 10 pcs. | 2.00 kg per carton |
| 100304   | M12 "Safe" fixed earthing terminal with yellow protective cap and waterstop<br>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<br>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<br>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

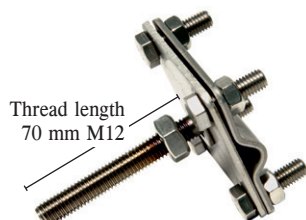


| Art. no. | Description               | PU    | Weight      |
|----------|---------------------------|-------|-------------|
| 101180   | galvanised, length 200 mm | 1 pc. | 0.19 kg/pc. |
| 101182   | galvanised, length 300 mm | 1 pc. | 0.27 kg/pc. |
| 101184   | V4A, length 200 mm        | 1 pc. | 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<br>Thread M12, thread length 70 mm<br>Clamping range:<br>round 8 + 10 mm, flat up to 40 mm | Carton<br>of 10 pcs. | 3.90 kg<br>per carton |
| 100462   | Cross clamp for fixed earthing terminal M12, V4A<br>Thread M12, thread length 70 mm<br>Clamping range:<br>round 8 + 10 mm, flat up to 40 mm        | Carton<br>of 10 pcs. | 3.90 kg<br>per carton |
| 100464   | Cross clamp for fixed earthing terminal M12, V4A<br>Thread M12, thread length 200 mm<br>Clamping range:<br>round 8 + 10 mm, flat up to 40 mm       | Carton<br>of 10 pcs. | 4.25 kg<br>per carton |

Art. no. 100460 + 100462



Art. no. 100464



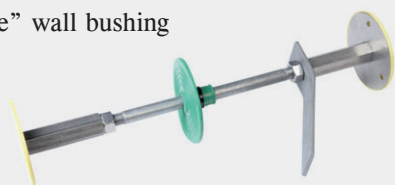
## M12 wall bushings with pre-assembled fixed earthing terminals

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

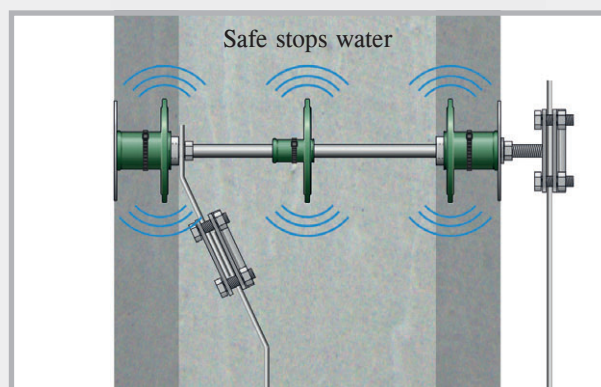
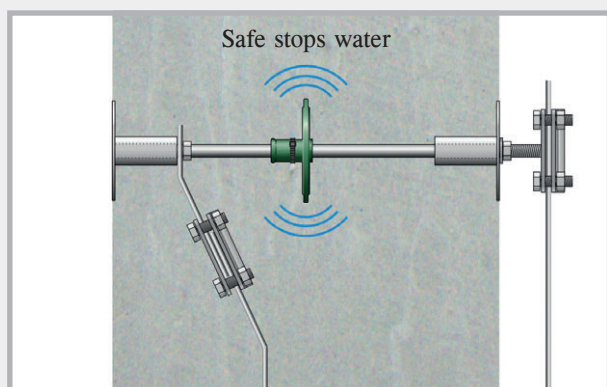
Fixed earthing terminal in stainless steel V4A, connection axes 12 mm stainless steel incl. connecting plate 4 x 40 mm

| 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

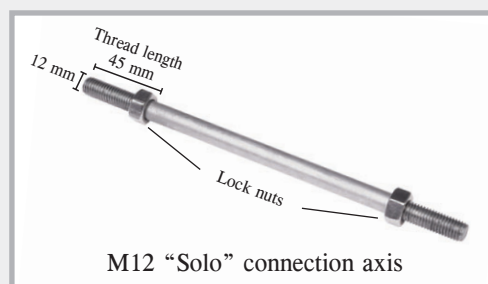


M12 "DW Safe" wall bushing



## 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 |

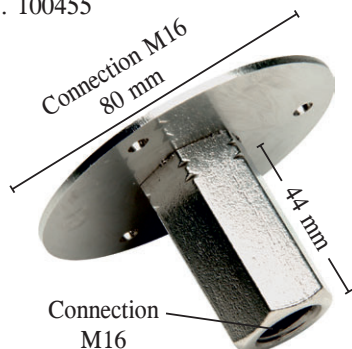


## Fixed earthing terminal M16

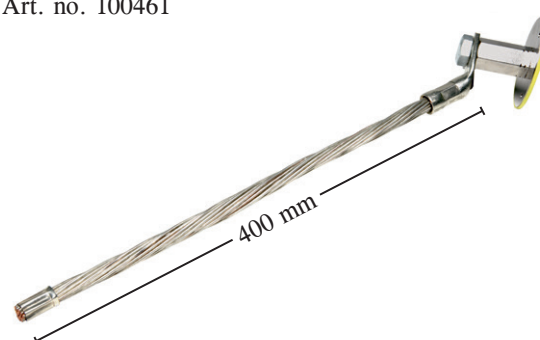
to connect the equipotential bonding conductors to the foundation earth electrode, reinforcement and lightning protection system

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

Art. no. 100455



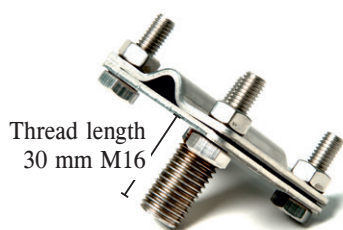
Art. no. 100461



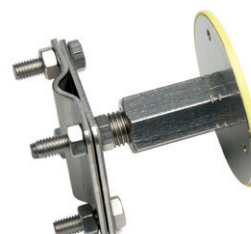
## Cross clamps for fixed earthing terminals M16

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


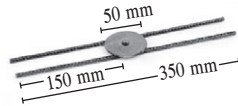
Art. no. 100458



Fixed earthing terminal M16 with cross clamp



## Accessories for fixed earthing terminal

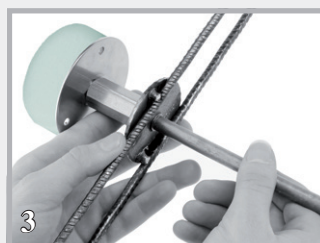
| Art. no.      | Description  | PU                | Weight  |   |
|---------------|--|-------------------|---------|---|
| <b>100198</b> | <b>Plastic foam for fixed earthing terminal</b><br>self-adhesive on one side<br>Ø 76 mm, thickness 20 mm | Bag<br>of 10 pcs. | 0.10 kg |  |
| <b>100196</b> | <b>Fixing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



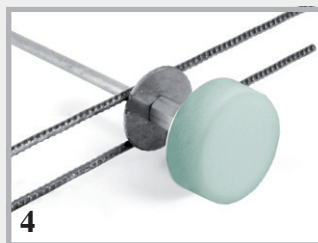
1  
Remove protective cap of  
fixed earthing terminal



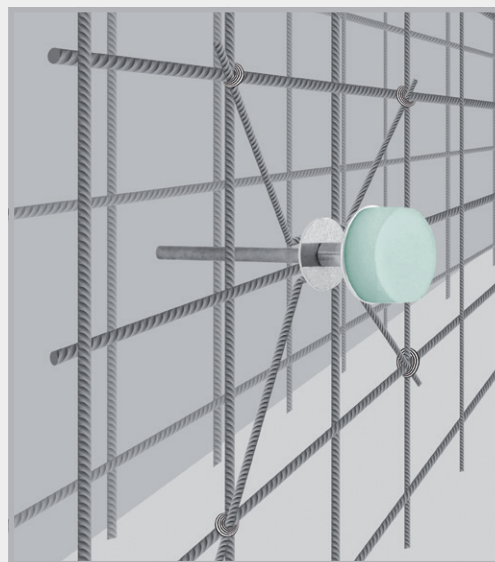
2  
Stick on plastic foam



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

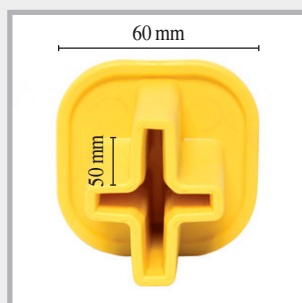
Protective cap  
to DIN 18014

PVC protective cap  
for round and flat conductors

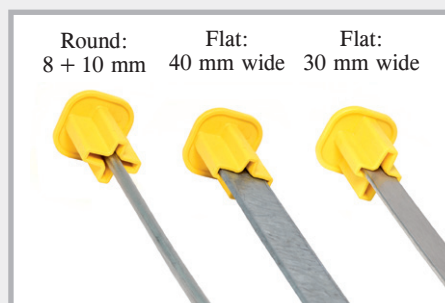


| Art. no. | Description  | PU                 | Weight             |
|----------|--|--------------------|--------------------|
| 100500   | <b>MultiCap</b> , colour: yellow<br>area of application:<br>round conductor: 8 + 10 mm<br>flat conductor: 30 x 3.5 mm 40 x 4.0 mm<br>30 x 3.0 mm 40 x 5.0 mm | Bag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

### Technical data



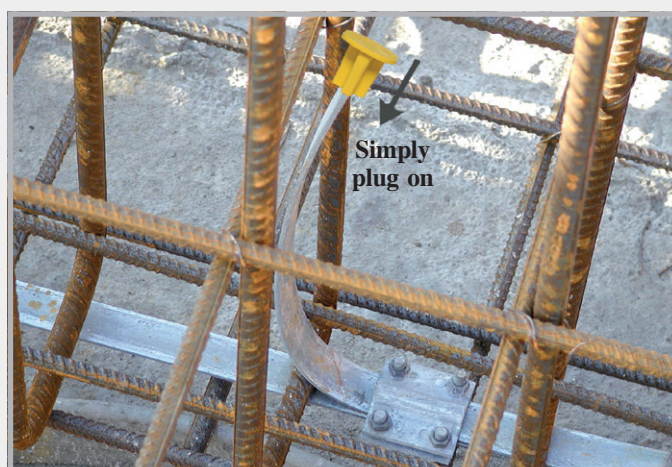
Material: PVC,  
large labelled safety cap  
60 x 60 mm,  
long mounting slot 50 mm



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:

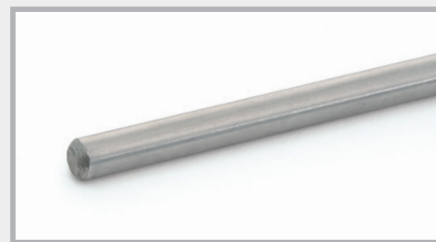
For safety reasons, the terminal lugs must be prominently marked during the construction phase.



# Lightning protection accessories

## Terminal lugs

### Round conductor rods, bevelled



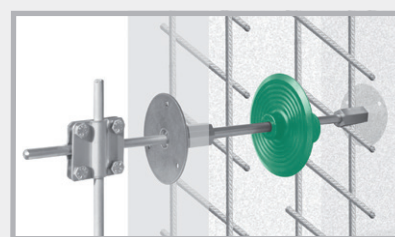
Round conductor rods, bevelled

| 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<br>for lightning protection conductor 8 + 10 mm | 1 pc. | Carton<br>of 100 pcs. | 0.13 kg |
| 090892             | RONDO RO flat<br>for earthing strap 30x3.5 + 30x3.0 mm      | 1 pc. |                       | 0.17 kg |
| <b>NEW!</b> 090988 | RONDO EFP<br>For hexagon fixed earthing terminal            | 1 pc. |                       | 0.04 kg |



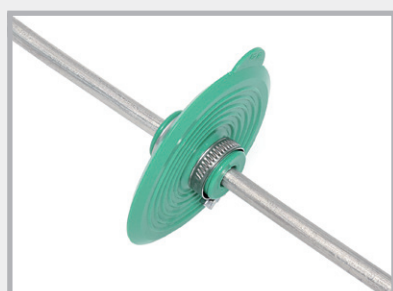
RONDO RO 10



RONDO RO flat



RONDO EFP



RONDO RO 10, mounted



RONDO RO flat, mounted

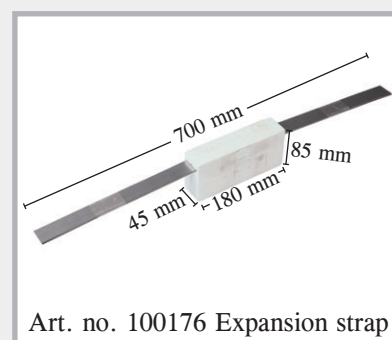
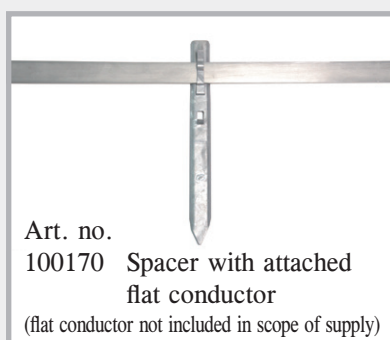
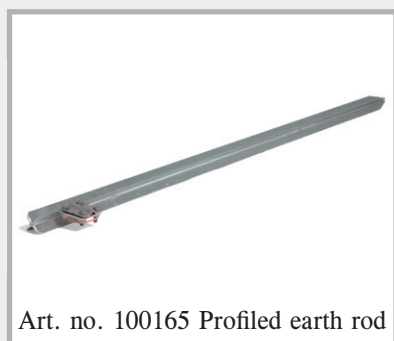


RONDO EFP, mounted

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

# Lightning protection accessories

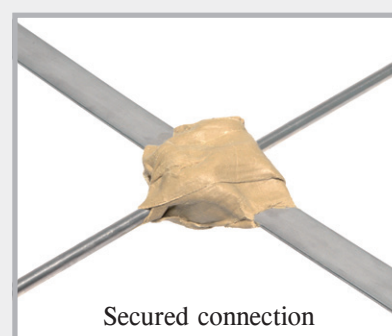
| Art. no.           | Description   | PU                    | Weight                 |
|--------------------|---|-----------------------|------------------------|
| <b>100165</b>      | <b>Profiled earth rod, 1.5 m long, galvanised</b><br>cross profile 50 x 50 mm<br>with cross clamp welded on   | 1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



## Anti-corrosive tapes

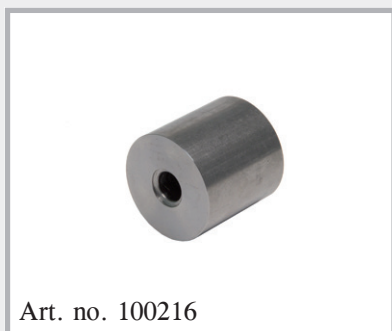
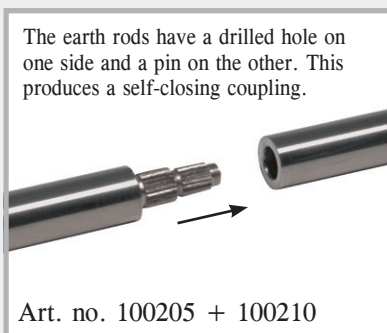
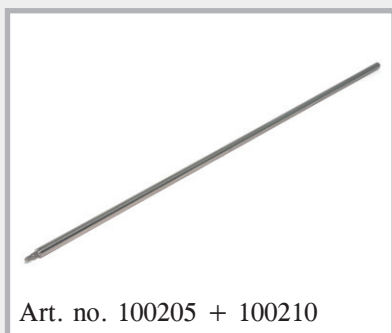
For wrapping of overground and underground connections.

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



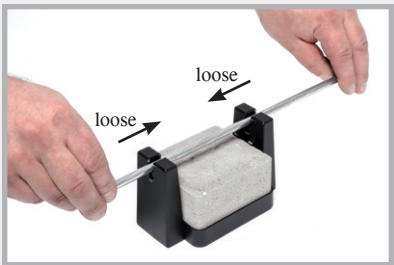
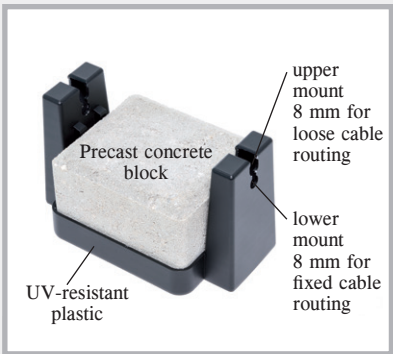


# MultiClip roof conductor holder

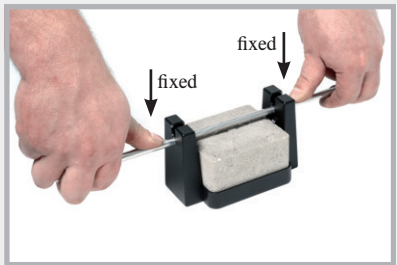
For loose and fixed wire routing

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

## Product description

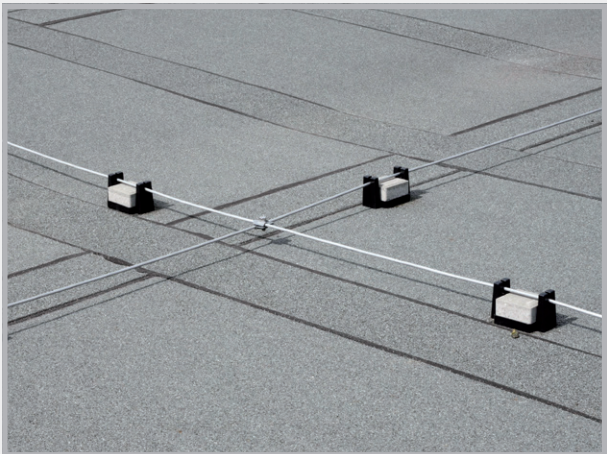


Pushing the round conductor into the upper mount. The wire is locked in place but can be moved.



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.

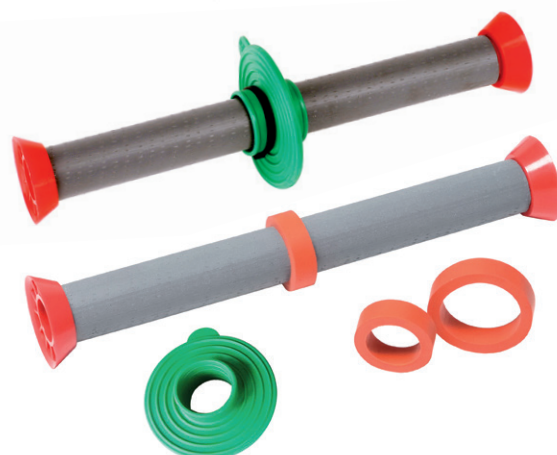
- DIN STANDARDS DIN EN 62561-1 and 62561-2

- 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



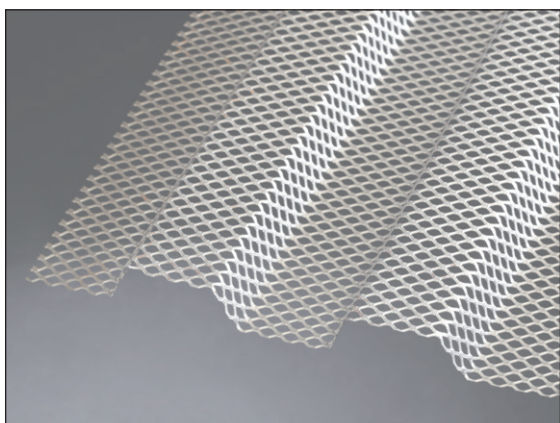
**ActiveRings + RONDO MINI**  
pages 137 – 140



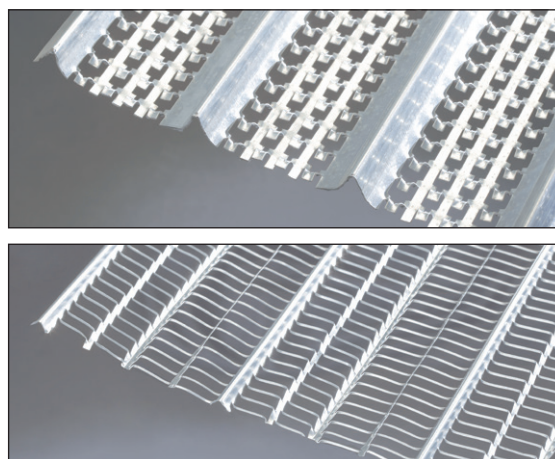
**Damp proof courses**  
pages 141 – 143



**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

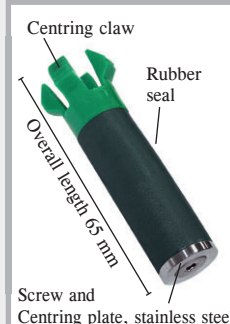
| Art. no. | Description   | Tie point inner diameter | PU                          | Weight                     |
|----------|---|--------------------------|-----------------------------|----------------------------|
| 046230   | <b>STOPPER SCREW Type 3 in</b><br>Overall length: 65 mm              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



STOPPER SCREW  
Type 1 in



STOPPER SCREW  
Type 1 covered



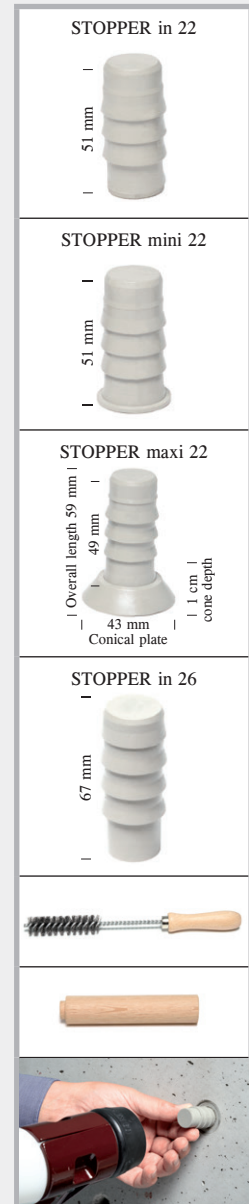
# STOPPER

Inner seals for plastic and fibre cement distance tubes

## STOPPER



| Art. no. | Description   | PU                    | Weight                 |
|----------|---|-----------------------|------------------------|
| 046140   | <b>STOPPER in 22</b><br>for distance tubes<br>inner diameter 21.5-23 mm   | Bucket<br>of 250 pcs. | 6.00 kg<br>per bucket  |
| 046150   | <b>STOPPER mini 22</b><br>for distance tubes<br>inner diameter 21.5-23 mm | Bucket<br>of 250 pcs. | 6.00 kg<br>per bucket  |
| 046160   | <b>STOPPER maxi 22</b><br>for distance tubes<br>inner diameter 21.5-23 mm | Bucket<br>of 250 pcs. | 9.00 kg<br>per bucket  |
| 046163   | <b>STOPPER in 26</b><br>for distance tubes<br>Inner diameter 26 mm        | Bucket<br>of 250 pcs. | 10.50 kg<br>per bucket |
| 046170   | <b>Cleaning brush</b><br>for tube 21.5-26 mm                              | 1 pc.                 | 0.11 kg<br>per pc.     |
| 046180   | <b>Drive-in aid</b><br>for STOPPER 22 + 26 mm                             | 1 pc.                 | 0.10 kg<br>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<br>maxi 22<br>water column | STOPPER<br>mini 22<br>water column | STOPPER<br>in 22<br>water column | STOPPER<br>in 26<br>water column | Result when<br>sealed on<br>both sides |
|---|------------------------------------|------------------------------------|----------------------------------|----------------------------------|--|
| Plastic distance tube<br>inner diameter approx. 21.5-23 mm        | 50 m                               | 50 m                               | 30 m                             | –                                | No water<br>flow                       |
| Fibre cement distance tube<br>inner diameter approx. 22 mm, round | 40 m                               | 40 m                               | 20 m                             | –                                | No water<br>flow                       |
| Steel distance tube<br>inner diameter approx. 22.45 mm,<br>round  | 40 m                               | 40 m                               | 20 m                             | –                                | No water<br>flow                       |
| Steel distance tube<br>inner diameter approx. 23 mm, round        | 30 m                               | 30 m                               | 20 m                             | –                                | No water<br>flow                       |
| Plastic distance tube<br>Inner diameter 26 mm                     | –                                  | –                                  | –                                | 50 m                             | No water<br>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 | ■ Diluted acids + alkalis | ■ Oils    |
| (Please consult our team)      |                           |           |

## 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

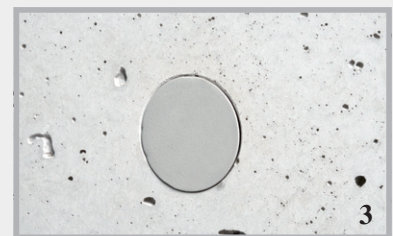
## STOPPER maxi



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             |
|----------|---|--------------------|--------------------|
| 047200   | <b>ActiveRing mini</b><br>for outer pipe diameters 25-32 mm<br>e.g. plastic distance tubes<br>22/26 26/31 26/32 | Bag<br>of 250 pcs. | 1.70 kg<br>per bag |
| 047250   | <b>ActiveRing maxi</b><br>for outer pipe diameters 38-42 mm<br>e.g. fibre cement distance tubes                 | Bag<br>of 250 pcs. | 2.40 kg<br>per bag |



## RONDO MINI



Technical details page 140

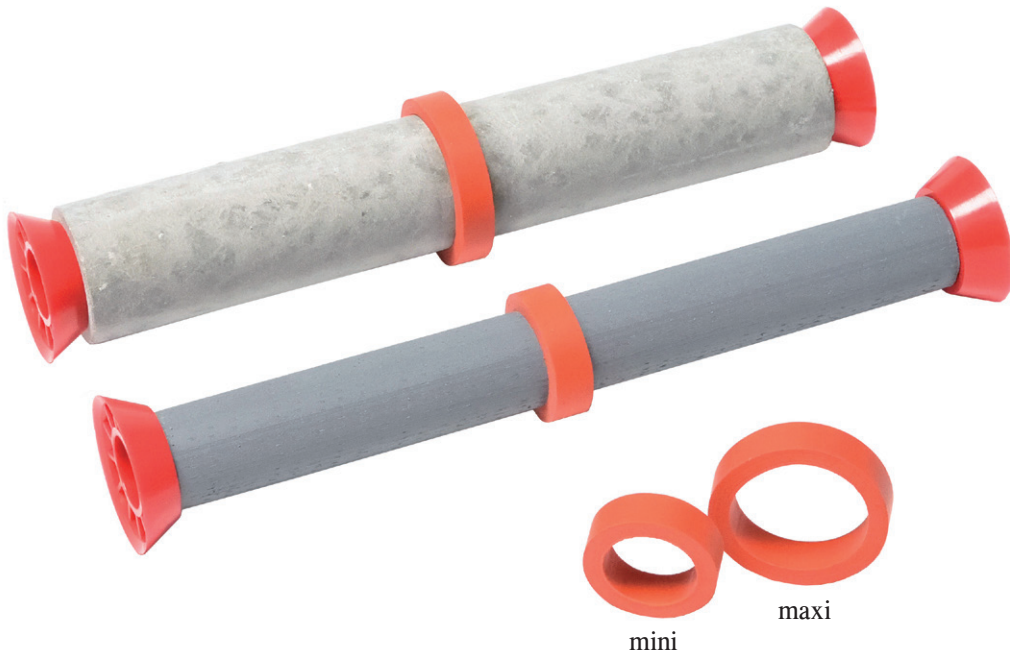
| Art. no. | Type   | Description  | PU  | Weight   |
|----------|--|--|---|----------|
| 090870   | <b>RONDO MINI 26</b><br>Suitable for outer dia. 25-27 mm | for plastic distance tubes 22/26 mm<br>Waterstop 2 cm<br>Bearing width 2.7 cm      | Bag<br>of 50 pcs.<br>incl. plastic fastening straps | 0.030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

 YouTube

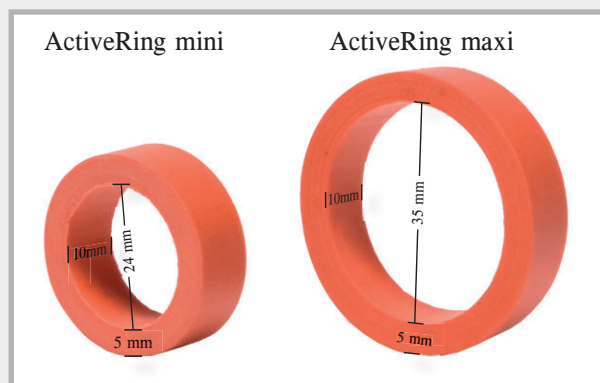


ActiveRing on plastic distance tubes

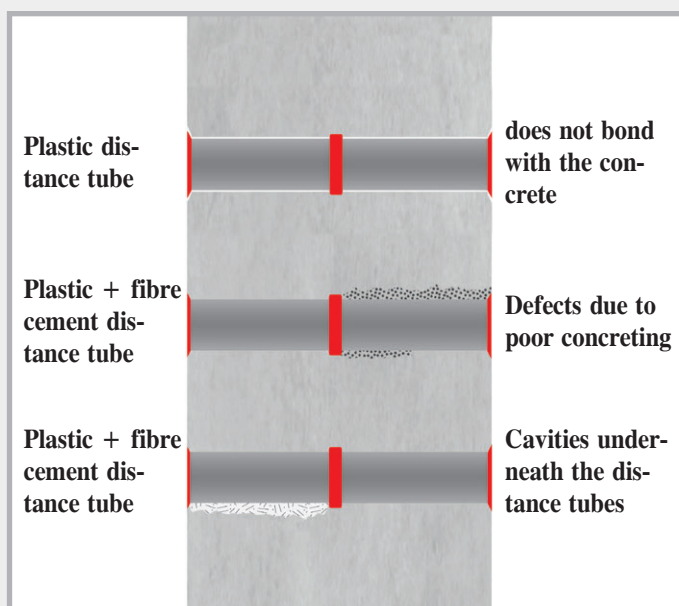


## Product description for ActiveRings

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

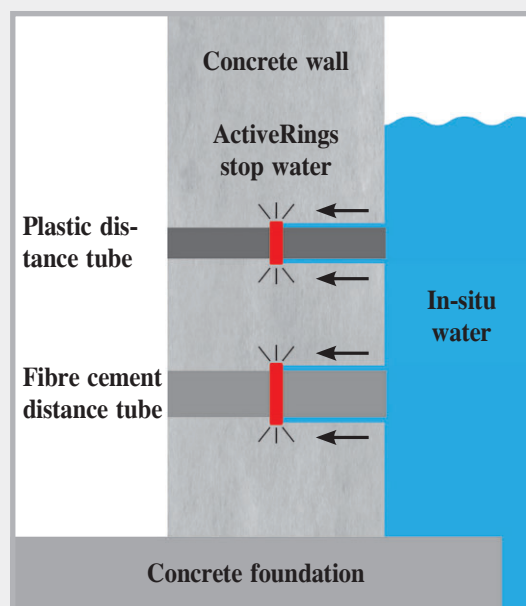


There are many causes which lead to leaking distance tubes. Plastic generally does not bond with concrete. The plastic breaks off and opens the way for water. The second main reason is poor concreting. Not only are plastic distance tubes affected, but also those made of fibre cement.

## 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.

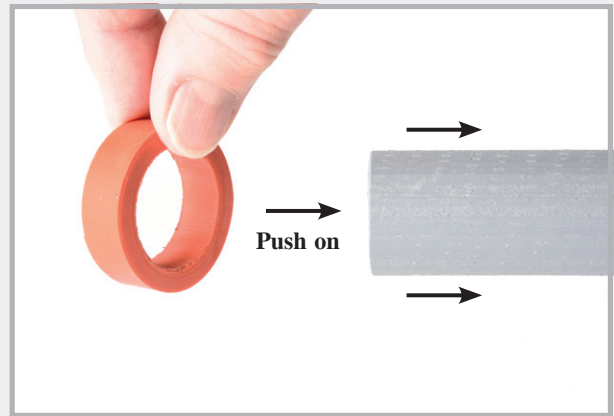
## Resistance

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

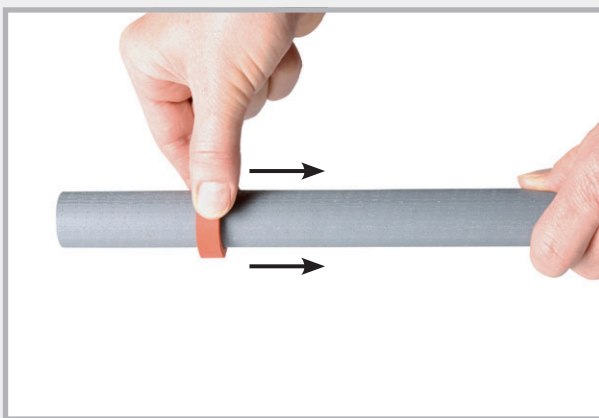
## Quick and secure installation



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



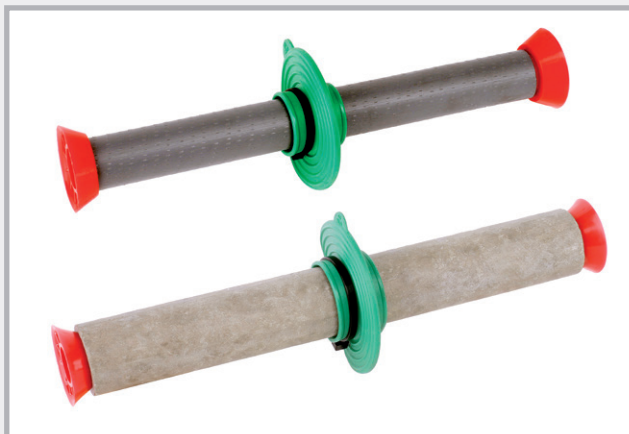
Concreting in the distance tube with ActiveRing.

# 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

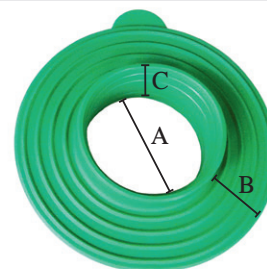
Installation: Temperature range  $-35^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$

Resistance:

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



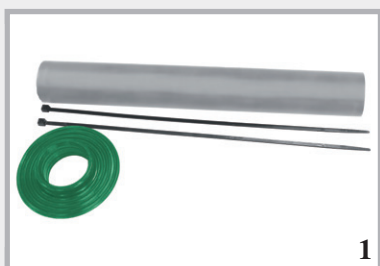
MINI 26



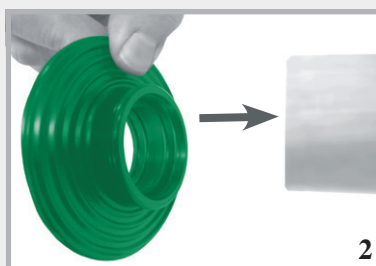
MINI 40

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

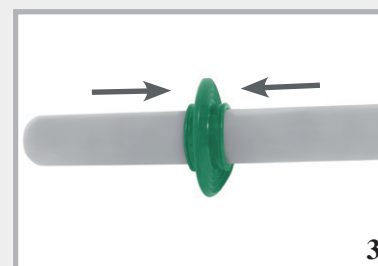
## Quick and easy installation



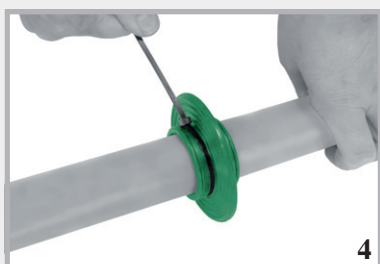
Fibre cement distance tube, RONDO MINI, 2 fastening straps



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      |
|---------------|------------|-------------|----------------------|--------|---------------------|------------------|
| <b>041115</b> | 11.5 cm    | 50 m        | 5.75 m <sup>2</sup>  | 1 roll | Pallet of 500 rolls | approx. 1.65 kg  |
| <b>041150</b> | 15.0 cm    | 50 m        | 7.50 m <sup>2</sup>  | 1 roll | Pallet of 400 rolls | approx. 2.10 kg  |
| <b>041175</b> | 17.5 cm    | 50 m        | 8.75 m <sup>2</sup>  | 1 roll | Pallet of 350 rolls | approx. 2.45 kg  |
| <b>041200</b> | 20.0 cm    | 50 m        | 10.00 m <sup>2</sup> | 1 roll | Pallet of 300 rolls | approx. 2.80 kg  |
| <b>041240</b> | 24.0 cm    | 50 m        | 12.00 m <sup>2</sup> | 1 roll | Pallet of 240 rolls | approx. 3.40 kg  |
| <b>041250</b> | 25.0 cm    | 50 m        | 12.50 m <sup>2</sup> | 1 roll | Pallet of 240 rolls | approx. 3.50 kg  |
| <b>041300</b> | 30.0 cm    | 50 m        | 15.00 m <sup>2</sup> | 1 roll | Pallet of 200 rolls | approx. 4.20 kg  |
| <b>041365</b> | 36.5 cm    | 50 m        | 18.25 m <sup>2</sup> | 1 roll | Pallet of 160 rolls | approx. 5.15 kg  |
| <b>041425</b> | 42.5 cm    | 50 m        | 21.25 m <sup>2</sup> | 1 roll | Pallet of 150 rolls | approx. 5.95 kg  |
| <b>041500</b> | 50.0 cm    | 50 m        | 25.00 m <sup>2</sup> | 1 roll | Pallet of 120 rolls | approx. 7.00 kg  |
| <b>041750</b> | 75.0 cm    | 50 m        | 37.50 m <sup>2</sup> | 1 roll | Pallet of 100 rolls | approx. 10.50 kg |
| <b>041000</b> | 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

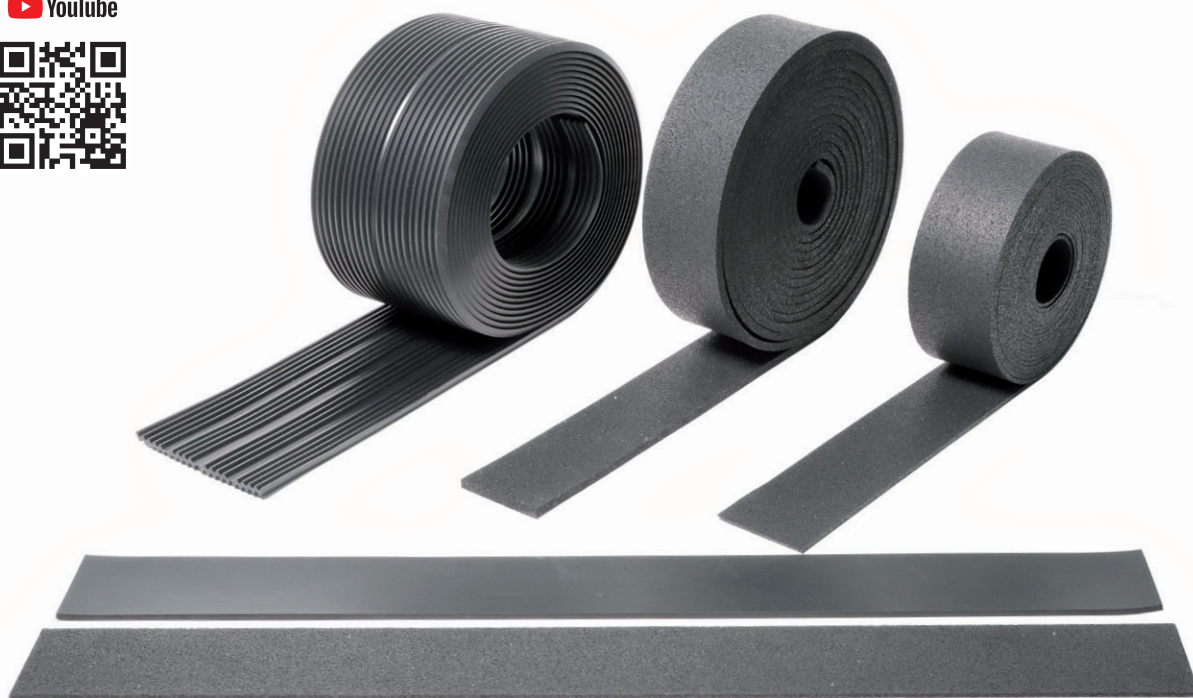
### Application

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

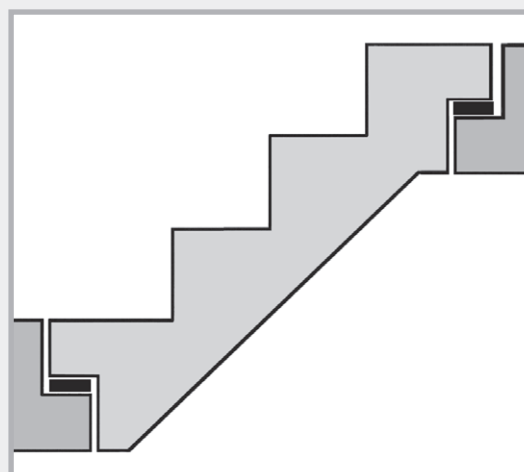


## Impact sound insulation T1

### Product description

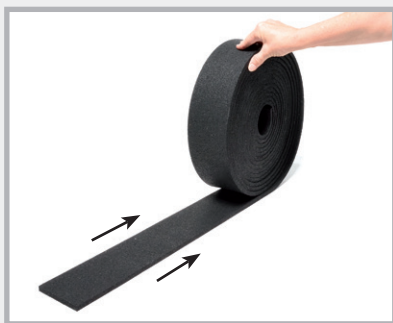


|                         |  |  |
|-------------------------|--|--|
| Material:               | The impact sound insulation T1 is made of fine mixed elastomer fibres bonded with PUR. |  |
| Application:            | As bearing for stairs and slabs  |  |
| Presentation:           | Rolls, strips and boards   |  |
| Testing:                | Load test  | for thickness 10 mm<br>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   |  |

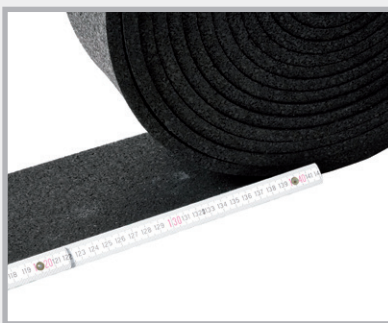


Impact sound insulation T1, e.g. for bearing of staircases

## 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><br>Size: 10000 x 100 x 5 mm   | 1 roll |                        | 4.40 kg<br>per roll           |
| <b>060230</b> | <b>Impact sound insulation roll T1</b><br>Size: 10000 x 100 x 10 mm      | 1 roll | 60 rolls<br>per pallet | 9.70 kg<br>per roll           |
| <b>060115</b> | <b>Impact sound insulation roll T1</b><br>Size: 10000 x 1250 x 10 mm   | 1 roll |                        | 8.60 kg<br>per m <sup>2</sup> |

### Strips

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

### Boards

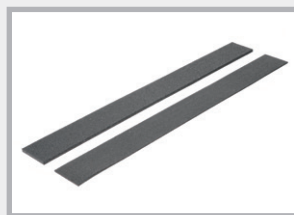
| Art. no.      | Description   | PU      | Weight                |
|---------------|---|---------|-----------------------|
| <b>060100</b> | <b>Sound insulation board T1</b><br>Size: 1000 x 1000 x 5 mm  | 1 board | 4.60 kg<br>per board  |
| <b>060110</b> | <b>Sound insulation board T1</b><br>Size: 1000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

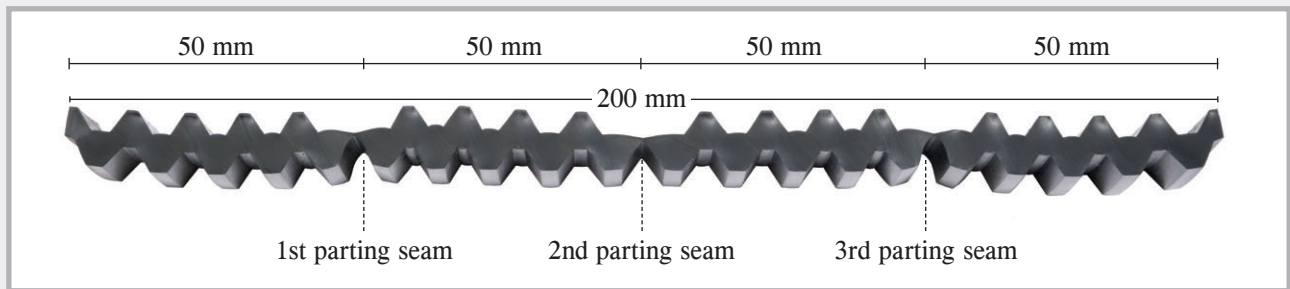


## Product description

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

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

YouTube



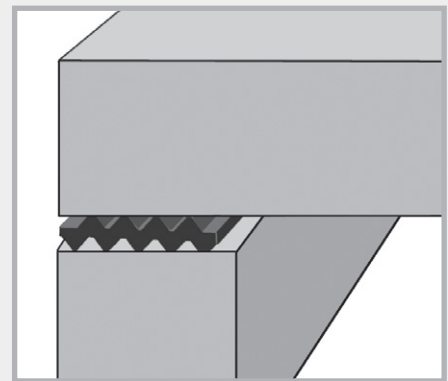
**Presentation:** Rolls

**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              |
|---------------|--|--------|---------------------|
| <b>060010</b> | <b>Corrugated bearing 10 mm</b><br>Size: 10000 x 200 x 10 mm<br>with 3 parting seams | 1 roll | 16.0 kg<br>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.



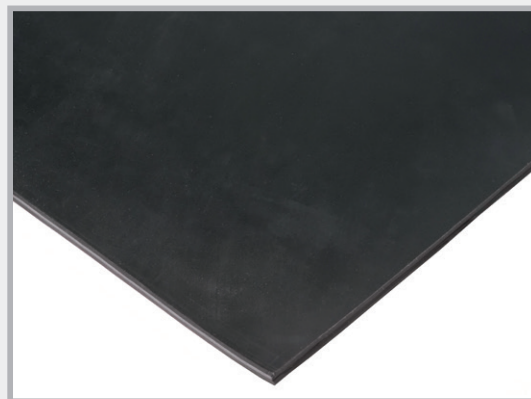
Over a width of 20 cm the corrugated bearing has 3 parting seams. This enables bearing widths of 5, 10, 15 and 20 cm.



# Construction bearing R1

## Product description

|                         |  |
|-------------------------|--|
| Material:               | NR-SBR copolymer   |
| Application:            | Separation of 2 components<br>Bearing of stairs<br>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<br>Size: 1000 x 100 x 5 mm  | 1 strip | 0.75 kg<br>per strip |
| 060330   | Construction bearing strip R1<br>Size: 1000 x 100 x 10 mm | 1 strip | 1.60 kg<br>per strip |

### Boards

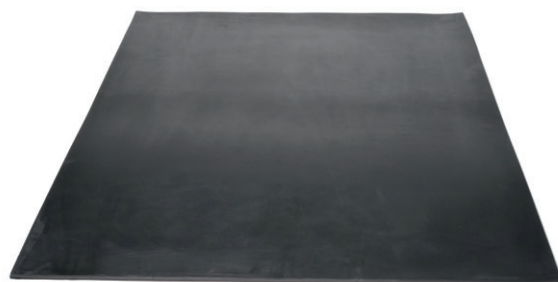
| Art. no. | Description  | PU      | Weight                |
|----------|--|---------|-----------------------|
| 060310   | Construction bearing board R1<br>Size: 1200 x 1000 x 5 mm  | 1 board | 9.50 kg<br>per board  |
| 060300   | Construction bearing board R1<br>Size: 1200 x 1000 x 10 mm | 1 board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

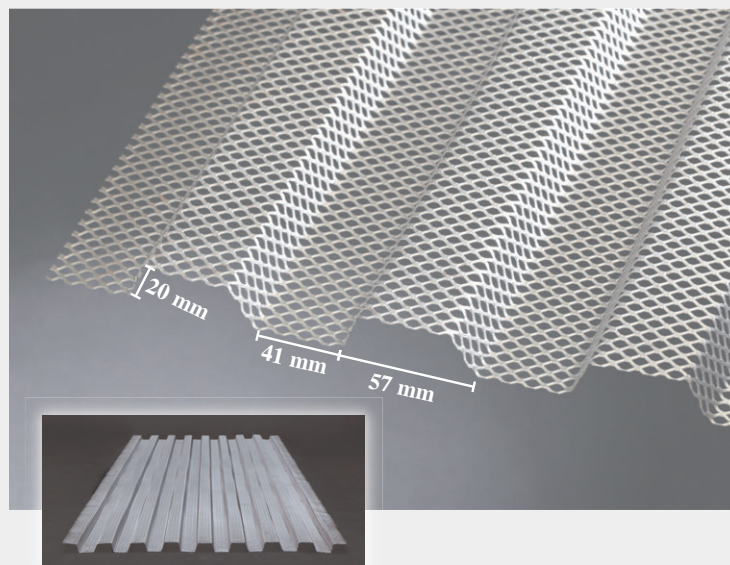
### LinkFix stopend panel

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><br><b>Thickness 0.75 mm</b><br>Size: 240 x 80 cm | Pallet<br>of 100 pcs.<br>= 192 m <sup>2</sup> | 530 kg/pallet<br>m <sup>2</sup> approx. 2.6 kg |

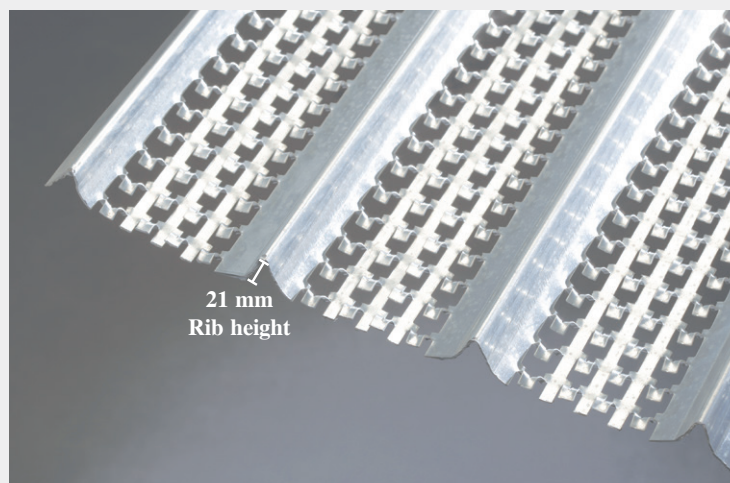
### Rib lath formwork, high-ribbed

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><br><b>Thickness 0.3 mm</b> , galvanised<br>Size: 200 x 45 cm, rib height 21 mm<br>Identification colour: green | Pallet<br>of 200 pcs.<br>= 180 m <sup>2</sup> | 3 pallets           | 480 kg<br>per pallet<br>m <sup>2</sup> approx. 2.7 kg |
| 020010   | <b>High-ribbed</b><br><b>Thickness 0.4 mm</b> , galvanised<br>Size: 200 x 45 cm, rib height 21 mm<br>Identification colour: blue  | Pallet<br>of 100 pcs.<br>= 90 m <sup>2</sup>  | 5 pallets           | 306 kg<br>per pallet<br>m <sup>2</sup> approx. 3.4 kg |
| 020020   | <b>High-ribbed</b><br><b>Thickness 0.5 mm</b> , galvanised<br>Size: 200 x 45 cm, rib height 21 mm<br>Identification colour: red   | Pallet<br>of 100 pcs.<br>= 90 m <sup>2</sup>  | 4 pallets           | 360 kg<br>per pallet<br>m <sup>2</sup> approx. 4 kg   |

## Rib lath formwork, medium-ribbed

Lost formwork for construction joints.

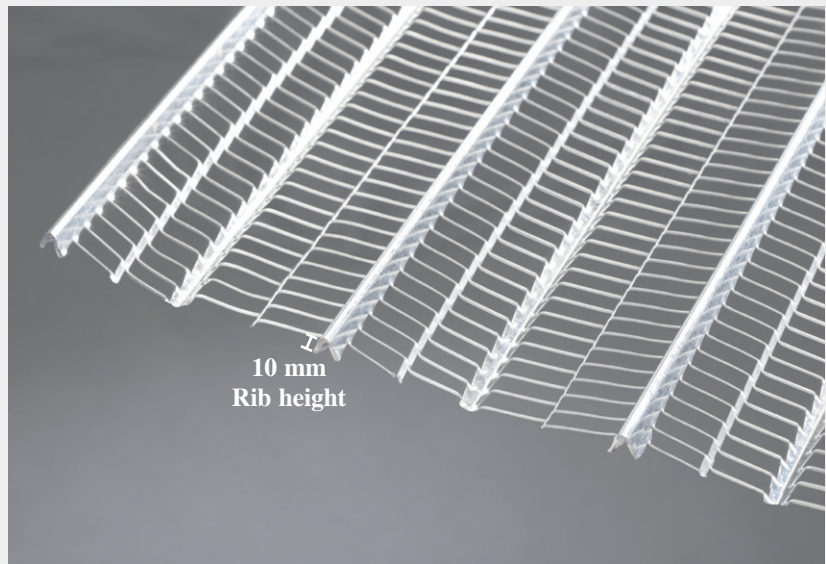


- Effective bond between concrete segments
- Good malleability

Material: Galvanised

Rib height: 10 mm

Sheet size: Length 250 cm  
Width 60 cm



10 mm  
Rib height

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

## Rib lath formwork, flat-ribbed



Lost formwork

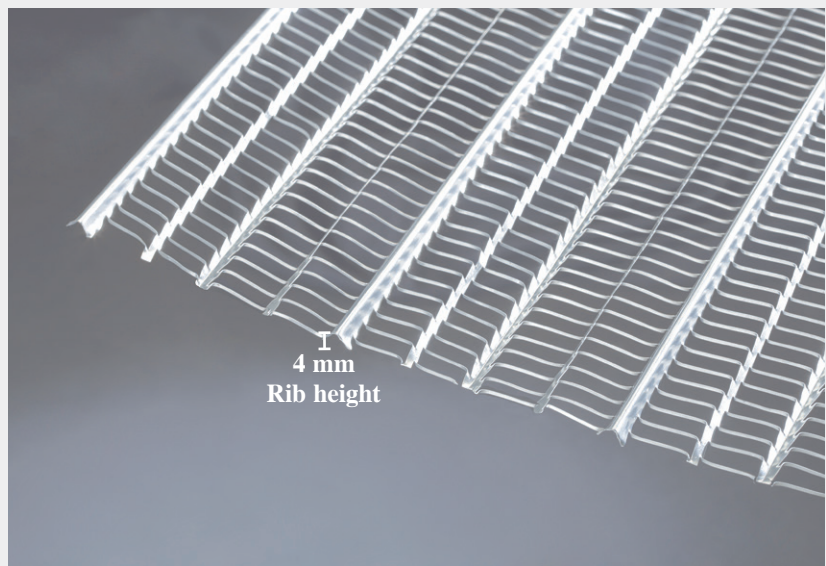
- Effective bond between concrete segments
- Highly malleable

Material: Galvanised

Rib height: 4 mm

Thickness: 0.25 mm

Sheet size: Length 250 cm  
Width 60 cm



4 mm  
Rib height

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





## Notes

## Notes





