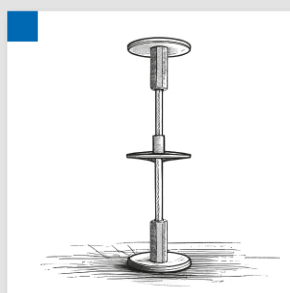
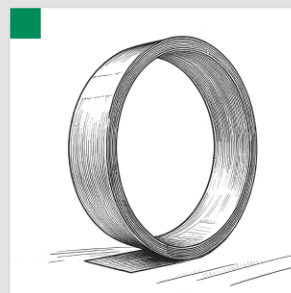
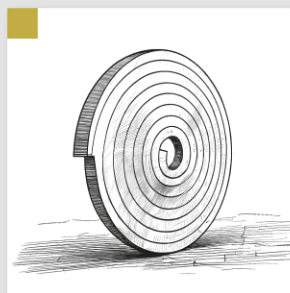




# PRODUCT RANGE 2025/2026



**MASTERTEC**  
SPECIAL ARTICLES FOR REINFORCED CONCRETE CONSTRUCTION



# MASTERTEC

SPECIAL ARTICLES FOR REINFORCED CONCRETE CONSTRUCTION

## MASTERTEC – Quality and Innovation for Reinforced Concrete Construction

For over 25 years, MASTERTEC has been providing smart solutions for reinforced concrete construction. Waterproofing of buildings, lightning protection, and formwork accessories are our specialties. Our current product range includes the latest developments – marked with this **NEW!** symbol – as well as proven solutions.

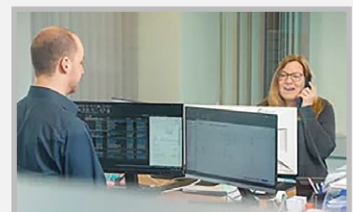
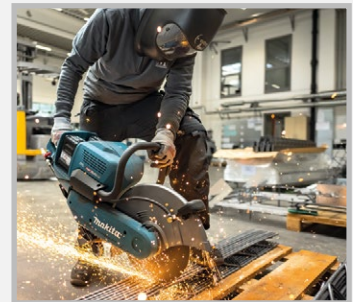
Our products are developed and manufactured locally in Germany. Additionally, we conduct extensive testing in renowned testing facilities. This ensures that all the products you find in our catalogue deliver on our promise: maximum safety with outstanding quality!

Moreover, something particularly important to us as a family-owned company is communication on equal footing with our customers, distributors, and business partners. Even as we use the latest technologies to enhance our offerings, human interaction will always remain a priority for us.

The MASTERTEC team now consists of 55 employees who dedicate themselves to our goals, and our products are used in construction projects across the globe. To our dealers, distribution partners, and friends who have supported and continue to support us on this journey, we extend our heartfelt thanks as the MASTERTEC team.

We wish you much success with our new product range and look forward to continued collaboration!

Jakob and Felix Kropfelder  
Managing Directors



### You can contact us

Monday – Thursday  
7:15 am – 12:00 pm  
12:45 – 4:30 pm

Friday  
7:15 am – 12:00 pm  
12:45 – 3:00 pm



# Over 25 years of Mastertec

**Founding year:** 1998

**Employees:** 55

**Storage and logistics:** Approx. 8000 m<sup>2</sup> of storage and production area, 6000 pallet slots

**Target markets:** Europe and growing export to non-European countries

**In-house:** Development and construction, production and assembly, quality assurance, training



**1998**

Introduction of **MASTERTUBE** injection hose

**1999**

Development and production start of **MASTERSTOP** bentonite swelling tapes

**2001**

**MASTER joint sheet metal:**  
First coated joint sheet metal with fixing angle

**2002**

**MASTERSTOP SK:**  
Self-adhesive bentonite swelling tape

**2004**

First attendance at the **bauma** trade fair in Munich  
Development of **WELLO** active lining pipe,  
Introduction of **FASO** lining pipe,  
**VB** joint sheet metal, **RONDO** sealing collar and **KG** sewage pipe bushing type double socket (DM)

**2007**

**VB** joint sheet metal roll,  
Launch of **lightning protection**

**2012**

**MASTERSTOP** LONG TIME

**2013**

**RONDO** MINI

**2014**

High-pressure swelling tape **FLOWSTOP**

**2016**

**STOPPER** and **ActiveRings**

**2017**

First attendance at the **BAU** trade fair in Munich

**2018**

Development and production of **stopend panels**

**2019**

**LinkForm** and **LinkFix**,  
**RONDO** Protect sealing collar

**2020**

Development of **STOPPER SCREW**

**2022**

**Stopend panels** in all common versions,  
**ABS formwork comb**,  
**Waterproofing technologies** for agricultural buildings,  
**UniCut** lining pipe,  
**MASTERTEC** Connector connection seal,  
**Pipe bushing Novo**, type double socket (DM)

**2023**

**STOPPER SCREW** patent and **25 years of MASTERTEC**

**2024**

Expansion of steel processing and new formwork **stopend panels**

**2025**

Robot-assisted technology for production

## Follow us on social media

### Instagram



[www.instagram.com/mastertec.eu](https://www.instagram.com/mastertec.eu)

### YouTube



[www.youtube.com/@masterteceu](https://www.youtube.com/@masterteceu)

### Facebook



[www.instagram.com/mastertec.eu](https://www.instagram.com/mastertec.eu)

### LinkedIn



[www.youtube.com/@masterteceu](https://www.youtube.com/@masterteceu)

## Service platforms

AUSSCHREIBEN.DE

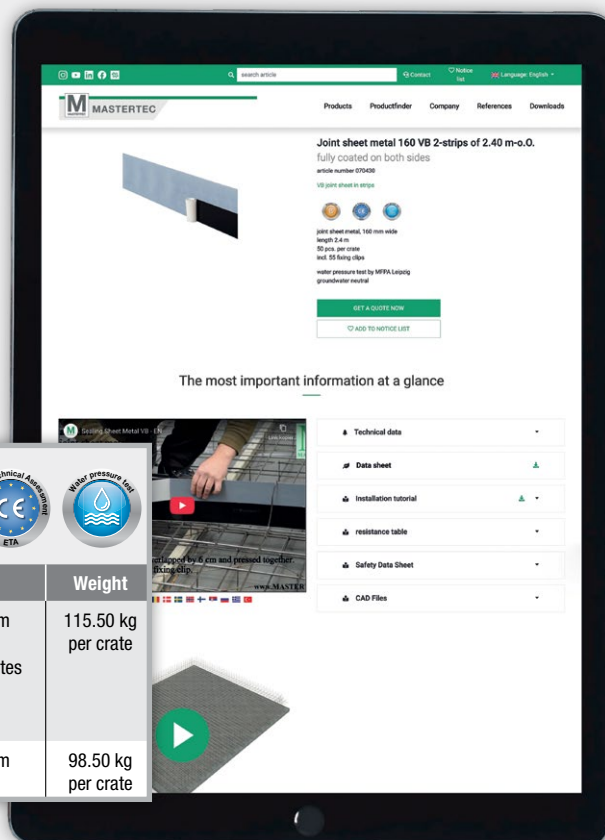


Building  
Material  
Scout

MASTERTEC can also be found on the leading service platforms of the construction sector. This is where you will find the right answers if you are preparing invitations to tender, researching product information or if you would like information on the sustainability of our range.

## Interactive price list

The PDF version of our price list features an interactive design. You can click on an article number to directly call up detailed product information for the selected product on our website. This is where you will find comprehensive technical data, product information, installation instructions, product videos and .dwg files.



### VB joint sheet metal (Height 160 mm)

Strips and rolls [Technical details pages 74 – 75](#)

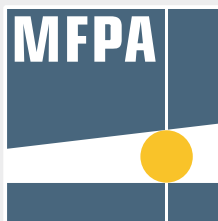


Art. no.	Description	PU	Weight
070430	<b>Joint sheet metal 160 VB2 in crate</b> <b>Length 2.4 m, height 160 mm,</b> 1 crate = 120 m (50 strips of 2.4 m each), <b>fully coated on both sides,</b> incl. 55 fixing clips	1 crate = 120 m 1 pallet = 12 crates	115.50 kg per crate
070432	<b>Joint sheet metal 160 VB2 in crate</b> <b>Length 2,0 m, height 160 mm,</b>	1 crate = 100 m	98.50 kg per crate

INTERACTIVE

## Product safety

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



### IAF - Radioökologie GmbH

Labor für Radionuklidanalytik  
Radiologische Gutachten  
Consulting



DBI - Gastechnologisches  
Institut gGmbH Freiberg



## We are a member



From involvement in the compilation of standards for the construction of lightning protection systems, to conducting seminars and workshops and systematic public education, the association makes a major contribution to personal safety and the protection of objects of material value. This service is provided thanks to the voluntary activity of its members.



The technical and academic association of the German construction industry is dedicated to the primary issues of construction technology and its further development within German and European networks. It promotes academia and research with construction consultations, events, publications and committee work.



The FHRK association aims to raise and increase interest in the proper sealing of house entries for supply and disposal lines. Additionally, it seeks to develop technically sound, sustainable, and efficient solutions in collaboration with utility companies and other users.



# MASTERTEC PRODUCT RANGE

PRODUCT GROUP

## Hydrophilic waterstop **1**

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

pages 9 – 24

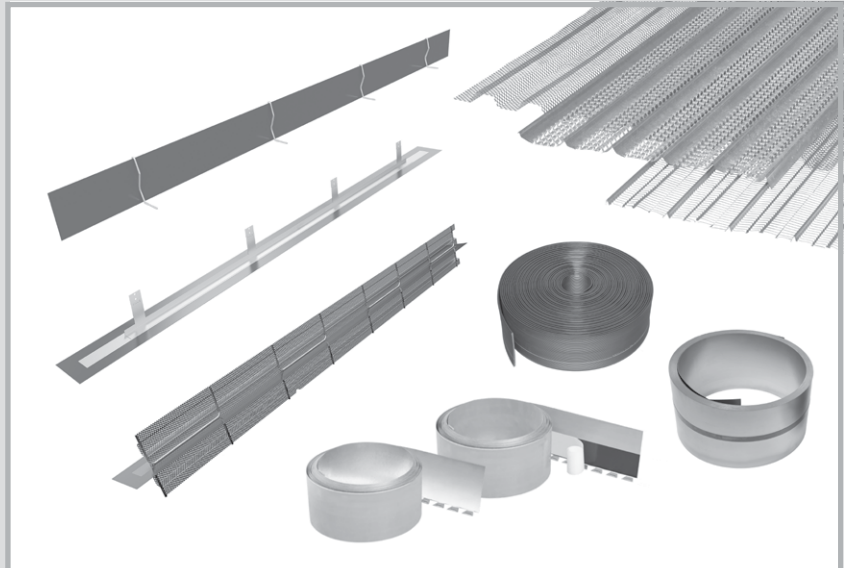


PRODUCT GROUP

## Joint sheet metals **2**

- Coated joint sheet metals
- Crack-inducing profiles
- Uncoated joint sheet metals
- Joint tapes
- Connectors
- Rib laths
- Formwork systems+ accessories

pages 25 – 98



PRODUCT GROUP

## Injection hoses **3** Construction chemistry

- Injection hoses
- Accessories for injection hoses
- Injection packers
- Injection resins
- Concrete adhesives
- Concrete release agents

pages 99 – 108



# MASTERTEC PRODUCT RANGE

## PRODUCT GROUP

### Pressure water-tight service ducts

4

- Formwork aids
- Service duct system
- Lining pipes
- Gasket inserts
- Sealing compound
- Sealing collars
- Pipe bushings
- Ground drains

pages 109 – 152



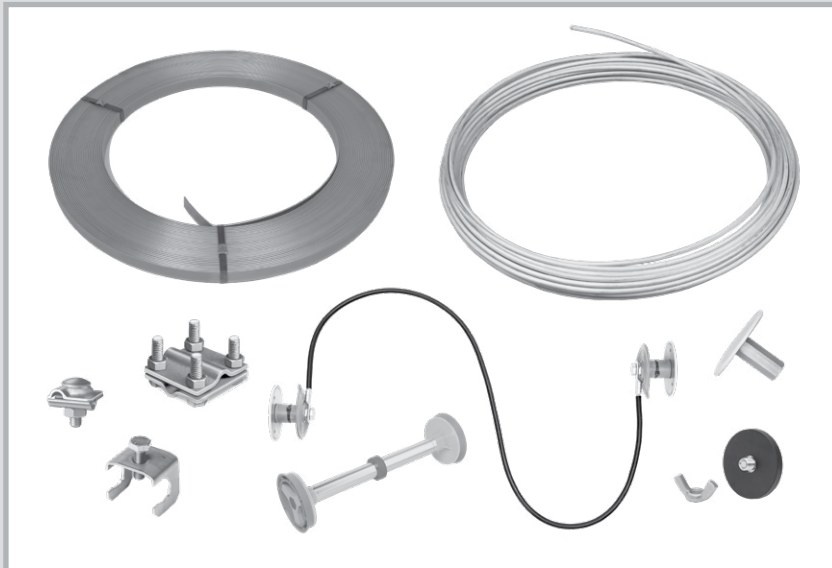
## PRODUCT GROUP

### Lightning protection

5

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

pages 153 – 174



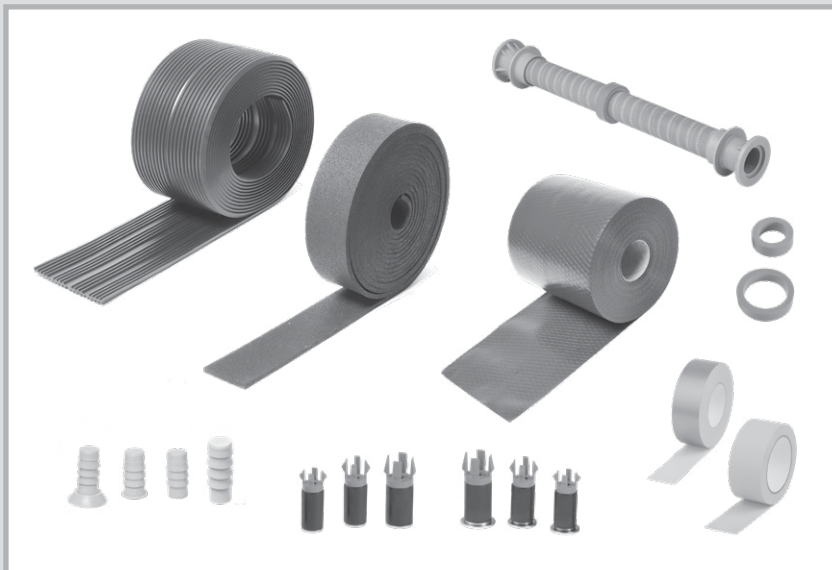
## PRODUCT GROUP

### Formwork accessories

6

- Sealing plugs
- Sealing of formwork tie points
- Corrugated bearings
- Impact sound insulation/ bearings
- Adhesive tapes
- Damp proof courses

pages 175 – 191



# Our pictograms

In many places in this catalogue, you will find various pictograms. This is a brief overview of their meanings:



Test of impermeability to pressurised water



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



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



Test of maximum static load



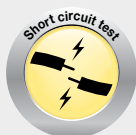
Test of resistance to various media



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



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



Test short-circuit current carrying capacity



National technical approval for storage and filling facilities of slurry/liquid manure/silage effluent and biogas facilities



Compliance with the European requirements for construction technology



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



Compliance with a European harmonised standard

## Technology

For products which feature this pictogram, you will find further technical information on the specified page.

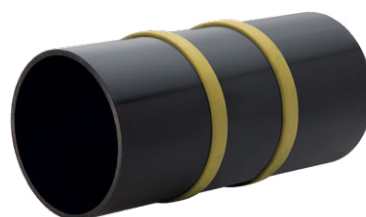
**You will find additional information, such as technical data sheets, installation videos, installation instructions and dwg files on our website at [www.mastertec.eu](http://www.mastertec.eu)**



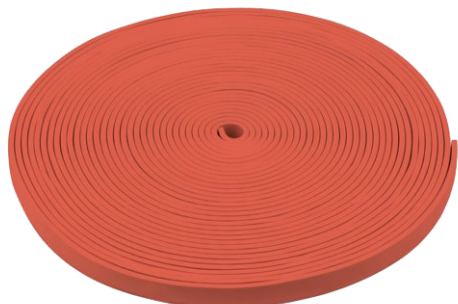
# HYDROPHILIC WATERSTOPS



**MASTERSTOP**  
Bentonite swelling tape  
page 10



**MASTERSTOP SK**  
Self-adhesive  
bentonite swelling tape  
page 11



**FLOWSTOP**  
High-pressure swelling tape  
page 11



**Accessories for swelling tapes**  
pages 12 – 13

1

HYDROPHILIC  
WATERSTOPS

2

JOINT SHEET METALS

3

INJECTION HOSES  
CONSTRUCTION CHEMISTRY

4

SERVICE DUCTS

5

LIGHTNING  
PROTECTION

6

FORMWORK  
ACCESSORIES

# SWELLING TAPES

## MASTERSTOP bentonite swelling tapes

for the waterproofing of construction joints Technical details pages 14 – 17



Art. no.	Description	PU	Secondary packaging	Weight per carton
010011	<b>MASTERSTOP bentonite swelling tape</b> Size: 25 x 20 mm, colour: black, Carton 30 m (6 rolls of 5 m each), Pressure-tight up to 80 m water column on rough and smooth surfaces (For technical details see page 14) <div>Art.Gr. 100</div>	1 carton	1 pallet = 36 cartons	22.65 kg
010012	<b>MASTERSTOP LONG TIME</b> Bentonite swelling tape with protective film, Size: 25 x 20 mm, colour: black, Carton 30 m (6 rolls of 5 m each), Pressure-tight up to 50 m water column <div>Art.Gr. 100</div>	1 carton	1 pallet = 36 cartons	23.20 kg
010020	<b>MASTERSTOP bentonite swelling tape</b> Size: 20 x 15 mm, colour: green, Carton 30 m (6 rolls of 5 m each), Pressure-tight up to 20 m water column <div>Art.Gr. 110</div>	1 carton	1 pallet = 36 cartons	13.95 kg



## MASTERSTOP bentonite swelling tapes

for subordinate waterproofing

Art.Gr. 110

Art. no.	Description	PU	Secondary packaging	Weight per carton
010017	<b>MASTERSTOP bentonite swelling tape</b> Size: 20 x 10 mm, colour: black, Carton 54 m (9 rolls of 6 m each)	1 carton	1 pallet = 36 cartons	16.90 kg



# MASTERSTOP SK



Self-adhesive bentonite swelling tape

Technical details page 18

Art.Gr.  
101

Art. no.	Description	PU	Secondary packaging	Weight per carton
010025	<b>MASTERSTOP SK</b> Size: 20 x 5 mm, self-adhesive, Carton 90 m (5 rolls of 18 m each), Pressure-tight up to 50 m water column	1 carton	1 pallet = 36 cartons	14.95 kg



# FLOWSTOP



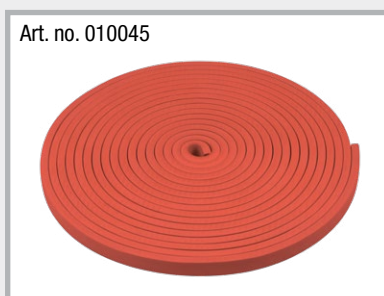
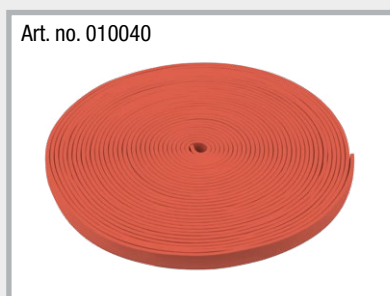
High-pressure TPE swelling tapes

for waterproofing of construction joints

Technical details pages 19 – 21

Art.Gr.  
102

Art. no.	Description	PU	Secondary packaging	Weight per carton
010040	<b>FLOWSTOP</b> Size: 20 x 5 mm, Carton 120 m (6 rolls of 20 m each), Pressure-tight up to 80 m water column	1 carton	1 pallet = 36 cartons	19.60 kg
010045	<b>FLOWSTOP</b> Size: 20 x 10 mm, Carton 60 m (6 rolls of 10 m each), Pressure-tight up to 80 m water column	1 carton	1 pallet = 36 cartons	17.80 kg



FLOWSTOP is fixed using POWER swelling tape adhesive.


Suitable installation accessories such as swelling tape adhesive and grids can be found on pages 12/13.



Adhesives and swelling paste

Technical details pages 22 – 24

Art.Gr.  
103

Art. no.	Description	PU	Secondary packaging	Weight per carton
010050	<b>Swelling tape adhesive for bentonite swelling tape</b> Cartridge 310 ml Usage: 1 cartridge = approx. 7 m suitable for damp substructures	1 pc.	1 carton = 20 cartridges	11.00 kg
010052	<b>POWER swelling tape adhesive</b> High-pressure adhesive for fixing MASTERSTOP and FLOWSTOP swelling tapes or for fixing the foil flange, Cartridge 310 ml, Usage: 1 cartridge = approx. 7 m, suitable for damp substructures	1 pc.	1 carton = 20 cartridges	9.80 kg
010030	<b>MasterMastic PU swelling paste</b>  Polyurethane-based swelling paste, for waterproofing construction joints (20 m water column) and penetrations (40 m water column) or for fixing swelling tapes, Cartridge: 310 ml, Usage: Construction joint approx. 300-350 ml/m Usage: Penetration approx. 80-100 ml/m Usage: Fixing swelling tape approx. 45-50 ml/m	1 pc.	1 carton = 12 cartridges	5.65 kg

Art. no. 010050



Art. no. 010052



The **POWER** swelling tape adhesive can do more in construction:

- Very good adhesion to many substrates
- Bonding of stone, natural stone and ceramics
- Bonding and mounting of all kinds of different materials, such as wood, wood materials, plastics and metals
- Extremely water-resistant – for bonds with high water load
- Paintable
- Free from silicone and isocyanate

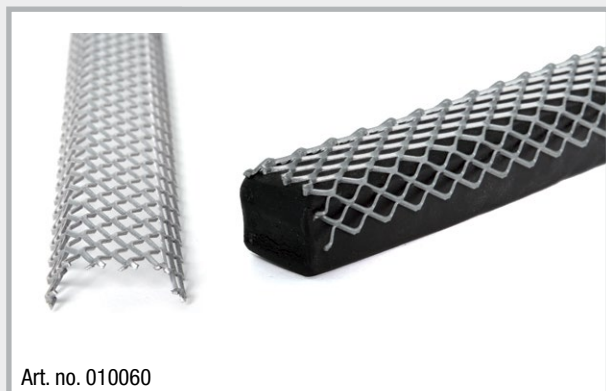
Art. no. 010030



## Fastening grids

Art.Gr.  
**105**

Art. no.	Description	PU	Secondary packaging	Weight per carton
<b>010060</b>	<b>Universal swelling tape grid for bentonite swelling tapes 25 x 20 mm and 20 x 15 mm,</b> Carton 30 m (30 grids of 1 m each)	1 carton	1 pallet = 250 cartons	2.40 kg
<b>010065</b>	<b>Swelling tape grid for MASTERSTOP LONG TIME 25 x 20 mm,</b> Carton 30 m (30 grids of 1 m each)	1 carton	1 pallet = 99 cartons	5.50 kg



## Fastening nails

Art.Gr.  
**106**

Art. no.	Description	PU	Weight
<b>010080</b>	<b>Nails for bolt-firing tool</b> Length: 42 mm with big washer	1 bag of 100 pcs.	1.10 kg per bag
<b>010090</b>	<b>Nails for manual fastening</b> Length: 40 mm with washer	1 carton of 250 pcs.	0.95 kg per carton



Place the swelling tape grid over the MASTERSTOP bentonite swelling tape and fasten to the concrete with nails. Nailing can be performed manually or with a bolt-firing tool. The spacing between the nails must not exceed 20 cm.

# MASTERSTOP bentonite swelling tapes



- European Technical Assessment ETA
- General Building Supervisory Test Certificate (abP) for smooth and rough construction joints
- Standard test 50 m water column with swelling tape adhesive
- High pressure testing for smooth and rough construction joints with water column up to 80 m. In this case, POWER swelling tape adhesive or MasterMastic PU swelling paste must be used for fastening.
- Complies with the directive for water-impermeable structures. Wear classes 1 + 2: continuously or periodically pressurised water or soil moisture and utility class A + B

## 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.

## The convincing advantages of MASTERSTOP bentonite swelling tapes

- Produced with high-grade sodium bentonite
- Easy and safe installation
- No foundation curb
- Self-injecting effect: the swelling tape components 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

## Resistances of MASTERSTOP bentonite swelling tapes and MASTERSTOP SK

Medium	resistant	not resistant
Alkalies in general	✓	
Urea	✓	
Liquid manure/slurry	✓	
Biogas	✓	
Radon	✓	
De-icing salt	✓	
Substances obtained by means of composting	✓	
Petrol		✓
Diesel		✓
Heating oil		✓

Further resistances are available on request.

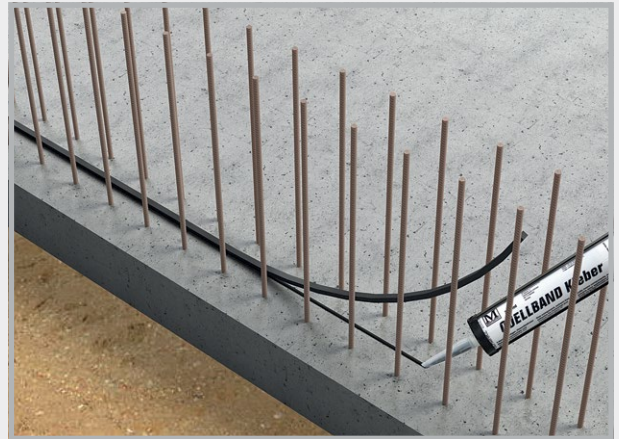


## Installation

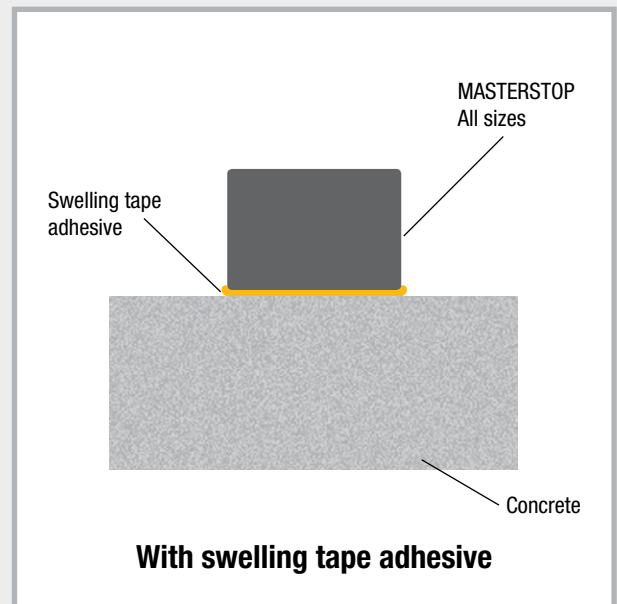
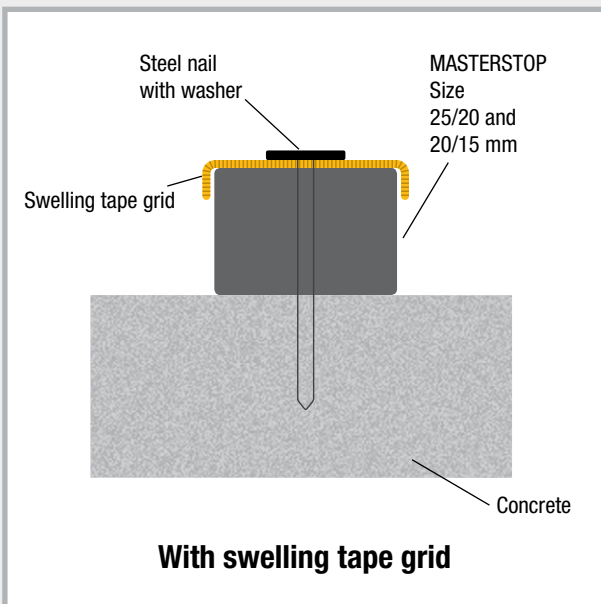
MASTERSTOP bentonite swelling tapes are fixed with a swelling tape grid, swelling tape adhesive or with MasterMastic PU swelling paste. They are laid inside the reinforcement with a concrete cover of at least 8 cm.



Installation with fastening grid and nails



Installation with swelling tape adhesive

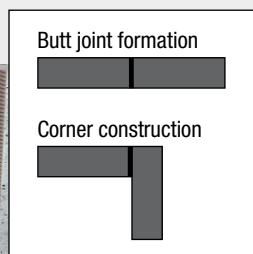


## Laying

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 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 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

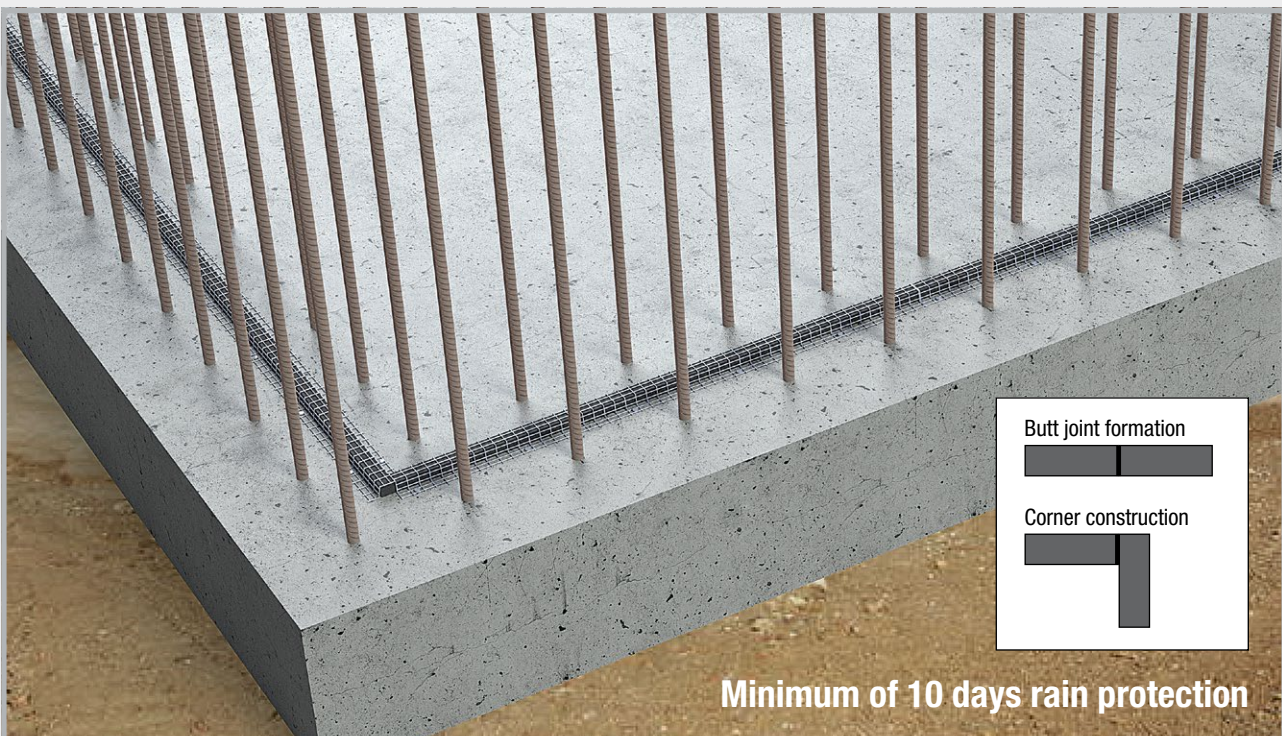
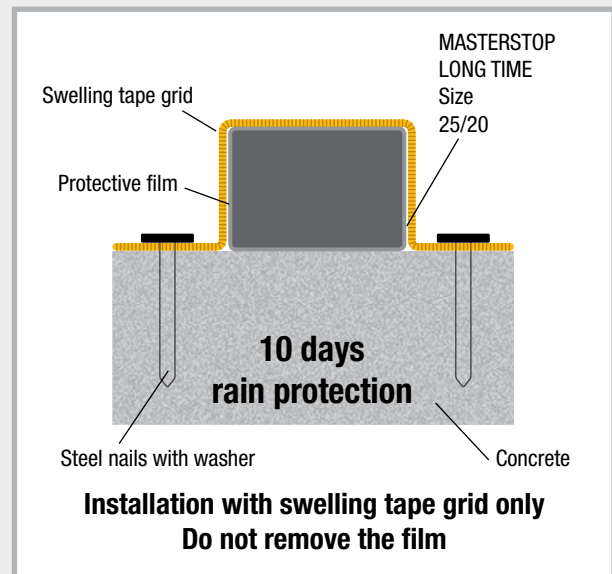
### The convincing advantages of MASTERSTOP LONG TIME

- All-weather installation
- No foundation curb
- Self-injecting effect: the swelling tape components 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

- 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 20 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



### Product description

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

### Testing

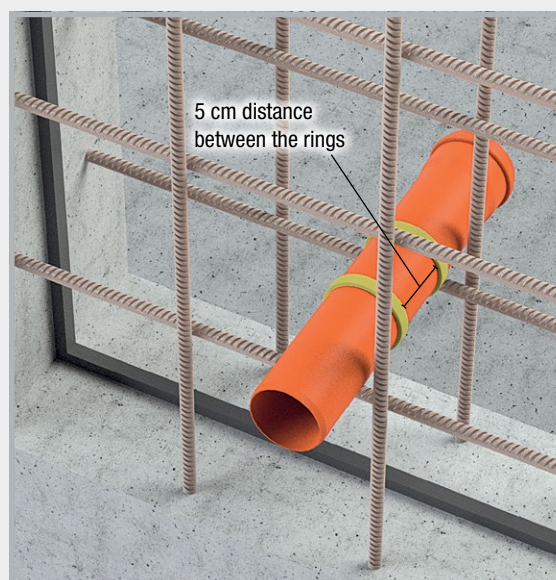
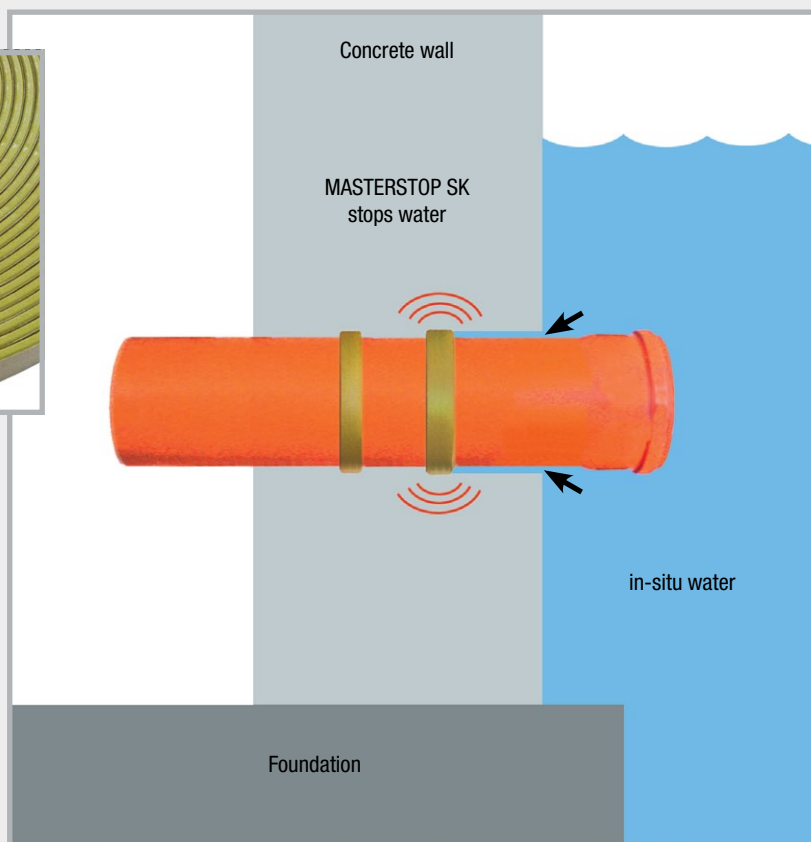
- Test report MFPA Leipzig, up to 50 m water column
- Environmentally friendly

### 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 pipe surface 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



### Product description

For waterproofing construction joints and penetrations in concrete structures. With a proven ability to withstand the pressure of an 80 m water column, FLOWSTOP 20 x 5 mm meets the requirements of the German directive on water-impermeable concrete structures (WU Directive) 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 80 m water column with size 20 x 5 mm
- Long-term testing for more than 250 days
- Easy installation with POWER swelling tape adhesive
- No foundation curb required
- Chemical basis: Modified TPE
- Temperature range: -30°C to +60°C
- Storage: Dry and protected

### Resistances of FLOWSTOP



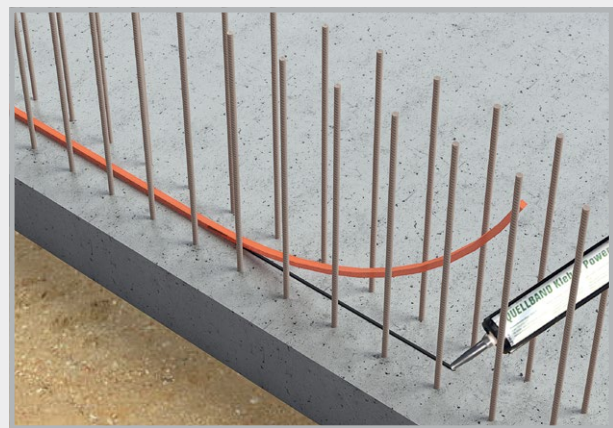
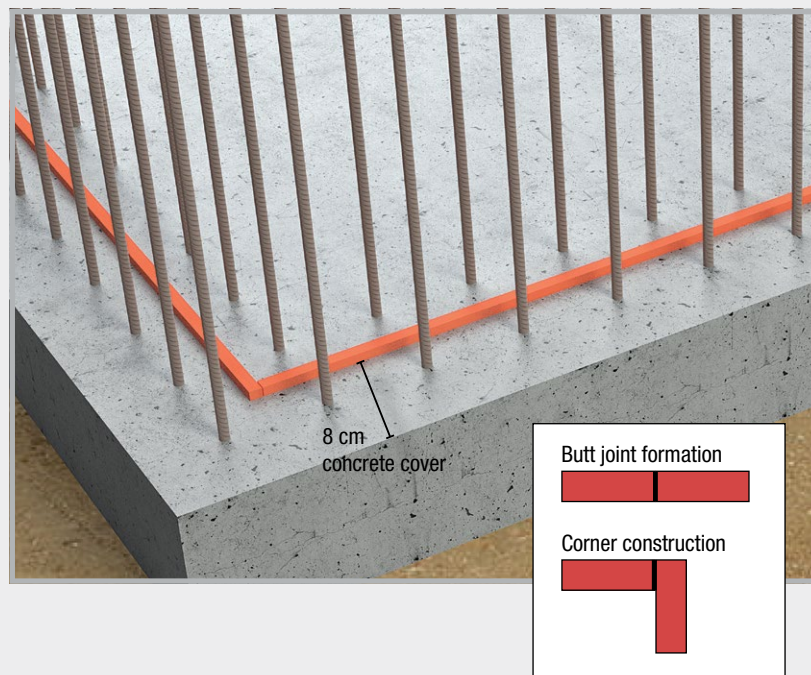
Further resistances are available on request.

Medium	resistant
Soapy water	✓
Sodium hydroxide solution	✓
Caustic potash solution	✓
Liquid manure/slurry	✓
Mineral oil 15W-40	✓
Motor oil 0W-40	✓
Hydraulic oil HVLP 46	✓
Salt water 3-4% NaCl	✓
Chlorinated water 0.95-1 mg/l	✓
Chlorinated water 10 mg/l (shock chlorination)	✓
Sodium carbonate	✓
Bitumen	✓



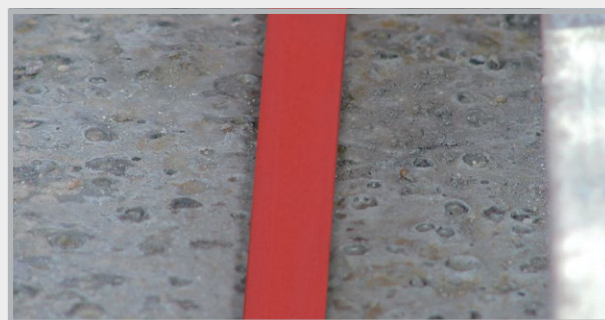
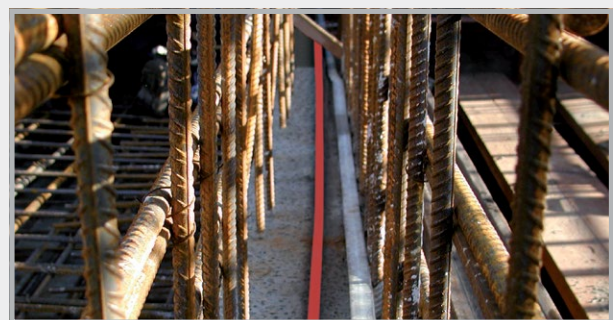
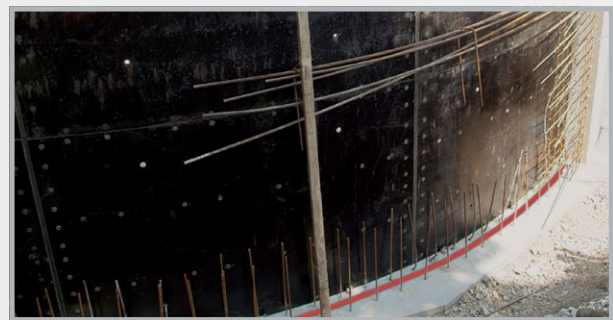
## Installation

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.



Spray on the POWER swelling tape adhesive and place the FLOWSTOP swelling tape on top of the adhesive.

## Waterproofing 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 aggressive to concrete with pH value 4.5	200%
Salt water	100%



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

## FLOWSTOP test procedure

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

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

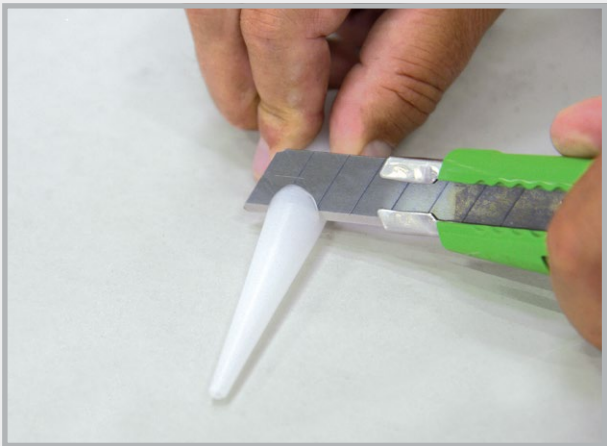


# Adhesives and swelling pastes

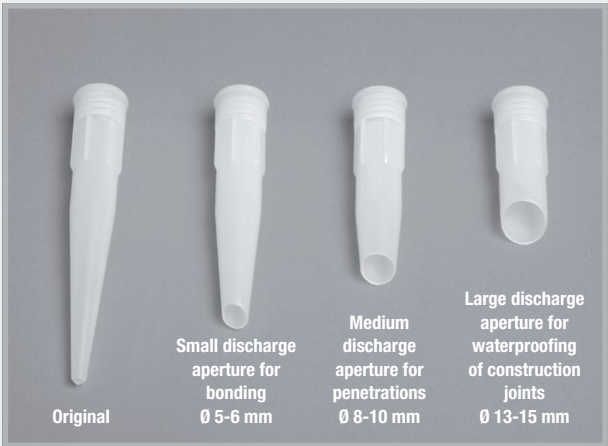
MASTERTEC produces adhesives for swelling tapes and swelling pastes for waterproofing various types and qualities of construction joints and wall penetrations.

## Preparatory work

### Cutting the cartridge tips



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

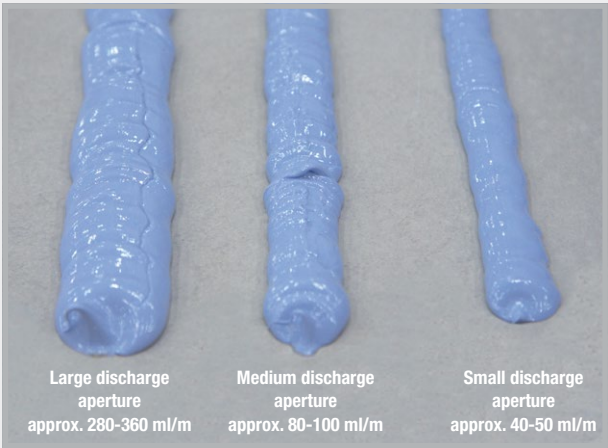


Cuts

## Application of the adhesive or pastes



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



## 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 after 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



Position the swelling tape

## POWER swelling tape adhesive

Single-component solvent-free sealant for bonding of MASTERSTOP and FLOWSTOP swelling tapes or for fixing the foil flange. The POWER version is a high-pressure adhesive.

Usage:	40-50 ml/m = approx. 7 m per cartridge
Application:	for dry and damp 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 after 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 swelling tapes

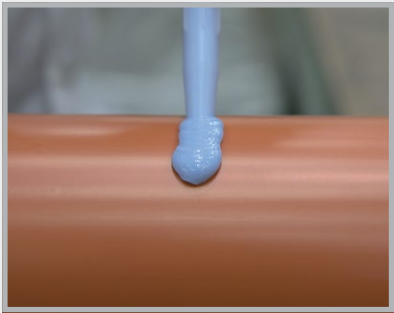
# MasterMastic PU swelling paste



Single-component, swellable polyurethane paste for sealing construction joints and penetrations in water-impermeable concrete structures or for fixing swelling tapes:



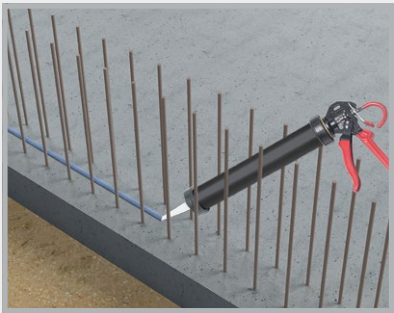
- For dry and damp substrates
- Solvent-free
- Application: +5°C to +45°C
- Physiologically harmless
- Setting speed:  
approx. 6 – 7 mm/24 hrs.



## Openings

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

- Application:      Circular Ø approx. 8-10 mm
- Usage:              approx. 80-100 ml/m
- Adheres to:        Concrete, steel, stone, hard PVC  
**Not suitable for polypropylene!**
- Installation:      Inside the reinforcement with at least 8 cm  
concrete cover  
**Protect against premature swelling from  
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. 300-350 ml/m\*
- Adheres to:        Dust-free, dry or matt damp concrete surfaces
- Installation:      Inside the reinforcement with at least 8 cm  
concrete cover  
**Protect against premature swelling from  
moisture and rain.**



## Fixing of swelling tape

- Application:      Bead Ø approx. 6-8 mm
- Usage:              approx. 45 – 50 ml/m\*
- Adheres to:        Dust-free, dry or matt damp concrete surfaces

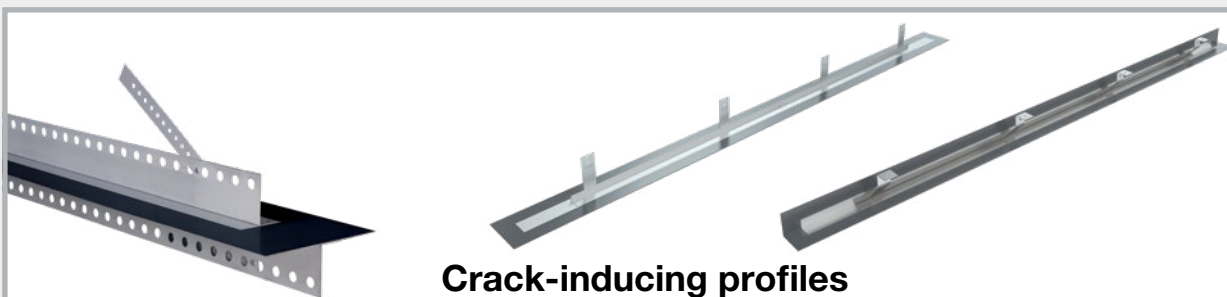
\* Depending on the concrete roughness

# JOINT SHEET METALS



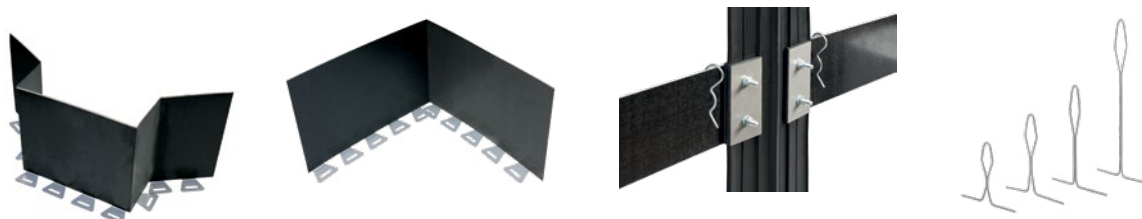
**Coated joint sheet metals**

pages 26 – 29



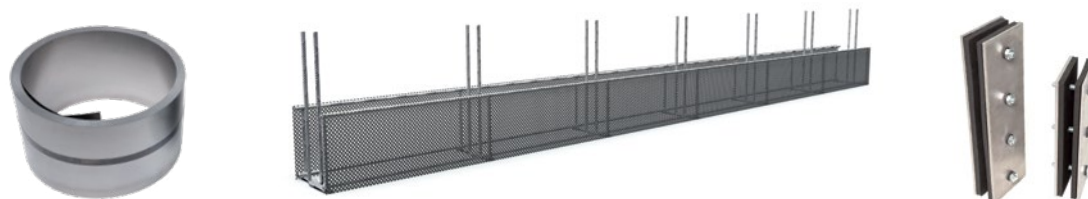
**Crack-inducing profiles**

pages 30 – 31



**Accessories for coated joint sheet metals**

pages 31 – 32



**Uncoated joint sheet metal & accessories/joint tape & accessories**

pages 33 – 35



**Rib laths, formwork systems & accessories**

pages 36 – 73

1

HYDROPHILIC  
WATERSTOPS

2

JOINT SHEET METALS

3

INJECTION HOSES  
CONSTRUCTION CHEMISTRY

4

SERVICE DUCTS

5

LIGHTNING  
PROTECTION

6

FORMWORK  
ACCESSORIES

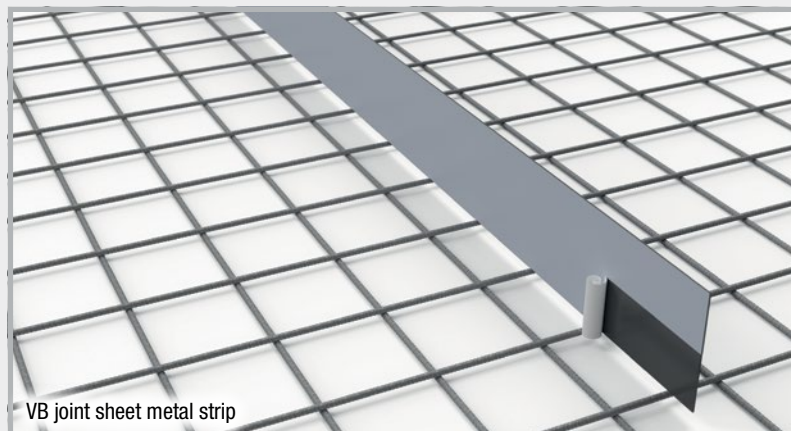


# Coated joint sheet metals

## High-pressure VB joint sheet metals

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 strip

### VB joint sheet metal (Height 160 mm)

Strips and rolls [Technical details pages 74 – 75](#)



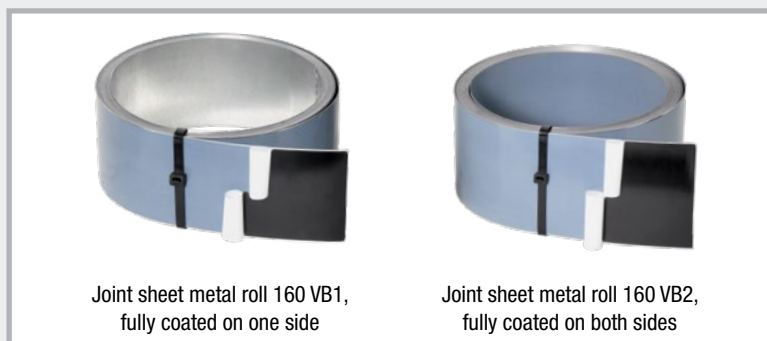
Page 32

Order  
suitable  
Omega bracket  
Art. no. 070415

Art. no.	Description	PU	Weight	
070430	<b>Joint sheet metal 160 VB2 in crate</b> <b>Length 2.4 m, height 160 mm,</b> 1 crate = 120 m (50 strips of 2.4 m each), <b>fully coated on both sides,</b> incl. 55 fixing clips	Art.Gr. 200 1 crate = 120 m 1 pallet = 12 crates	115.50 kg per crate	
070432	<b>Joint sheet metal 160 VB2 in crate</b> <b>Length 2,0 m, height 160 mm,</b> 1 crate = 100 m (50 strips of 2 m each), <b>fully coated on both sides,</b> incl. 55 fixing clips	Art.Gr. 200 1 crate = 100 m 1 pallet = 12 crates	98.50 kg per crate	
070461	<b>Joint sheet metal roll 160 VB2</b> <b>Height 160 mm, roll length 20 m,</b> <b>fully coated on both sides,</b> <b>incl. 30 omega brackets</b> and 2 fixing clips	Art.Gr. 201 1 roll = 20 m per carton 1 pallet = 36 cartons	18.50 kg per carton	
070460	<b>Joint sheet metal roll 160 VB1</b> <b>Height 160 mm, roll length 20 m,</b> <b>fully coated on one side,</b> <b>incl. 30 omega brackets</b> and 2 fixing clips	Art.Gr. 201 1 roll = 20 m per carton 1 pallet = 36 cartons	17.80 kg per carton	



Joint sheet metal 160 VB2 strip,  
fully coated on both sides



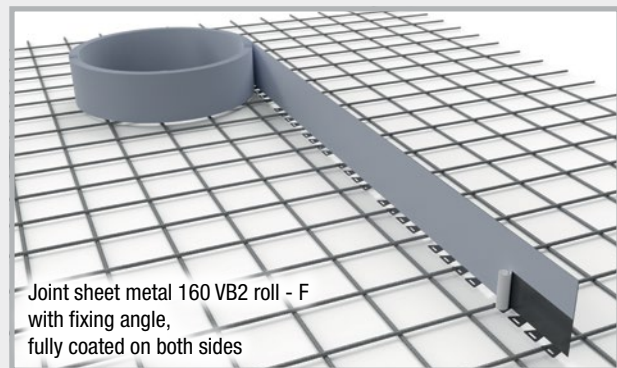
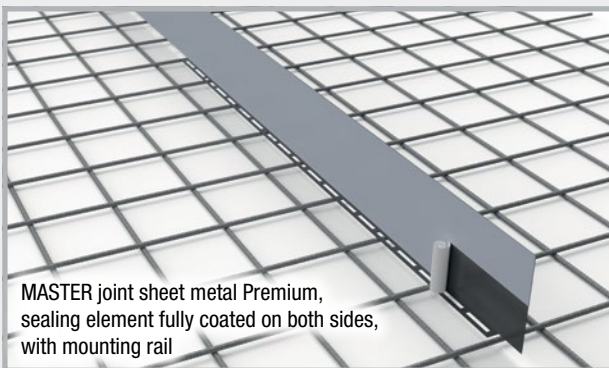
Joint sheet metal roll 160 VB1,  
fully coated on one side

Joint sheet metal roll 160 VB2,  
fully coated on both sides

# Joint sheet metal VB 160 (Height 160 mm) with mounting rail/fixing angle, strips and rolls



Art. no.	Description	PU	Weight
<b>NEW!</b> 070200	<b>MASTER joint sheet metal Premium</b> <b>Length 2.5 m, height 160 mm,</b> 1 crate = 100 m (40 strips of 2.5 m each), <b>fully coated sealing element on both sides,</b> with mounting rail, 20 mm perforated, incl. 55 fixing clips  Technical details page 76	1 crate = 100 m  1 pallet = 12 crates	142.50 kg per crate
070468	<b>Joint sheet metal 160 VB2 roll - F</b> <b>with fixing angle,</b> <b>Height 160 mm, roll length 20 m,</b> <b>fully coated on both sides,</b> incl. 2 fixing clips  Technical details pages 74 – 75	1 roll = 20 m per carton  1 pallet = 36 cartons	17.85 kg per carton



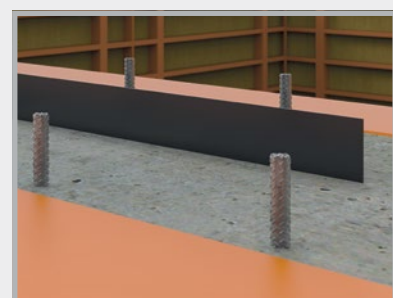
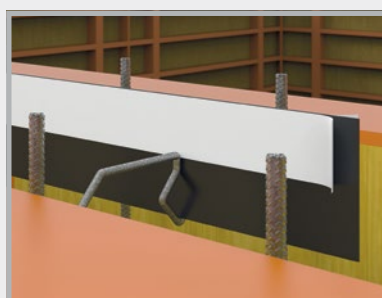
## Joint sheet metal VB 80 (Height 80 mm) for the wall/slab connection, strips and rolls



Art. no.	Description	PU	Weight	
070455	<b>Joint sheet metal 80 VB2 in crate</b> <b>Length 2,4 m, height 80 mm,</b> 1 crate = 120 m (50 strips of 2.4 m each), <b>fully coated on both sides,</b> incl. 55 fixing clips  Art.Gr. 202	1 crate = 120 m  1 pallet = 12 crates	65.00 kg per crate	
<b>NEW!</b> 070456	<b>Joint sheet metal 80 VB2 roll</b> <b>Height 80 mm, roll length 20 m</b> <b>fully coated on both sides,</b> incl. 2 fixing clips  Art.Gr. 213	1 roll = 20 m per carton  1 pallet = 48 cartons	8.56 kg per carton	

Page 32

Order  
suitable  
Omega bracket  
Art. no. 070425  
Art. no. 070413



Joint sheet metal VB 120 (Height 120 mm)  
Joint sheet metal VB 240 (Height 240 mm)

Rolls

Technical details pages 74 – 75

Art.Gr.  
213



Art. no.	Description	PU	Weight
070464	Joint sheet metal 120 VB2 roll Height 120 mm, roll length 20 m, fully coated on both sides, <u>incl. 30 omega brackets</u> and 2 fixing clips	1 roll = 20 m per carton 1 pallet = 48 cartons	13.50 kg per carton
070463	Joint sheet metal 120 VB1 roll Height 120 mm, roll length 20 m, fully coated on one side, <u>incl. 30 omega brackets</u> and 2 fixing clips	1 roll = 20 m per carton 1 pallet = 48 cartons	13.05 kg per carton
070462	Joint sheet metal 240 VB2 roll Height 240 mm, roll length 20 m, fully coated on both sides, <u>incl. 30 omega brackets</u> and 4 fixing clips	1 roll = 20 m per carton 1 pallet = 24 cartons	26.75 kg per carton

Wherever required, we supply the rolls incl. the required omega brackets as standard.

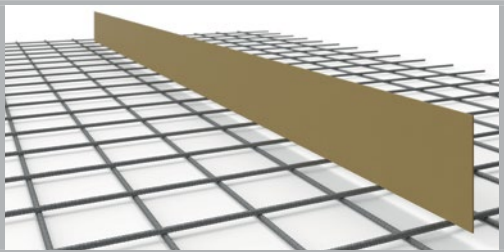
MB joint sheet metal


Mineral-coated joint sheet metal for  
waterproofing of construction joints

Technical details page 77



Art.Gr.  
204



Art. no.	Description	PU	Weight	Page 32
070481	Joint sheet metal MB 160, overlap type Length 2.4 m, height 160 mm, 1 crate = 120 m (50 strips of 2.4 m each), with full mineral coating on both sides, incl. 55 fixing clips	1 crate = 120 m  1 pallet = 12 crates	130.50 kg per crate	Order suitable Omega bracket Art. no. 070415 

AKTIV joint sheet metal

The active, bentonite-coated joint sheet metal

Technical details page 78



Art.Gr.  
205



Art. no.	Description	PU	Weight
070490	AKTIV joint sheet metal Roll length 10 m, height 160 mm, fully coated on one side with bentonite, <u>incl. 20 omega brackets</u> , 4 fixing clips and 0.75 m adhesive tape for bonding of joints	1 roll = 10 m per carton  1 pallet = 36 cartons  incl. fastening material	14.70 kg per carton

# MASTER-MultiFlex (MMF 140)



Certified active joint tape for waterproofing of construction joints in concrete

Technical details pages 79 – 80

Art.Gr.  
**212**

Art. no.	Description	PU	Weight	
080646	<b>MMF 140 MASTER-MultiFlex Construction joint tape with additional swelling profile</b> Height 140 mm, Roll length 25 m, with adhesive tape for bonding of joints and 2 fixing clips	1 roll = 25 m per carton  1 pallet = 32 cartons	36.00 kg per carton	
080647	<b>MMF 140 Omega bracket</b> System-related omega brackets to secure the MMF 140 in position on the reinforcement, Requires approx. 2 pcs. per metre	1 sack of 50 pcs.	3.90 kg per sack	
070605	<b>MMF 140 MASTER-Connect "active"</b> Joint tape connector with additional swelling tape	1 pc.	1.80 kg per pc.	

## VB joint sheet metal JGS (slurry/liquid manure/silage effluent)



The joint sheet metal for storage and filling facilities of slurry/liquid manure/silage effluent and biogas facilities with national technical approval (abZ)

National technical approval (abZ): Z-74.101-209

Technical details page 81

Art.Gr.  
**220**


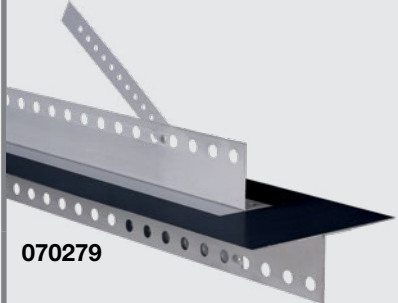
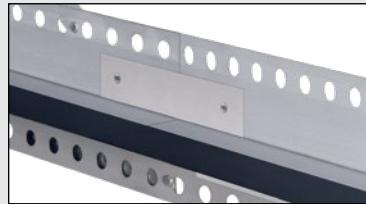

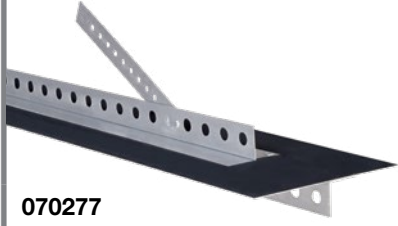
Art. no.	Description	PU	Weight	
070476	<b>VB joint sheet metal JGS, roll</b> <b>Length 20 m, height 160 mm,</b> Joint sheet metal fully coated on both sides, incl. 2 fixing clips	1 roll = 20 m per carton  1 pallet = 36 cartons	18.50 kg per carton  <b>Suitable omega bracket Art. no. 070415 page 32</b>	
070477	<b>VB joint sheet metal JGS, roll - F</b> <b>Length 20 m, height 160 mm,</b> Joint sheet metal fully coated on both sides, with fixing angle, incl. 2 fixing clips	1 roll = 20 m per carton  1 pallet = 36 cartons	17.85 kg per carton	
070475	<b>VB joint sheet metal JGS, strips</b> <b>Length 2.4 m, height 160 mm,</b> 1 crate = 120 m (50 strips of 2.4 m each), Joint sheet metal fully coated on both sides, incl. 55 fixing clips	1 crate = 120 m  1 pallet = 12 crates	115.50 kg per crate  <b>Suitable omega bracket Art. no. 070415 page 32</b>	



# Crack-inducing profiles

Technical details pages 82 – 83

Art.Gr.  
**215**


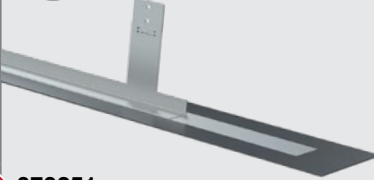
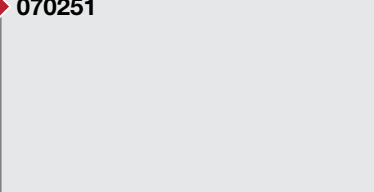

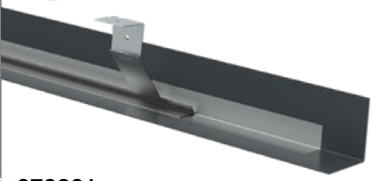
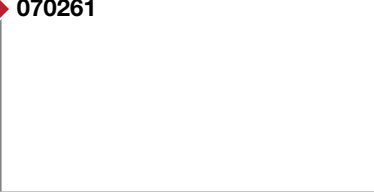
Art. no.	Description	PU	Weight
<b>070280</b>   <b>070279</b>	<b>SRF 125 Multi</b> <b>In-situ concrete wall type,</b> <b>Coated crack-inducing profile,</b> <b>Length: 2.5 m</b>  incl. 2 fixing clips with perforated support rail and perforated foldable retaining plates Type for in-situ concrete walls, Wall thicknesses up to 36.5 cm	1 pc.  1 pallet = 120 pcs.	4.85 kg per pc.
	<b>SRF 125 Multi</b> <b>In-situ concrete wall type,</b> <b>Coated crack-inducing profile,</b> <b>Length: 3.0 m</b>  incl. 2 fixing clips with perforated support rail and perforated foldable retaining plates Type for in-situ concrete walls, Wall thicknesses up to 36.5 cm	1 pc.  1 pallet = 120 pcs.	5.80 kg per pc.
	<b>SRF 125 Multi short piece</b> <b>In-situ concrete wall type,</b> <b>extension set</b> <b>Length: 0.6 m</b>  incl. suitable connection set, Consists of: 2 pcs. connecting plates, 4 pcs. self-tapping screws		1.10 kg per pc.
<b>070280K</b>  <b>070278</b>   <b>070277</b>	<b>FOR IN-SITU CONCRETE WALLS</b>  <b>SRF 125 Multi</b> <b>Cavity wall type,</b> <b>Coated crack-inducing profile,</b> <b>Length: 2.5 m</b>  incl. 2 fixing clips with perforated support rail and perforated foldable retaining plates Type for cavity walls, Wall thicknesses up to 40 cm	1 pc.  1 pallet = 120 pcs.	4.00 kg per pc.
	<b>SRF 125 Multi</b> <b>Cavity wall type,</b> <b>Coated crack-inducing profile,</b> <b>Length: 3.0 m</b>  incl. 2 fixing clips with perforated support rail and perforated foldable retaining plates Type for cavity walls, Wall thicknesses up to 40 cm	1 pc.  1 pallet = 120 pcs.	4.75 kg per pc.
	<b>SRF 125 Multi short piece</b> <b>Cavity wall type,</b> <b>Extension set,</b> <b>Length: 0.6 m</b>  incl. suitable connection set, Consists of: 2 pcs. connecting plates, 4 pcs. self-tapping screws		0.93 kg per pc.

Up to a **wall thickness** of **300 mm** also suitable for use in **corner butt joint**; **MASTER joint sheet metal Premium corner element FB (art. no. 070416)** required (see technical details, page 83)

# Crack-inducing profiles

Technical details pages 84 – 85

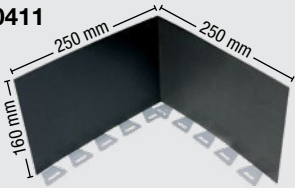
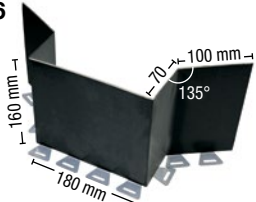
Art.Gr.  
**206**

Art. no.	Description	PU	Weight
<b>070250</b>  	<b>MASTER joint sheet metal SFG</b> <b>Length: 2.5 m</b> incl. 6 nail plugs 5/60 and 4 fixing clips, adjustable brackets Extension at the construction site possible Wall thicknesses up to 40 cm	1 pc.  1 pallet = 88 pcs.	4.70 kg per pc.
<b>NEW!</b> <b>070251</b> 	<b>MASTER joint sheet metal SFG</b> <b>Length: 3.0 m</b> incl. 6 nail plugs 5/60 and 4 fixing clips, adjustable brackets	1 pc.  1 pallet = 88 pcs.	5.62 kg per pc.
<b>070260</b>  	<b>MASTER joint sheet metal SFE</b> <b>Length: 2.5 m</b> incl. 6 nail plugs 5/60 and 4 fixing clips, adjustable brackets Extension at the construction site possible Wall thicknesses up to 40 cm	1 pc.  1 pallet = 80 pcs.	5.15 kg per pc.
<b>NEW!</b> <b>070261</b> 	<b>MASTER joint sheet metal SFE</b> <b>Length: 3.0 m</b> incl. 6 nail plugs 5/60 and 4 fixing clips, adjustable brackets	1 pc.  1 pallet = 80 pcs.	6.14 kg per pc.





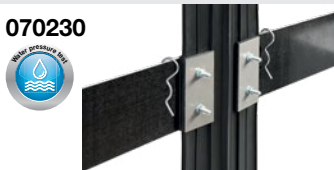

FOR CAVITY WALLS

## Accessories for coated joint sheet metals

Art.Gr.  
**221**

Art. no.	Description	PU	Weight
<b>NEW!</b> <b>070411</b> 	<b>MASTER joint sheet metal Premium</b> <b>angle 90°</b> side length 25 x 25 cm, with fixing angle,	1 pc.	0.62 kg per pc.
<b>NEW!</b> <b>070416</b> 	<b>MASTER joint sheet metal Premium</b> <b>corner element FB</b> with fixing angle	1 pc.	0.58 kg per pc.

Accessories for coated joint sheet metals

Art. no.	Description	PU	Weight
<div>070413</div> <div>070415</div> <div>070421</div> <div>070422</div> 	<b>Omega bracket</b> for joint sheet metals <span>Art.Gr. 222</span> up to height 125 mm	150 pcs./sack	per sack 5.85 kg
	up to height 160 mm	150 pcs./sack	7.80 kg
	Height 161-205 mm	150 pcs./sack	8.55 kg
	Height 206-330 mm	150 pcs./sack	12.30 kg
<div>070412</div> 	<b>Fixing clip</b> for securing the overlapping joints <span>Art.Gr. 230</span> suitable for height 80 + 120 mm	1 bag of 55 pcs.	1.90 kg per bag
<div>070410</div> 	suitable for height 160 + 240 mm	1 bag of 55 pcs.	3.10 kg per bag
<div>NEW!</div> <div>070425</div> 	<b>Mounting bracket joint sheet metal - wall crown</b> <span>Art.Gr. 222</span>	1 bundle = 50 pcs.	4.00 kg per bundle
<div>070230</div> 	<b>Joint sheet metal/ joint tape connector</b> <span>Art.Gr. 230</span> transition from joint sheet metal to joint tape <a href="#">Technical details page 97</a>	1 set = 2 pcs.	2.50 kg per set
<div>070240</div> 	<b>MASTER adhesive tape for joint sheet metal</b> <span>Art.Gr. 230</span> Adhesive tape for securing joints and crossing points, thickness 1.5 mm, roll length 10 m, width 38 mm	1 carton of 16 rolls	0.95 kg per roll



# Uncoated joint sheet metals

## in accordance with the WU directive

The DAfStb guideline "Water-Impermeable Concrete Structures" (WU guideline) requires a sheet thickness of at least 1.5 mm for uncoated joint sheet metals as construction joint waterproofing in water-impermeable structures. The following sheet height requirements apply for stress class 1 and service class A:

≥ 250 mm: up to 3 m water pressure height

≥ 300 mm: 3 m to 10 m water pressure height

The sheets must be embedded with half their height on both sides of the joint.

## Small coils

Uncoated joint sheet metal, black, as roll material with 30 m length



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	1 pallet = 12 rolls	90.00 kg
070176	Joint sheet metal, black, 1.5 x 300 mm in accordance with the WU directive	1 roll of 30 m	1 pallet = 10 rolls	108.00 kg
070177	Joint sheet metal, black, 2.0 x 200 mm	1 roll of 30 m	1 pallet = 12 rolls	96.00 kg
070178	Joint sheet metal, black, 2.0 x 250 mm in accordance with the WU directive	1 roll of 30 m	1 pallet = 10 rolls	120.00 kg
070180	Joint sheet metal, black, 2.0 x 300 mm in accordance with the WU directive	1 roll of 30 m	1 pallet = 8 rolls	144.00 kg
070090	Joint sheet metal, galvanised, 0.6 x 100 mm	1 roll of 30 m	1 pallet = 60 rolls	14.40 kg
070100	Joint sheet metal, galvanised, 0.6 x 125 mm	1 roll of 30 m	1 pallet = 60 rolls	18.00 kg
070110	Joint sheet metal, galvanised, 0.6 x 150 mm	1 roll of 30 m	1 pallet = 48 rolls	21.60 kg
070120	Joint sheet metal, galvanised, 0.6 x 200 mm	1 roll of 30 m	1 pallet = 36 rolls	28.80 kg
070181	Joint sheet metal, galvanised, 2.0 x 300 mm	1 roll of 30 m	1 pallet = 8 rolls	153.85 kg

**Black** joint sheet metals with a min. thickness of 1.5 mm and a min. height of 250 mm comply with the German WU directive for Water-Impermeable Concrete Buildings. Sheets with smaller dimensions and galvanised sheets do not comply with the directive for water-impermeable structures.

## Joint sheet metal, strip material

Uncoated joint sheet metal, black, as strip material with 2.5 m length in accordance with the German WU directive for Water-Impermeable Concrete Structures

Art.Gr.  
**231**

Art. no.	Description	PU	Weight per strip
131105	Joint sheet metal strips black, 1.5 x 250 mm, length 2.5 m	1 strip of 2.5 m	7.50 kg
131205	Joint sheet metal strips black, 1.5 x 300 mm, length 2.5 m	1 strip of 2.5 m	9.00 kg
131305	Joint sheet metal strips black, 2.0 x 250 mm, length 2.5 m	1 strip of 2.5 m	9.50 kg
131405	Joint sheet metal strips black, 2.0 x 300 mm, length 2.5 m	1 strip of 2.5 m	11.50 kg

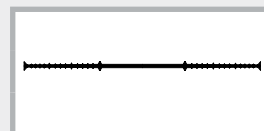
Suitable installation and joining accessories for the roll and strip products can be found on page 35.

# Joint tape, factory standard PVC

## Construction joint tape, internal

Art.Gr.  
211

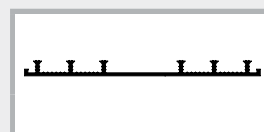
Type	Tape width	Roll length	PU	Weight per roll	PVC Factory standard
A 19	190 mm	25 m	1 pc.	22.50 kg	<b>080500</b>
A 24	240 mm	25 m	1 pc.	30.00 kg	<b>080510</b>
A 32	320 mm	25 m	1 pc.	45.00 kg	<b>080520</b>



## Construction joint tape, external

Art.Gr.  
211

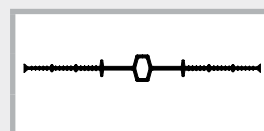
AA 19	190 mm	25 m	1 pc.	29.00 kg	<b>080530</b>
AA 24	240 mm	25 m	1 pc.	40.00 kg	<b>080540</b>
AA 32	320 mm	25 m	1 pc.	57.50 kg	<b>080550</b>



## Expansion joint tape, internal

Art.Gr.  
211

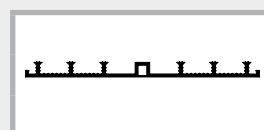
D 19	190 mm	25 m	1 pc.	28.75 kg	<b>080650</b>
D 24	240 mm	25 m	1 pc.	37.50 kg	<b>080660</b>
D 32	320 mm	25 m	1 pc.	57.50 kg	<b>080670</b>



## Expansion joint tape, external

Art.Gr.  
211

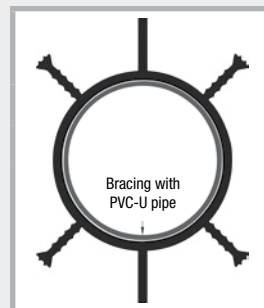
DA 19	190 mm	25 m	1 pc.	36.25 kg	<b>080680</b>
DA 24	240 mm	25 m	1 pc.	45.00 kg	<b>080690</b>
DA 32	320 mm	25 m	1 pc.	62.50 kg	<b>080700</b>



## Crack inducer tubes

Art.Gr.  
211

Art. no.	Type	Diameter/mm	Pipe length	PU	Pipe weight
<b>080712</b>	Q 1	88 WS 24 – 35	3.0 m	1 pc.	8.00 kg



## Joint tape clamp

Art.Gr.  
230

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



# MASTER-Connect

Connector for joint sheet metals and joint tapes

## MASTER-Connect joint sheet metal



Technical details page 98

Art.Gr.  
210

Art. no.	Description	PU	Weight/pc.	
070196	<b>MASTER-Connect joint sheet metal F150</b> for joint sheet metal heights up to 150 mm	1 pc.	1.70 kg per pc.	
070193	<b>MASTER-Connect joint sheet metal F250</b> for joint sheet metal heights up to 250 mm	1 pc.	2.90 kg per pc.	
070194	<b>MASTER-Connect joint sheet metal F330</b> for joint sheet metal heights up to 330 mm	1 pc.	3.75 kg per pc.	

### 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 98

Art.Gr.  
210

Art. no.	Description	PU	Weight/pc.	
070610	<b>MASTER-Connect joint tape B250</b> for joint tape widths up to 250 mm	1 pc.	2.75 kg per pc.	
070620	<b>MASTER-Connect joint tape B330</b> for joint tape widths up to 330 mm	1 pc.	3.75 kg per pc.	

### Resistance:

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

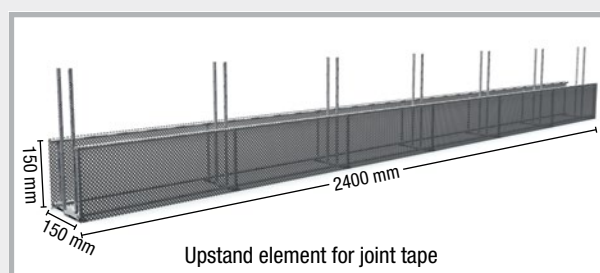
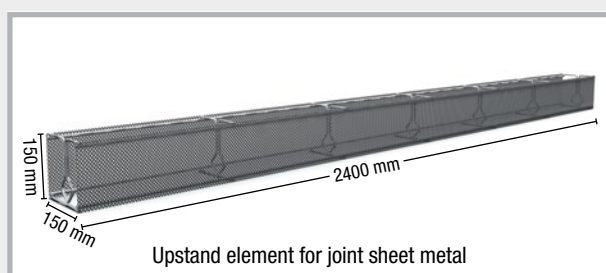
# Uprstand elements

Installation aid for joint sheet metals and joint tapes

Art.Gr.  
224

Art. no.	Description	PU	Weight/pc.
070650	<b>Uprstand element for joint sheet metal, rough</b> Height 150 mm, width 150 mm, length 2400 mm, for joint sheet metals 250 and 300 mm	1 pc.	6.55 kg
070652	<b>Uprstand element for joint tape, rough</b> Height 150 mm, width 150 mm, length 2400 mm, for internal joint tape A24 and A32	1 pc.	8.00 kg

Version with base or as toothed joint available on request





# Rib laths

## Lost formwork for construction joints in concrete

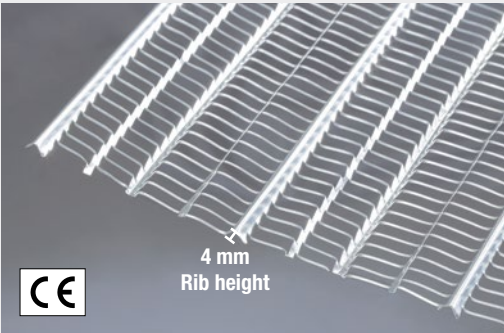
### Rib lath formwork, flat-ribbed

Lost formwork/plaster base

- Effective bond between concrete segments
- Highly malleable

Material: Galvanised  
 Rib height: 4 mm  
 Thickness: 0.25 mm  
 Sheet size: Length 250 cm, width 60 cm

Art.Gr.  
226



Art. no.	Description	PU	Secondary packaging	Weight
020045	<b>Thickness 0.25 mm</b> , galvanised Size: 250 x 60 cm = 1.5 m², Rib height approx. 4 mm, Identification colour: yellow	1 package of 20 sheets = 30 m²	1 pallet of 30 packages = 900 m²	approx. 22 kg per package  0.73 kg/m²

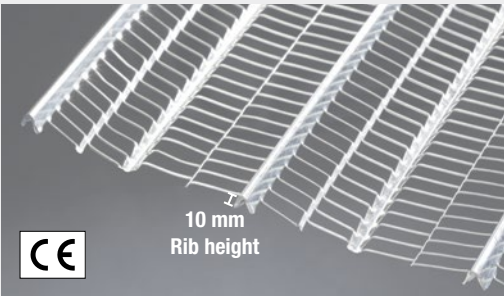
### Rib lath formwork, medium-ribbed

Lost formwork

- Effective bond between concrete segments
- Good malleability

Material: Galvanised  
 Rib height: 10 mm  
 Sheet size: Length 250 cm, width 60 cm

Art.Gr.  
227



Art. no.	Description	PU	Secondary packaging	Weight
020040	<b>Thickness 0.30 mm</b> , galvanised, Size: 250 x 60 cm = 1.5 m², Rib height approx. 10 mm, Identification colour: black	1 package of 20 sheets = 30 m²	1 pallet of 25 packages = 750 m²	approx. 36 kg per package  1.20 kg/m²

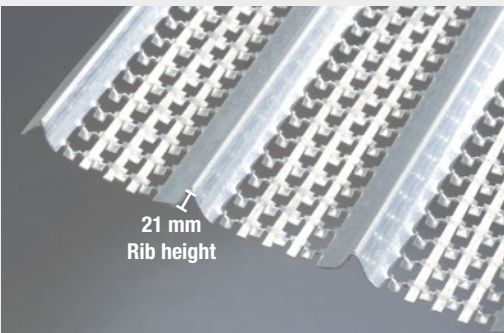
### Rib lath formwork, high-ribbed

Lost formwork

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

Material: Galvanised  
 Rib height: 21 mm

Art.Gr.  
228



Art. no.	Description	PU	Secondary packaging	Weight
020005	<b>Thickness 0.3 mm</b> , galvanised, Size: 200 x 45 cm, rib height 21 mm, Identification colour: green	1 pallet of 200 pcs. = 180 m²	3 pallets	436 kg per pallet approx. 2.42 kg per m²
020010	<b>Thickness 0.4 mm</b> , galvanised, Size: 200 x 45 cm, rib height 21 mm, Identification colour: blue	1 pallet of 100 pcs. = 90 m²	5 pallets	301 kg per pallet approx. 3.34 kg per m²
020020	<b>Thickness 0.5 mm</b> , galvanised, Size: 200 x 45 cm, rib height 21 mm, Identification colour: red	1 pallet of 100 pcs. = 90 m²	4 pallets	366 kg per pallet approx. 4.06 kg per m²

# LinkFix stopend panel

Art.Gr.  
229

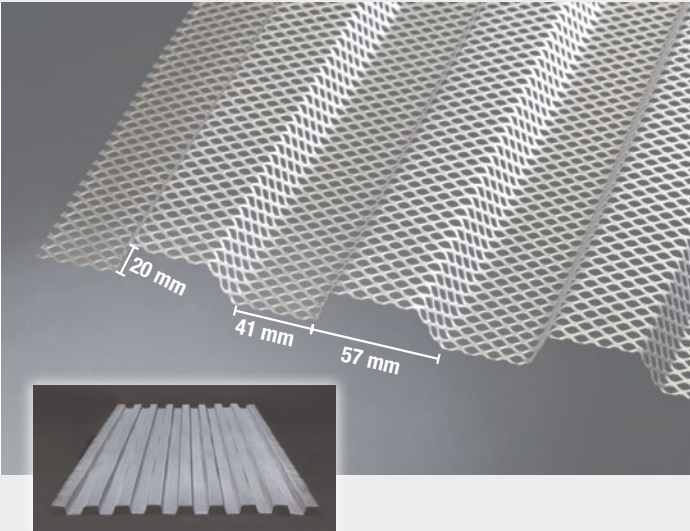
Profiled rib lath formwork as stopend panel for construction joints

Material: Profiled rib lath formwork of bright steel, thickness 0.75 mm

Joint category: toothed according to DIN EN 1992-1-1 NA (EC2)

Profile: 57 x 41 x 20 mm

Sheet size: Length 240 cm, width 80 cm



Art. no.	Description	PU	Weight
020050	<b>LinkFix</b> thickness 0.75 mm, Size: 240 x 80 cm	1 pallet of 100 pcs. = 192 m <sup>2</sup>	536 kg per pallet approx. 2.79 kg per m <sup>2</sup>

# LinkForm stopend panel

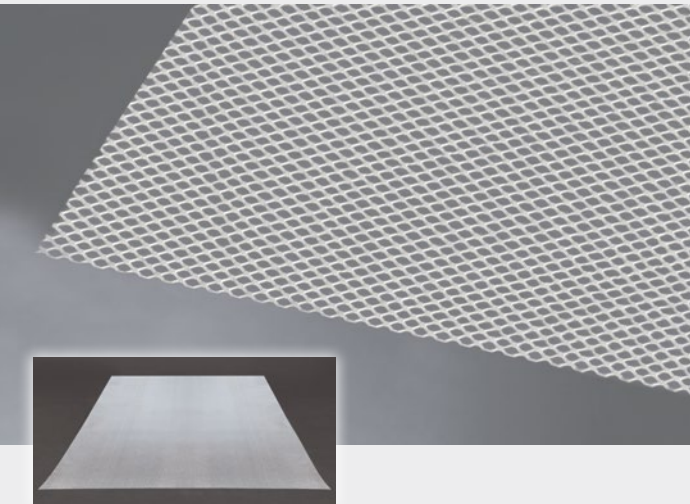
Art.Gr.  
229

Rib lath formwork as stopend panel for construction joints

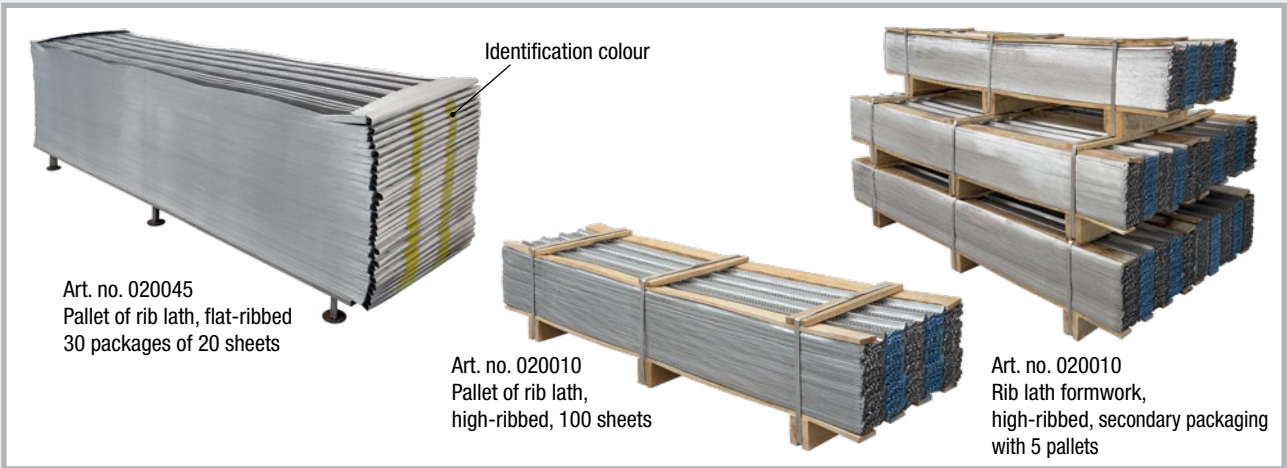
Material: Rib lath formwork of bright steel, thickness 0.75 mm.

Joint category: rough according to DIN EN 1992-1-1 NA (EC2)

Sheet size: Length: 240 cm, Width 100 cm



Art. no.	Description	PU	Weight
070520	<b>LinkForm</b> Thickness 0.75 mm, Size 240 x 100 cm	1 pallet of 100 pcs. = 240 m <sup>2</sup>	536 kg per pallet approx. 2.23 kg per m <sup>2</sup>

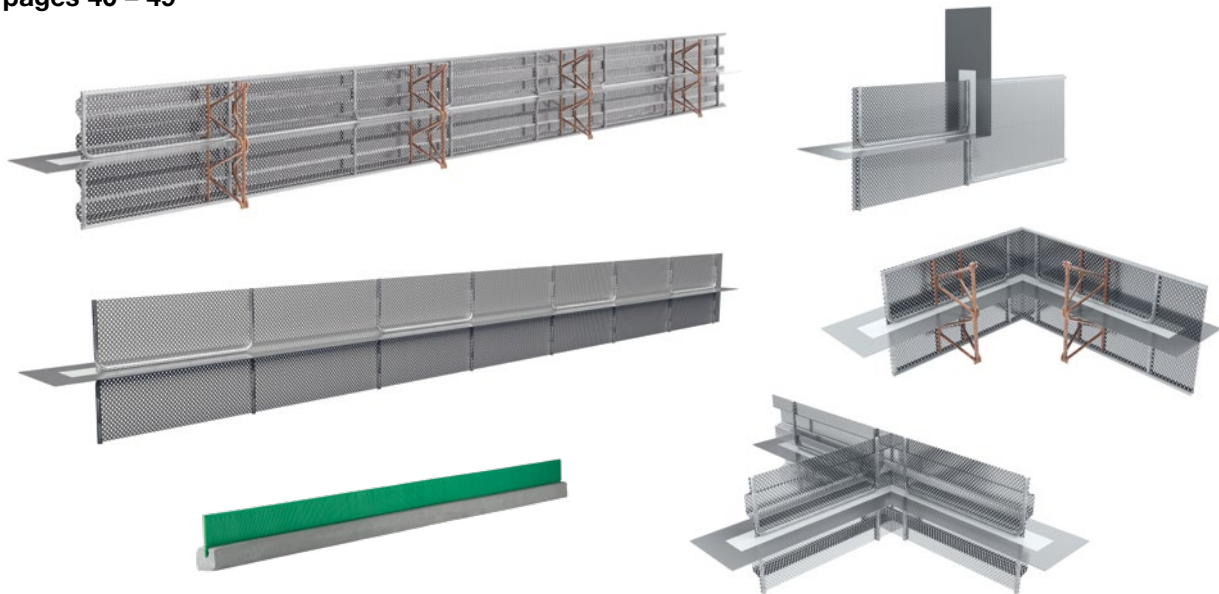




# Formwork systems

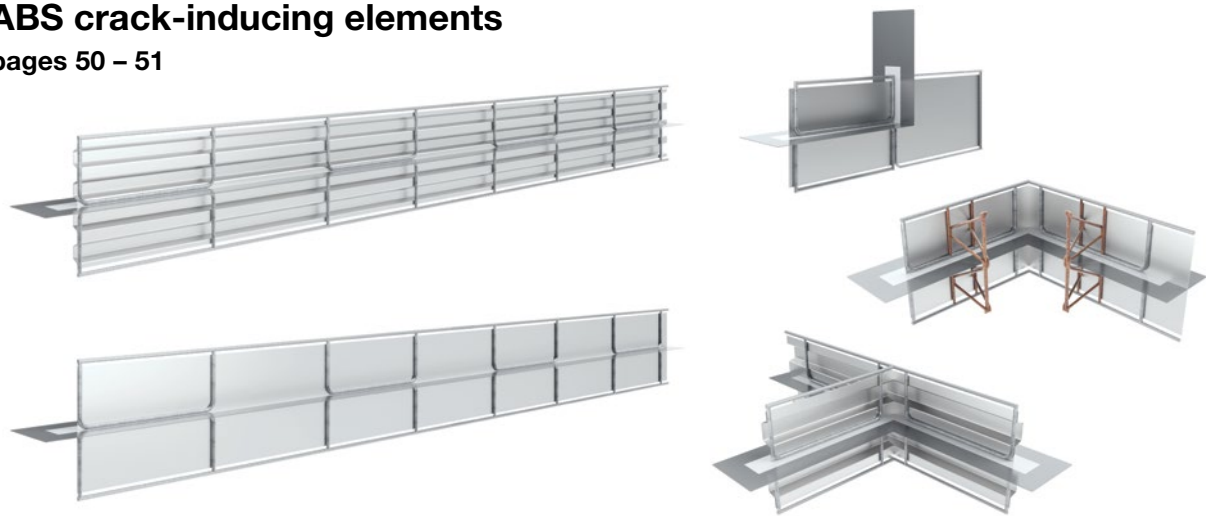
## Stopend panels ABS/special profiles/accessories

pages 40 – 49



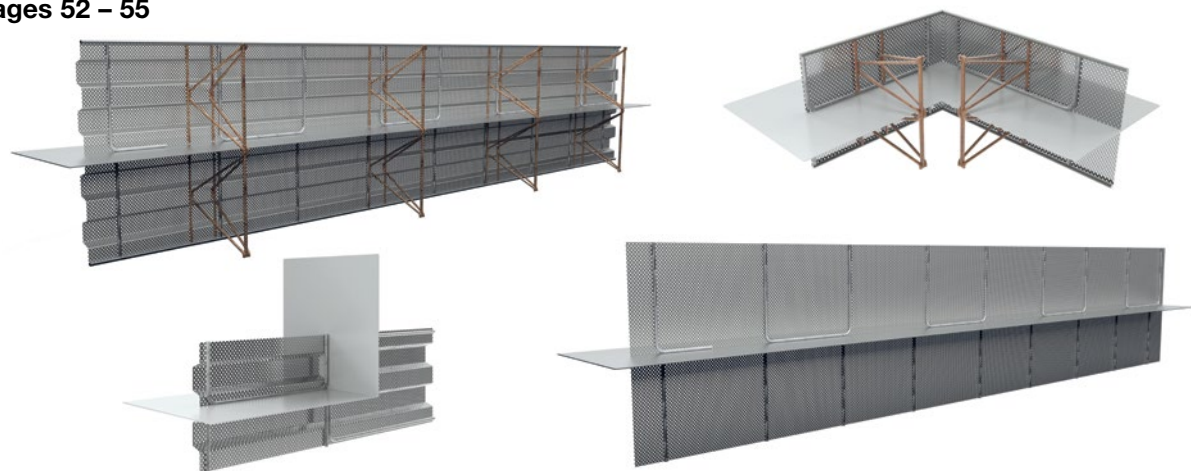
## ABS crack-inducing elements

pages 50 – 51



## Stopend panels with integrated uncoated joint sheet metal

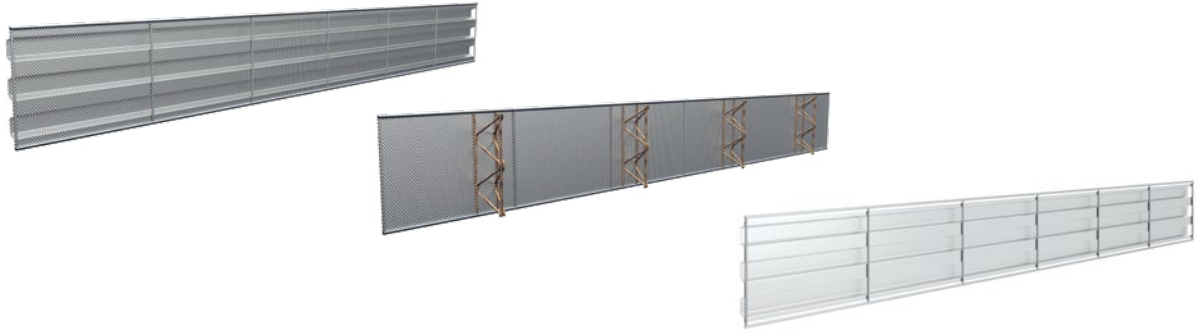
pages 52 – 55





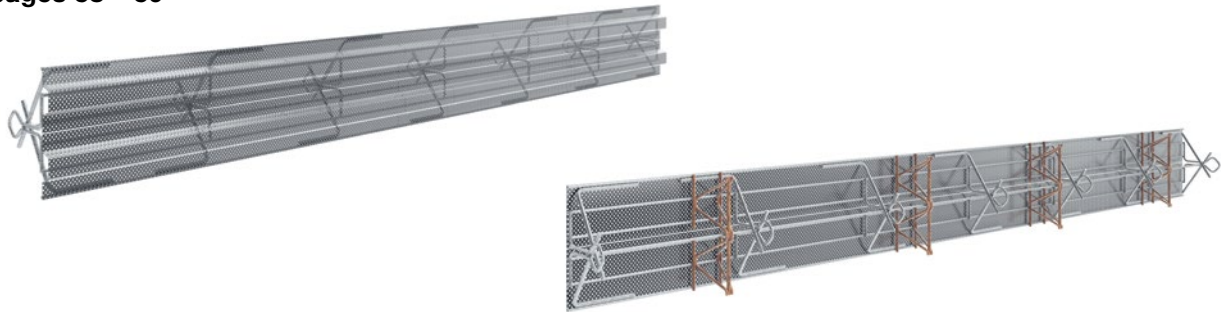
## Stopend panels and crack-inducing elements LinkFix/LinkForm

pages 56 – 57



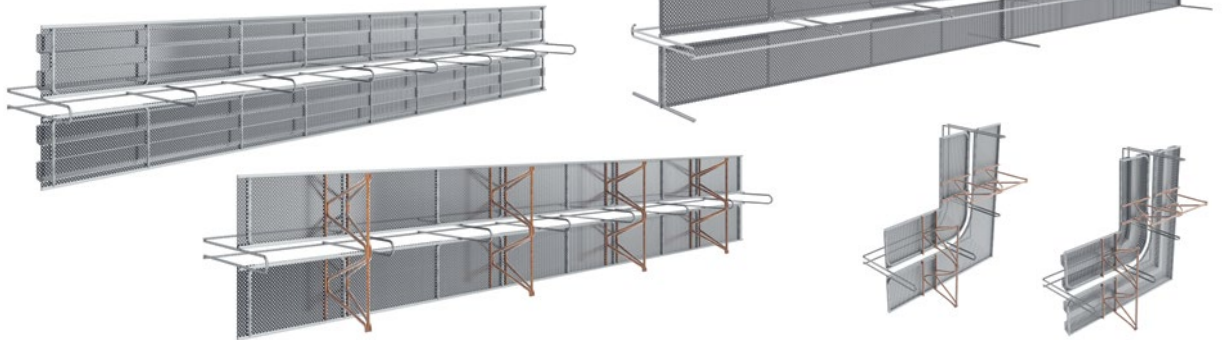
## ABS joint sheet metal cage

pages 58 – 59



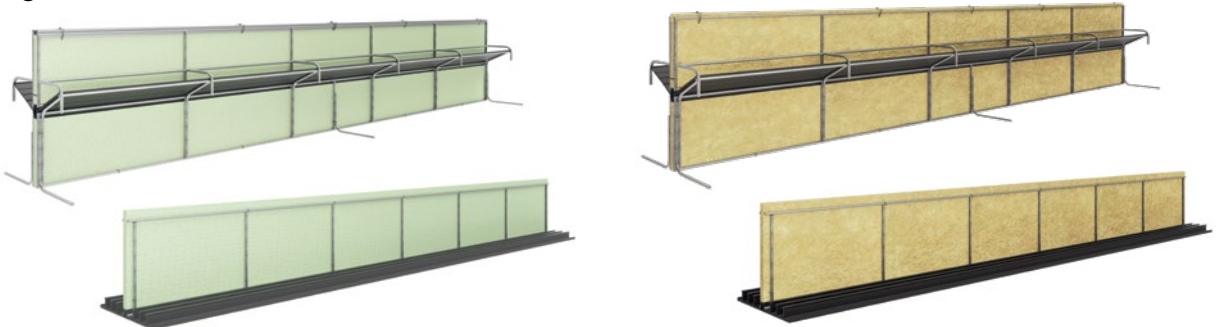
## ABS joint tape cage

pages 60 – 65



## ABS expansion joint elements and ABS sound joint elements

pages 66 – 73



# Stopend panels ABS

## Stopend panels ABS toothed

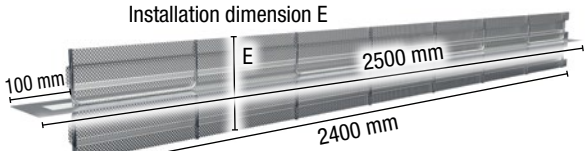
with joint sheet metal coated on both sides

Technical details pages 86 – 88

Art.Gr.  
207

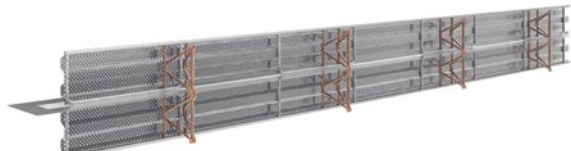


### Type S = Standard braced



Stopend panels ABS toothed – Type S

### Type V = Reinforced version



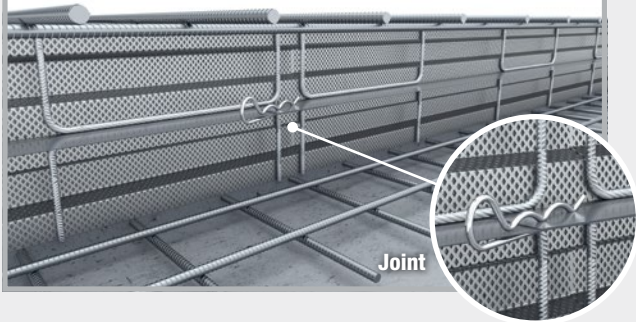
Stopend panels ABS toothed – Type V

Description	Installation dimension E = Rib lath width	Length	Type S = Standard braced		Type V = Reinforced version	
			Art. no.	Weight/pc.	Art. no.	Weight/pc.
ABS 160 toothed	Up to 160 mm	2.5 m	070362	5.60 kg	070362V	8.55 kg
ABS 200 toothed	170 – 200 mm	2.5 m	070364	6.00 kg	070364V	9.20 kg
ABS 250 toothed	210 – 250 mm	2.5 m	070366	6.45 kg	070366V	10.00 kg
ABS 300 toothed	260 – 300 mm	2.5 m	070368	7.00 kg	070368V	10.90 kg
ABS 400 toothed	310 – 400 mm	2.5 m	070370	8.00 kg	070370V	12.65 kg
ABS 500 toothed	410 – 500 mm	2.5 m	070372	9.70 kg	070372V	15.00 kg
ABS 600 toothed	510 – 600 mm	2.5 m	070374	10.30 kg	070374V	16.35 kg
ABS 700 toothed	610 – 700 mm	2.5 m	070376	10.95 kg	070376V	17.65 kg
ABS 800 toothed	710 – 800 mm	2.5 m	070378	12.65 kg	070378V	20.05 kg
ABS 900 toothed	810 – 900 mm	2.5 m	070380	13.25 kg	070380V	21.35 kg
ABS 1000 toothed	910 – 1000 mm	2.5 m	070382	13.90 kg	070382V	22.70 kg

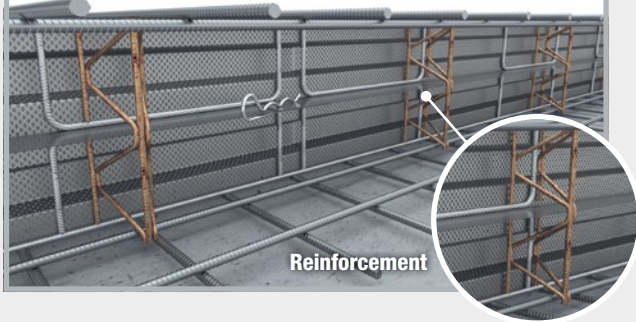
All intermediate dimensions of the rib lath width available.  
Installation dimension E > 1000 mm available on request  
For proper formwork results, we recommend the combination with our ABS formwork comb type spacers.

## Installation situation

### Type S – Standard braced



### Type V – Reinforced version

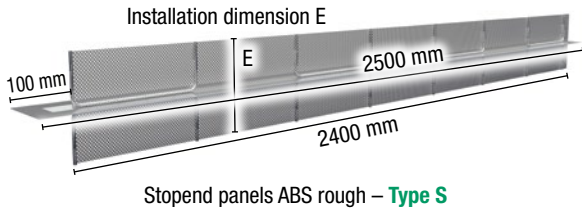


# Stopend panels ABS rough

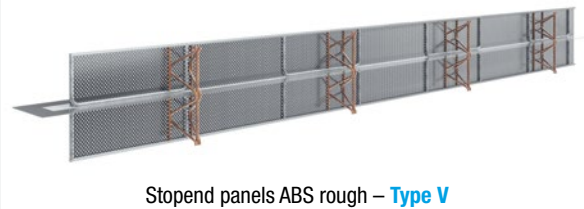
with joint sheet metal coated on both sides Technical details pages 86 – 88

Art.Gr.  
**207**

## Type S = Standard braced



## Type V = Reinforced version



Description	Installation dimension E = Rib lath width	Length	Type S = Standard braced		Type V = Reinforced version	
			Art. no.	Weight/pc.	Art. no.	Weight/pc.
<b>ABS 130 rough</b>	Up to 130 mm	2.5 m	<b>070281</b>	5.15 kg	<b>070281V</b>	7.80 kg
<b>ABS 160 rough</b>	140 – 160 mm	2.5 m	<b>070282</b>	5.40 kg	<b>070282V</b>	8.30 kg
<b>ABS 200 rough</b>	170 – 200 mm	2.5 m	<b>070284</b>	5.75 kg	<b>070284V</b>	8.95 kg
<b>ABS 250 rough</b>	210 – 250 mm	2.5 m	<b>070287</b>	6.15 kg	<b>070287V</b>	9.70 kg
<b>ABS 300 rough</b>	260 – 300 mm	2.5 m	<b>070289</b>	6.60 kg	<b>070289V</b>	10.50 kg
<b>ABS 400 rough</b>	310 – 400 mm	2.5 m	<b>070291</b>	7.50 kg	<b>070291V</b>	12.15 kg
<b>ABS 500 rough</b>	410 – 500 mm	2.5 m	<b>070293</b>	9.05 kg	<b>070293V</b>	14.40 kg
<b>ABS 600 rough</b>	510 – 600 mm	2.5 m	<b>070295</b>	9.55 kg	<b>070295V</b>	15.60 kg
<b>ABS 700 rough</b>	610 – 700 mm	2.5 m	<b>070297</b>	10.05 kg	<b>070297V</b>	16.80 kg
<b>ABS 800 rough</b>	710 – 800 mm	2.5 m	<b>070299</b>	11.60 kg	<b>070299V</b>	19.05 kg
<b>ABS 900 rough</b>	810 – 900 mm	2.5 m	<b>070301</b>	12.10 kg	<b>070301V</b>	20.25 kg
<b>ABS 1000 rough</b>	910 – 1000 mm	2.5 m	<b>070303</b>	12.60 kg	<b>070303V</b>	21.45 kg

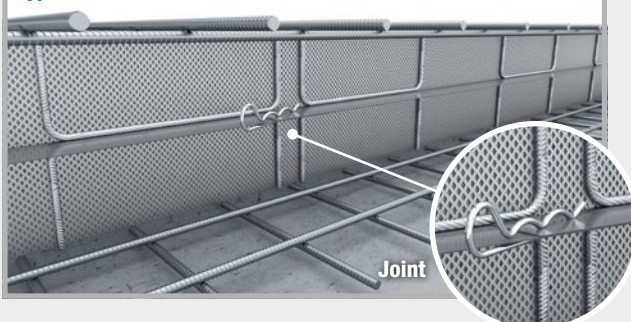
All intermediate dimensions of the rib lath width available.

Installation dimension E > 1000 mm available on request

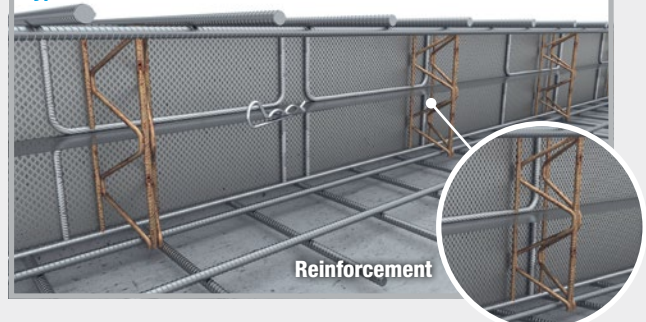
For proper formwork results, we recommend the combination with our ABS formwork comb type spacers.

## Installation situation

### Type S – Standard braced



### Type V – Reinforced version





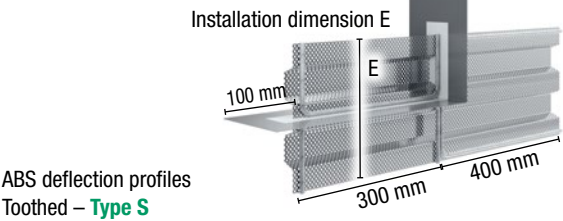
# Stopend panel ABS special profiles

## ABS deflection profiles (ULP) toothed

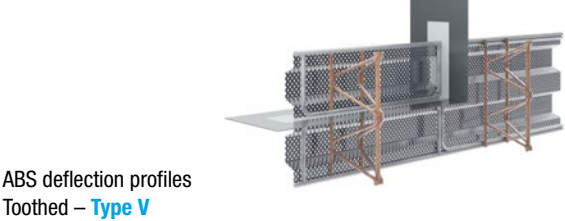
with joint sheet metal coated on both sides [Technical details page 89](#)

Art.Gr.  
**216**

Type S = Standard braced



Type V = Reinforced version

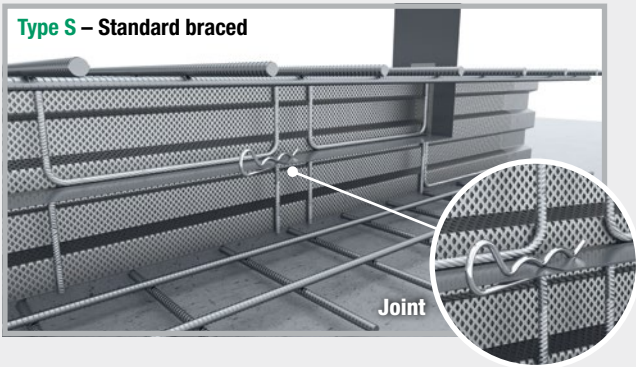


Description	Installation dimension E = Rib lath width	Type S = Standard braced		Type V = Reinforced version	
		Art. no.	Weight/pc.	Art. no.	Weight/pc.
ULP 160 toothed	Up to 160 mm	070387	2.05 kg	070387V	2.65 kg
ULP 200 toothed	170 – 200 mm	070389	2.15 kg	070389V	2.85 kg
ULP 250 toothed	210 – 250 mm	070391	2.30 kg	070391V	3.15 kg
ULP 300 toothed	260 – 300 mm	070393	2.80 kg	070393V	3.90 kg
ULP 400 toothed	310 – 400 mm	070395	3.20 kg	070395V	4.60 kg
ULP 500 toothed	410 – 500 mm	070397	3.80 kg	070397V	5.55 kg
ULP 600 toothed	510 – 600 mm	070399	4.05 kg	070399V	6.15 kg
ULP 700 toothed	610 – 700 mm	070401	4.30 kg	070401V	6.75 kg
ULP 800 toothed	710 – 800 mm	070403	4.90 kg	070403V	7.70 kg
ULP 900 toothed	810 – 900 mm	070405	5.15 kg	070405V	8.30 kg
ULP 1000 toothed	910 – 1000 mm	070407	5.40 kg	070407V	8.90 kg

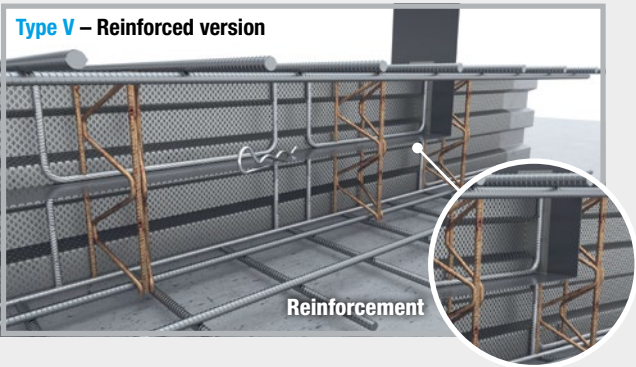
All intermediate dimensions of the rib lath width available.  
Installation dimension E > 1000 mm available on request  
For proper formwork results, we recommend the combination with our ABS formwork comb type spacers.

### Installation situation

Type S – Standard braced



Type V – Reinforced version

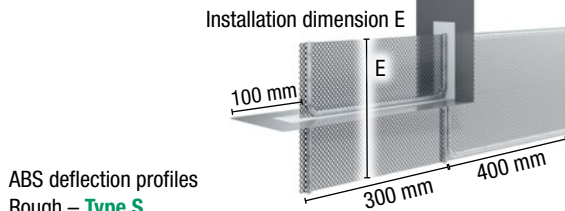


# ABS deflection profiles (ULP) rough

with joint sheet metal coated on both sides Technical details page 89

Art.Gr.  
**216**

## Type S = Standard braced



## Type V = Reinforced version



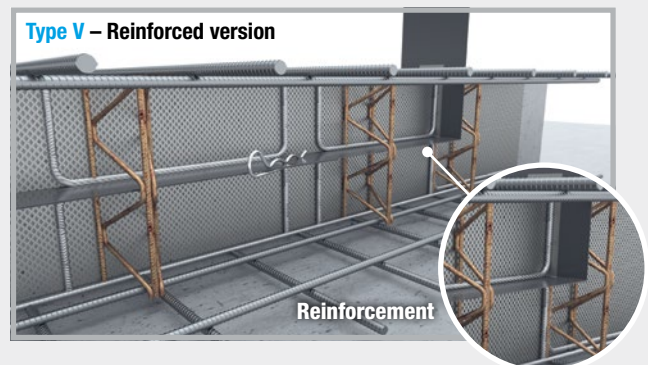
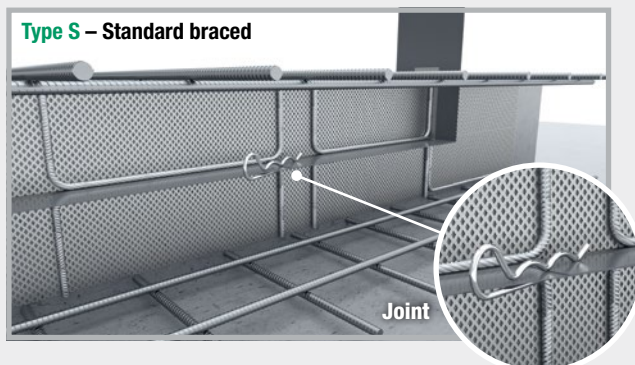
Description	Installation dimension E = Rib lath width	Type S = Standard braced		Type V = Reinforced version	
		Art. no.	Weight/pc.	Art. no.	Weight/pc.
ULP 130 rough	Up to 130 mm	<b>070330</b>	1.90 kg	<b>070330V</b>	2.35 kg
ULP 160 rough	140 – 160 mm	<b>070333</b>	1.95 kg	<b>070333V</b>	2.55 kg
ULP 200 rough	170 – 200 mm	<b>070336</b>	2.05 kg	<b>070336V</b>	2.75 kg
ULP 250 rough	210 – 250 mm	<b>070339</b>	2.15 kg	<b>070339V</b>	3.05 kg
ULP 300 rough	260 – 300 mm	<b>070342</b>	2.70 kg	<b>070342V</b>	3.75 kg
ULP 400 rough	310 – 400 mm	<b>070345</b>	3.05 kg	<b>070345V</b>	4.45 kg
ULP 500 rough	410 – 500 mm	<b>070347</b>	3.60 kg	<b>070347V</b>	5.40 kg
ULP 600 rough	510 – 600 mm	<b>070349</b>	3.85 kg	<b>070349V</b>	5.95 kg
ULP 700 rough	610 – 700 mm	<b>070351</b>	4.05 kg	<b>070351V</b>	6.50 kg
ULP 800 rough	710 – 800 mm	<b>070353</b>	4.60 kg	<b>070353V</b>	7.40 kg
ULP 900 rough	810 – 900 mm	<b>070355</b>	4.80 kg	<b>070355V</b>	8.00 kg
ULP 1000 rough	910 – 1000 mm	<b>070357</b>	5.00 kg	<b>070357V</b>	8.55 kg

All intermediate dimensions of the rib lath width available.

Installation dimension E > 1000 mm available on request

For proper formwork results, we recommend the combination with our ABS formwork comb type spacers.

## Installation situation

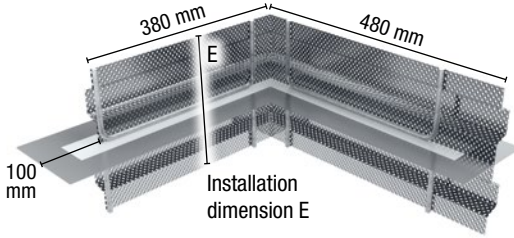


# ABS corner profile (EP) toothed and rough

with joint sheet metal coated on both sides Technical details page 89

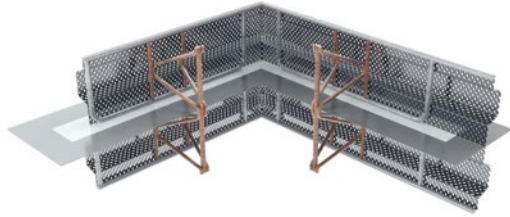
Art.Gr.  
**216**

Type S = Standard braced



ABS corner profile toothed – Type S

Type V = Reinforced version



ABS corner profile toothed – Type V

## Corner profile (EP) toothed

Description	Installation dimension E = Rib lath width	Type S = Standard braced		Type V = Reinforced version	
		Art. no.	Weight/pc.	Art. no.	Weight/pc.
EP 160 toothed	Up to 160 mm	070740	2.40 kg	070740V	3.60 kg
EP 200 toothed	170 – 200 mm	070742	2.60 kg	070742V	3.90 kg
EP 250 toothed	210 – 250 mm	070744	2.75 kg	070744V	4.30 kg
EP 300 toothed	260 – 300 mm	070746	3.00 kg	070746V	4.70 kg
EP 400 toothed	310 – 400 mm	070748	3.45 kg	070748V	5.50 kg
EP 500 toothed	410 – 500 mm	070750	4.25 kg	070750V	6.65 kg
EP 600 toothed	510 – 600 mm	070752	4.50 kg	070752V	7.25 kg
EP 700 toothed	610 – 700 mm	070754	4.70 kg	070754V	7.80 kg
EP 800 toothed	710 – 800 mm	070756	5.50 kg	070756V	8.95 kg
EP 900 toothed	810 – 900 mm	070758	5.75 kg	070758V	9.55 kg
EP 1000 toothed	910 – 1000 mm	070760	5.95 kg	070760V	10.10 kg

## Corner profile (EP) rough

Description	Installation dimension E = Rib lath width	Type S = Standard braced		Type V = Reinforced version	
		Art. no.	Weight/pc.	Art. no.	Weight/pc.
EP 130 rough	Up to 130 mm	070700	2.20 kg	070700V	3.30 kg
EP 160 rough	140 – 160 mm	070702	2.35 kg	070702V	3.55 kg
EP 200 rough	170 – 200 mm	070704	2.50 kg	070704V	3.85 kg
EP 250 rough	210 – 250 mm	070706	2.65 kg	070706V	4.15 kg
EP 300 rough	260 – 300 mm	070708	2.85 kg	070708V	4.55 kg
EP 400 rough	310 – 400 mm	070710	3.25 kg	070710V	5.30 kg
EP 500 rough	410 – 500 mm	070712	4.05 kg	070712V	6.45 kg
EP 600 rough	510 – 600 mm	070714	4.20 kg	070714V	6.95 kg
EP 700 rough	610 – 700 mm	070716	4.40 kg	070716V	7.50 kg
EP 800 rough	710 – 800 mm	070718	5.15 kg	070718V	8.60 kg
EP 900 rough	810 – 900 mm	070720	5.35 kg	070720V	9.15 kg
EP 1000 rough	910 – 1000 mm	070722	5.50 kg	070722V	9.70 kg

All intermediate dimensions of the rib lath width available.  
Installation dimension E > 1000 mm available on request  
For proper formwork results. we recommend the combination with our ABS formwork comb type spacers.

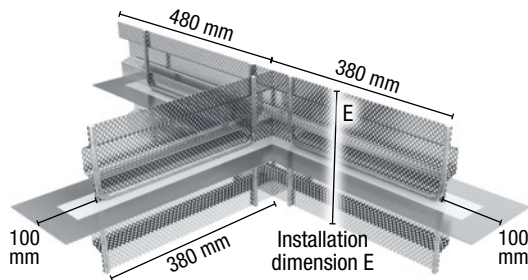


# ABS T profile (TP) toothed and rough

Technical details page 90

Art.Gr.  
216

Type S = Standard braced



ABS T-profile toothed – Type S

Type V = Reinforced version



ABS T-profile toothed – Type V

## T profile (TP) toothed

Description	Installation dimension E = Rib lath width	Type S = Standard braced		Type V = Reinforced version	
		Art. no.	Weight/pc.	Art. no.	Weight/pc.
TP 160 toothed	Up to 160 mm	070830	3.40 kg	070830V	5.10 kg
TP 200 toothed	170 – 200 mm	070832	3.60 kg	070832V	5.55 kg
TP 250 toothed	210 – 250 mm	070834	3.90 kg	070834V	6.10 kg
TP 300 toothed	260 – 300 mm	070836	4.20 kg	070836V	6.70 kg
TP 400 toothed	310 – 400 mm	070838	4.85 kg	070838V	7.85 kg
TP 500 toothed	410 – 500 mm	070840	6.00 kg	070840V	9.55 kg
TP 600 toothed	510 – 600 mm	070842	6.30 kg	070842V	10.40 kg
TP 700 toothed	610 – 700 mm	070844	6.65 kg	070844V	11.25 kg
TP 800 toothed	710 – 800 mm	070846	7.80 kg	070846V	12.90 kg
TP 900 toothed	810 – 900 mm	070848	8.10 kg	070848V	13.75 kg
TP 1000 toothed	910 – 1000 mm	070850	8.45 kg	070850V	14.60 kg

## T profile (TP) rough

Description	Installation dimension E = Rib lath width	Type S = Standard braced		Type V = Reinforced version	
		Art. no.	Weight/pc.	Art. no.	Weight/pc.
TP 130 rough	Up to 130 mm	070800	3.10 kg	070800V	4.65 kg
TP 160 rough	140 – 160 mm	070802	3.30 kg	070802V	5.00 kg
TP 200 rough	170 – 200 mm	070804	3.50 kg	070804V	5.45 kg
TP 250 rough	210 – 250 mm	070806	3.75 kg	070806V	5.95 kg
TP 300 rough	260 – 300 mm	070808	4.00 kg	070808V	6.50 kg
TP 400 rough	310 – 400 mm	070810	4.60 kg	070810V	7.60 kg
TP 500 rough	410 – 500 mm	070812	5.65 kg	070812V	9.20 kg
TP 600 rough	510 – 600 mm	070814	5.95 kg	070814V	10.00 kg
TP 700 rough	610 – 700 mm	070816	6.20 kg	070816V	10.80 kg
TP 800 rough	710 – 800 mm	070818	7.25 kg	070818V	12.40 kg
TP 900 rough	810 – 900 mm	070820	7.55 kg	070820V	13.20 kg
TP 1000 rough	910 – 1000 mm	070822	7.80 kg	070822V	13.95 kg

All intermediate dimensions of the rib lath width available.

Installation dimension E &gt; 1000 mm available on request

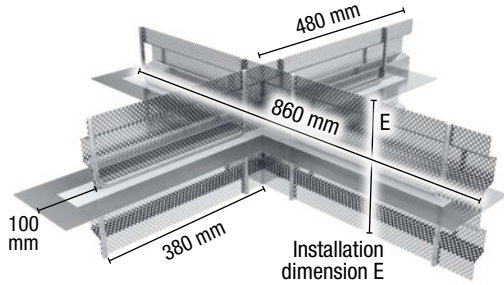
For proper formwork results, we recommend the combination with our ABS formwork comb type spacers.

# ABS cross profile (KP) toothed and rough

Technical details page 90

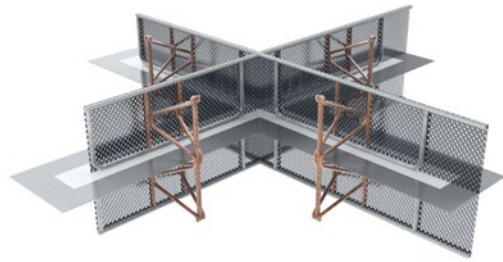
Art.Gr.  
216

Type S = Standard braced



ABS cross-profile toothed – Type S

Type V = Reinforced version



ABS cross-profile rough – Type V

## Cross profile (KP) toothed

Description	Installation dimension E = Rib lath width	Type S = Standard braced		Type V = Reinforced version	
		Art. no.	Weight/pc.	Art. no.	Weight/pc.
KP 160 toothed	Up to 160 mm	070878	4.45 kg	070878V	6.85 kg
KP 200 toothed	170 – 200 mm	070880	4.75 kg	070880V	7.45 kg
KP 250 toothed	210 – 250 mm	070882	5.10 kg	070882V	8.15 kg
KP 300 toothed	260 – 300 mm	070884	5.55 kg	070884V	8.95 kg
KP 400 toothed	310 – 400 mm	070886	6.40 kg	070886V	10.50 kg
KP 500 toothed	410 – 500 mm	070888	7.90 kg	070888V	12.70 kg
KP 600 toothed	510 – 600 mm	070890	8.35 kg	070890V	13.85 kg
KP 700 toothed	610 – 700 mm	070892	8.80 kg	070892V	15.00 kg
KP 800 toothed	710 – 800 mm	070894	10.30 kg	070894V	17.20 kg
KP 900 toothed	810 – 900 mm	070896	10.75 kg	070896V	18.35 kg
KP 1000 toothed	910 – 1000 mm	070898	11.20 kg	070898V	19.55 kg

## Cross profile (KP) rough

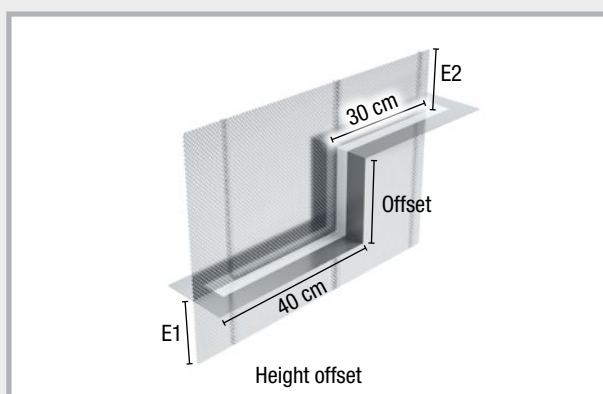
Description	Installation dimension E = Rib lath width	Type S = Standard braced		Type V = Reinforced version	
		Art. no.	Weight/pc.	Art. no.	Weight/pc.
KP 130 rough	Up to 130 mm	070852	4.05 kg	070852V	6.25 kg
KP 160 rough	140 – 160 mm	070854	4.30 kg	070854V	6.70 kg
KP 200 rough	170 – 200 mm	070856	4.55 kg	070856V	7.25 kg
KP 250 rough	210 – 250 mm	070858	4.90 kg	070858V	7.95 kg
KP 300 rough	260 – 300 mm	070860	5.25 kg	070860V	8.65 kg
KP 400 rough	310 – 400 mm	070862	6.05 kg	070862V	10.15 kg
KP 500 rough	410 – 500 mm	070864	7.45 kg	070864V	12.25 kg
KP 600 rough	510 – 600 mm	070866	7.80 kg	070866V	13.30 kg
KP 700 rough	610 – 700 mm	070868	8.15 kg	070868V	14.40 kg
KP 800 rough	710 – 800 mm	070870	9.60 kg	070870V	16.50 kg
KP 900 rough	810 – 900 mm	070872	9.95 kg	070872V	17.55 kg
KP 1000 rough	910 – 1000 mm	070874	10.30 kg	070874V	18.65 kg

All intermediate dimensions of the rib lath width available.  
Installation dimension E > 1000 mm available on request  
For proper formwork results. we recommend the combination with our ABS formwork comb type spacers.

# Accessories/special versions

## JOINT SHEET METAL ABS

Art. no.	Description	Schematic illustration
000354	<b>ABS installation aid, one side (bottom)</b> comprising 4 L brackets	
000356	<b>ABS installation aid, both sides (top + bottom)</b> comprising 4 L brackets, arranged opposed to each other on each side	
	<b>Tapered, one side</b> Rib lath wing with diagonal cut on one side	
	<b>Tapered, both sides</b> Rib lath wing with diagonal cut on both sides	
	<b>Offset</b> Rib lath wing with different heights	
	<b>Special lengths</b> Length of the element greater or less than stock length of 2.5 m	
	<b>Recess (round and rectangular)</b> Round or rectangular recesses in the rib lath wing produced in the factory	





# ABS spacer

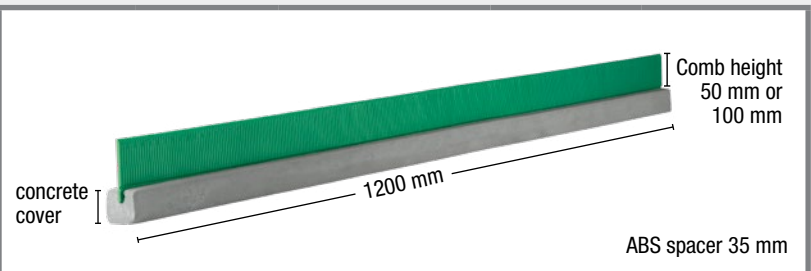
## ABS spacer, “formwork comb” type

Technical details page 91

Art.Gr. 219

Fibre cement square spacer with integrated formwork comb

- Compliant with German WU directive for Water-Impermeable Concrete Buildings



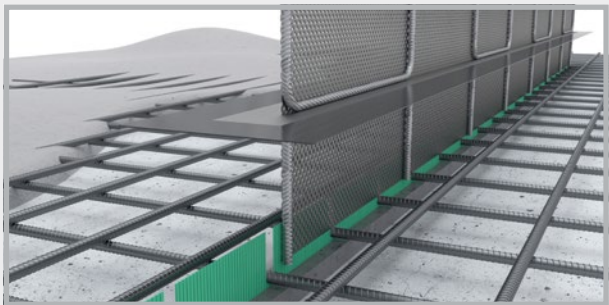
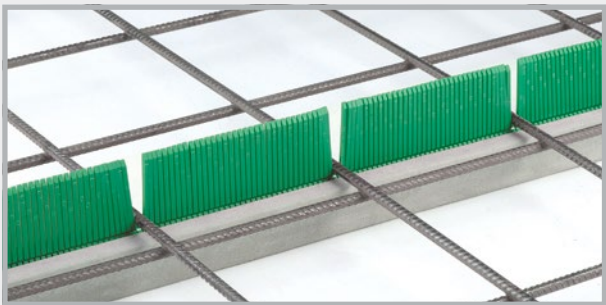
Description	Length	PU	Secondary packaging	Art. no.	Weight per pc.
<b>ABS spacer 35/50 mm</b> “Formwork comb” type, concrete cover 35 mm, Comb height 50 mm	1.2 m	1 pc.	1 pallet = 276 pcs.	<b>070645</b>	2.90 kg
<b>ABS spacer 35/100 mm</b> “Formwork comb” type, concrete cover 35 mm, Comb height 100 mm	1.2 m	1 pc.	1 pallet = 184 pcs.	<b>070643</b>	3.20 kg
<b>ABS spacer 40/50 mm</b> “Formwork comb” type, Concrete cover 40 mm, Comb height 50 mm	1.2 m	1 pc.	1 pallet = 228 pcs.	<b>070647</b>	3.80 kg
<b>ABS spacer 40/100 mm</b> “Formwork comb” type, Concrete cover 40 mm, Comb height 100 mm	1.2 m	1 pc.	1 pallet = 152 pcs.	<b>070646</b>	4.10 kg
<b>ABS spacer 50/50 mm</b> “Formwork comb” type, Concrete cover 50 mm, Comb height 50 mm	1.2 m	1 pc.	1 pallet = 140 pcs.	<b>070649</b>	6.10 kg
<b>ABS spacer 50/100 mm</b> “Formwork comb” type, Concrete cover 50 mm, Comb height 100 mm	1.2 m	1 pc.	1 pallet = 84 pcs.	<b>070648</b>	6.40 kg

By positioning the ABS spacer type formwork comb below the longitudinal direction of stopend panels, the comb minimises the discharge of concrete in the area of the lower reinforcement layer. The teeth of the comb are only displaced in the support area of the reinforcement; the open area between and below the lower layer of reinforcement is therefore reduced.

**The comb height must be selected in accordance with the height of the reinforcement structure:**

**Reinforcement structure up to 40 mm = comb height 50 mm**

**Reinforcement structure up to 90 mm = comb height 100 mm**



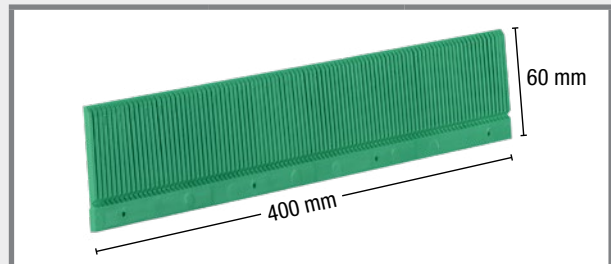
The formwork comb is arranged facing the first concreting section.

## Formwork comb – SOLO

Formwork aid for the upper reinforcement layer

Art.Gr.  
219

By positioning the formwork comb above the longitudinal direction of stopend panels, the comb minimises the discharge of concrete in the area of the upper reinforcement layer. The teeth of the formwork comb are only displaced in the support area of the reinforcement; the open area between the layer of reinforcement is therefore reduced.



Description	Length	PU	Art. no.	Weight/pc.
Formwork comb – SOLO, 50 mm	0.4 m	1 pc.	070644	0.06 kg
Formwork comb – SOLO, 100 mm	0.4 m	1 pc.	070642	0.12 kg



With nail holes, for simple installation



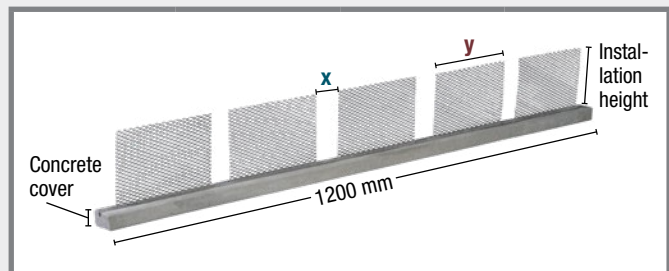
Position, align and anchor back the square timber

## ABS spacer, rib lath type “Fix”

Fibre cement square spacer with integrated rib lath

Art.Gr.  
219

By positioning the ABS spacer below the longitudinal direction of stopend panels, the rib lath minimises the discharge of concrete in the area of the lower reinforcement layer. The variant “Fix” is pre-fabricated to meet your specifications.



Description	Length	PU	Installation height 120		Installation height 150	
			Art. no.	Weight per pc.	Art. no.	Weight per pc.
ABS spacer 35 mm type “Fix” Installation height 120/150-x-y	1.2 m	1 pc.	070630	3.20 kg	070636	3.40 kg
ABS spacer 40 mm, type “Fix” Installation height 120/150-x-y	1.2 m	1 pc.	070632	3.60 kg	070638	3.80 kg
ABS spacer 50 mm, type “Fix” Installation height 120/150-x-y	1.2 m	1 pc.	070634	6.50 kg	070640	6.70 kg

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**.

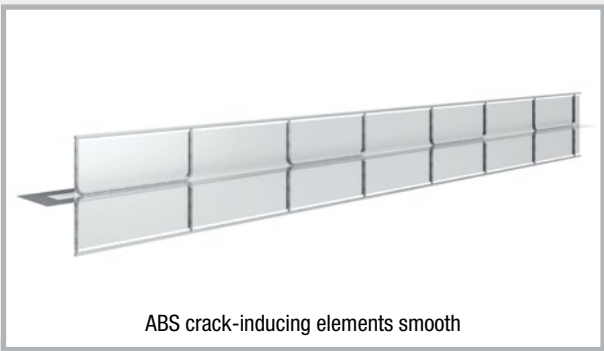
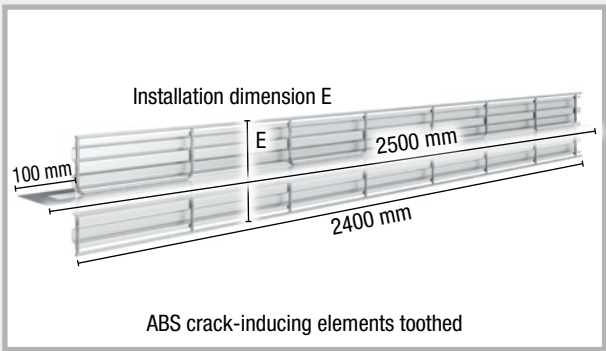
# ABS crack-inducing elements

## ABS crack-inducing elements toothed

with bracing and mounting rim,  
maximum joint opening 1.0 mm

Technical details page 92

Art.Gr.  
**233**



Description	E = Rib lath width	Length	Art. no.	Weight/pc.
<b>ABS crack-inducing elements 160 toothed</b>	Up to 160 mm	2.5 m	<b>070362S</b>	8.25 kg
<b>ABS crack-inducing elements 200 toothed</b>	170 – 200 mm	2.5 m	<b>070364S</b>	8.95 kg
<b>ABS crack-inducing elements 250 toothed</b>	210 – 250 mm	2.5 m	<b>070366S</b>	9.80 kg
<b>ABS crack-inducing elements 300 toothed</b>	260 – 300 mm	2.5 m	<b>070368S</b>	10.70 kg
<b>ABS crack-inducing elements 400 toothed</b>	310 – 400 mm	2.5 m	<b>070370S</b>	12.45 kg
<b>ABS crack-inducing elements 500 toothed</b>	410 – 500 mm	2.5 m	<b>070372S</b>	14.90 kg
<b>ABS crack-inducing elements 600 toothed</b>	510 – 600 mm	2.5 m	<b>070374S</b>	16.25 kg
<b>ABS crack-inducing elements 700 toothed</b>	610 – 700 mm	2.5 m	<b>070376S</b>	17.65 kg
<b>ABS crack-inducing elements 800 toothed</b>	710 – 800 mm	2.5 m	<b>070378S</b>	20.05 kg
<b>ABS crack-inducing elements 900 toothed</b>	810 – 900 mm	2.5 m	<b>070380S</b>	21.45 kg
<b>ABS crack-inducing elements 1000 toothed</b>	910 – 1000 mm	2.5 m	<b>070382S</b>	22.80 kg

All intermediate dimensions of the rib lath width available.  
Installation dimension E > 1000 mm available on request



# ABS crack-inducing elements smooth

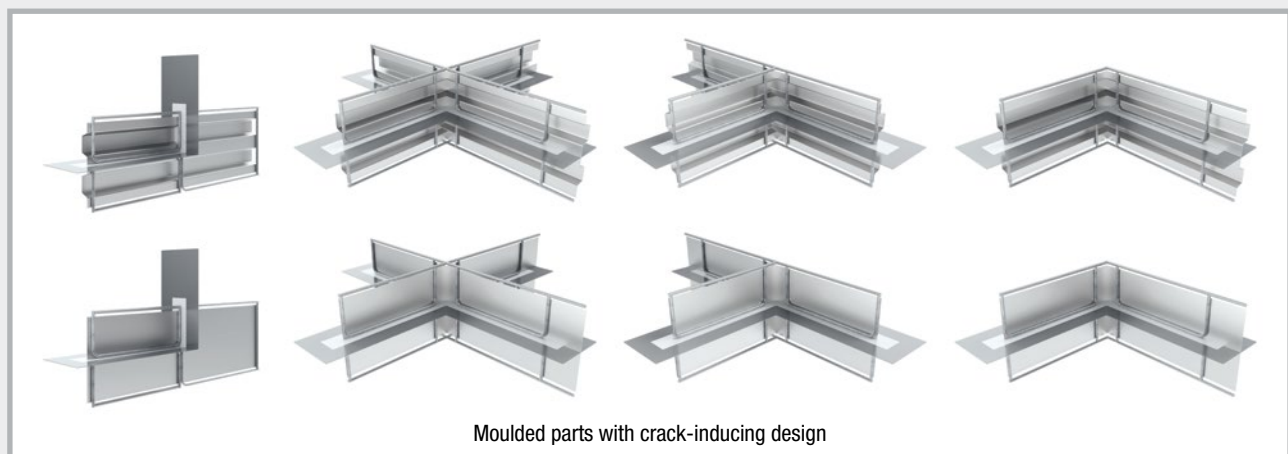
with bracing and mounting rim,  
maximum joint opening 1.0 mm

Technical details page 92

Art.Gr.  
**233**

Description	E = Rib lath width	Length	Art. no.	Weight/pc.
<b>ABS crack-inducing elements 130 smooth</b>	Up to 130 mm	2.5 m	<b>070281S</b>	7.45 kg
<b>ABS crack-inducing elements 160 smooth</b>	140 – 160 mm	2.5 m	<b>070282S</b>	7.95 kg
<b>ABS crack-inducing elements 200 smooth</b>	170 – 200 mm	2.5 m	<b>070284S</b>	8.55 kg
<b>ABS crack-inducing elements 250 smooth</b>	210 – 250 mm	2.5 m	<b>070287S</b>	9.30 kg
<b>ABS crack-inducing elements 300 smooth</b>	260 – 300 mm	2.5 m	<b>070289S</b>	10.05 kg
<b>ABS crack-inducing elements 400 smooth</b>	310 – 400 mm	2.5 m	<b>070291S</b>	11.60 kg
<b>ABS crack-inducing elements 500 smooth</b>	410 – 500 mm	2.5 m	<b>070293S</b>	13.85 kg
<b>ABS crack-inducing elements 600 smooth</b>	510 – 600 mm	2.5 m	<b>070295S</b>	15.00 kg
<b>ABS crack-inducing elements 700 smooth</b>	610 – 700 mm	2.5 m	<b>070297S</b>	16.15 kg
<b>ABS crack-inducing elements 800 smooth</b>	710 – 800 mm	2.5 m	<b>070299S</b>	18.35 kg
<b>ABS crack-inducing elements 900 smooth</b>	810 – 900 mm	2.5 m	<b>070301S</b>	19.50 kg
<b>ABS crack-inducing elements 1000 smooth</b>	910 – 1000 mm	2.5 m	<b>070303S</b>	20.65 kg

All intermediate dimensions of the rib lath width available.  
Installation dimension E > 1000 mm available on request



All accessories, e.g. deflection profile, cross profile, T profile and corner profile, can be produced with a crack-inducing design as toothed and smooth variant.

# Stopend panels UNCOATED JOINT SHEET METAL

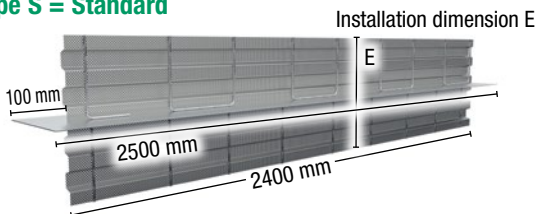
## Stopend panels UNCOATED JOINT SHEET METAL toothed

Uncoated joint sheet metal as recommended by the WU Guideline

Joint category: toothed, according to DIN EN 1992-1-1 NA (EC2)

Art.Gr.  
**218**

Type S = Standard



Stopend panels UNCOATED JOINT SHEET METAL toothed – Type S

Type V = Reinforced version



Stopend panels UNCOATED JOINT SHEET METAL toothed – Type V

Description	Installation dimension E = Rib lath width		Joint sheet metal 1.5 x 250 mm		Joint sheet metal 1.5 x 300 mm		Joint sheet metal 2.0 x 250 mm		Joint sheet metal 2.0 x 300 mm	
			Type S	Type V	Type S	Type V	Type S	Type V	Type S	Type V
<b>FB ABS 160 toothed</b>	up to 160 mm	Art. no.	<b>071100</b>	<b>071100V</b>	<b>071122</b>	<b>071122V</b>	<b>071144</b>	<b>071144V</b>	<b>071166</b>	<b>071166V</b>
		Weight	9.75 kg	12.90 kg	11.25 kg	14.35 kg	12.10 kg	15.20 kg	14.05 kg	17.20 kg
<b>FB ABS 200 toothed</b>	170-200 mm	Art. no.	<b>071102</b>	<b>071102V</b>	<b>071124</b>	<b>071124V</b>	<b>071146</b>	<b>071146V</b>	<b>071168</b>	<b>071168V</b>
		Weight	10.15 kg	13.60 kg	11.65 kg	15.10 kg	12.50 kg	15.95 kg	14.45 kg	17.90 kg
<b>FB ABS 250 toothed</b>	210-250 mm	Art. no.	<b>071104</b>	<b>071104V</b>	<b>071126</b>	<b>071126V</b>	<b>071148</b>	<b>071148V</b>	<b>071170</b>	<b>071170V</b>
		Weight	10.60 kg	14.45 kg	12.10 kg	16.00 kg	12.95 kg	16.80 kg	14.90 kg	18.75 kg
<b>FB ABS 300 toothed</b>	260-300 mm	Art. no.	<b>071106</b>	<b>071106V</b>	<b>071128</b>	<b>071128V</b>	<b>071150</b>	<b>071150V</b>	<b>071172</b>	<b>071172V</b>
		Weight	11.10 kg	15.40 kg	12.60 kg	16.90 kg	13.45 kg	17.75 kg	15.40 kg	19.70 kg
<b>FB ABS 400 toothed</b>	310-400 mm	Art. no.	<b>071108</b>	<b>071108V</b>	<b>071130</b>	<b>071130V</b>	<b>071152</b>	<b>071152V</b>	<b>071174</b>	<b>071174V</b>
		Weight	12.15 kg	17.25 kg	13.65 kg	18.75 kg	14.50 kg	19.60 kg	16.45 kg	21.55 kg
<b>FB ABS 500 toothed</b>	410-500 mm	Art. no.	<b>071110</b>	<b>071110V</b>	<b>071132</b>	<b>071132V</b>	<b>071154</b>	<b>071154V</b>	<b>071176</b>	<b>071176V</b>
		Weight	13.85 kg	19.80 kg	15.30 kg	21.25 kg	16.20 kg	22.10 kg	18.15 kg	24.10 kg
<b>FB ABS 600 toothed</b>	510-600 mm	Art. no.	<b>071112</b>	<b>071112V</b>	<b>071134</b>	<b>071134V</b>	<b>071156</b>	<b>071156V</b>	<b>071178</b>	<b>071178V</b>
		Weight	14.45 kg	21.25 kg	15.95 kg	22.70 kg	16.80 kg	23.55 kg	18.75 kg	25.55 kg
<b>FB ABS 700 toothed</b>	610-700 mm	Art. no.	<b>071114</b>	<b>071114V</b>	<b>071136</b>	<b>071136V</b>	<b>071158</b>	<b>071158V</b>	<b>071180</b>	<b>071180V</b>
		Weight	15.10 kg	22.70 kg	16.55 kg	24.15 kg	17.45 kg	25.10 kg	19.40 kg	27.00 kg
<b>FB ABS 800 toothed</b>	710-800 mm	Art. no.	<b>071116</b>	<b>071116V</b>	<b>071138</b>	<b>071138V</b>	<b>071160</b>	<b>071160V</b>	<b>071182</b>	<b>071182V</b>
		Weight	16.75 kg	25.20 kg	18.25 kg	26.65 kg	19.10 kg	27.55 kg	21.05 kg	29.50 kg
<b>FB ABS 900 toothed</b>	810-900 mm	Art. no.	<b>071118</b>	<b>071118V</b>	<b>071140</b>	<b>071140V</b>	<b>071162</b>	<b>071162V</b>	<b>071184</b>	<b>071184V</b>
		Weight	17.40 kg	26.65 kg	18.85 kg	28.15 kg	19.75 kg	29.00 kg	21.70 kg	30.95 kg
<b>FB ABS 1000 toothed</b>	910-1000 mm	Art. no.	<b>071120</b>	<b>071120V</b>	<b>071142</b>	<b>071142V</b>	<b>071164</b>	<b>071164V</b>	<b>071186</b>	<b>071186V</b>
		Weight	18.00 kg	28.10 kg	19.50 kg	29.60 kg	20.35 kg	30.45 kg	22.30 kg	32.40 kg

All intermediate dimensions of the rib lath width available.

Installation dimension E > 1000 mm available on request

For proper formwork results. we recommend the combination with our ABS formwork comb type spacers.

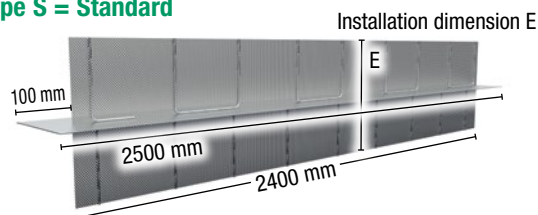
# Stopend panels UNCOATED JOINT SHEET METAL rough

Uncoated joint sheet metal as recommended by the WU Guideline

Joint category: rough, according to DIN EN 1992-1-1 NA (EC2)

Art.Gr.  
**218**

## Type S = Standard



Stopend panels UNCOATED JOINT SHEET METAL rough – Type S

## Type V = Reinforced version



Stopend panels UNCOATED JOINT SHEET METAL rough – Type V

Description	Installation dimension E = Rib lath width		Joint sheet metal 1,5 x 250 mm		Joint sheet metal 1,5 x 300 mm		Joint sheet metal 2,0 x 250 mm		Joint sheet metal 2,0 x 300 mm	
			Type S	Type V	Type S	Type V	Type S	Type V	Type S	Type V
FB ABS 130 rough	up to 130 mm	Art. no.	071000	071000V	071026	071026V	071050	071050V	071074	071074V
		Weight	9.25 kg	12.15 kg	10.75 kg	13.60 kg	11.60 kg	14.45 kg	13.55 kg	16.45 kg
FB ABS 160 rough	140-160 mm	Art. no.	071002	071002V	071028	071028V	071052	071052V	071076	071076V
		Weight	9.55 kg	12.70 kg	11.05 kg	14.15 kg	11.90 kg	15.00 kg	13.85 kg	17.00 kg
FB ABS 200 rough	170-200 mm	Art. no.	071004	071004V	071030	071030V	071054	071054V	071078	071078V
		Weight	9.90 kg	13.35 kg	11.40 kg	14.85 kg	12.25 kg	15.70 kg	14.20 kg	17.65 kg
FB ABS 250 rough	210-250 mm	Art. no.	071006	071006V	071032	071032V	071056	071056V	071080	071080V
		Weight	10.30 kg	14.15 kg	11.75 kg	15.65 kg	12.65 kg	16.50 kg	14.60 kg	18.45 kg
FB ABS 300 rough	260-300 mm	Art. no.	071008	071008V	071034	071034V	071058	071058V	071082	071082V
		Weight	10.75 kg	15.05 kg	12.20 kg	16.50 kg	13.10 kg	17.35 kg	15.05 kg	19.35 kg
FB ABS 400 rough	310-400 mm	Art. no.	071010	071010V	071036	071036V	071060	071060V	071084	071084V
		Weight	11.65 kg	16.75 kg	13.15 kg	18.25 kg	14.00 kg	19.10 kg	15.95 kg	21.10 kg
FB ABS 500 rough	410-500 mm	Art. no.	071012	071012V	071038	071038V	071062	071062V	071086	071086V
		Weight	13.20 kg	19.15 kg	14.70 kg	20.65 kg	15.60 kg	21.50 kg	17.50 kg	23.45 kg
FB ABS 600 rough	510-600 mm	Art. no.	071014	071014V	071040	071040V	071064	071064V	071088	071088V
		Weight	13.70 kg	20.50 kg	15.20 kg	21.95 kg	16.05 kg	22.80 kg	18.00 kg	24.80 kg
FB ABS 700 rough	610-700 mm	Art. no.	071016	071016V	071042	071042V	071066	071066V	071090	071090V
		Weight	14.20 kg	21.80 kg	15.70 kg	23.30 kg	16.55 kg	24.15 kg	18.50 kg	26.10 kg
FB ABS 800 rough	710-800 mm	Art. no.	071018	071018V	071044	071044V	071068	071068V	071092	071092V
		Weight	15.75 kg	24.20 kg	17.25 kg	25.65 kg	18.10 kg	26.55 kg	20.05 kg	28.50 kg
FB ABS 900 rough	810-900 mm	Art. no.	071020	071020V	071046	071046V	071070	071070V	071094	071094V
		Weight	16.25 kg	25.55 kg	17.75 kg	27.00 kg	18.60 kg	27.85 kg	20.55 kg	29.85 kg
FB ABS 1000 rough	910-1000 mm	Art. no.	071022	071022V	071048	071048V	071072	071072V	071096	071096V
		Weight	16.75 kg	26.85 kg	18.25 kg	28.35 kg	19.10 kg	29.20 kg	21.05 kg	31.15 kg

All intermediate dimensions of the rib lath width available.

Installation dimension E > 1000 mm available on request

For proper formwork results, we recommend the combination with our ABS formwork comb type spacers.



# Deflection profile, toothed and rough

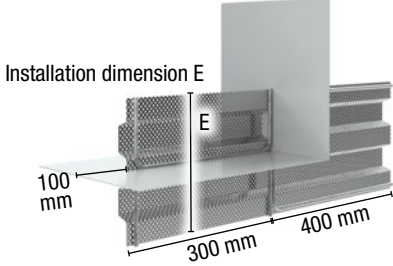
for changing the direction of the sealing level from horizontal to vertical

Uncoated joint sheet metal as recommended by the WU Guideline

Joint category: toothed and rough, according to DIN EN 1992-1-1 NA (EC2)

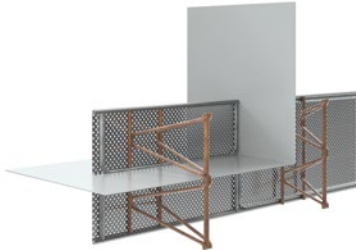
Art.Gr.  
**218**

Type S = Standard



Stopend panels UNCOATED JOINT SHEET METAL deflection profile, toothed

Type V = Reinforced version



Stopend panels UNCOATED JOINT SHEET METAL deflection profile, rough

Description	Installation dimension E = Rib lath width		toothed 2.0 x 250 mm		toothed 2.0 x 300 mm		rough 2.0 x 250 mm		rough 2.0 x 300 mm	
			Type S	Type V	Type S	Type V	Type S	Type V	Type S	Type V
<b>FB ABS ULP 130</b>	up to 130 mm	Art. no. Weight	–	–	–	–	<b>071260</b> 4.00 kg	<b>071260V</b> 4.50 kg	<b>071290</b> 4.45 kg	<b>071290V</b> 4.99 kg
<b>FB ABS ULP 160</b>	140 – 160 mm	Art. no. Weight	<b>071320</b> 4.36 kg	<b>071320V</b> 5.03 kg	<b>071350</b> 4.87 kg	<b>071350V</b> 5.53 kg	<b>071262</b> 4.16 kg	<b>071262V</b> 4.83 kg	<b>071292</b> 4.67 kg	<b>071292V</b> 5.33 kg
<b>FB ABS ULP 200</b>	170 – 200 mm	Art. no. Weight	<b>071322</b> 4.69 kg	<b>071322V</b> 5.52 kg	<b>071352</b> 5.21 kg	<b>071352V</b> 6.04 kg	<b>071264</b> 4.44 kg	<b>071264V</b> 5.27 kg	<b>071294</b> 4.96 kg	<b>071294V</b> 5.79 kg
<b>FB ABS ULP 250</b>	210 – 250 mm	Art. no. Weight	<b>071324</b> 5.10 kg	<b>071324V</b> 6.14 kg	<b>071354</b> 5.64 kg	<b>071354V</b> 6.68 kg	<b>071266</b> 4.79 kg	<b>071266V</b> 5.83 kg	<b>071296</b> 5.33 kg	<b>071296V</b> 6.36 kg
<b>FB ABS ULP 300</b>	260 – 300 mm	Art. no. Weight	<b>071326</b> 5.96 kg	<b>071326V</b> 7.21 kg	<b>071356</b> 6.52 kg	<b>071356V</b> 7.77 kg	<b>071268</b> 5.59 kg	<b>071268V</b> 6.83 kg	<b>071298</b> 6.15 kg	<b>071298V</b> 7.39 kg
<b>FB ABS ULP 400</b>	310 – 400 mm	Art. no. Weight	<b>071328</b> 6.92 kg	<b>071328V</b> 8.58 kg	<b>071358</b> 7.52 kg	<b>071358V</b> 9.18 kg	<b>071270</b> 6.42 kg	<b>071270V</b> 8.08 kg	<b>071300</b> 7.02 kg	<b>071300V</b> 8.68 kg
<b>FB ABS ULP 500</b>	410 – 500 mm	Art. no. Weight	<b>071330</b> 8.09 kg	<b>071330V</b> 10.17 kg	<b>071360</b> 8.73 kg	<b>071360V</b> 10.80 kg	<b>071272</b> 7.47 kg	<b>071272V</b> 9.54 kg	<b>071302</b> 8.10 kg	<b>071302V</b> 10.18 kg
<b>FB ABS ULP 600</b>	510 – 600 mm	Art. no. Weight	<b>071332</b> 8.91 kg	<b>071332V</b> 11.40 kg	<b>071362</b> 9.58 kg	<b>071362V</b> 12.07 kg	<b>071274</b> 8.16 kg	<b>071274V</b> 10.65 kg	<b>071304</b> 8.83 kg	<b>071304V</b> 11.32 kg
<b>FB ABS ULP 700</b>	610 – 700 mm	Art. no. Weight	<b>071334</b> 9.73 kg	<b>071334V</b> 12.63 kg	<b>071364</b> 10.44 kg	<b>071364V</b> 13.35 kg	<b>071276</b> 8.85 kg	<b>071276V</b> 11.76 kg	<b>071306</b> 9.57 kg	<b>071306V</b> 12.47 kg
<b>FB ABS ULP 800</b>	710 – 800 mm	Art. no. Weight	<b>071336</b> 10.90 kg	<b>071336V</b> 14.22 kg	<b>071366</b> 11.65 kg	<b>071366V</b> 14.97 kg	<b>071278</b> 9.90 kg	<b>071278V</b> 13.22 kg	<b>071308</b> 10.65 kg	<b>071308V</b> 13.97 kg
<b>FB ABS ULP 900</b>	810 – 900 mm	Art. no. Weight	<b>071338</b> 11.72 kg	<b>071338V</b> 15.45 kg	<b>071368</b> 12.51 kg	<b>071368V</b> 16.24 kg	<b>071280</b> 10.59 kg	<b>071280V</b> 14.33 kg	<b>071310</b> 11.38 kg	<b>071310V</b> 15.12 kg
<b>FB ABS ULP 1000</b>	910 – 1000 mm	Art. no. Weight	<b>071340</b> 12.53 kg	<b>071340V</b> 16.68 kg	<b>071370</b> 13.37 kg	<b>071370V</b> 17.52 kg	<b>071282</b> 11.28 kg	<b>171282V</b> 15.43 kg	<b>071312</b> 12.12 kg	<b>071312V</b> 16.27 kg

The 2.0 x 250 mm or 2.0 x 300 mm version can also be used for all joint sheet metals ABS 1.5 x 250 mm or 1.5 x 300 mm.

# Corner profile, toothed and rough

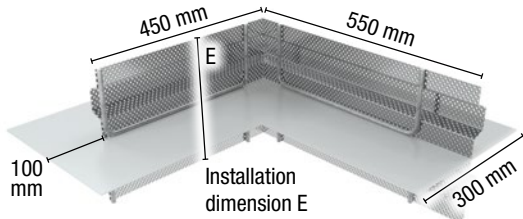
for changing the direction of the sealing level in the floor slab

Uncoated joint sheet metal as recommended by the WU Guideline

Joint category: toothed and rough, according to DIN EN 1992-1-1 NA (EC2)

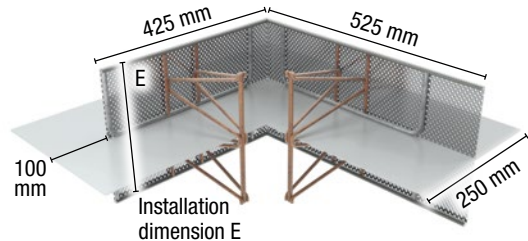
Art.Gr.  
**218**

**Type S = Standard**



Stopend panels UNCOATED JOINT SHEET METAL corner profile, toothed

**Type V = Reinforced version**



Stopend panels UNCOATED JOINT SHEET METAL corner profile, rough

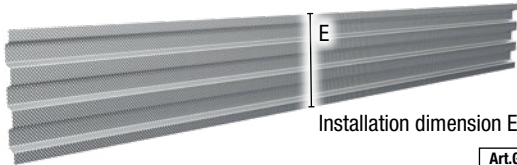
Description	Installation dimension E = Rib lath width		toothed 2.0 x 250 mm		toothed 2.0 x 300 mm		rough 2.0 x 250 mm		rough 2.0 x 300 mm	
			Type S	Type V	Type S	Type V	Type S	Type V	Type S	Type V
<b>FB ABS EP 130</b>	up to 130 mm	Art. no. Weight	—	—	—	—	<b>071380</b> 5.95 kg	<b>071380V</b> 6.49 kg	<b>071410</b> 6.70 kg	<b>071410V</b> 7.24 kg
<b>FB ABS EP 160</b>	140 – 160 mm	Art. no. Weight	<b>071440</b> 6.30 kg	<b>071440V</b> 6.96 kg	<b>071470</b> 7.05 kg	<b>071470V</b> 7.72 kg	<b>071382</b> 6.10 kg	<b>071382V</b> 6.76 kg	<b>071412</b> 6.85 kg	<b>071412V</b> 7.52 kg
<b>FB ABS EP 200</b>	170 – 200 mm	Art. no. Weight	<b>071442</b> 6.55 kg	<b>071442V</b> 7.38 kg	<b>071472</b> 7.30 kg	<b>071472V</b> 8.13 kg	<b>071384</b> 6.30 kg	<b>071384V</b> 7.13 kg	<b>071414</b> 7.05 kg	<b>071414V</b> 7.88 kg
<b>FB ABS EP 250</b>	210 – 250 mm	Art. no. Weight	<b>071444</b> 6.86 kg	<b>071444V</b> 7.90 kg	<b>071474</b> 7.61 kg	<b>071474V</b> 8.65 kg	<b>071386</b> 6.55 kg	<b>071386V</b> 7.59 kg	<b>071416</b> 7.30 kg	<b>071416V</b> 8.34 kg
<b>FB ABS EP 300</b>	260 – 300 mm	Art. no. Weight	<b>071446</b> 7.77 kg	<b>071446V</b> 9.01 kg	<b>071476</b> 8.52 kg	<b>071476V</b> 9.77 kg	<b>071388</b> 7.39 kg	<b>071388V</b> 8.64 kg	<b>071418</b> 8.15 kg	<b>071418V</b> 9.39 kg
<b>FB ABS EP 400</b>	310 – 400 mm	Art. no. Weight	<b>071448</b> 8.62 kg	<b>071448V</b> 10.28 kg	<b>071478</b> 9.38 kg	<b>071478V</b> 11.04 kg	<b>071390</b> 8.12 kg	<b>071390V</b> 9.78 kg	<b>071420</b> 8.88 kg	<b>071420V</b> 10.54 kg
<b>FB ABS EP 500</b>	410 – 500 mm	Art. no. Weight	<b>071450</b> 9.83 kg	<b>071450V</b> 11.91 kg	<b>071480</b> 10.59 kg	<b>071480V</b> 12.66 kg	<b>071392</b> 9.21 kg	<b>071392V</b> 11.28 kg	<b>071422</b> 9.96 kg	<b>071422V</b> 12.04 kg
<b>FB ABS EP 600</b>	510 – 600 mm	Art. no. Weight	<b>071452</b> 10.46 kg	<b>071452V</b> 12.95 kg	<b>071482</b> 11.21 kg	<b>071482V</b> 13.70 kg	<b>071394</b> 9.71 kg	<b>071394V</b> 12.20 kg	<b>071424</b> 10.46 kg	<b>071424V</b> 12.95 kg
<b>FB ABS EP 700</b>	610 – 700 mm	Art. no. Weight	<b>071454</b> 11.08 kg	<b>071454V</b> 13.99 kg	<b>071484</b> 11.39 kg	<b>071484V</b> 14.74 kg	<b>071396</b> 10.21 kg	<b>071396V</b> 13.11 kg	<b>071426</b> 10.96 kg	<b>071426V</b> 13.87 kg
<b>FB ABS EP 800</b>	710 – 800 mm	Art. no. Weight	<b>071456</b> 12.29 kg	<b>071456V</b> 15.61 kg	<b>071486</b> 13.05 kg	<b>071486V</b> 16.37 kg	<b>071398</b> 11.29 kg	<b>071398V</b> 14.61 kg	<b>071428</b> 12.05 kg	<b>071428V</b> 15.37 kg
<b>FB ABS EP 900</b>	810 – 900 mm	Art. no. Weight	<b>071458</b> 12.92 kg	<b>071458V</b> 16.65 kg	<b>071488</b> 13.67 kg	<b>071488V</b> 13.67 kg	<b>071400</b> 11.79 kg	<b>071400V</b> 15.53 kg	<b>071430</b> 12.55 kg	<b>071430V</b> 16.28 kg
<b>FB ABS EP 1000</b>	910 – 1000 mm	Art. no. Weight	<b>071460</b> 13.54 kg	<b>071460V</b> 17.69 kg	<b>071490</b> 14.30 kg	<b>071490V</b> 18.45 kg	<b>071402</b> 12.29 kg	<b>071402V</b> 16.44 kg	<b>071432</b> 13.05 kg	<b>071432V</b> 17.80 kg

The 2.0 x 250 mm or 2.0 x 300 mm version can also be used for all joint sheet metals ABS 1.5 x 250 mm or 1.5 x 300 mm.

# LinkFix stopend panels

Lost formwork/crack-inducing profiles for construction joints in the toothed joint category according to DIN EN 1992-1-1 NA (EC2), prefabricated ready for installation

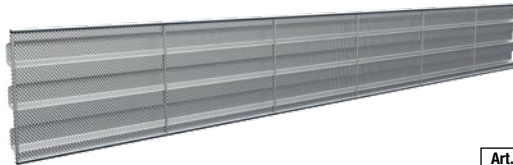
Type S = Formwork strips



LinkFix stopend panel – Type S

Art.Gr.  
217

Type V = braced



LinkFix stopend panel – Type V

Art.Gr.  
217

Type VV = braced + reinforced



LinkFix stopend panel – Type VV

Art.Gr.  
217

Type SRE =  
crack-inducing element

Technical details page 93



LinkFix stopend panel – Type SRE

Art.Gr.  
234

Element length: 2.4 m

E dimension > 800 mm available on request  
All intermediate dimensions available

Description	Installation dimension	Type S = Formwork strips		Type V = braced	
		Art. no.	Weight per pc.	Art. no.	Weight per pc.
LinkFix 130 toothed	Up to 130 mm	070556	0.81 kg	070576	2.80 kg
LinkFix 160 toothed	140 – 160 mm	070558	1.00 kg	070578	3.05 kg
LinkFix 200 toothed	170 – 200 mm	070560	1.25 kg	070580	3.35 kg
LinkFix 250 toothed	210 – 250 mm	070562	1.60 kg	070582	3.75 kg
LinkFix 300 toothed	260 – 300 mm	070564	1.90 kg	070584	4.15 kg
LinkFix 400 toothed	310 – 400 mm	070566	2.50 kg	070586	4.90 kg
LinkFix 500 toothed	410 – 500 mm	070568	3.15 kg	070588	5.70 kg
LinkFix 600 toothed	510 – 600 mm	070570	3.75 kg	070590	6.50 kg
LinkFix 700 toothed	610 – 700 mm	070572	4.40 kg	070592	7.25 kg
LinkFix 800 toothed	710 – 800 mm	020050 LinkFix sheets (page 37)		070594	8.05 kg

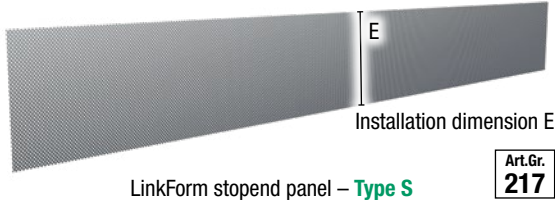
Description	Installation dimension	Type VV = braced + reinforced		Type SRE = crack-inducing element	
		Art. no.	Weight per pc.	Art. no.	Weight per pc.
LinkFix 130 toothed	Up to 130 mm	070576V	3.70 kg	070576S	3.50 kg
LinkFix 160 toothed	140 – 160 mm	070578V	4.15 kg	070578S	3.90 kg
LinkFix 200 toothed	170 – 200 mm	070580V	4.75 kg	070580S	4.40 kg
LinkFix 250 toothed	210 – 250 mm	070582V	5.50 kg	070582S	5.05 kg
LinkFix 300 toothed	260 – 300 mm	070584V	6.25 kg	070584S	5.70 kg
LinkFix 400 toothed	310 – 400 mm	070586V	7.75 kg	070586S	6.70 kg
LinkFix 500 toothed	410 – 500 mm	070588V	9.20 kg	070588S	8.30 kg
LinkFix 600 toothed	510 – 600 mm	070590V	10.70 kg	070590S	9.60 kg
LinkFix 700 toothed	610 – 700 mm	070592V	12.20 kg	070592S	10.90 kg
LinkFix 800 toothed	710 – 800 mm	070594V	13.70 kg	070594S	12.20 kg



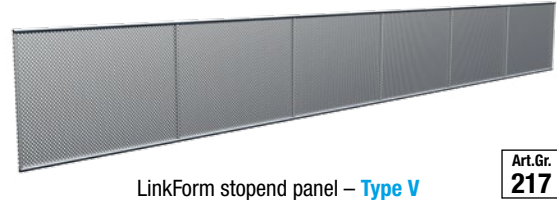
# LinkForm stopend panels

Lost formwork/crack-inducing profiles for construction joints in the rough joint category according to DIN EN 1992-1-1 NA (EC2), prefabricated ready for installation

**Type S = Formwork strips**



**Type V = braced**



**Type VV = braced + reinforced**



**Type SRE = crack-inducing element**

Technical details page 93



Element length: 2.4 m

E dimension > 800 mm available on request  
All intermediate dimensions available

Description	Installation dimension	Type S = Formwork strips		Type V = braced	
		Art. no.	Weight per pc.	Art. no.	Weight per pc.
LinkForm 130 rough	Up to 130 mm	070500	0.65 kg	070530	2.65 kg
LinkForm 160 rough	140 – 160 mm	070502	0.80 kg	070532	2.85 kg
LinkForm 200 rough	170 – 200 mm	070504	1.00 kg	070534	3.10 kg
LinkForm 250 rough	210 – 250 mm	070506	1.25 kg	070536	3.45 kg
LinkForm 300 rough	260 – 300 mm	070508	1.50 kg	070538	3.75 kg
LinkForm 400 rough	310 – 400 mm	070512	2.00 kg	070540	4.40 kg
LinkForm 500 rough	410 – 500 mm	070514	2.50 kg	070544	5.05 kg
LinkForm 600 rough	510 – 600 mm	070516	3.00 kg	070546	5.75 kg
LinkForm 700 rough	610 – 700 mm	070518	3.50 kg	070548	6.40 kg
LinkForm 800 rough	710 – 800 mm	070519	4.00 kg	070550	7.05 kg

Description	Installation dimension	Type VV = braced + reinforced		Type SRE = crack-inducing element	
		Art. no.	Weight per pc.	Art. no.	Weight per pc.
LinkForm 130 rough	Up to 130 mm	070530V	3.55 kg	070530S	3.30 kg
LinkForm 160 rough	140 – 160 mm	070532V	3.95 kg	070532S	3.65 kg
LinkForm 200 rough	170 – 200 mm	070534V	4.50 kg	070534S	4.10 kg
LinkForm 250 rough	210 – 250 mm	070536V	5.20 kg	070536S	4.70 kg
LinkForm 300 rough	260 – 300 mm	070538V	5.85 kg	070538S	5.25 kg
LinkForm 400 rough	310 – 400 mm	070540V	7.25 kg	070540S	6.40 kg
LinkForm 500 rough	410 – 500 mm	070544V	8.60 kg	070544S	7.55 kg
LinkForm 600 rough	510 – 600 mm	070546V	9.95 kg	070546S	8.70 kg
LinkForm 700 rough	610 – 700 mm	070548V	11.30 kg	070548S	9.85 kg
LinkForm 800 rough	710 – 800 mm	070550V	12.70 kg	070550S	11.00 kg

For proper formwork results, we recommend the combination with our ABS formwork comb type spacers.

# ABS joint sheet metal cage

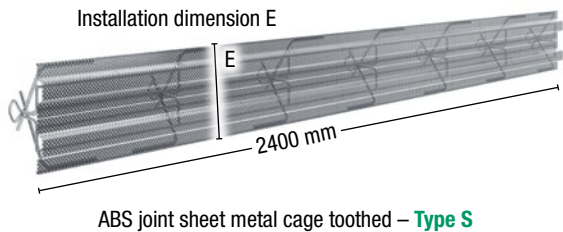
## ABS joint sheet metal cage toothed

Stopend panel for retrofitting joint sheet metal

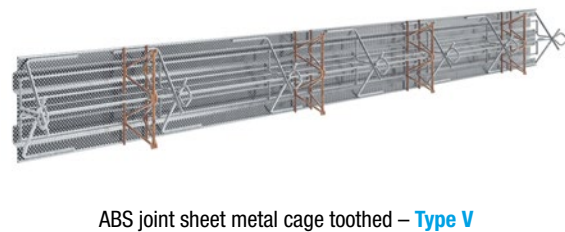
Joint category: toothed, according to DIN EN 1992-1-1 NA (EC2) Technical details page 94

Art.Gr.  
**225**

Type S = Standard braced



Type V = Reinforced version



Element length: 2.4 m

Description	Installation dimension E = Rib lath width	Type S = Standard braced		Type V = Reinforced version	
		Art. no.	Weight per pc.	Art. no.	Weight per pc.
ABS joint sheet metal cage 160 toothed	Up to 160 mm	071230	8.20 kg	–	–
ABS joint sheet metal cage 200 toothed	170 – 200 mm	071232	9.30 kg	071232V	10.95 kg
ABS joint sheet metal cage 250 toothed	210 – 250 mm	071234	9.60 kg	071234V	11.70 kg
ABS joint sheet metal cage 300 toothed	260 – 300 mm	071236	10.15 kg	071236V	12.65 kg
ABS joint sheet metal cage 400 toothed	310 – 400 mm	071238	11.70 kg	071238V	15.00 kg
ABS joint sheet metal cage 500 toothed	410 – 500 mm	071240	12.30 kg	071240V	16.45 kg
ABS joint sheet metal cage 600 toothed	510 – 600 mm	071242	12.95 kg	071242V	17.90 kg
ABS joint sheet metal cage 700 toothed	610 – 700 mm	071244	13.55 kg	071244V	19.40 kg
ABS joint sheet metal cage 800 toothed	710 – 800 mm	071246	14.20 kg	071246V	20.85 kg
ABS joint sheet metal cage 900 toothed	810 – 900 mm	071248	14.80 kg	071248V	22.30 kg
ABS joint sheet metal cage 1000 toothed	910 – 1000 mm	071250	15.45 kg	071250V	23.75 kg

All intermediate dimensions of the rib lath width available.  
Installation dimension E > 1000 mm available on request  
For proper formwork results, we recommend the combination with our ABS formwork comb type spacers.

You can also use all accessories, e.g. deflection profile, cross profile, T profile and corner profile, in conjunction with the ABS joint sheet metal cage. You will find an overview on pages 42 to 46.

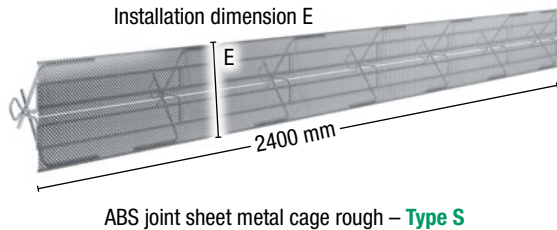
# ABS joint sheet metal cage rough

Stopend panel for retrofitting joint sheet metal

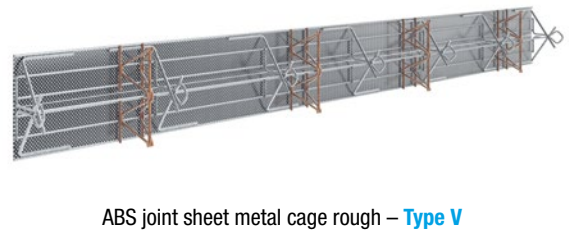
Joint category: rough, according to DIN EN 1992-1-1 NA (EC2) [Technical details page 94](#)

Art.Gr.  
**225**

## Type S = Standard braced



## Type V = Reinforced version



Element length: 2.4 m

Description	Installation dimension E = Rib lath width	Type S = Standard braced		Type V = Reinforced version	
		Art. no.	Weight per pc.	Art. no.	Weight per pc.
ABS joint sheet metal cage 130 rough	Up to 130 mm	071200	6.95 kg	—	—
ABS joint sheet metal cage 160 rough	140 – 160 mm	071202	7.10 kg	—	—
ABS joint sheet metal cage 200 rough	170 – 200 mm	071204	7.30 kg	071204V	8.95 kg
ABS joint sheet metal cage 250 rough	210 – 250 mm	071206	8.45 kg	071206V	10.50 kg
ABS joint sheet metal cage 300 rough	260 – 300 mm	071208	9.80 kg	071208V	12.30 kg
ABS joint sheet metal cage 400 rough	310 – 400 mm	071210	11.20 kg	071210V	14.55 kg
ABS joint sheet metal cage 500 rough	410 – 500 mm	071212	11.70 kg	071212V	15.85 kg
ABS joint sheet metal cage 600 rough	510 – 600 mm	071214	12.20 kg	071214V	17.20 kg
ABS joint sheet metal cage 700 rough	610 – 700 mm	071216	12.70 kg	071216V	18.50 kg
ABS joint sheet metal cage 800 rough	710 – 800 mm	071218	13.20 kg	071218V	19.85 kg
ABS joint sheet metal cage 900 rough	810 – 900 mm	071220	13.70 kg	071220V	21.15 kg
ABS joint sheet metal cage 1000 rough	910 – 1000 mm	071222	14.20 kg	071222V	22.50 kg

All intermediate dimensions of the rib lath width available.

Installation dimension E > 1000 mm available on request

For proper formwork results, we recommend the combination with our ABS formwork comb type spacers.

You can also use all accessories, e.g. deflection profile, cross profile, T profile and corner profile, in conjunction with the ABS joint sheet metal cage. You will find an overview on pages 42 to 46.

# ABS joint tape cage

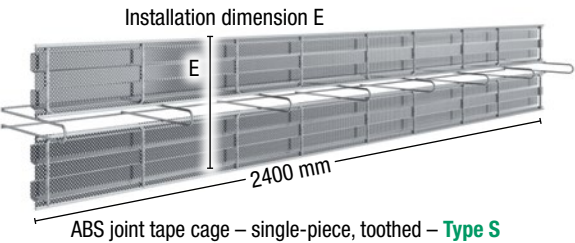
## ABS joint tape cage – single-piece, toothed

Stopend panel for retrofitting joint tapes

Joint category: toothed, according to DIN EN 1992-1-1 NA (EC2) Technical details page 95

Art.Gr.  
**232**

Type S = Standard braced



Type V = Reinforced version



Element length: 2.4 m

Description	Installation dimension E = Rib lath width	Type S = Standard braced		Type V = Reinforced version	
		Art. no.	Weight per pc.	Art. no.	Weight per pc.
ABS joint tape cage 160 single-piece, toothed	Up to 160 mm	070922	8.00 kg	–	–
ABS joint tape cage 200 single-piece, toothed	170 – 200 mm	070923	8.40 kg	070923V	10.05 kg
ABS joint tape cage 250 single-piece, toothed	210 – 250 mm	070924	8.85 kg	070924V	10.95 kg
ABS joint tape cage 300 single-piece, toothed	260 – 300 mm	070925	9.35 kg	070925V	11.85 kg
ABS joint tape cage 400 single-piece, toothed	310 – 400 mm	070926	10.40 kg	070926V	13.75 kg
ABS joint tape cage 500 single-piece, toothed	410 – 500 mm	070927	12.10 kg	070927V	16.25 kg
ABS joint tape cage 600 single-piece, toothed	510 – 600 mm	070928	12.70 kg	070928V	17.70 kg
ABS joint tape cage 700 single-piece, toothed	610 – 700 mm	070929	13.35 kg	070929V	19.15 kg
ABS joint tape cage 800 single-piece, toothed	710 – 800 mm	070930	15.00 kg	070930V	21.65 kg
ABS joint tape cage 900 single-piece, toothed	810 – 900 mm	070931	15.65 kg	070931V	23.10 kg
ABS joint tape cage 1000 single-piece, toothed	910 – 1000 mm	070932	16.25 kg	070932V	24.55 kg

All intermediate dimensions of the rib lath width available.  
Installation dimension E > 1000 mm available on request  
For proper formwork results, we recommend the combination with our ABS formwork comb type spacers.

When ordering, please specify the joint tape width (up to 320 mm).  
You will find the suitable joint tapes on page 34. A separate order is required.



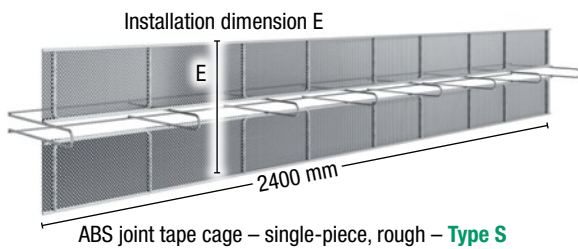
# ABS joint tape cage – single-piece, rough

Stopend panel for retrofitting joint tapes

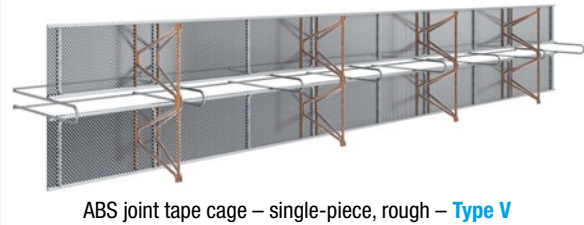
Joint category: rough, according to DIN EN 1992-1-1 NA (EC2) [Technical details page 95](#)

Art.Gr.  
**232**

## Type S = Standard braced



## Type V = Reinforced version



Element length: 2.4 m

All intermediate dimensions of the rib lath width available

Description	Installation dimension E = Rib lath width	Type S = Standard braced		Type V = Reinforced version	
		Art. no.	Weight per pc.	Art. no.	Weight per pc.
ABS joint tape cage 130 single-piece, rough	Up to 130 mm	<b>070910</b>	7.55 kg	–	–
ABS joint tape cage 160 single-piece, rough	140 – 160 mm	<b>070911</b>	7.85 kg	–	–
ABS joint tape cage 200 single-piece, rough	170 – 200 mm	<b>070912</b>	8.20 kg	<b>070912V</b>	9.85 kg
ABS joint tape cage 250 single-piece, rough	210 – 250 mm	<b>070913</b>	8.60 kg	<b>070913V</b>	10.65 kg
ABS joint tape cage 300 single-piece, rough	260 – 300 mm	<b>070914</b>	9.05 kg	<b>070914V</b>	11.50 kg
ABS joint tape cage 400 single-piece, rough	310 – 400 mm	<b>070915</b>	9.95 kg	<b>070915V</b>	13.25 kg
ABS joint tape cage 500 single-piece, rough	410 – 500 mm	<b>070916</b>	11.50 kg	<b>070916V</b>	15.65 kg
ABS joint tape cage 600 single-piece, rough	510 – 600 mm	<b>070917</b>	12.00 kg	<b>070917V</b>	17.00 kg
ABS joint tape cage 700 single-piece, rough	610 – 700 mm	<b>070918</b>	12.50 kg	<b>070918V</b>	18.30 kg
ABS joint tape cage 800 single-piece, rough	710 – 800 mm	<b>070919</b>	14.05 kg	<b>070919V</b>	20.70 kg
ABS joint tape cage 900 single-piece, rough	810 – 900 mm	<b>070920</b>	14.55 kg	<b>070920V</b>	22.00 kg
ABS joint tape cage 1000 single-piece, rough	910 – 1000 mm	<b>070921</b>	15.05 kg	<b>070921V</b>	23.35 kg

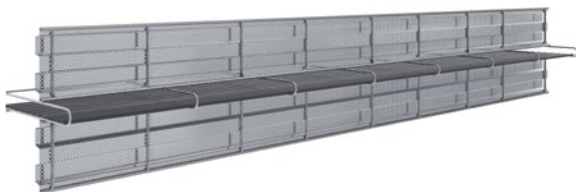
All intermediate dimensions of the rib lath width available.

Installation dimension E > 1000 mm available on request

For proper formwork results, we recommend the combination with our ABS formwork comb type spacers.

When ordering, please specify the joint tape width (up to 320 mm).

You will find the suitable joint tapes on page 34. A separate order is required.



ABS joint tape cage – single-piece, toothed,  
with construction joint tape – **Type S**



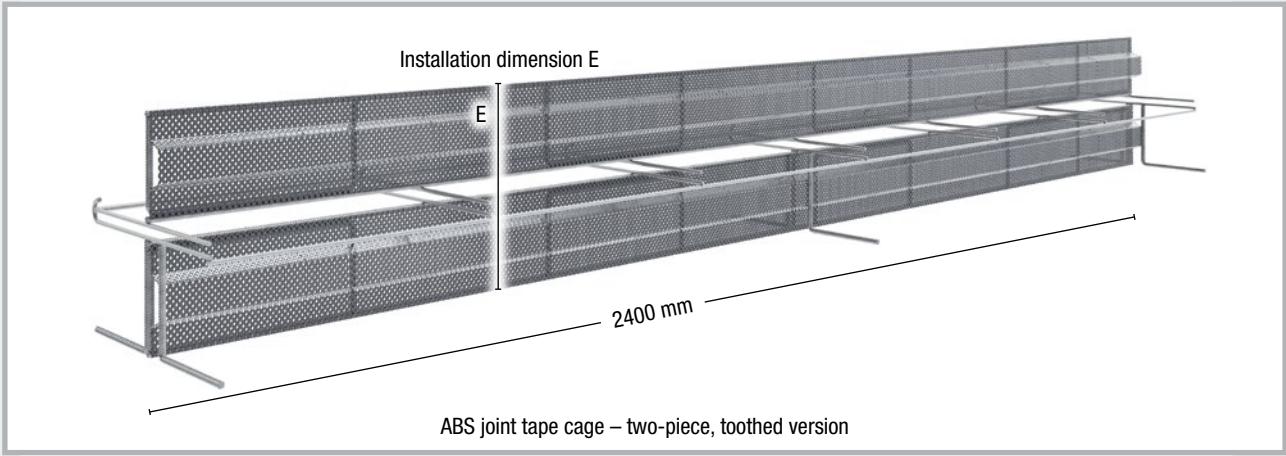
ABS joint tape cage – single-piece, rough,  
with construction joint tape – **Type V**

# ABS joint tape cage – two-piece, toothed and rough version

Stopend panel for retrofitting joint sheet metal

Joint category: toothed and rough, according to DIN EN 1992-1-1 NA (EC2)

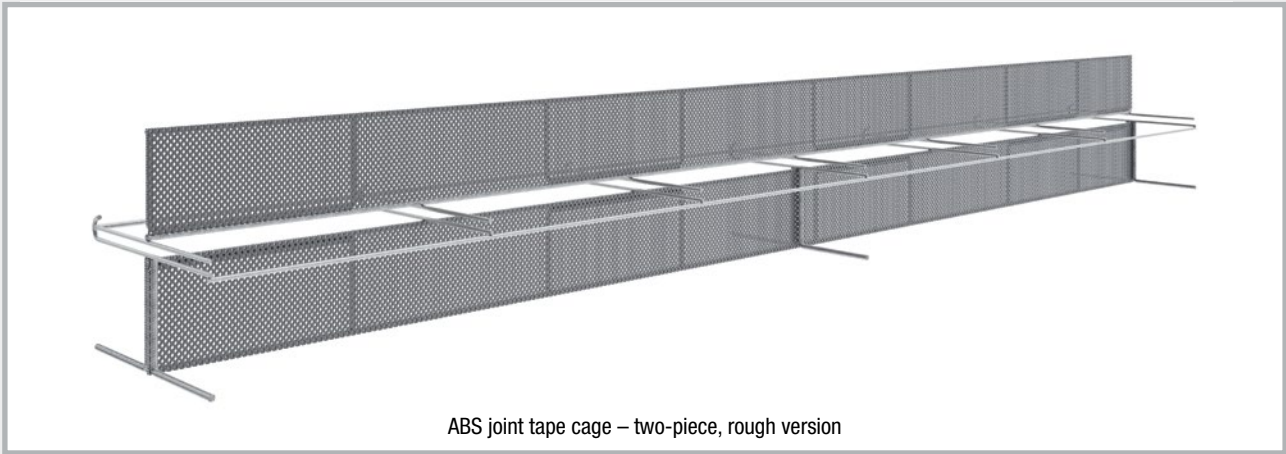
Art.Gr.  
232



Element length: 2.4 m

Description	Installation dimension E = Rib lath width	toothed		rough	
		Art. no.	Weight per pc.	Art. no.	Weight per pc.
ABS joint tape cage 160 two-piece	up to 160 mm	070986	7.99 kg	070980	7.82 kg
ABS joint tape cage 200 two-piece	170 – 200 mm	070987	8.38 kg	070981	8.17 kg
ABS joint tape cage 250 two-piece	210 – 250 mm	070988	8.83 kg	070982	8.55 kg
ABS joint tape cage 300 two-piece	260 – 300 mm	070989	9.35 kg	070983	9.01 kg
ABS joint tape cage 400 two-piece	310 – 400 mm	070990	10.39 kg	070984	9.92 kg
ABS joint tape cage 500 two-piece	410 – 500 mm	070991	12.06 kg	070985	11.48 kg

All intermediate dimensions of the rib lath width available.  
Installation dimension E > 500 mm available on request  
For proper formwork results, we recommend the combination with our ABS formwork comb type spacers.



## Product description

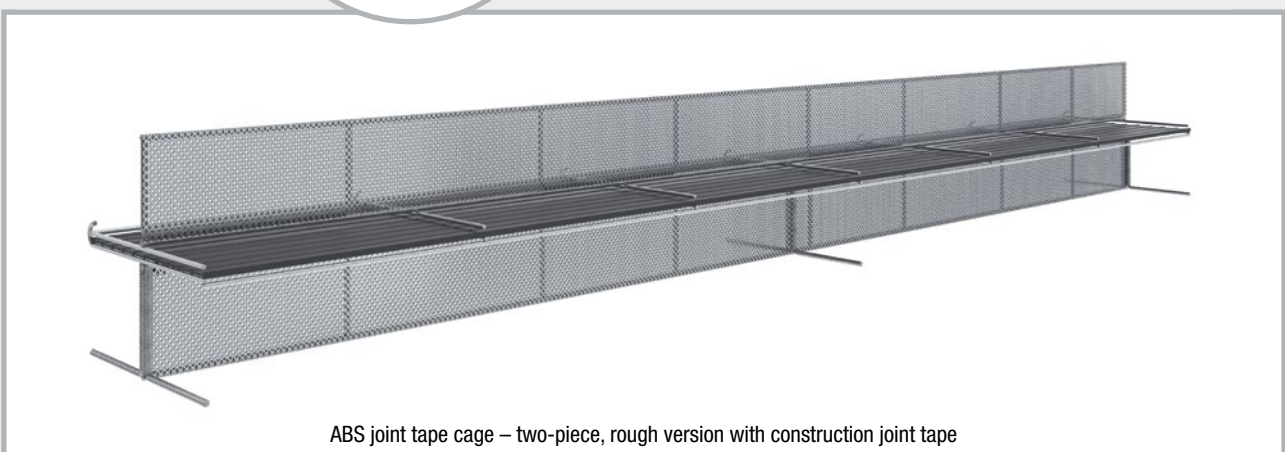
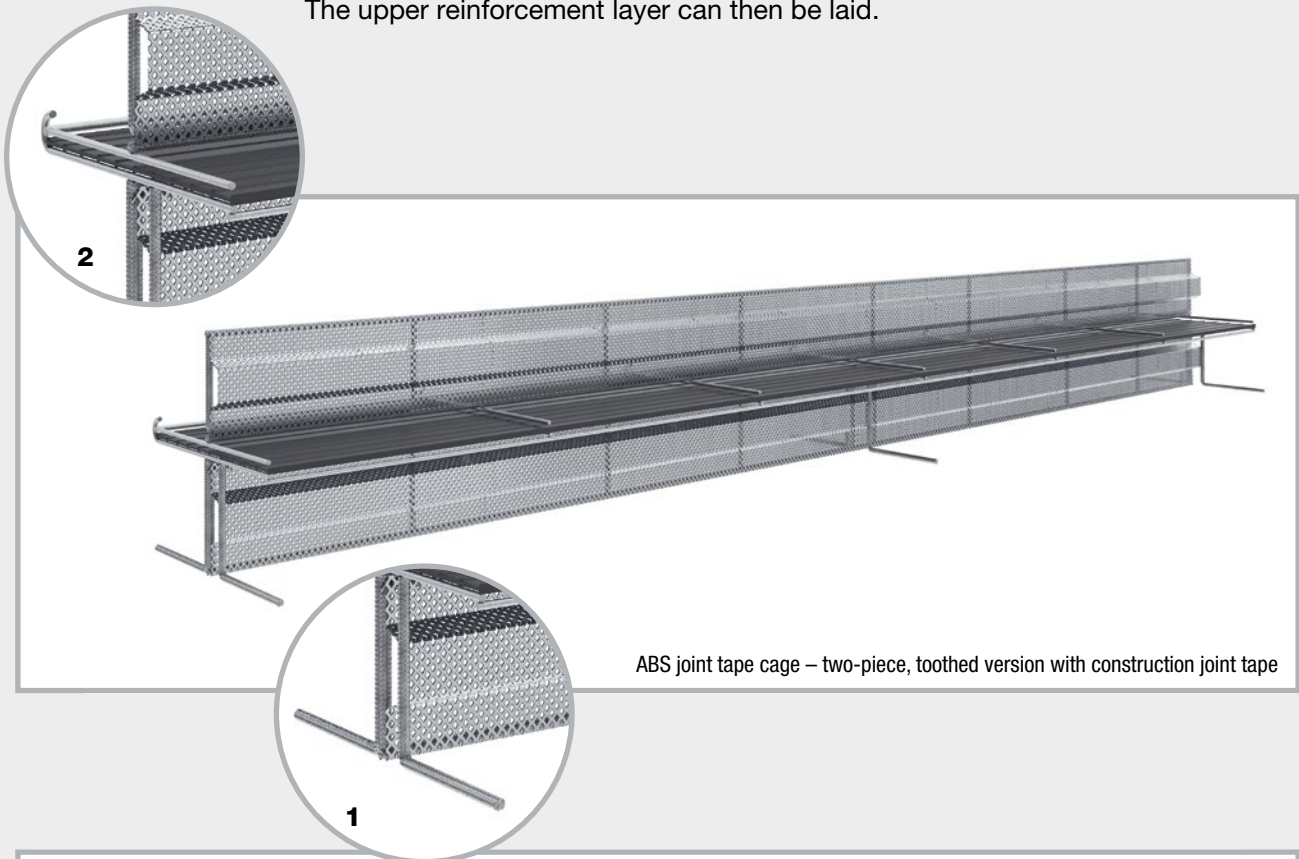
The two-piece structure of the joint tape cage ensures maximum ease of use. It consists of a head part and a base part between which the joint tape is installed.

## Installation

The base part which is equipped with support feet on both sides (**see Fig. 1**), is fastened to the lower reinforcement layer.

The joint tape is placed on the guide cage of the base part. The head part is then hooked into the base part (**see Fig. 2**) and pushed down. It secures the joint tape between the two parts.

The upper reinforcement layer can then be laid.



When ordering, please specify the joint tape width (up to 320 mm).

You will find the suitable joint tapes on page 34. They must be ordered separately.

ABS joint tape cage

Deflection profiles toothed

Stopend panel for retrofitting joint tapes,  
suitable for combination with ABS joint tape cage single- and two-piece

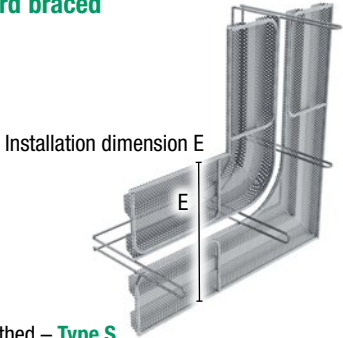
Joint category: toothed, according to DIN EN 1992-1-1 NA (EC2)

Bending radius 150 mm according to DIN 18197

Technical details page 96

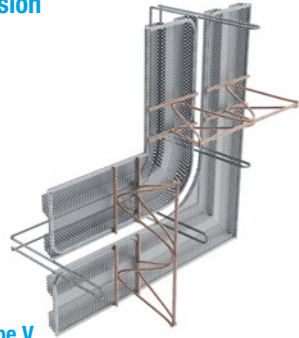
Art.Gr.  
232

Type S = Standard braced



ABS joint tape cage  
Deflection profile toothed – Type S

Type V = Reinforced version



ABS joint tape cage  
Deflection profile toothed – Type V

Description	Installation dimension E = Rib lath width	Type S = Standard braced		Type V = Reinforced version	
		Art. no.	Weight per pc.	Art. no.	Weight per pc.
ABS joint tape cage ULP 160 toothed	Up to 160 mm	070963	5.28 kg	–	–
ABS joint tape cage ULP 200 toothed	170 – 200 mm	070964	5.35 kg	070964V	6.18 kg
ABS joint tape cage ULP 250 toothed	210 – 250 mm	070965	5.44 kg	070965V	6.48 kg
ABS joint tape cage ULP 300 toothed	260 – 300 mm	070966	5.53 kg	070966V	6.78 kg
ABS joint tape cage ULP 400 toothed	310 – 400 mm	070967	5.72 kg	070967V	7.38 kg
ABS joint tape cage ULP 500 toothed	410 – 500 mm	070968	5.90 kg	070968V	7.97 kg
ABS joint tape cage ULP 600 toothed	510 – 600 mm	070969	6.08 kg	070969V	8.57 kg
ABS joint tape cage ULP 700 toothed	610 – 700 mm	070970	6.26 kg	070970V	9.17 kg
ABS joint tape cage ULP 800 toothed	710 – 800 mm	070971	6.44 kg	070971V	9.76 kg
ABS joint tape cage ULP 900 toothed	810 – 900 mm	070972	6.63 kg	070972V	10.36 kg
ABS joint tape cage ULP 1000 toothed	910 – 1000 mm	070973	6.81 kg	070973V	10.60 kg

All intermediate dimensions of the rib lath width available.  
Installation dimension E > 1000 mm available on request  
For proper formwork results, we recommend the combination with our ABS formwork comb type spacers.

When ordering, please specify the joint tape width (up to 320 mm).  
You will find the suitable joint tapes on page 34. A separate order is required.



# ABS joint tape cage

## Deflection profiles rough

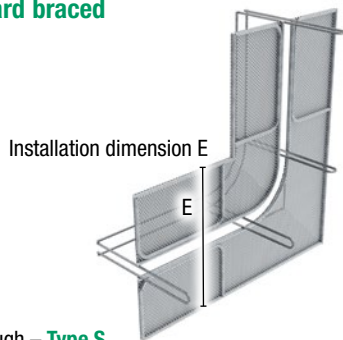
Stopend panel for retrofitting joint tapes,  
suitable for combination with ABS joint tape cage single- and two-piece

Joint category: rough, according to DIN EN 1992-1-1 NA (EC2)

Bending radius 150 mm according to DIN 18197 [Technical details page 96](#)

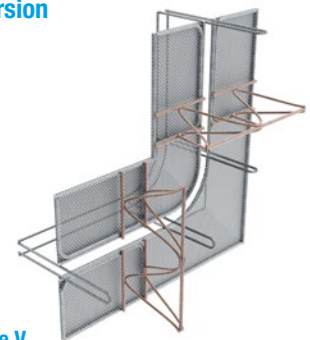
Art.Gr.  
232

Type S = Standard braced



ABS joint tape cage  
Deflection profile rough – Type S

Type V = Reinforced version



ABS joint tape cage  
Deflection profile rough – Type V

Description	Installation dimension E = Rib lath width	Type S = Standard braced		Type V = Reinforced version	
		Art. no.	Weight per pc.	Art. no.	Weight per pc.
ABS joint tape cage ULP 130 rough	Up to 130 mm	070950	5.18 kg	–	–
ABS joint tape cage ULP 160 rough	140 – 160 mm	070951	5.22 kg	–	–
ABS joint tape cage ULP 200 rough	170 – 200 mm	070952	5.28 kg	070952V	6.11 kg
ABS joint tape cage ULP 250 rough	210 – 250 mm	070953	5.35 kg	070953V	6.39 kg
ABS joint tape cage ULP 300 rough	260 – 300 mm	070954	5.42 kg	070954V	6.67 kg
ABS joint tape cage ULP 400 rough	310 – 400 mm	070955	5.57 kg	070955V	7.23 kg
ABS joint tape cage ULP 500 rough	410 – 500 mm	070956	5.72 kg	070956V	7.79 kg
ABS joint tape cage ULP 600 rough	510 – 600 mm	070957	5.86 kg	070957V	8.35 kg
ABS joint tape cage ULP 700 rough	610 – 700 mm	070958	6.01 kg	070958V	8.91 kg
ABS joint tape cage ULP 800 rough	710 – 800 mm	070959	6.15 kg	070959V	9.47 kg
ABS joint tape cage ULP 900 rough	810 – 900 mm	070960	6.30 kg	070960V	10.03 kg
ABS joint tape cage ULP 1000 rough	910 – 1000 mm	070961	6.44 kg	070961V	10.59 kg

All intermediate dimensions of the rib lath width available.

Installation dimension E > 1000 mm available on request

For proper formwork results, we recommend the combination with our ABS formwork comb type spacers.

**When ordering, please specify the joint tape width (up to 320 mm).**

**You will find the suitable joint tapes on page 34. A separate order is required.**

# ABS expansion joint elements

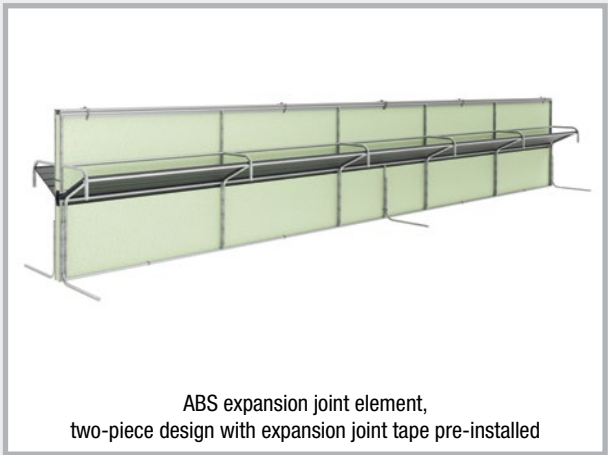
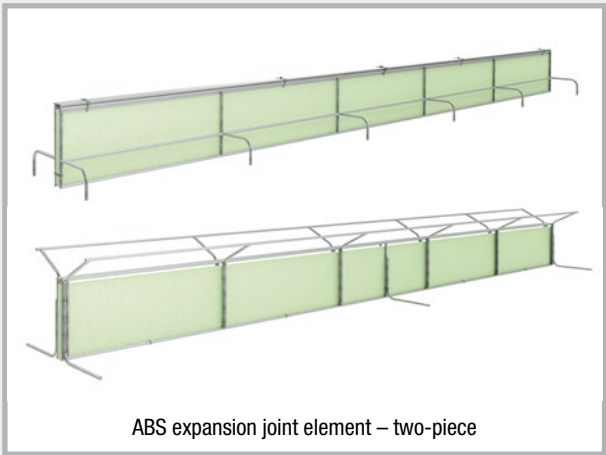
Thickness of the expansion joint insert (rigid foam): 20 mm

## ABS expansion joint element – two-piece

Art.Gr.  
235

Description	Component thickness	Length	Art. no.	Weight per kg
ABS expansion joint element two-piece, 180-200	180 – 200 mm	2.4 m	070940	14.55 kg
ABS expansion joint element two-piece, 210-300	210 – 300 mm	2.4 m	070941	14.75 kg
ABS expansion joint element two-piece, 310-400	310 – 400 mm	2.4 m	070942	15.80 kg
ABS expansion joint element two-piece, 410-500	410 – 500 mm	2.4 m	070943	15.95 kg

Component thickness > 500 mm available on request



Expansion joint elements for mounting an internal expansion joint tape up to 320 mm.

### Product description

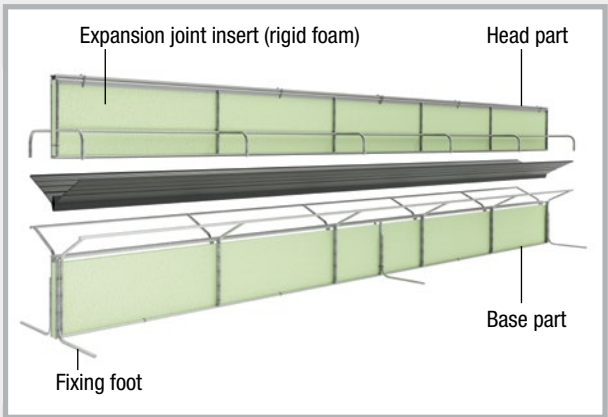
The two-piece element is designed for installation of internal expansion joint tapes with a joint tape width of up to 320 mm and 20 mm expansion core. The joint tapes are not included in the scope of delivery.

The base part, which is equipped with support feet, combines a self-standing rigid foam expansion joint insert with a 15° angled mounting cage for the expansion joint tape.

The head part which overlaps into the base part generates a straight guide for the expansion joint insert over the complete thickness of the constructional elements. The expansion core of the joint tape is secured in the middle of the expansion joint insert.

The total height (base part + joint tape expansion core + head part) must be matched to the planned thickness of the constructional elements.

**You will find the suitable expansion joint tapes on page 34.**

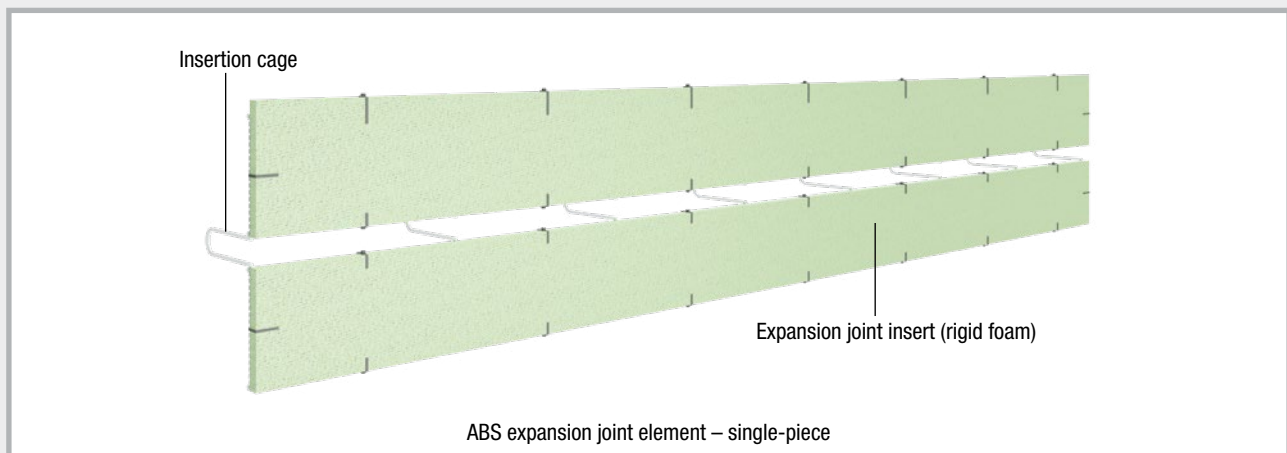


Art.Gr.  
235

# ABS expansion joint element – single-piece

Description	Component thickness	Length	Art. no.	Weight per pc.
ABS expansion joint element single-piece, 100 – 200 mm	100 – 200 mm	2.4 m	<b>070948</b>	8.65 kg
ABS expansion joint element single-piece, 210 – 300 mm	210 – 300 mm	2.4 m	<b>070949</b>	9.31 kg
ABS expansion joint element single-piece, 310 – 400 mm	310 – 400 mm	2.4 m	<b>070974</b>	10.87 kg
ABS expansion joint element single-piece, 410 – 500 mm	410 – 500 mm	2.4 m	<b>070975</b>	11.53 kg

All intermediate sizes are available for delivery.  
Component thickness > 500 mm available on request.

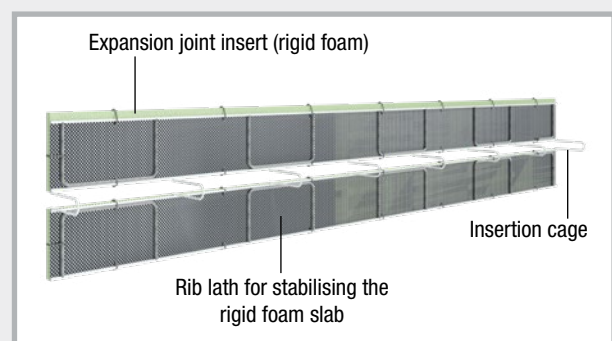


Single-piece expansion joint element for mounting an internal expansion joint tape of up to 320 mm with 20 mm expansion core.

## Product description

The element is designed for use of internal expansion joint tapes with a joint tape width of up to 320 mm and 20 mm expansion core. The joint tapes are not included in the scope of delivery.

The element combines an expansion joint insert which is adapted to the thickness of the component, with a centrally positioned joint tape cage for mounting the expansion joint tape. The expansion joint insert is stabilised by rib lath strips. As a result, the element can also be used for wall joints which run vertically.



## Installation

The expansion joint tape is inserted into the cage until the expansion core of the joint tape forms a line with the expansion joint insert. This is where it is secured in its position. The half of the joint tape which protrudes from the cage must be secured in position on site.

**When ordering, please specify the joint tape width.**

**You will find the suitable expansion joint tapes on page 34. They must be ordered separately.**

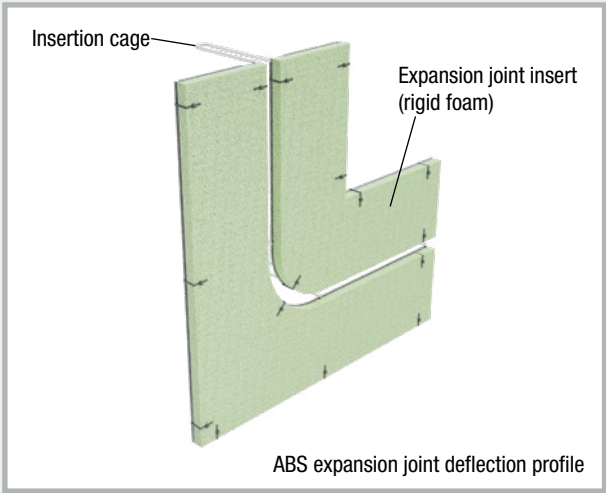
# ABS expansion joint deflection profile

Suitable for combination with ABS expansion joint element, single-piece and two-piece

Art.Gr.  
235

Description	Component thickness	Art. no.	Weight per pc.
ABS expansion joint deflection profile 100 – 200 mm	100 – 200 mm	070976	3.77 kg
ABS expansion joint deflection profile 210 – 300 mm	210 – 300 mm	070977	4.04 kg
ABS expansion joint deflection profile 310 – 400 mm	310 – 400 mm	070978	5.21 kg
ABS expansion joint deflection profile 410 – 500 mm	410 – 500 mm	070979	5.59 kg

All intermediate sizes are available for delivery.  
Component thickness > 500 mm available on request.



Single-piece expansion joint element for mounting an internal expansion joint tape of up to 320 mm with 20 mm expansion core.

For changing the direction of the expansion joint tape from the horizontal to the vertical laying direction.

## Product description

The element is designed for use of internal expansion joint tapes with a joint tape width of up to 320 mm with 20 mm expansion core. The joint tapes are not included in the scope of delivery.

The element combines a two-piece expansion joint insert which is adapted to the thickness of the component, with a centrally positioned joint tape cage for mounting the expansion joint tape.

The joint tape cage runs from the horizontal laying direction of the joint tape into the vertical laying direction, which is the typical installation situation of the floor slab/wall transition. The laying radius of the expansion joint tape which is determined by the joint tape cage meets the requirements for the minimum bending radius for internal expansion joint tapes of 250 mm according to DIN 18197.

## Installation

The expansion joint tape is inserted into the cage until the expansion core of the joint tape forms a line with the expansion joint insert. This is where it is secured in its position. The half of the joint tape which protrudes from the cage must be secured in position on site.

**When ordering, please specify the joint tape width.**

**You will find the suitable expansion joint tapes on page 34. They must be ordered separately.**

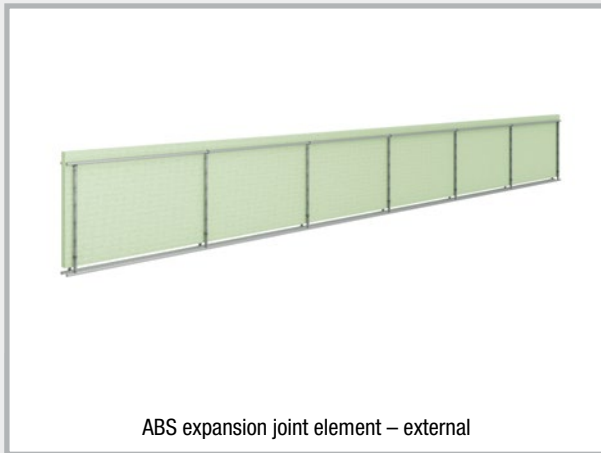


Art.Gr.  
**235**

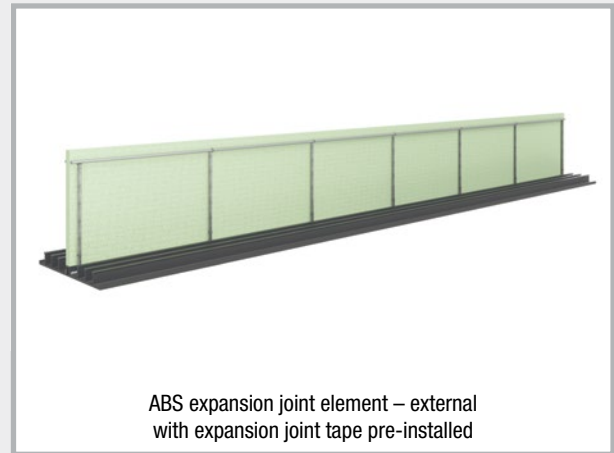
# ABS expansion joint insert – external

Description	Component thickness	Length	Art. no.	Weight per kg
<b>ABS expansion joint element external, 180-200</b>	180-200 mm	2.4 m	<b>070944</b>	4.90 kg
<b>ABS expansion joint element external, 210-300</b>	210-300 mm	2.4 m	<b>070945</b>	5.45 kg
<b>ABS expansion joint element external, 310-400</b>	310-400 mm	2.4 m	<b>070946</b>	5.60 kg
<b>ABS expansion joint element external, 410-500</b>	410-500 mm	2.4 m	<b>070947</b>	6.50 kg

All intermediate sizes are available for delivery.  
Component thickness > 500 mm available on request.



ABS expansion joint element – external



ABS expansion joint element – external  
with expansion joint tape pre-installed

Expansion joint elements for external expansion joint tapes and joint tapes for capping joints (specify additionally when ordering).

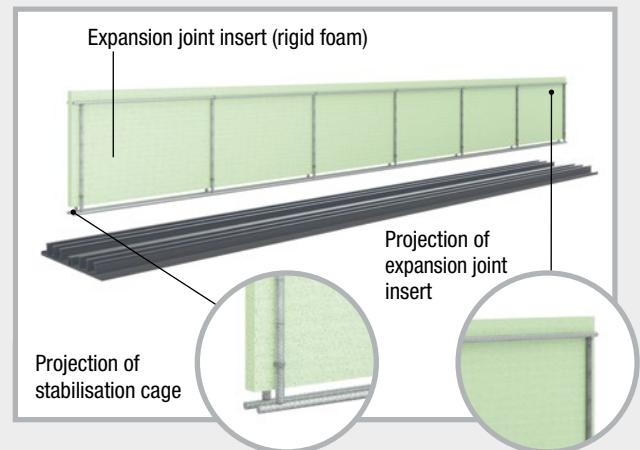
## Product description

The external ABS expansion joint element is designed for external expansion joint tapes and joint tapes for capping joints with an expansion core of 20 mm. The joint tapes are not included in the scope of delivery.

It comprises a rigid foam expansion joint insert with a thickness of 20 mm, combined with a stabilisation cage arranged on both sides. The stabilisation cage has a projection in the base area which is matched to the height of the expansion core and overlaps with the expansion core. In the head area, the expansion joint insert projects around the concrete cover.

When using joint tapes for capping joints, the stabilisation cage is set back by the overlap length of the joint tapes for capping joints.

**You will find the suitable expansion joint tapes on page 34.**



# ABS sound joint elements

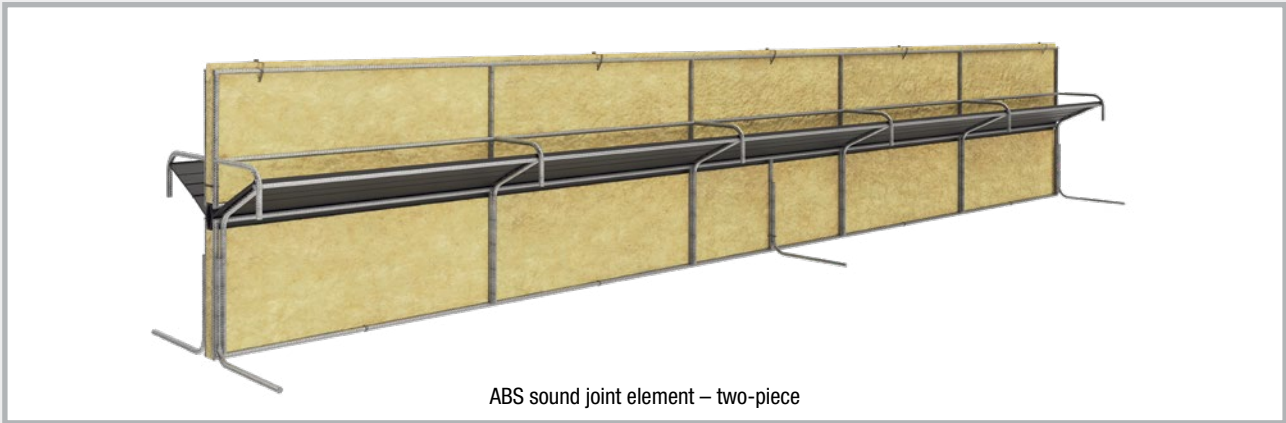
Thickness of sound joint insert (soft wood fibre board): 30 mm according to DIN 4109

## ABS sound joint element – two-piece

Art.Gr.  
236

Description	Component thickness	Length	Art. no.	Weight per kg
ABS sound joint element two-piece, 180 – 200 mm	180 – 200 mm	2.4 m	070940S	14.41 kg
ABS sound joint element two-piece, 210 – 300 mm	210 – 300 mm	2.4 m	070941S	14.96 kg
ABS sound joint element two-piece, 310 – 400 mm	310 – 400 mm	2.4 m	070942S	15.81 kg
ABS sound joint element two-piece, 410 – 500 mm	410 – 500 mm	2.4 m	070943S	16.35 kg

All intermediate dimensions of the sound joint insert available.  
Component thickness > 500 mm available on request.



Two-piece sound joint element for mounting an internal expansion joint tape or construction joint tape of up to 320 mm.

### Product description

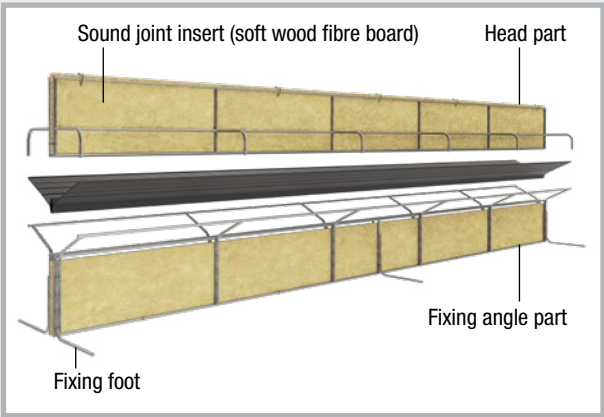
The two-piece element is designed for use of internal expansion joint tapes and construction joint tapes with a joint tape width of up to 320 mm. The joint tapes are not included in the scope of delivery.

The base part formed with support feet positioned on both sides combines a self-standing sound joint insert with a 15° angled mounting cage made of soft wood fibre board for the joint tape.

The head part which overlaps into the base part generates a straight guide for the sound joint insert over the complete thickness of the constructional elements.

The total height (base part + thickness of the joint tape (or expansion core) + head part) must be matched to the planned thickness of the constructional elements.

**When ordering, please specify the joint tape width.**  
**You will find the suitable joint tapes on page 34. They must be ordered separately.**

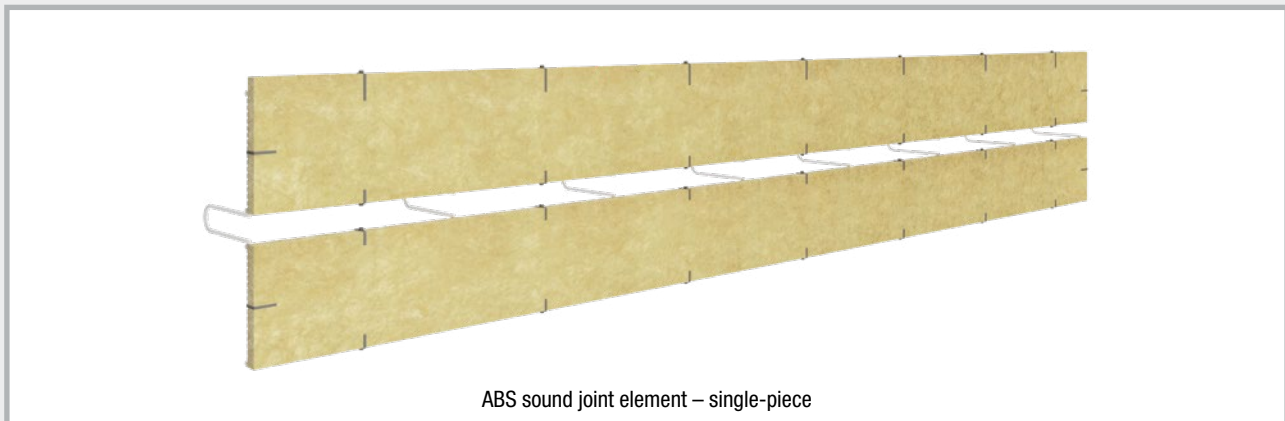


# ABS sound joint element – single-piece

 Art.Gr.  
236

Description	Component thickness	Length	Art. no.	Weight per kg
ABS sound joint element single-piece, 100 – 200 mm	100 – 200 mm	2.4 m	<b>070948S</b>	8.52 kg
ABS sound joint element single-piece, 210 – 300 mm	210 – 300 mm	2.4 m	<b>070949S</b>	9.11 kg
ABS sound joint element single-piece, 310 – 400 mm	310 – 400 mm	2.4 m	<b>070974S</b>	10.60 kg
ABS sound joint element single-piece, 410 – 500 mm	410 – 500 mm	2.4 m	<b>070975S</b>	11.20 kg

All intermediate dimensions of the sound joint insert available.  
Component thickness > 500 mm available on request.



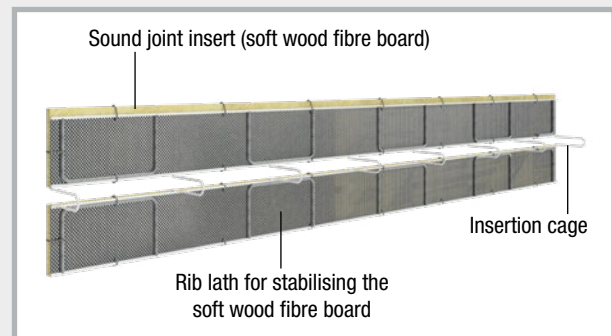
ABS sound joint element – single-piece

Single-piece sound joint tape for mounting an internal expansion joint tape or construction joint tape of up to 320 mm.

## Product description

The element is designed for use of internal expansion joint tapes or construction joint tapes with a joint tape width of up to 320 mm. The joint tapes are not included in the scope of delivery.

The element combines a sound joint insert which is adapted to the thickness of the component and separated by a centrally positioned joint tape cage for mounting the joint tape. The soft wood fibre board is stabilised by rib lath strips. As a result, the element can also be used for wall joints which run vertically.



## Installation

The joint tape is inserted into the cage until it is positioned centrally in a line with the sound joint insert. This is where it is secured in its position. The half of the joint tape which protrudes from the cage must be secured in position on site.

**When ordering, please specify the joint tape width.**

**You will find the suitable expansion joint tapes on page 34. They must be ordered separately.**

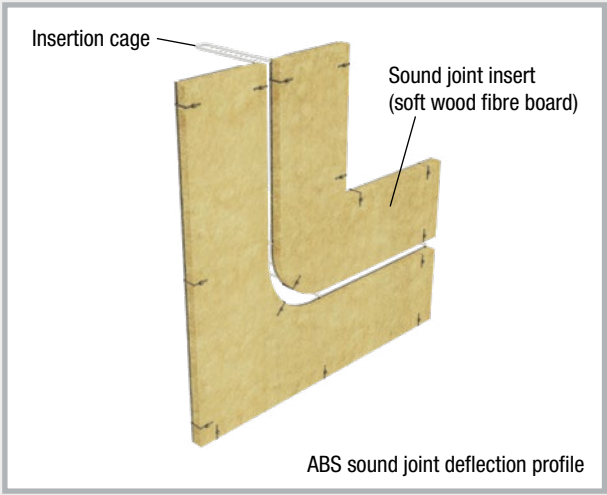
# ABS sound joint deflection profile

Suitable for combination with ABS sound joint element, single-piece and two-piece

Art.Gr.  
236

Description	Component thickness	Art. no.	Weight per pc.
<b>ABS sound joint deflection profile</b> 100 – 200 mm	100 – 200 mm	<b>070976S</b>	3.72 kg
<b>ABS sound joint deflection profile</b> 210 – 300 mm	210 – 300 mm	<b>070977S</b>	4.02 kg
<b>ABS sound joint deflection profile</b> 310 – 400 mm	310 – 400 mm	<b>070978S</b>	5.20 kg
<b>ABS sound joint deflection profile</b> 410 – 500 mm	410 – 500 mm	<b>070979S</b>	5.60 kg

All intermediate dimensions of the sound joint insert available.  
Component thickness > 500 mm available on request.



Single-piece sound joint tape for mounting an internal expansion joint tape or construction joint tape of up to 320 mm.

For changing the direction of the joint tape from the horizontal to the vertical laying direction.

## Product description

The element is designed for use of internal expansion joint tapes and construction joint tapes with a joint tape width of up to 320 mm. The joint tapes are not included in the scope of delivery.

The element combines a two-piece sound joint insert which is adapted to the thickness of the component, with a centrally positioned joint tape cage for mounting the joint tape.

The joint tape cage runs from the horizontal laying direction of the joint tape into the vertical laying direction, which is the typical installation situation of the floor slab/wall transition. The laying radius of the joint tape being used which is determined by the joint tape cage meets the requirements for the minimum bending radius for internal expansion joint tapes of 250 mm according to DIN 18197.

## Installation

The expansion joint tape is inserted into the cage until the expansion core of the joint tape forms a line with the expansion joint insert. This is where it is secured in its position. The half of the joint tape which protrudes from the cage must be secured in position on site.

**When ordering, please specify the joint tape width.**

**You will find the suitable expansion joint tapes on page 34. They must be ordered separately.**

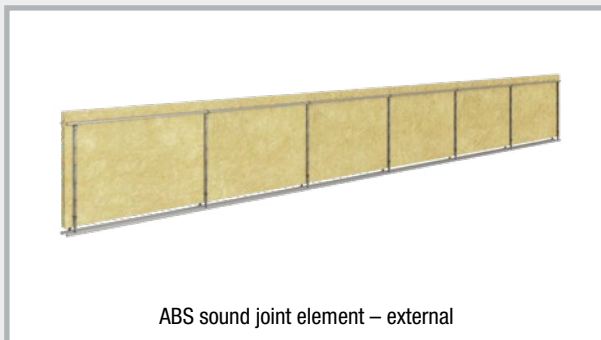


# ABS sound joint element – external

 Art.Gr.  
236

Description	Component thickness	Length	Art. no.	Weight per kg
ABS sound joint element external, up to 200 mm	up to 200 mm	2.4 m	<b>070944S</b>	2.37 kg
ABS sound joint element external, 210 – 300 mm	210 – 300 mm	2.4 m	<b>070945S</b>	2.68 kg
ABS sound joint element external, 310 – 400 mm	310 – 400 mm	2.4 m	<b>070946S</b>	3.00 kg
ABS sound joint element external, 410 – 500 mm	410 – 500 mm	2.4 m	<b>070947S</b>	3.31 kg

All intermediate dimensions of the sound joint insert available.  
Component thickness > 500 mm available on request.



ABS sound joint element – external



ABS sound joint element – external  
with expansion joint insert pre-installed

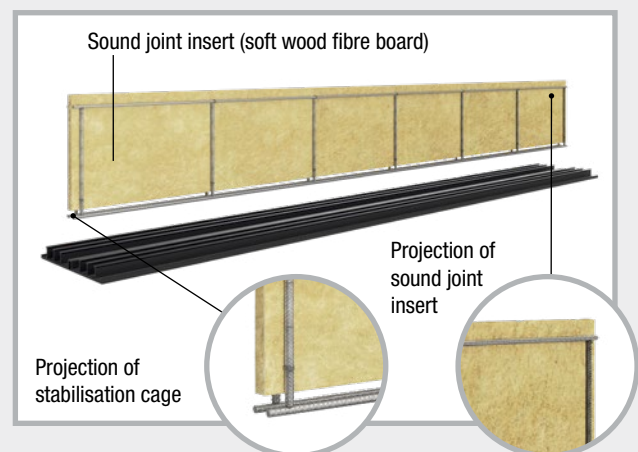
Single-piece sound joint tape for mounting an external expansion joint tape or construction joint tape (specify when ordering).

## Product description

The single-piece element is designed for use of external expansion joint tapes with 20 mm expansion core and external construction joint tapes. The joint tapes are not included in the scope of delivery.

It comprises a soft wood fibre board sound joint insert with a thickness of 30 mm, combined with a stabilisation cage arranged on both sides. For combination with external expansion joint tapes, the stabilisation cage is manufactured with a projection in the base area which is adapted to the expansion core. This projection is omitted for external construction joint tapes.

In the head area, the sound joint insert projects around the concrete cover regardless of the type of joint tape used.



## Installation

The external expansion joint tape or construction joint tape is applied to the blinding layer. The sound joint element is then positioned above the expansion core (in the case of expansion joint tapes) or in the middle of the construction joint tape (in the case of construction joint tapes), and secured above the stabilisation cage plumb against the reinforcement which is interrupted in the sound joint area.

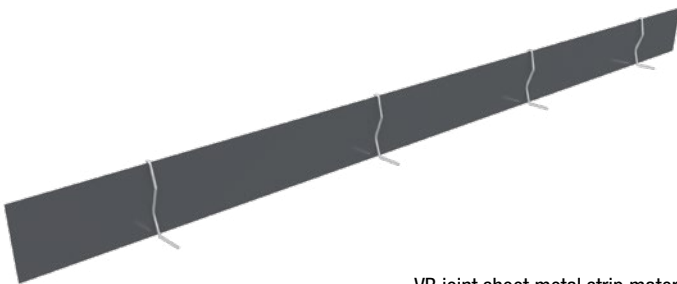
**You will find the suitable expansion joint tapes on page 34. They must be ordered separately.**

# VB joint sheet metal high-pressure metal sheets



## Product description

- VB joint sheet metal consists of a galvanised carrier sheet which is coated with a reactive, bitumen-free polymer coating. The coating forms a watertight bond with the fresh concrete.
- High pressure watertightness with low embedment depth
- Extensive tests (abP, ETA, application tests)
- Extensive accessories for crack-inducing joints and stopend panels



VB joint sheet metal strip material



Joint sheet metal roll VB1  
fully coated on one side

Joint sheet metal roll - F with fixing angle  
fully coated on both sides

Description	Height	Length	Water pressure acc. to application test	Water pressure according to General Building Supervisory Test Certificate (abP)	Embedment depth Floor slab
<b>Strips</b>	80 mm	2.4 m	6 bar (60 m water column)	1 bar (10 m water column)	≥ 30 mm ≤ ½ sheet height
	160 mm	2.0 m / 2.4 m	8 bar (80 m water column)	2 bar (20 m water column)	
<b>Rolls</b>	120 mm	20 m	6 bar (60 m water column)	1.6 bar (16 m water column)	≥ 30 mm ≤ ½ sheet height
	160 mm	20 m	8 bar (80 m water column)	2.0 bar (20 m water column)	
	240 mm	20 m	8 bar (80 m water column)	2.0 bar (20 m water column)	
<b>Rolls with fixing angle</b>	160 mm	20 m	8 bar (80 m water column)	2.0 bar (20 m water column)	≥ 30 mm ≤ ½ sheet height

Technical data and detailed installation instructions can be found at

[www.mastertec.eu](http://www.mastertec.eu)

## Installation instructions

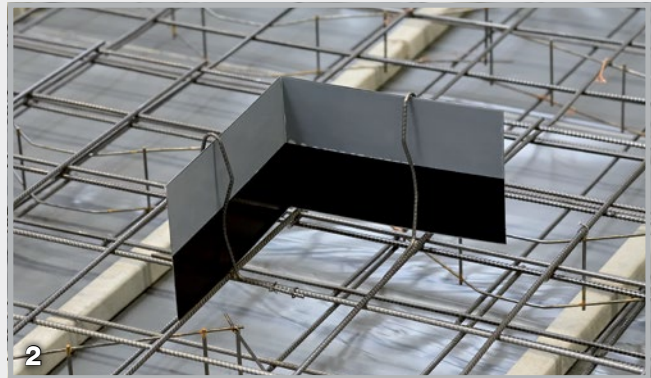
**VB joint sheet metal is available as strips or rolls with a special coating on one or both sides.**

1. When installing sheet metal with coating on one side, the coating must face the water side.
2. The coating is protected against dirt by a protective film. The protective film must be removed as late as possible, but definitely before concreting.
3. The protective film is separated halfway up the sheet. When concreting the floor slab, the upper half of the protective film remains on the coating and protects it from becoming contaminated during and after concreting. The upper half is removed as late as possible before the wall is concreted (see Fig. 1).
4. Corner formations can be produced on site without any problems (see Fig. 2).
5. In the joint area, the protective film is folded back, the sheet is overlapped over a length of 6 cm, bonded over the entire surface and secured by means of system-specific fixing clips (see Fig. 3).
6. The embedment depth in the first concreting section must not be less than 30 mm and must not exceed half the sheet height.
- 7a. The position on the upper reinforcement layer is secured by means of the system-specific omega brackets (see Fig. 4).
- 7b. In the case of the **joint sheet metal roll F**, the position is secured by tying the fixing angle to the upper layer of reinforcement using tie wire (see Fig. 5).
8. The joint sheet metal must form a self-contained system that covers all construction and controlled crack joints.

## Extensive system accessories available

**Crack-inducing profiles** pages 30 – 31

**Stopend panels** pages 38 – 73



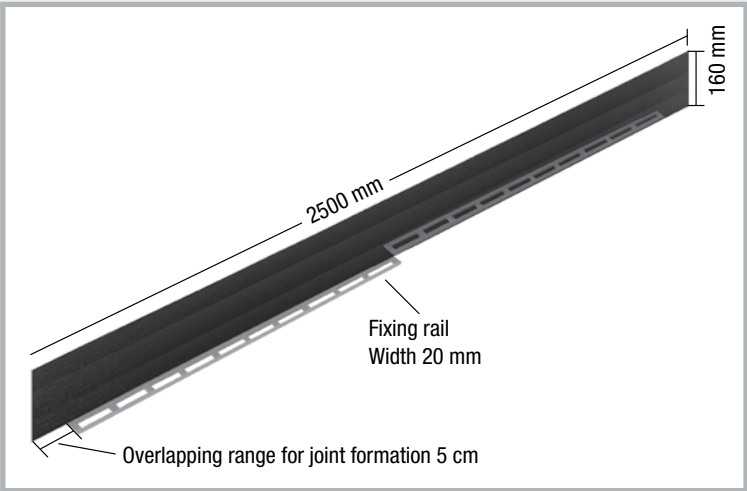


# MASTER joint sheet metal Premium



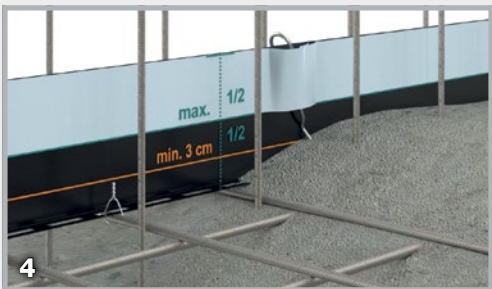
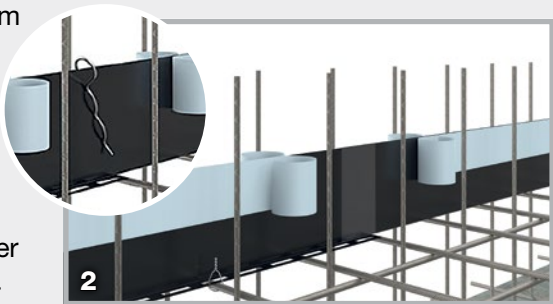
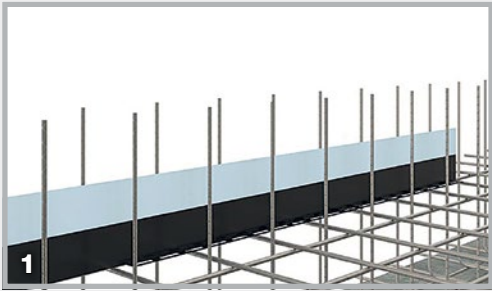
## Product description

- MASTER joint sheet metal Premium is made of galvanised sheet steel which is fully coated on both sides with a special coating. The coating forms a watertight bond with the fresh concrete.
- Element length 2500 mm
- General Building Supervisory Test



## Installation instructions

1. The coating is protected against dirt by a protective film. The protective film must be removed as late as possible, but definitely before concreting.
2. The protective film is separated halfway up the sheet. When concreting the floor slab, the upper half of the protective film remains on the coating and protects it from becoming contaminated during and after concreting. The upper half is removed as late as possible before the wall is concreted (see Fig. 1).
3. In the joint area, the protective film is folded back, the sheets are overlapped over a length of 6 cm, bonded over the entire surface and secured by means of system-specific fixing clips (see Fig. 2).
4. The embedment depth in the first concreting section must not be less than 30 mm and must not exceed half the sheet height (see Fig. 4).
5. Corner formations and other geometries can be produced on site without any problems (see Fig. 3).
6. The position is secured on the upper layer of reinforcement by tying the fixing angle to the upper layer of reinforcement.
7. The joint sheet metal must form a self-contained system that covers all construction and controlled crack joints.





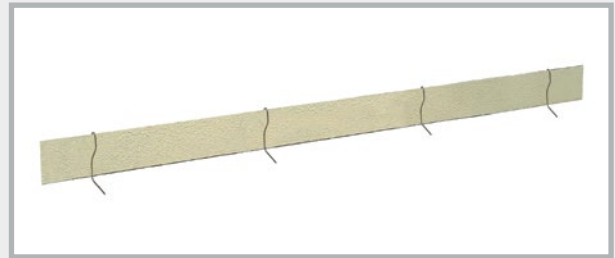
# Joint sheet metal MB Overlap

Mineral-coated joint sheet metal  
for waterproofing of construction joints



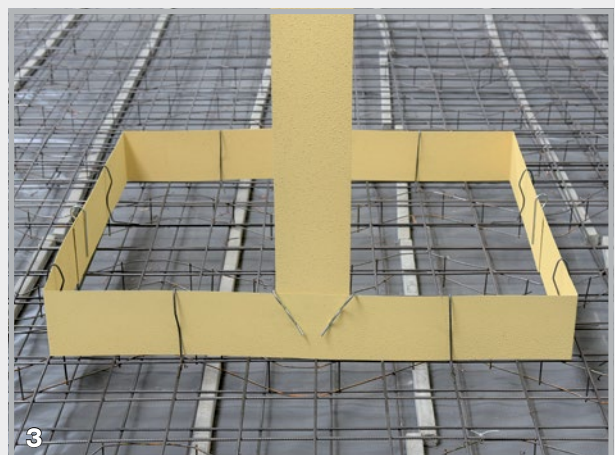
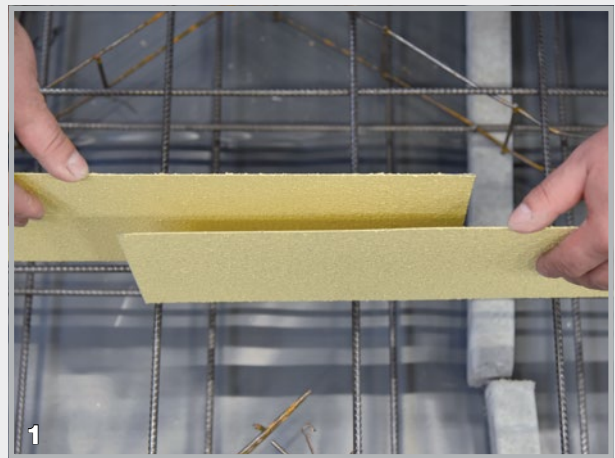
## Description

Strips with full mineral coating on both sides, 160 mm high. The metal waterproofing profiles are supplied with 55 fixing clips. You will find suitable omega brackets (art. no. 070415) on page 32. They must be ordered separately.



## Installation instructions

1. The mineral coating must be protected from dirt.
2. The sheet metal can be cut to length on site without any problems.
3. Two sheets are joined by overlapping. The overlap length must be at least 20 cm and must be additionally secured with a fixing clip (see Fig. 1).
4. The embedment depth in the first concreting section must not be less than 30 mm and must not exceed half the sheet height.
5. Corner formations can be produced on site without any problems (see Fig. 2).
6. The position on the upper reinforcement layer is secured by means of the system-specific omega brackets.
7. The joint sheet metal must form a self-contained, gap-free system (see Fig. 3).



Technical data and detailed  
installation instructions can be found at  
[www.mastertec.eu](http://www.mastertec.eu)

# AKTIV joint sheet metal



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

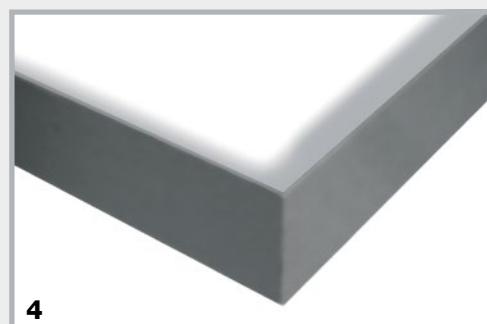
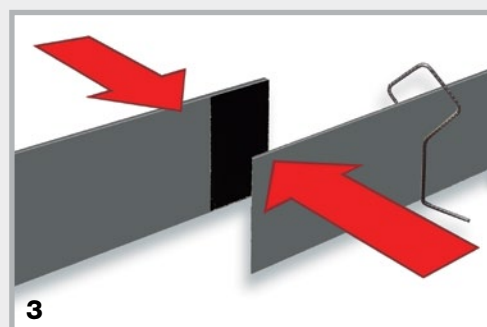
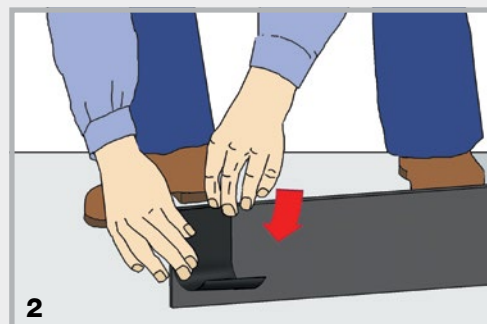
### Description

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



### Installation instructions

1. The bentonite coating must face the water side.
2. The bentonite coating must be protected from dirt and moisture.
3. The sheet metal can be cut to length on site without any problems (see Fig. 1).
4. Two elements are joined by means of butyl adhesive tape. Strips of this tape are already mounted at the start and end of the roll. When cutting to size, the supplied tape must be bonded to the bentonite coating at the cutting edge. Press the adhesive surface firmly together and secure with a fixing clip (see Fig. 2 + 3).
5. The embedment depth in the first concreting section must not be less than 35 mm and must not exceed half the sheet height.
6. Corner formations can be produced on site without any problems (see Fig. 4).
7. The position on the upper reinforcement layer is secured by means of the system-specific omega brackets.
8. The joint sheet metal must form a self-contained, gap-free system.



Technical data and detailed installation instructions can be found at [www.mastertec.eu](http://www.mastertec.eu)

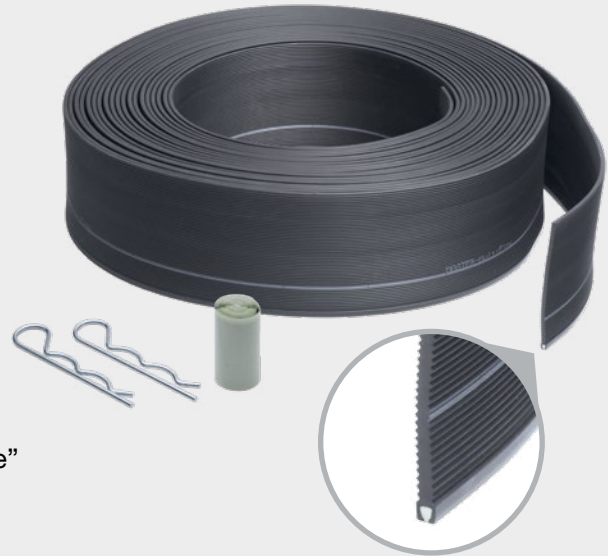
# MASTER-MultiFlex (MMF 140)

The certified active joint tape for waterproofing of construction joints in concrete. MMF 140 is a PVC joint tape with an additional swelling profile on the bottom.



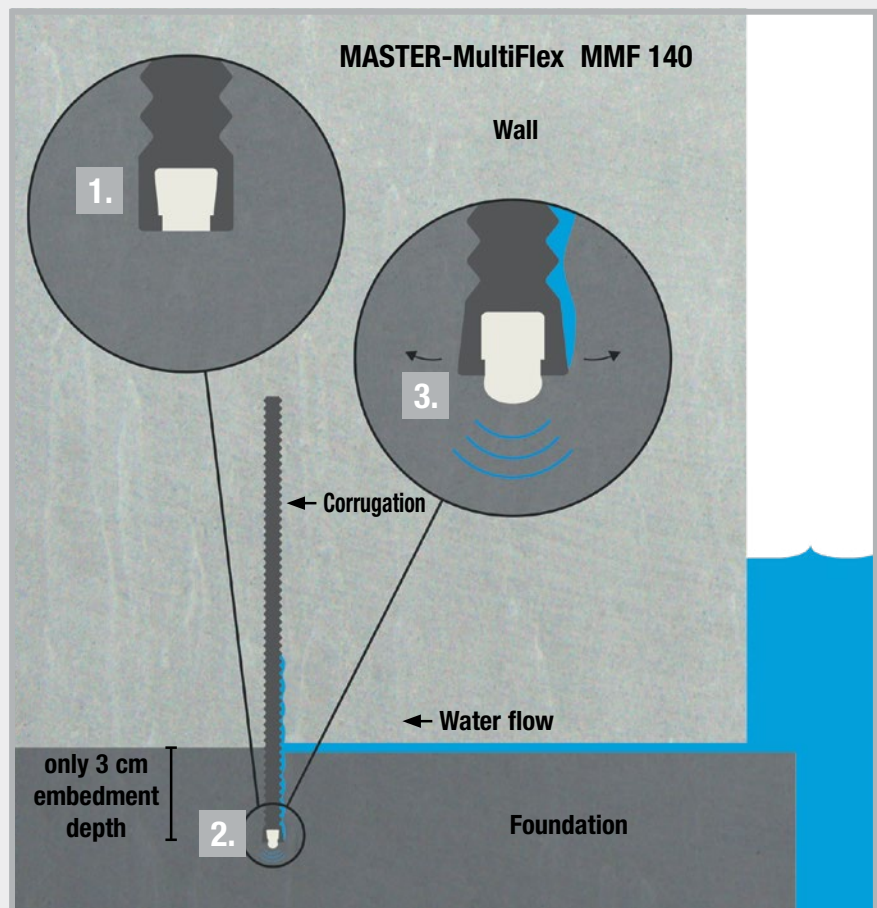
## MMF 140 product description

<b>Material:</b>	Soft PVC MMF 140 does not contain any substances of very high concern (SVHCs) according to Annex XIV of the REACH Regulation. <b>MMF 140 thus complies with European standards.</b>
<b>Swelling profile:</b>	Active TPE
<b>Height:</b>	140 mm
<b>Thickness:</b>	approx. 6 mm
<b>Profile:</b>	Corrugated
<b>Safety:</b>	with marking strips for embedment depth
<b>Elongation at break:</b>	High
<b>Tensile strength:</b>	High
<b>Workability:</b>	-10°C to +60°C
<b>Joinability:</b>	Bonded overlapping joint or with our MASTER-Connect "active"



## Function of MMF 140

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

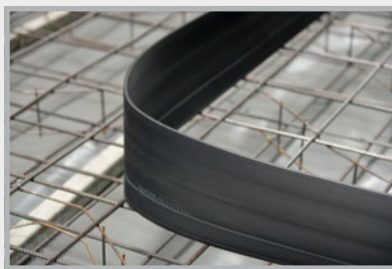




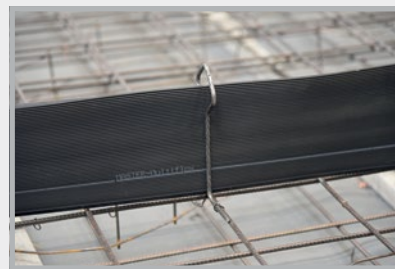
## Cutting and installing MMF 140



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

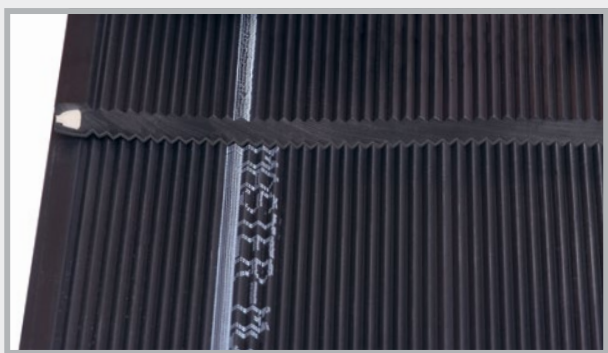


Non-sag but flexible.



Fastened using the system-specific MMF 140 omega brackets. These have to be ordered separately.

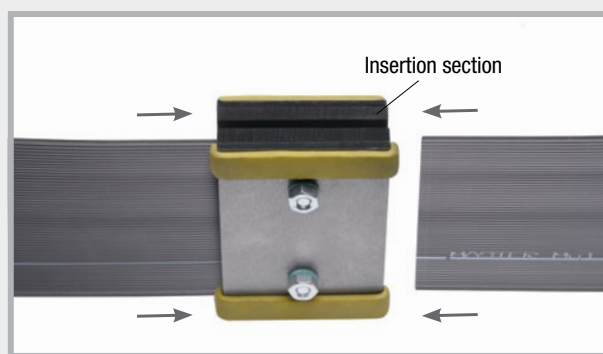
## Bonding options



**Bonded overlapping joint:**

**Time required at the construction site: approx. 15 – 30 min.**

Overlapping bonded joint.



**Screwed connection:**

**Time required at the construction site: approx. 10-15 min.**

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.



# VB joint sheet metal JGS (slurry/liquid manure/silage effluent)



National technical approval (abZ):  
Z-74.101-209

The Ordinance on Facilities Handling Substances that are Hazardous to Water (AwSV) has defined the requirements for agricultural installations nationwide since 1 August 2017. The aim is to protect water from substances hazardous to water from agricultural structures such as silos, slurry tanks or biogas facilities.

Special requirements are placed on the construction joint sealants here. These must have verification of fitness for use in the form of a national technical approval (abZ). By extensive resistance and functional tests the VB joint sheet metal JGS has received this verification of fitness for use.



## Product description

- VB joint sheet metal JGS consists of a galvanised carrier sheet with a highly resistant special coating. The coating forms a watertight bond with the fresh concrete.
- The coating is resistant to media that affect components in agricultural buildings and biogas facilities.
- National technical approval (abZ) granted by DIBt
- Low embedment depth of 35 mm

Description	Height	Length	Tank height	Embedment depth Floor slab
<b>Strips</b>	160 mm	2.4 m	≤ 10 m	≥ 35 mm ≤ ½ sheet height
<b>Rolls</b>	160 mm	20 m	≤ 10 m	≥ 35 mm ≤ ½ sheet height
<b>Rolls with fixing angle</b>	160 mm	20 m	≤ 10 m	≥ 35 mm ≤ ½ sheet height

## Installation instructions

The installation is identical to the VB joint sheet metal (page 75).

However, the embedment depth must be 35 mm into the first concreting section.

## Accessories

The verification of fitness for use in the form of the national technical approval (abZ) applies not only to waterproofing products for construction joints but also to pipe penetrations. Here, RONDO Protect offers a waterproofing solution for all common pipe types. You will find an overview on page 141 in our complete catalogue.



Technical data and installation instructions can be found at [www.mastertec.eu](http://www.mastertec.eu)

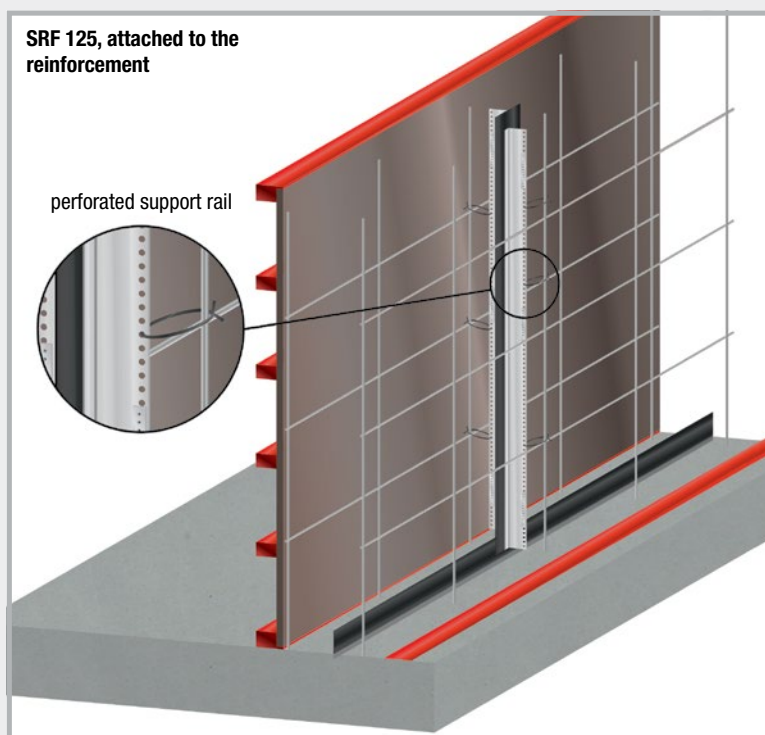
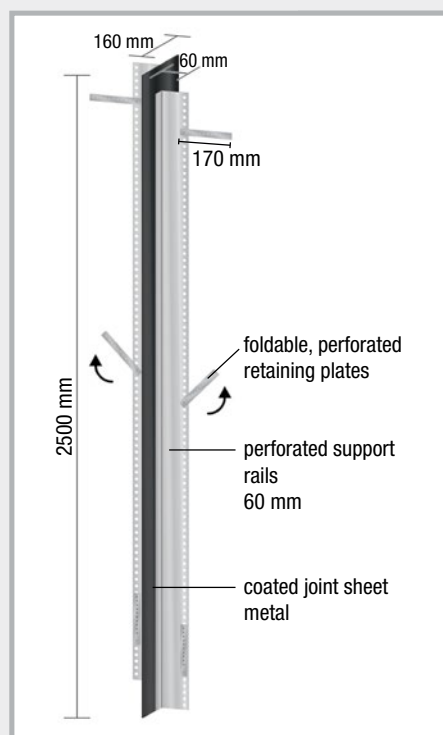
# Crack-inducing profiles

## Crack-inducing profile SRF 125 Multi

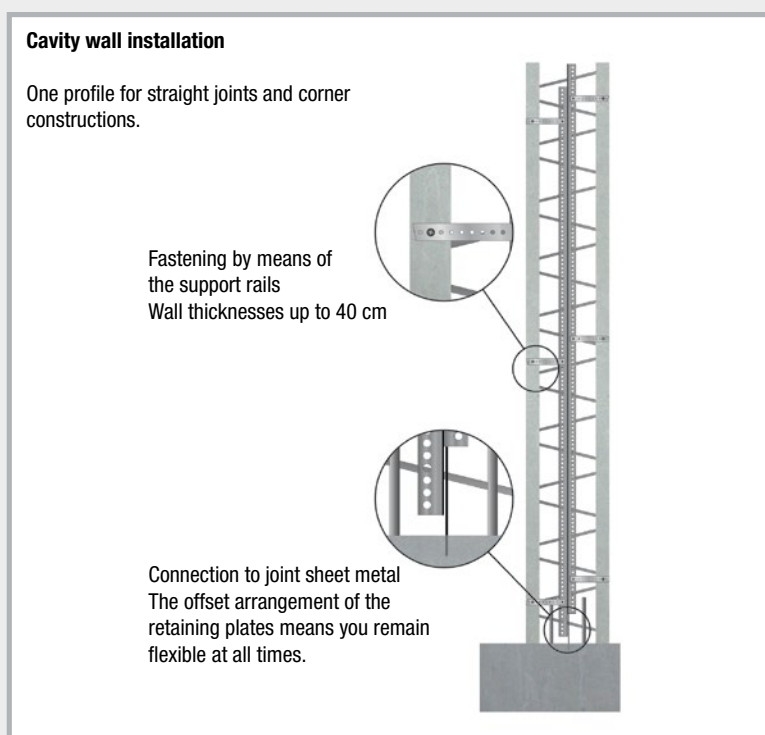
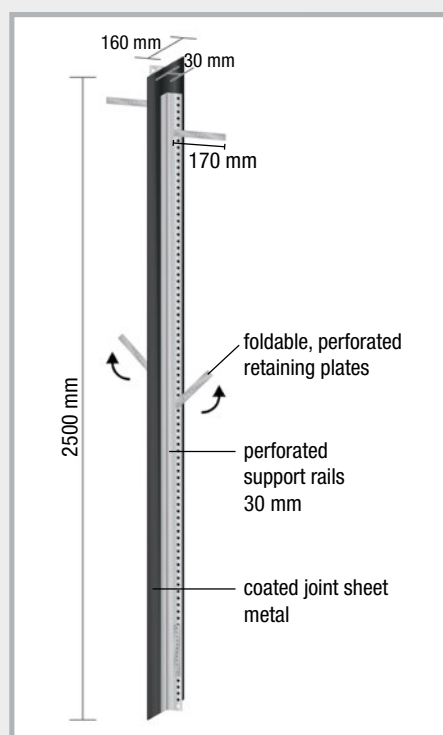


The SRF 125 Multi profile consists of a coated joint sheet metal element with perforated support rails attached to both sides and additional retaining plates. Depending on the requirements, the profile is fastened via the support rails or the perforated foldable retaining plates.

### Type SRF 125 Multi in-situ concrete



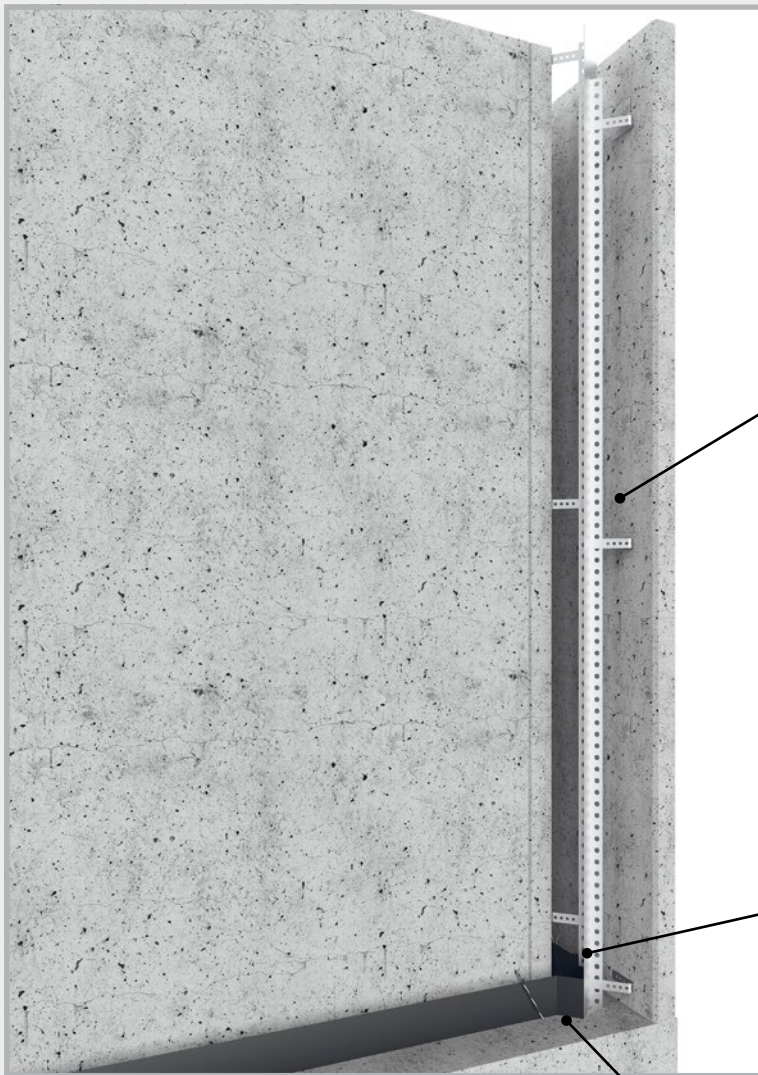
### Type SRF 125 Multi cavity wall



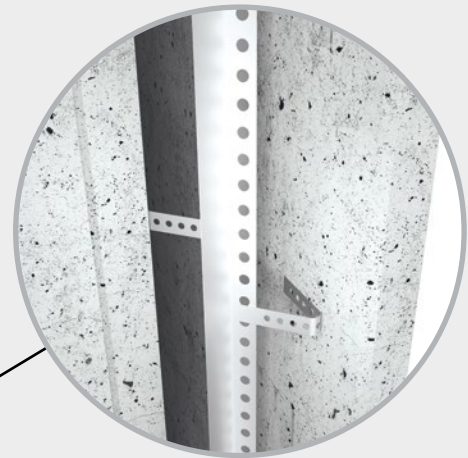
# Crack-inducing profile SRF 125 Multi cavity wall

## Corner installation

The cavity wall type crack-inducing profile SRF 125 Multi can also be used without any problems in the corner butt joint of cavity wall elements.



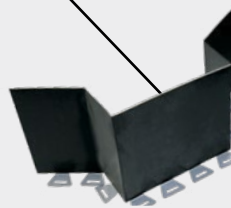
The profile is inserted vertically in the middle of the course of the crack between the external and internal shell of the cavity wall element.



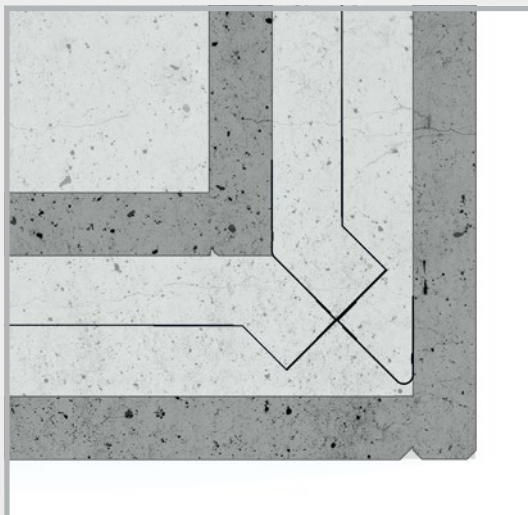
The retaining plates are angled in accordance with the course of the internal formwork and anchored in the concrete with nail plugs.



At the bottom, the joint sheet metal is bonded with the slab-wall joint sheet metal with an overlap, and is secured with fixing clips.



In the corner area the course of the slab-wall joint sheet metal must guarantee that the crack-inducing profile can be introduced vertically to the course of the crack. For the corner formation, we recommend installing MASTER joint sheet metal Premium corner element FB (art. no. 070416)



Corner installation possible up to wall thickness of 300 mm.

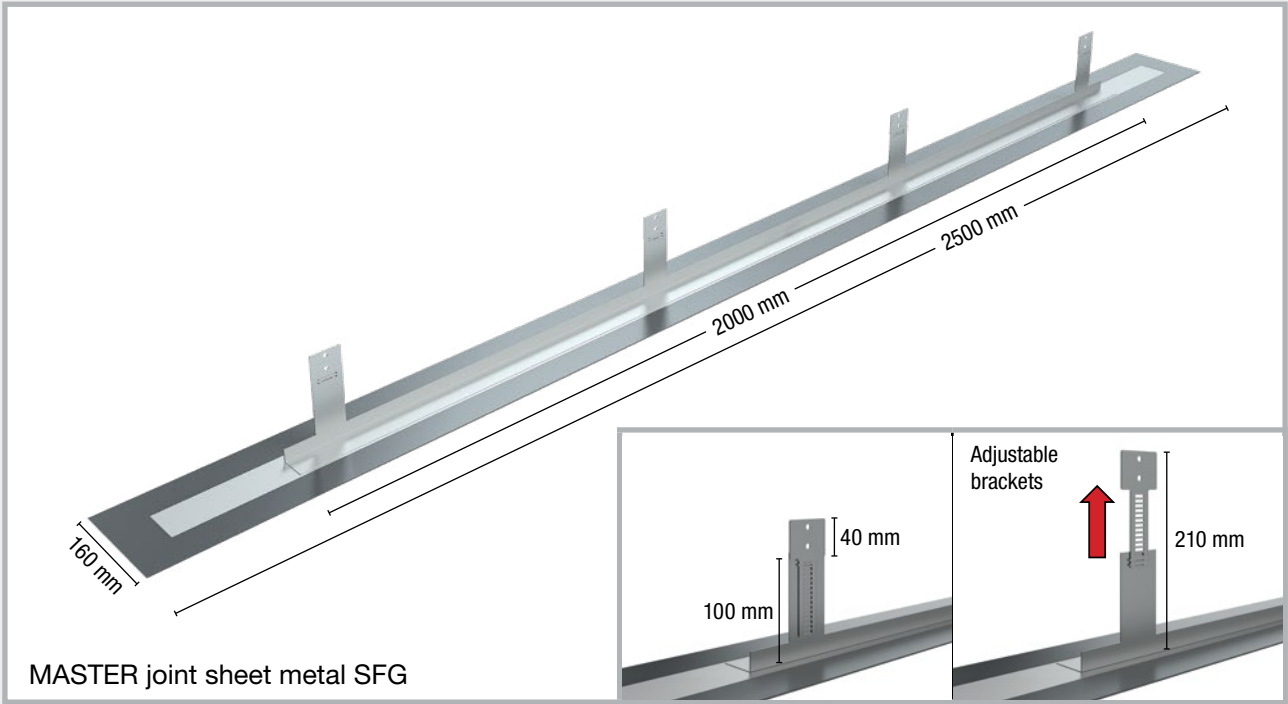


# MASTER joint sheet metal SFG adjustable

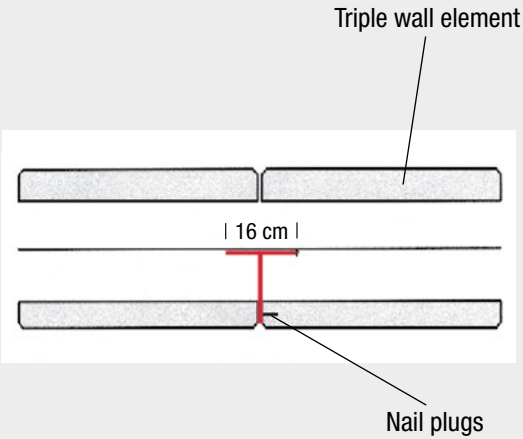
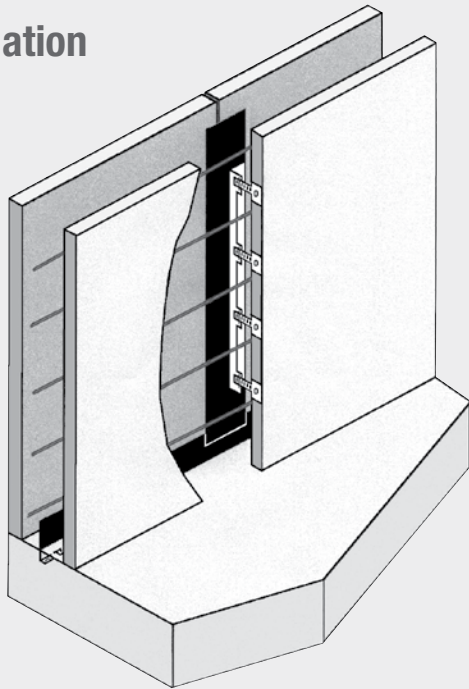
(prefabricated crack-inducing element, straight) for straight butt joints



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



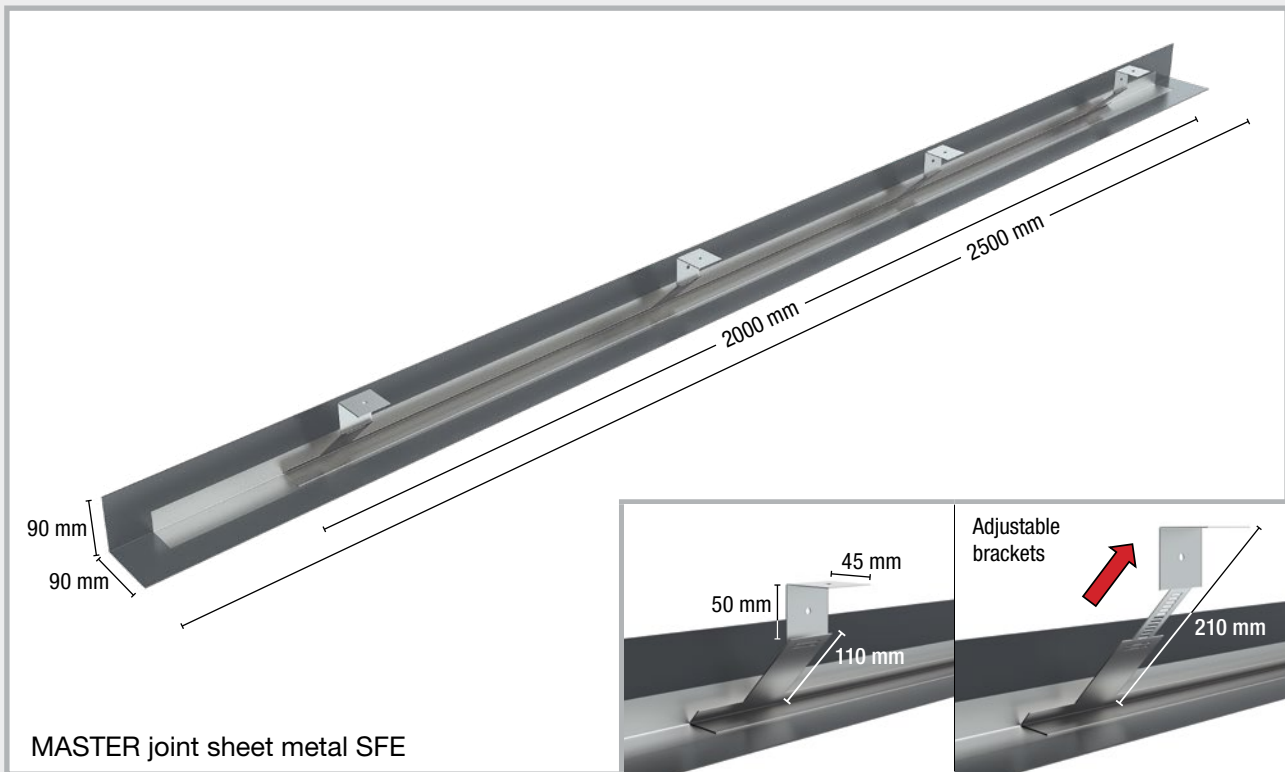
## Installation



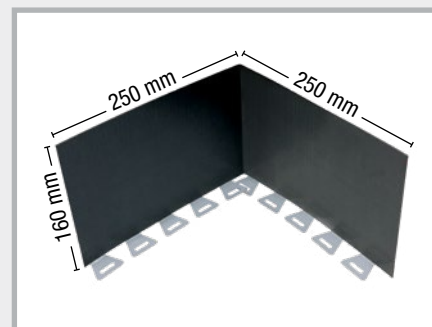
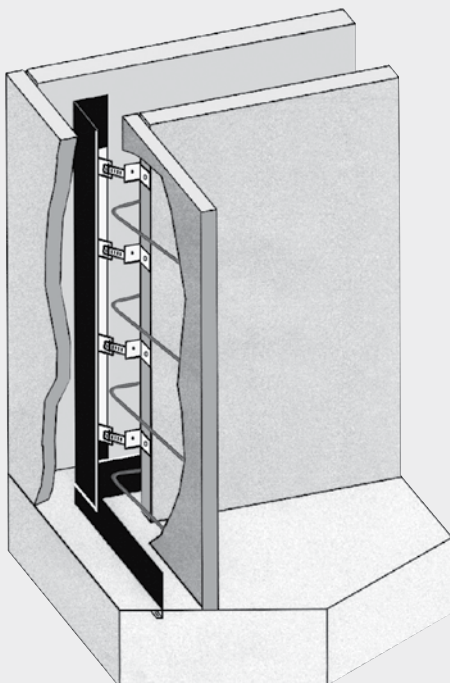
The elements supplied are completely prefabricated and are fastened to the internal formwork of the cavity wall elements using the supplied nail plugs. The lower part of the elements is bonded to the waterproofing profile in the foundation area.



# MASTER joint sheet metal SFE adjustable



## Installation of SFE



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

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

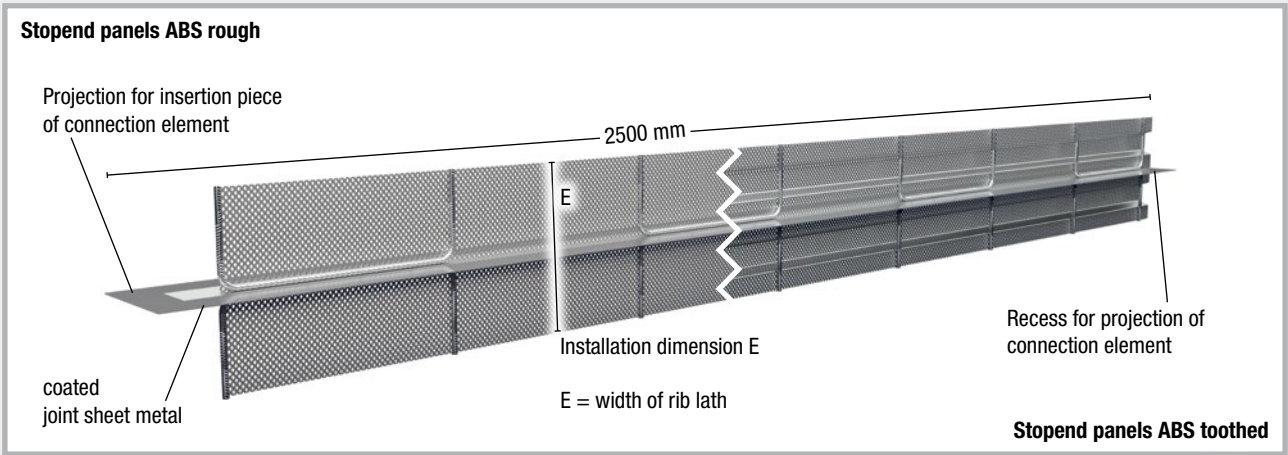
# Formwork systems

## ABS stopend panels rough/toothed

for construction joints exposed to pressurised water

The stopend panels ABS rough/toothed consist of a joint sheet metal with polymer coating on both sides in the edge area, which represents the horizontal sealing level when installed in the floor slab and the vertical sealing level when installed in the wall.

Perpendicular to the joint sheet metal, rib lath strips form the formwork level.



### Waterproofing

- All-round polymer coating on both sides in the edge area
- Proof of usability: abP and ETA
- For joint opening up to 1.0 mm



**European Technical Assessment (ETA):**

Intended purpose: Sealing element for sealing construction joints in structures made of concrete with high water penetration resistance against pressurised and non-pressurised water.



**General Building Supervisory Test Certificate (abP):**

2 bar water pressure (20 m water column) with joint opening up to 1.0 mm

**Application test:**

6 bar water pressure (60 m water column) with joint opening up to 1.0 mm



The carrier and coating material has good to very good resistance to chemicals and other media.

### Shuttering

The geometry and open passage of the rib lath strips create the following construction joint surfaces after concreting:

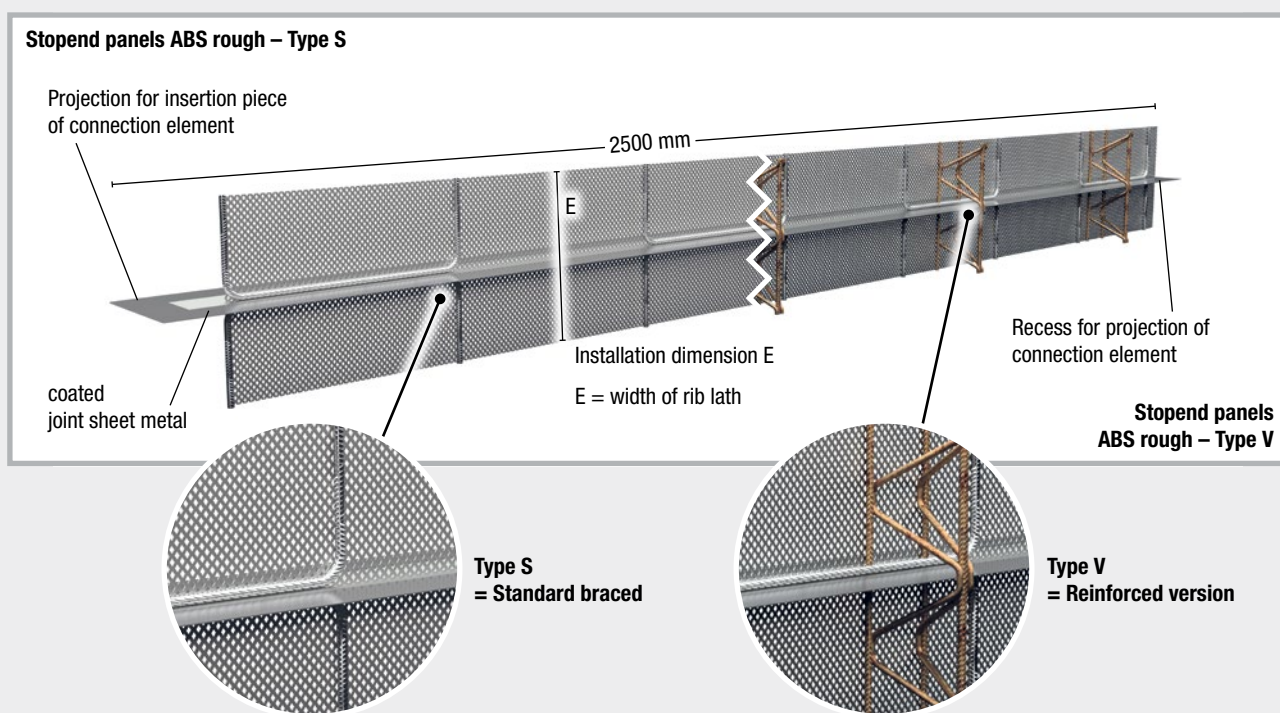
ABS rough: rough joint according to DIN EN 1992-1-1 NA (EC2)

ABS toothed: toothed joint according to DIN EN 1992-1-1 NA (EC2)

# Stopend panels ABS rough

for construction joints exposed to pressurised water

- Pressure watertight
- Rough joint according to DIN EN 1992-1-1 NA (EC2)
- Ready-to-install matched to floor slabs/wall thicknesses
- Special versions with diagonal cut, height offset, recesses or crown cut are possible (see page 47).



## Bracing options

- Type S Standard braced = U-brackets made of reinforcing steel stabilise the rib lath
- Type V Reinforced version = Increased stability due to additional lattice girders + mounting edge

## Installation size

- Installation dimensions from 130 to 1000 mm available, sizes > 1000 mm on request
- Special dimensions possible on request

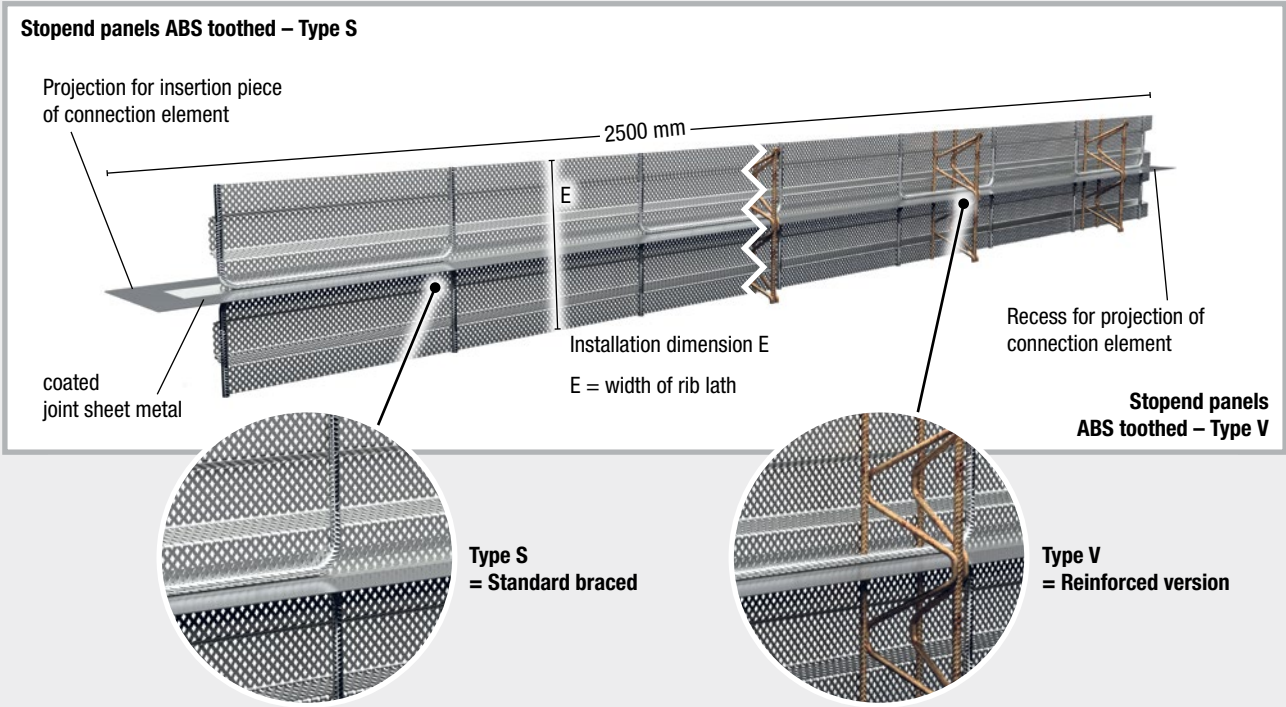
## Installation instructions

- Place the ABS elements between the reinforcement layers and fix them with tie wire.
- Fold back the protective film of the sheet metal projection and in the area of the recess of the next element, push the projection into the recess, press the coating firmly together and secure with the supplied fixing clip.
- The elements remain in the concrete, i.e. no time-consuming formwork or stripping required.
- Remove the protective film in the concreting area before concreting.
- The back anchoring and securing the position of the elements against concrete pressure is carried out at the construction site.

# Stopend panels ABS toothed

for construction joints exposed to pressurised water

- Pressure watertight
- Toothed joint according to DIN EN 1992-1-1 NA (EC2)
- Ready-to-install matched to floor slabs/wall thicknesses
- Special versions with diagonal cut, height offset, recesses or crown cut are possible (see page 47).



## Bracing options

- Type S Standard braced = U-brackets made of reinforcing steel stabilise the rib lath
- Type V Reinforced version = increased stability due to additional lattice girders + mounting edge

## Installation size

- Installation dimensions from 160 to 1000 mm available, sizes > 1000 mm on request
- Special dimensions possible on request

## Installation instructions

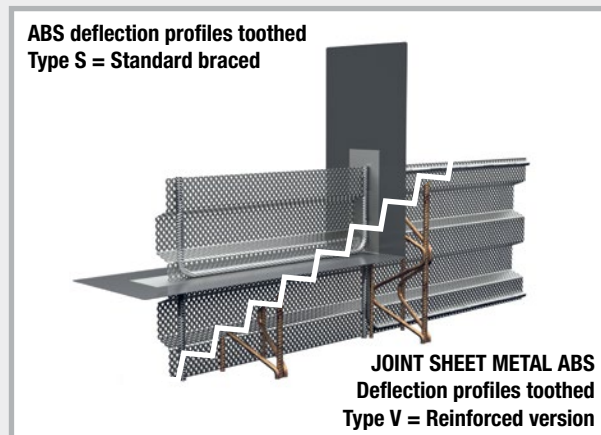
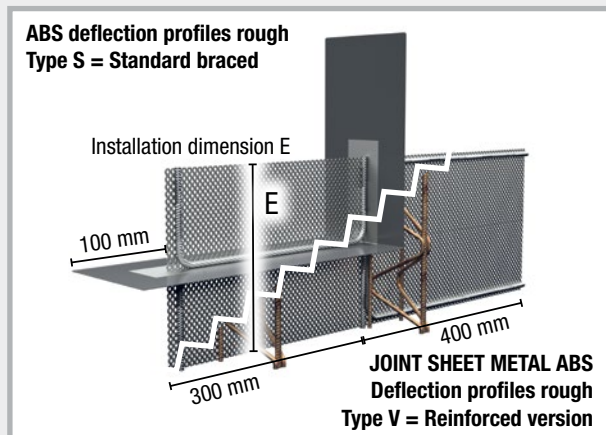
- Place the ABS elements between the reinforcement layers and fix them with tie wire.
- Fold back the protective film of the sheet metal projection and in the area of the recess of the next element, push the projection into the recess, press the coating firmly together and secure with the supplied fixing clip.
- The elements remain in the concrete, i.e. no time-consuming formwork or stripping required.
- Remove the protective film in the concreting area before concreting.
- The back anchoring and securing the position of the elements against concrete pressure is carried out at the construction site.



## ABS deflection profiles rough/toothed

for changing the direction of the sealing level from horizontal to vertical

- Pressure watertight
- Rough/toothed joint according to DIN EN 1992-1-1 NA (EC2)
- Ready-to-install, matched to the thickness of the floor slab

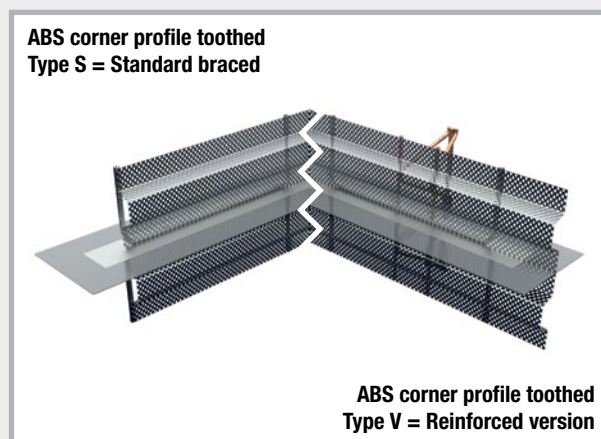
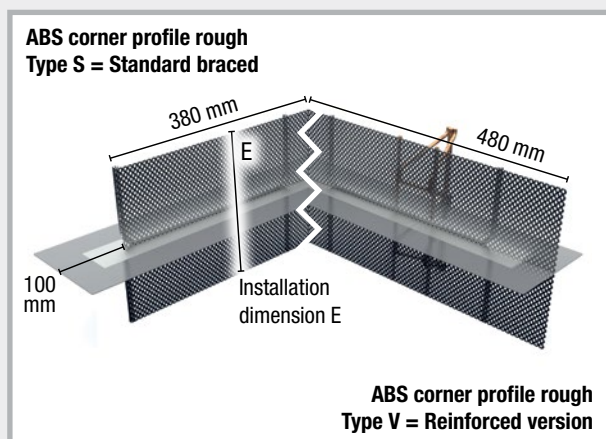


The ABS deflection profiles rough/toothed are used when switching from foundation formwork to wall formwork. Likewise, if the joint sheet metal from the foundation/wall transition is connected to the closed system of the sealing level in the area of the foundation formwork. The ABS deflection profiles rough/toothed are delivered ready-to-install and matched to the floor slab thickness. They are compatible with the stopend panels ABS rough/toothed.

## ABS corner profile rough/toothed

for changing the direction of the sealing level in the floor slab

- Pressure watertight
- Rough/toothed joint according to DIN EN 1992-1-1 NA (EC2)
- Ready-to-install, matched to the thickness of the floor slab

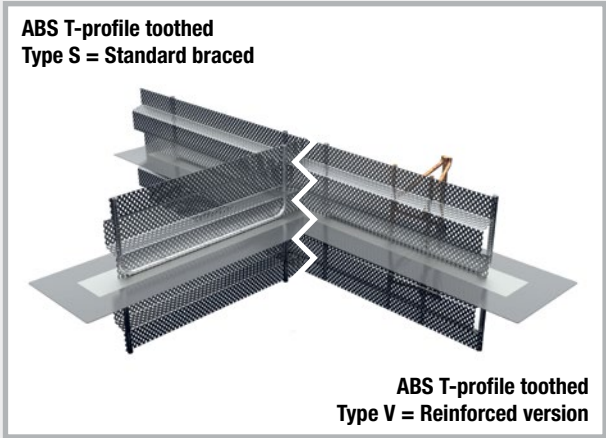
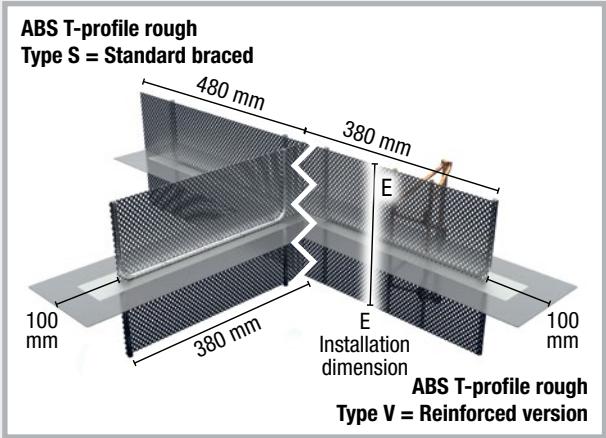


The ABS corner profile rough/toothed are used for corner formations of the floor slab formwork. The ABS corner profiles rough/toothed are delivered ready-to-install and matched to the floor slab thickness. They are compatible with the stopend panels ABS rough/toothed.

## ABS T-profile rough/toothed

for T-joints of the stopend panels with retention of the sealing level in the floor slab

- Pressure watertight
- Rough/toothed joint according to DIN EN 1992-1-1 NA (EC2)
- Ready-to-install, matched to the thickness of the floor slab

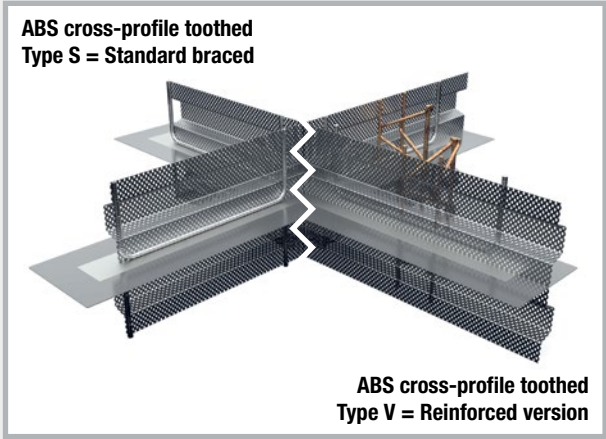
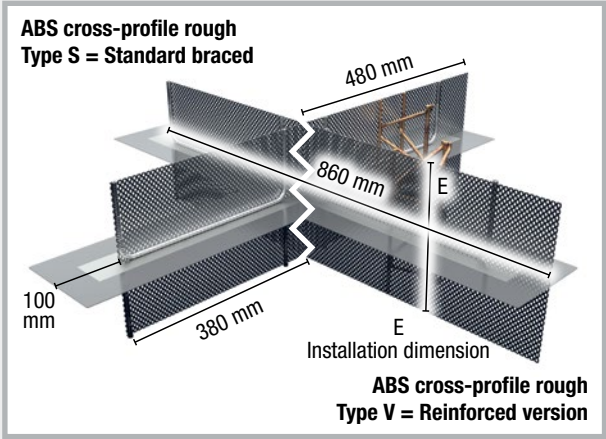


The ABS T-profile elements rough/toothed are used at one-sided joints of the floor slab formwork. The ABS T-profile elements rough/toothed are delivered ready-to-install and matched to the floor slab thickness. They are compatible with the stopend panels ABS rough/toothed.

## ABS cross-profile rough/toothed

for cross joints of the stopend panels with retention of the sealing level in the floor slab

- Pressure watertight
- Rough/toothed joint according to DIN EN 1992-1-1 NA (EC2)
- Ready-to-install, matched to the thickness of the floor slab



The ABS cross-profile elements rough/toothed are used at crossing points of the floor slab formwork. The ABS cross-profile elements rough/toothed are delivered ready-to-install and matched to the floor slab thickness. They are compatible with the stopend panels ABS rough/toothed.

## ABS spacers

Our range includes three different types of ABS spacers, each with its own advantages.

The 'Fix' type is the classic among ABS spacers, specially made to your requirements.

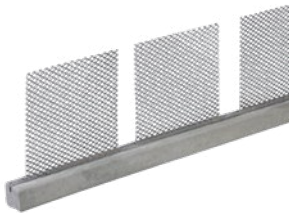


In case of changes or if the dimensions have not yet been definitively defined, you will be better off with the Flex type (see Excel price list and website).

The latest design is the formwork comb type, available in two different heights for reinforcements of up to 90 mm. The formwork comb type combines all the advantages of the other two types in one product.

Of course, all three versions meet the requirements of the WU guideline for water-impermeable concrete constructions.

The following table with the traffic light system shows the advantages of the individual types in a simple and clear way.



			
Criterion	FIX type	FLEX type	formwork comb type
Flexibility	●	●	●
Individual fabrication	●	●	●
Cost at construction site	●	●	●
Time required at construction site	●	●	●
Exact specifications required at time of order	●	●	●
Production lead time	●	●	●
<b>Total</b>	<b>good</b>	<b>better</b>	<b>best</b>

Both the expanded metal and the formwork comb are firmly glued into the fibre cement square-edged profile at the factory. This makes installation significantly faster and break-proof.

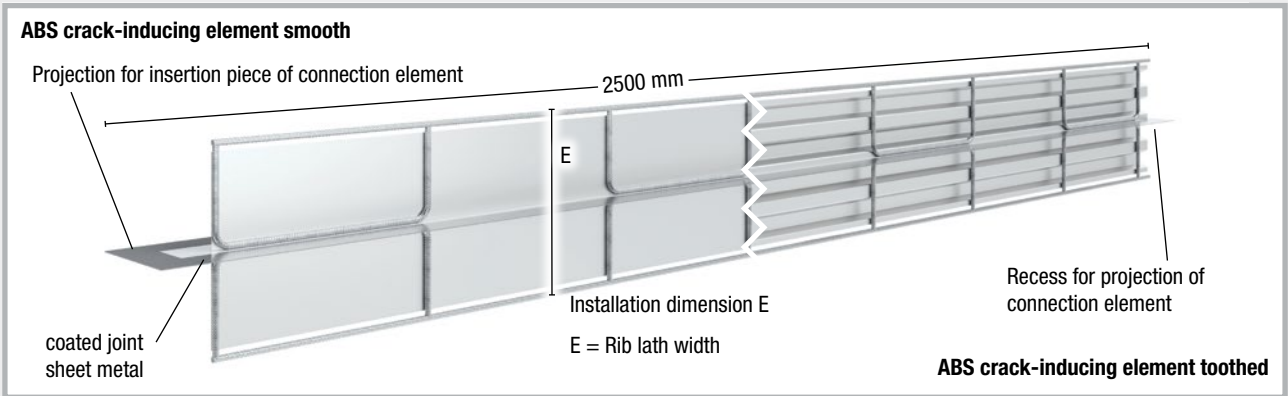
# ABS crack-inducing elements

for forming controlled crack joints with exposure to pressurised water

In order to prevent unplanned and difficult-to-control cracking in concrete components, systematically including controlled crack joints is recommended. They can be produced using systematic sectional weakening (as per the German WU directive for Water-Impermeable Concrete Buildings > 1/3 of the thickness of the constructional elements) of the concrete in conjunction with an adjustment of the reinforcement in the planned crack-inducing joint area. Our crack-inducing elements make for a practical variant of sectional weakening.

## ABS crack-inducing element smooth/toothed

Coated joint sheet metal with integrated crack-inducing joint rail



The ABS crack-inducing elements are made of joint sheet metal which is coated with a polymer coating on both sides in the edge area. Crack-inducing rails with integrated mounting projection are fitted on both sides vertically to the joint sheet metal. The installation dimension depends on the thickness of the constructional elements. The crack-inducing rails are available as a smooth (galvanised flat sheet metal) or toothed (galvanised sheet metal with trapezoidal profile) variant.

### Waterproofing

- All-round polymer coating on both sides in the edge area
- Proof of usability: abP and ETA
- For joint opening up to 1.0 mm



#### European Technical Assessment (ETA):

Intended purpose: Sealing element for sealing construction joints in structures made of concrete with high water penetration resistance against pressurised and non-pressurised water.



#### General Building Supervisory Test Certificate (abP):

2 bar water pressure (20 m water column) with joint opening up to 1.0 mm

#### Application test:

6 bar water pressure (60 m water column) with joint opening up to 1.0 mm



The carrier and coating material has good to very good resistance to chemicals and other media.

### Crack-inducing rails

The version of the crack-inducing rails used is critical for the resultant category of controlled crack in smooth or toothed joint. The geometry of the trapezoidal profile is based on the requirements for toothed joints according to DIN EN 1992-1-1 NA (EC2).



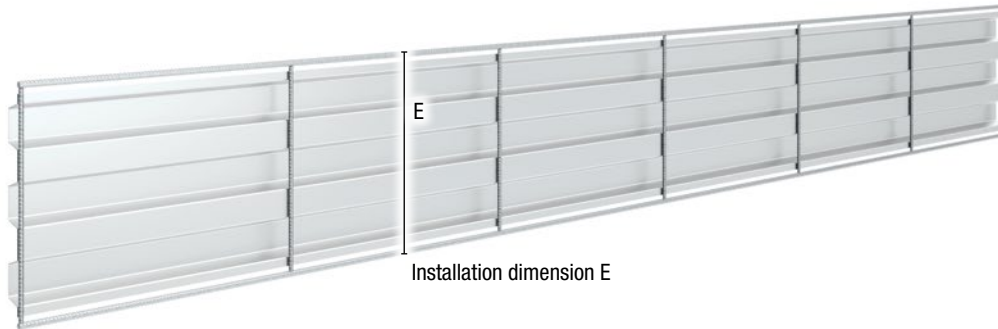
# Stopend panels LinkFix/LinkForm

Lost formwork for construction joints in the toothed/rough joint category according to DIN EN 1992-1-1 NA (EC2), prefabricated ready for installation

## LinkFix crack-inducing element

Crack-inducing profile for toothed joints

LinkFix crack-inducing element

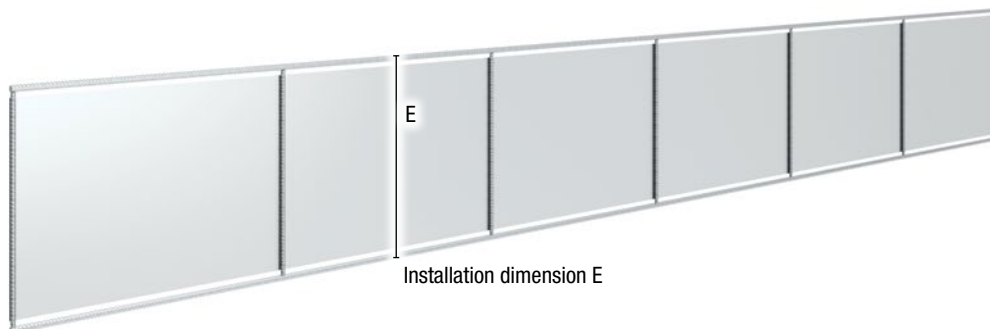


- LinkFix crack-inducing elements for systematic sectional weakening of concrete
- Trapezoidal profile design, geometry based on toothed joints according to DIN EN 1992-1-1 NA (EC2).
- Integrated mounting frame for fastening to the reinforcement
- Suitable for floor slabs and wall installation

## LinkForm crack-inducing element

Crack-inducing profile for smooth joints

LinkForm crack-inducing element



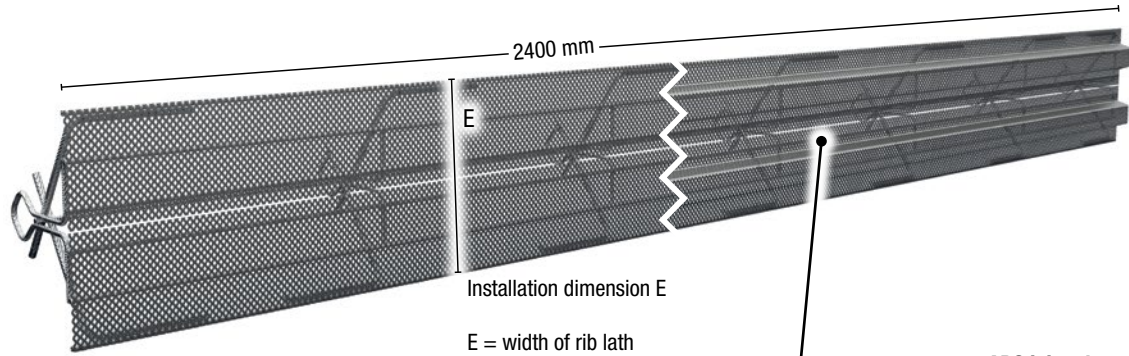
- LinkForm crack-inducing element for systematic sectional weakening of concrete
- Smooth version for straight crack course through the concrete component
- Integrated mounting frame for fastening to the reinforcement
- Suitable for floor slabs and wall installation

# ABS joint sheet metal cage rough/toothed

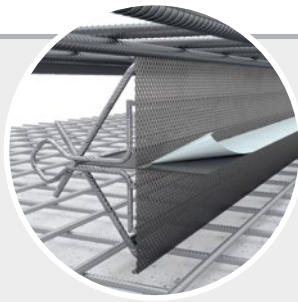
Stopend panel for retrofitting joint sheet metal

- Insertion cage for coated joint sheet metals
- Insertion depth limited at 80 mm
- Rough/toothed joint according to DIN EN 1992-1-1 NA (EC2)
- Ready-to-install, matched to the thickness of the floor slab

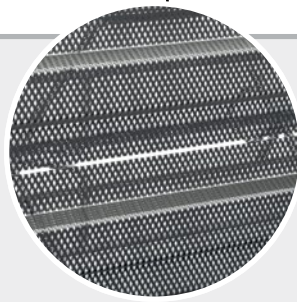
ABS joint sheet metal cage rough – Type S  
Type S = Standard braced



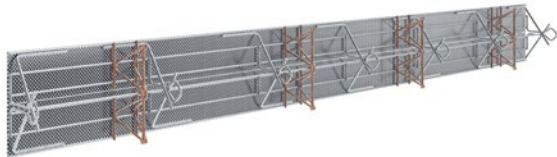
ABS joint sheet metal cage toothed – Type S  
Type S = Standard braced



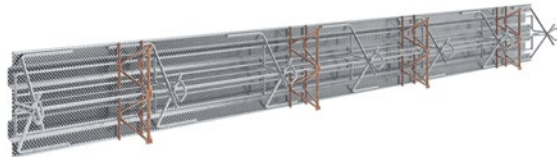
Insertion limit



Insertion opening for joint sheet metal



ABS joint sheet metal cage rough – Type V  
Type V = Reinforced version



ABS joint sheet metal cage toothed – Type V  
Type V = Reinforced version

## Installation instructions

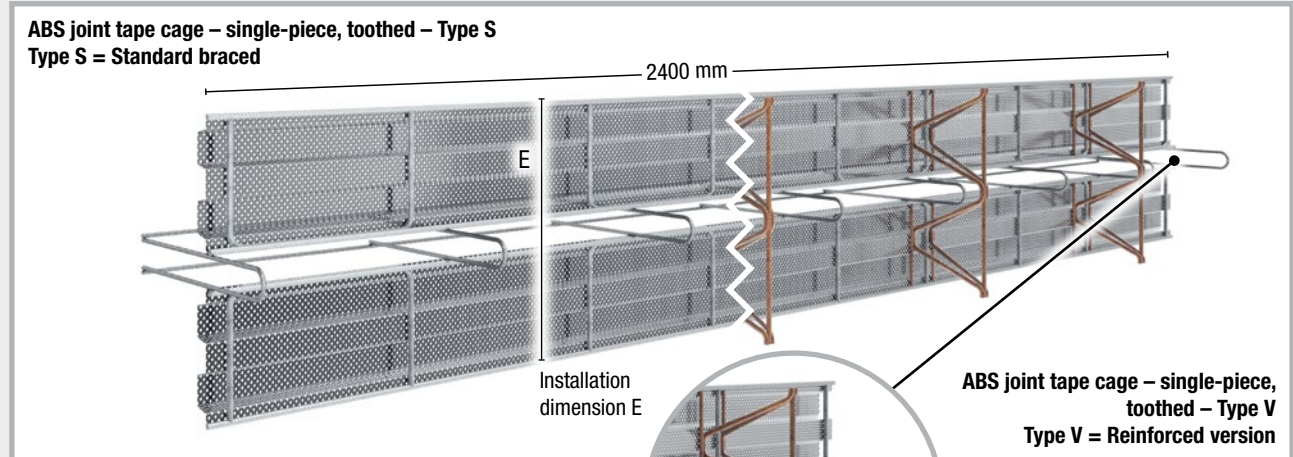
- Place the ABS joint sheet metal cage elements between the reinforcement layers and fix them with tie wire.
- Peel off the protective foil of the joint sheet metal on the sheet side of the first concreting section and push the joint sheet metal into the insertion cage.
- Overlap the sheet ends of the joint sheet metals to be inserted according to the manufacturer's specifications.
- The ABS joint sheet metal cage elements remain in the concrete, i.e. no time-consuming formwork or stripping required.
- The back anchoring and securing the position of the elements against concrete pressure is carried out at the construction site.

**Suitable joint sheet metal for retrofitting: you will find the VB joint sheet metal on pages 26 – 27.**

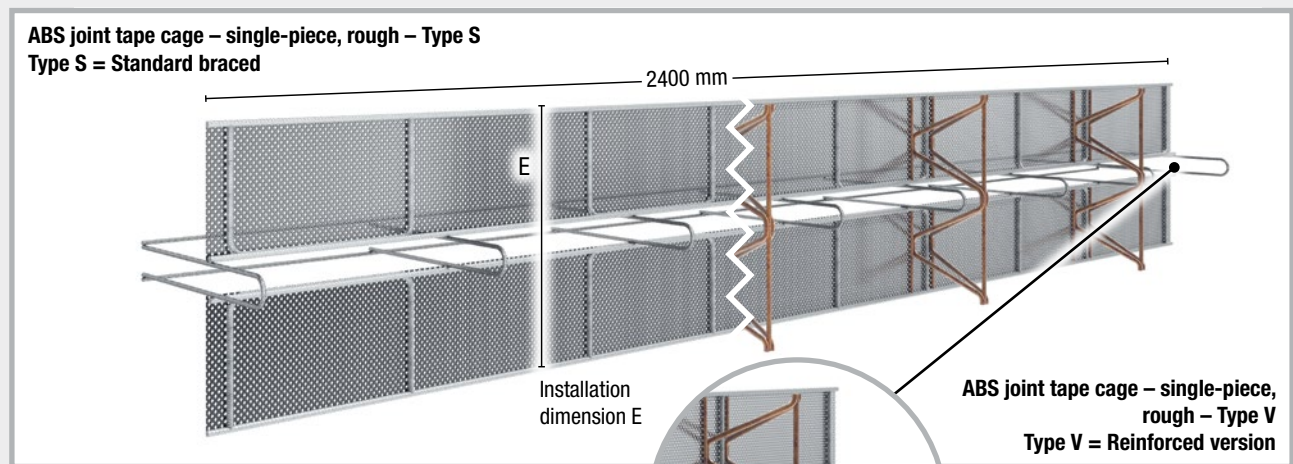
# ABS joint tape cage – single-piece, toothed/rough

## Stopend panel for retrofitting joint tapes

- Insertion cage for internal construction joint tapes 190, 240 and 320 mm
- Rough/toothed joint according to DIN EN 1992-1-1 NA (EC2)
- Ready-to-install, matched to the thickness of the floor slab
- Fastened to cage with joint tape clamp



- Toothed joint according to DIN EN 1992-1-1 NA (EC2)
- Type V – with welded on lattice girders for reinforcement
- Insertion opening for joint tape adapted to the joint tape width



- Rough joint according to DIN EN 1992-1-1 NA (EC2)
- Type V – with welded on lattice girders for reinforcement
- Insertion opening for joint tape adapted to the joint tape width

## ABS joint tape cage deflection profile

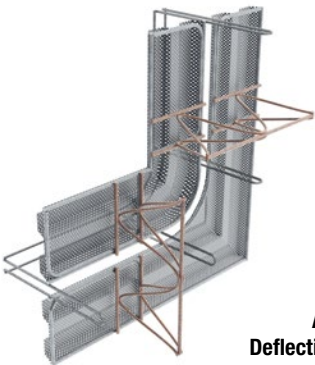
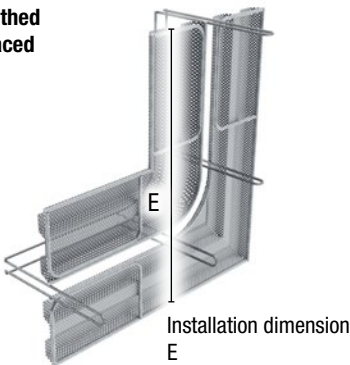
Stopend panel for direction changes of joint tapes

The ABS joint tape cage deflection profiles allow for direction changes from horizontal to vertical joint courses. The most common case is the transition from floor slabs to walls.

- Defined bending radius of 150 mm according to DIN 18197 for internal construction joint tapes
- Compatible with ABS joint tape cage

## ABS joint tape cage deflection profile toothed

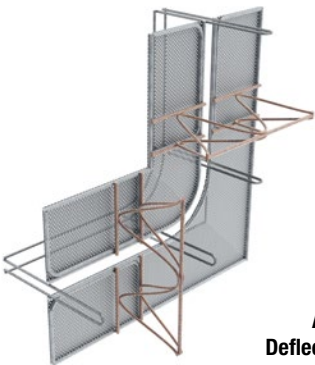
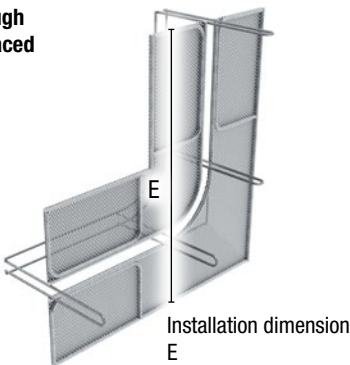
ABS joint tape cage  
Deflection profiles toothed  
Type S = Standard braced



- Toothed joint according to DIN EN 1992-1-1 NA (EC2)
- Type V – with welded on lattice girders for reinforcement

## ABS joint tape cage deflection profile rough

ABS joint tape cage  
Deflection profiles rough  
Type S = Standard braced



- Rough joint according to DIN EN 1992-1-1 NA (EC2)
- Type V – with welded on lattice girders for reinforcement



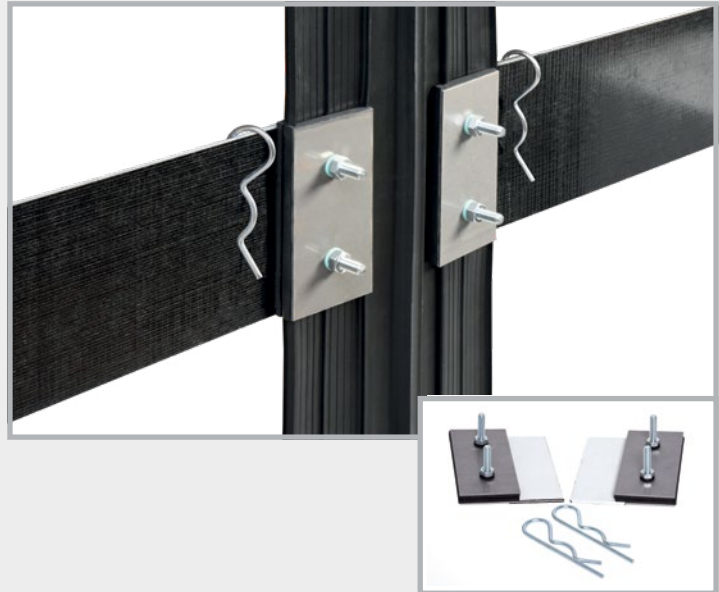
# Joint sheet metal/joint tape connector



## Product description

The joint sheet metal/joint tape connector establishes a reliable pressure watertight 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.



The positions of the bore holes are marked.



The holes are drilled.



The connectors and joint tape are assembled.



The screws are tightened.



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

# MASTER-Connect



## Connector for joint sheet metals and joint tapes

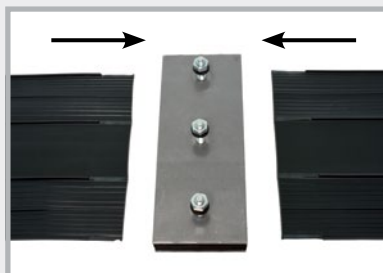
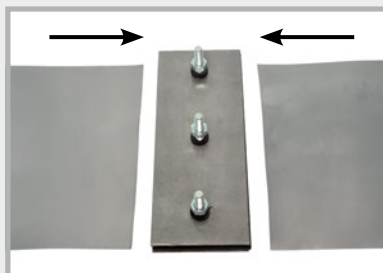
MASTER-Connect connectors are manufactured in 2 versions. MASTER-Connect Type F for joint sheet metals and Type B for joint tapes.

- No boreholes
- Supplied ready for installation
- No welding
- Completely pressure watertight connection

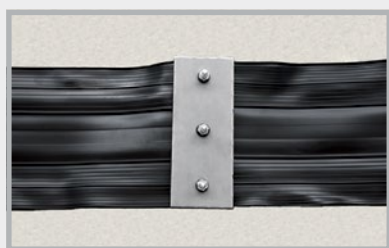


## Technology

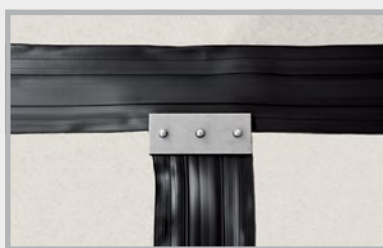
1. The connectors are supplied preassembled.
2. The joint sheet metal elements or joint tapes are pushed in between the seals on the left and right.
3. The ribs are removed at the insertion section of the joint tapes to ensure this section is as smooth as possible.
4. Following insertion the screws are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



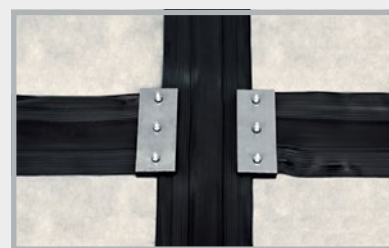
## Installation options for joint tape and joint sheet metal



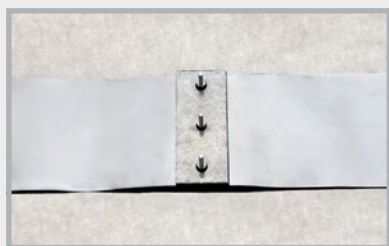
Butt joint



T piece



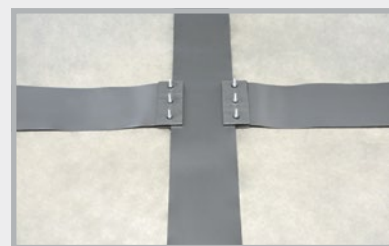
Junction



Butt joint



T piece



Junction

Technical data and detailed installation instructions can be found at [www.mastertec.eu](http://www.mastertec.eu)

# INJECTION HOSES CONSTRUCTION CHEMISTRY



**MASTERTUBE  
YELLOW**  
injection hose system  
pages 100 – 103



**MASTERTUBE  
RED/YELLOW**  
injection hose system  
pages 100 – 103



**PROTECT resin system  
+ Universal concrete adhesive  
+ Injection packers**  
pages 104 – 106



**LIDOL concrete release agent  
in MULTI and BIO quality**  
pages 107 – 108

1

HYDROPHILIC  
WATERSTOPS

2

JOINT SHEET METALS

3

INJECTION HOSES  
CONSTRUCTION CHEMISTRY

4

SERVICE DUCTS

5

LIGHTNING  
PROTECTION

6

FORMWORK  
ACCESSORIES



# MASTERTUBE injection hose systems



## Injection hoses

Art.Gr. 300

Art. no.	Description	PU	Secondary packaging	Weight
030400	<b>MASTERTUBE YELLOW</b> round, size: 6/12 mm, PVC injection hose	1 roll of 100 m	1 pallet = 48 rolls	10.25 kg per roll
030050	<b>MASTERTUBE RED/YELLOW</b> round, size: 6/12 mm, red/yellow Injection hose with woven jacket	1 roll of 100 m	1 pallet = 48 rolls	10.35 kg per roll

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

The MASTERTUBE YELLOW injection hose has fastening marks at intervals of 15 cm.



Art. no. 030400



Art. no. 030050

## MASTERTUBE YELLOW installation set

Art.Gr. 301

Art. no.	Description	PU	Weight/set
030055	<b>MASTERTUBE YELLOW installation set</b> 10 m MASTERTUBE YELLOW injection hose 100 plastic fastening clips, type B 2 fastening packers (1 x red, 1 x white), including 2 nipples 2 hose connectors	1 carton = 1 set	1.60 kg

## MASTERTUBE RED/YELLOW installation set

Art.Gr. 301

Art. no.	Description	PU	Weight/set
030052	<b>MASTERTUBE RED/YELLOW installation set</b> 40 m MASTERTUBE RED/YELLOW injection hose 20 fastening packers, including nipples 300 plastic fastening clips, type B 10 hose connectors 1 roll of filament tape	1 carton = 1 set	6.10 kg







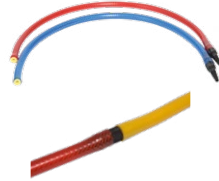








# Injection hose and accessories

 Art.Gr.  
302

Art. no.	Description	PU	Secondary packaging	Weight per pc.	
030060	<b>Fastening packer, without nipple,</b> for fastening of injection hose to the formwork, Colour of packer: black, 10 red plugs, 10 white plugs, for resin injection	1 bag of 20 pcs.	1 carton = 25 bags	0.50 kg per bag	
030063	<b>Nipples for fastening packers</b>	1 bag of 20 pcs.		0.10 kg per bag	
030362	<b>Plastic foam for fastening packer</b> Diameter 35 mm, Thickness 20 mm, self-adhesive, 10 pcs. white, 10 pcs. anthracite	1 bag of 20 pcs.		0.04 kg per bag	
030065	<b>Fixing spider</b> for fixing the fastening packer to the reinforcement	1 pc.		0.08 kg	
030075	<b>Plastic fastening clip type A</b> to be pressed into the fresh concrete, distance between clips: 15 cm	1 bag of 100 pcs.	1 sack = 25 bags	0.29 kg per bag	
030070	<b>Plastic fastening clip type B</b> for pressing into the fresh concrete or into Ø 8 mm bore holes, distance between clips: 15 cm	1 bag of 100 pcs.	1 sack = 25 bags	0.29 kg per bag	
030080	<b>Metal clip with pre-fitted nail</b> for all common nailguns, for firing and nailing, distance between clips: 15 cm	1 carton of 100 pcs.		1.75 kg per carton	
030081	<b>Metal clip without nail</b>	1 carton of 100 pcs.		1.40 kg per carton	
030083	<b>Nail plug 5 x 40 mm</b> borehole Ø 5 mm	1 carton of 200 pcs.		0.63 kg per carton	
030072	<b>Fastening grid for MASTERTUBE</b> 1 carton = 25 m (25 grids of 1 m)	1 carton		1.65 kg per carton	
030082	<b>MASTERTUBE joint sheet metal clamp</b>	1 bag of 100 pcs.		0.60 kg per bag	

Injection hose and accessories

Art.Gr.  
302

Art. no.	Description	PU	Weight per pc.	
030100	<b>Hose connector</b> for hose extension and connection of oddments	1 bag of 10 pcs.	0.03 kg per bag	
030102 030104	<b>Ventilation hose</b> Fabric hose blue-transparent round, size: 5/11 mm red-transparent round, size 5/11 mm	1 roll of 50 m	5.50 kg 5.50 kg per roll	
030112 030114	<b>Injection end pieces</b> including sealing plug and hose connector, length 50 cm blue-transparent round 5/11 mm red-transparent round 5/11 mm	1 bundle of 10 pcs. 1 bundle of 10 pcs.	0.60 kg per bundle 0.60 kg per bundle	
030096	<b>Sealing plugs</b> for injection end pieces and ventilation hose	1 bag of 20 pcs.	0.01 kg per bag	
030350	<b>Storage box for ventilation hose</b>	1 bag of 10 pcs.	0.73 kg per bag	
030140	<b>Hand-lever press 500 ccm</b> for resin injection	1 pc.	1.05 kg	
030150	<b>Reinforced hose L 300 mm</b> incl. gripping head	1 pc.	0.09 kg	
030160	<b>Gripping head</b>	1 pc.	0.03 kg	
030165	<b>Manometer 400 bar with T piece</b> incl. connecting tube and adapter	1 pc.	0.28 kg	
030130	<b>Injection packer, including nipple</b> for injection via ventilation hose or injection hose	1 bag of 10 pcs.	0.13 kg per bag	
030090	<b>Filament tape</b> roll width: 25 mm, roll length: 50 m to safeguard the hose ends	1 carton of 36 rolls	0.22 kg per roll	

# MASTERTUBE injection hose systems

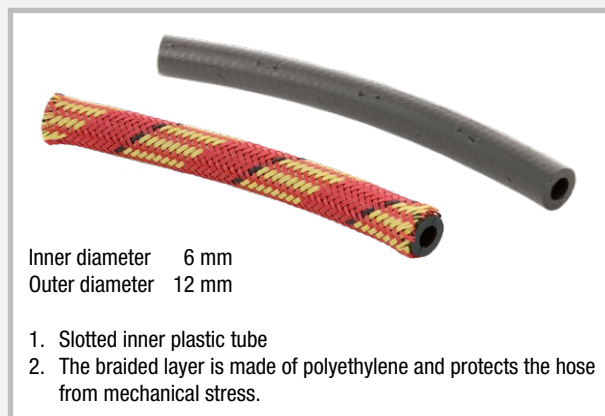
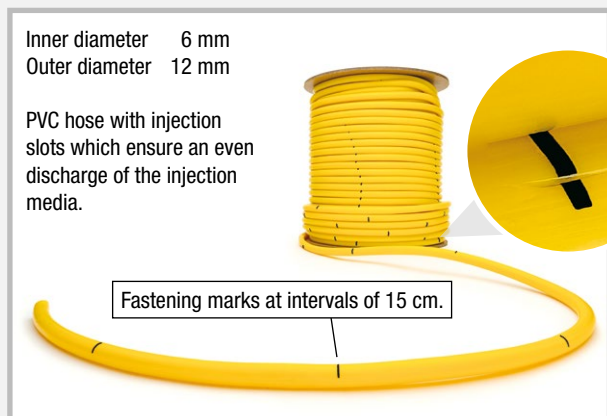


## Two systems with 100% reliability

The MASTERTUBE YELLOW and MASTERTUBE RED/YELLOW 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.



Both systems are also available as an installation set.



	MASTERTUBE YELLOW	MASTERTUBE RED/YELLOW
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
Grouting circuits up to 15 m	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



# 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.

## Universal concrete adhesive

### PROTECT Easy 1K



#### Single-component polymer-based concrete adhesive

For water-tight bonding of all fibre cement distance tubes and for the bonding of split FASO lining pipes.

Processing takes approx. 20 min. at +23°C;

**Resistant to all normal uncontaminated groundwater.**

Art.Gr.  
**308**

Art. no.	Description	PU	Secondary packaging	Weight/aluminium bag
040030	<b>PROTECT Easy 1K</b> in aluminium bag 800 g	1 aluminium bag	1 carton = 20 aluminium bags	0.80 kg

### PROTECT BK 2K



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

For water-impermeable bonding of all fibre cement distance tubes, for non-positive connection of concrete components and for the bonding of split FASO lining pipes.

Processing time approx. 60 min. at +20°C

#### Resistances of PROTECT BK once cured:

Diluted acids, mineral oil, lubricants and fuels, salt water, waste water, large number of alkalis and solvents, approved for use in contact with drinking water



Art.Gr.  
**308**

Art. no.	Description	PU	Secondary packaging	Weight
040100	<b>PROTECT BK 2K</b> for pressure water-tight sealing of fibre cement distance tubes.	1 kg combination can: (0.5 kg component A + 0.5 kg component B)	1 carton = 10 combination cans  1 pallet = 28 cartons	1.20 kg per can

## PROTECT Clean

#### Cleaning agent

For cleaning of polyurethane and epoxy resin prior to curing.



Art.Gr.  
**303**

Art. no.	Description	PU	Secondary packaging	Weight
040045	<b>PROTECT Clean</b>	1 can 1 l	1 carton = 12 cans	0.96 kg/can
040040	<b>PROTECT Clean</b>	1 canister 10 l	1 canister	9.45 kg/canister



**NEW! MC-Injekt 2300 flow****Polyurethane resin for hose and crack injection**

Permanently sealing, moisture-reactive injection resin;

CE marking;

Processing time up to 100 minutes at +20°C;



Art.Gr.  
**303**

Art. no.	Description	PU	Secondary packaging	Weight
040015	MC-Injekt 2300 flow polyurethane resin	1 l combination can: (0.5 l component A + 0.5 l component B)	1 carton = 6 cans	1.30 kg per can

**Application**

All resins must be very well homogenised during mixing.

Example MC-Injekt 2300 flow:

Installation instructions, technical data and data sheets can be found on our website:

**www.mastertec.eu**

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



Processing materials: Protective gloves, safety goggles, cordless screwdriver, suitable mixer.



Pour the entire contents of hardener component A into the combination can of component B.



Stir the mixture for at least 2 minutes.



Transfer the mixed material into a clean, dust-free container for further processing, either by machine or manually.

**MC-Injekt 1264 compact****Epoxy resin**

Non-positive filling of cracks and joints;

Injection into injection hoses;

Suitable for dry and damp substructures;

Processing time approx. 25 min. at +20°C;



Art.Gr.  
**303**

Art. no.	Description	PU	Secondary packaging	Weight
040020	MC-Injekt 1264 compact epoxy resin	1 l combination can: (800 ml component A + 200 ml component B)	1 carton = 6 cans	1.35 kg per can

**MC-Injekt 2133****Single-component, fast-foaming polyurethane-based foam resin**

Immediately stops the inflow of water; rapid expansion with high increase in volume;

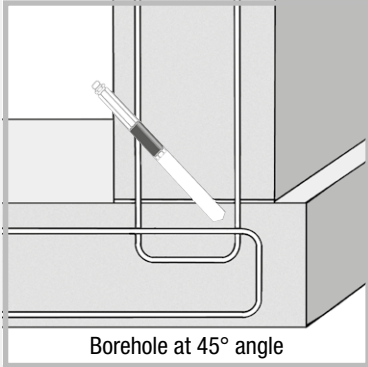
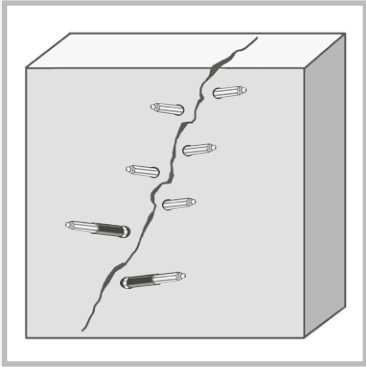
Reaction time upon contact with water approx. 10-15 seconds;



Art.Gr.  
**303**

Art. no.	Description	PU	Secondary packaging	Weight
040050	MC-Injekt 2133 foam resin	1 l can	1 carton = 6 cans	1.30 kg per can

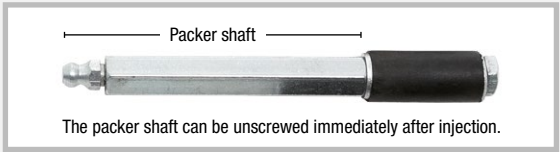
Injection packers / surface packers



Art. no.	Screw injection packer including nipple / size	Drill bit Ø	PU	Weight per carton
030185	10/70 mm	10 mm	1 carton of 100 pcs.	1.90 kg
030187	10/100 mm	10 mm	1 carton of 100 pcs.	2.70 kg
030183	13/80 mm	14 mm	1 carton of 100 pcs.	2.90 kg
030180	13/100 mm	14 mm	1 carton of 100 pcs.	4.65 kg
030181	13/160 mm	14 mm	1 carton of 100 pcs.	7.28 kg
030182	13/250 mm	14 mm	1 carton of 100 pcs.	10.80 kg

One day site packer

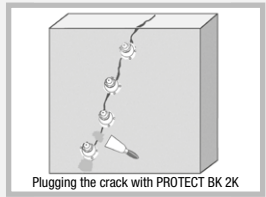
Art.Gr. 304



Art. no.	One day site packer including nipple / size	Drill bit Ø	PU	Weight per carton
030188	10/110 mm	10 mm	1 carton of 100 pcs.	4.00 kg
030189	13/115 mm	14 mm	1 carton of 100 pcs.	4.60 kg

Surface packer

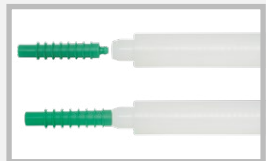
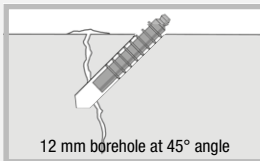
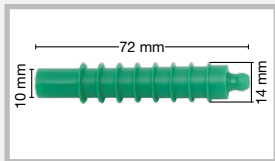
Art.Gr. 304



Art. no.	Description	PU	Weight
030200	Plastic surface packers, washer diameter 5 cm	1 bag of 100 pcs.	1.70 kg per bag

Plastic injector




Art.Gr. 304



Art. no.	Description	PU	Weight
030210	Plastic injector with non-return ball	1 bag of 200 pcs.	0.80 kg per bag
030215	Impact stud	1 pc.	0.07 kg/pc.

# LIDOL concrete release agent

Art.Gr.  
305

Art. no.	Description	PU	Secondary packaging	Weight	
040310	<b>LIDOL MULTI</b>	1 canister 25 l	1 pallet = 24 canisters	23.4 kg per canister	 Drum
040320	<b>LIDOL MULTI</b>	1 drum 200 l with integrated faucet	1 pallet = 2 drums	184.6 kg per drum	
040330	<b>LIDOL BIO</b>  Universal release agent for all common types of formwork Rapidly biodegradable Environmental label "Blue Angel"	1 canister 25 l	1 pallet = 24 canisters	23.4 kg per canister	 25 l canister

## 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 a compression sprayer.

# 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 “Blue Angel” 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°C
- Neutral odour



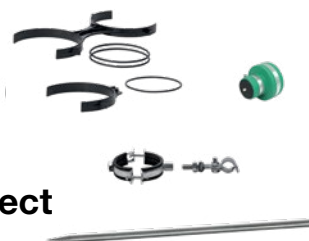
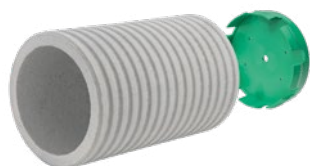
### Application:

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 a compression sprayer.

Types of formwork	Yield per 1 litre of LIDOL BIO	Yield per 1 litre of LIDOL MULTI
formwork panels	approx. 75 m <sup>2</sup>	approx. 80 m <sup>2</sup>
planed timber surface	approx. 35 m <sup>2</sup>	approx. 40 m <sup>2</sup>
unplaned timber surface	approx. 25 m <sup>2</sup>	approx. 30 m <sup>2</sup>



# PRESSURE WATER-TIGHT SERVICE DUCTS



## FIX formwork aid & Master-Home-Connect

pages 110 – 119



## Lining pipes & accessories

pages 120 – 129



## Gasket inserts, modular seals, FLEX 2000

pages 130 – 139



## RONDO sealing collars

pages 140 – 144



## Pipe bushings and ground drains

pages 145 – 152

1

HYDROPHILIC  
WATERSTOPS

2

JOINT SHEET METALS

3

INJECTION HOSES  
CONSTRUCTION CHEMISTRY

4

SERVICE DUCTS

5

LIGHTNING  
PROTECTION

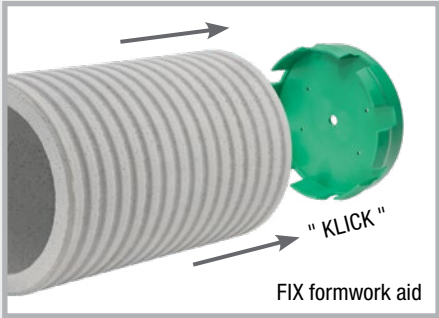
6

FORMWORK  
ACCESSORIES

# FIX formwork aid

Fastening system for lining pipes and fixed earthing terminals at the construction site and at the precast plant

For nailing to wooden and plastic formworks and for fastening to steel formworks using FIX Magnet



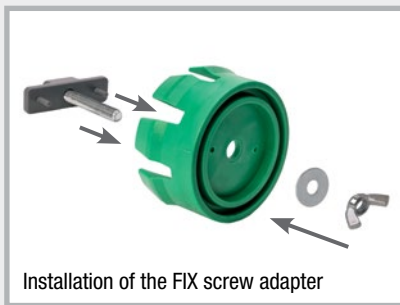
All parts of the FIX formwork range are reusable

Art.Gr.  
**420**

Art. no.	Description	PU	Weight per pc.	
091410	<b>FIX Magnet</b> for formwork aid Power Magnet for all FIX formwork aids, incl. screw and wing nut	25 pcs.	0.14 kg	
090804	<b>FIX EFP formwork aid</b> for fixed earthing terminals M10/12 and M12, cone height 11 mm	25 pcs.	0.03 kg	
090806	<b>FIX 80 formwork aid</b> for lining pipes ID 79-84 mm	25 pcs.	0.10 kg	
090810	<b>FIX 100 formwork aid</b> for lining pipes ID 99-104 mm Sewage pipe DN 110	25 pcs.	0.15 kg	
090814	<b>FIX 110 formwork aid</b> for lining pipes ID 109-114 mm for the socket of KG and KG 2000 sewage pipes DN 110	25 pcs.	0.16 kg	
090816	<b>FIX 125 formwork aid</b> for lining pipes ID 124-129 mm for the socket of KG and KG 2000 sewage pipes DN 125	25 pcs.	0.20 kg	
090818	<b>FIX 150 formwork aid</b> for lining pipes ID 149-154 mm Sewage pipe DN 160	25 pcs.	0.25 kg	
090822	<b>FIX 200 formwork aid</b> for lining pipes ID 199-206 mm	25 pcs.	0.38 kg	
090824	<b>FIX screw adapter incl. screw set</b> The screw adapter allows the FIX formwork aid to be fastened to the formwork shell. In the process, the screw connection is on the outside of the formwork, making stripping the formwork after concreting much easier.	1 set	0.04 kg	
090826	<b>FIX removal aid</b> The removal aid makes pulling out the formwork aid easier	1 pc.	0.08 kg	

# Installation of the FIX formwork aid for all common lining pipes

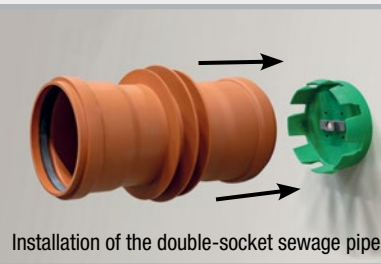
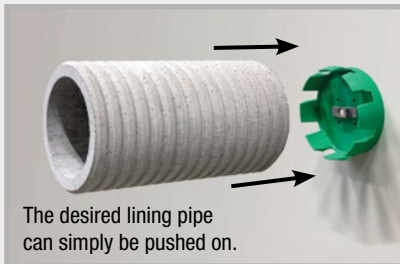
## Wooden or plastic formwork



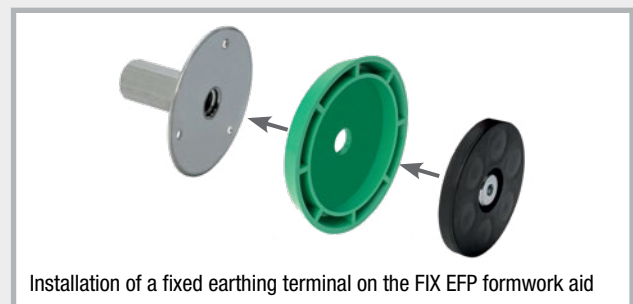
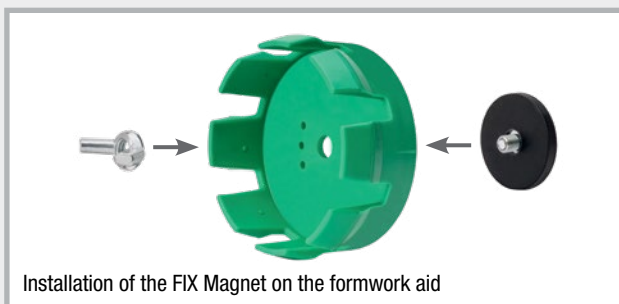
Fastening of the FIX formwork aid through  $\varnothing$  8 mm borehole in the formwork. For benefits and information on installation, visit the website.



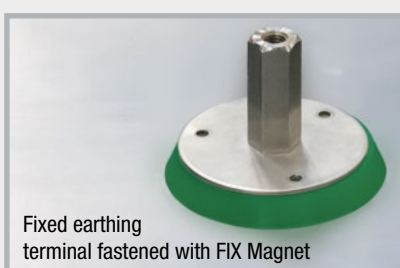
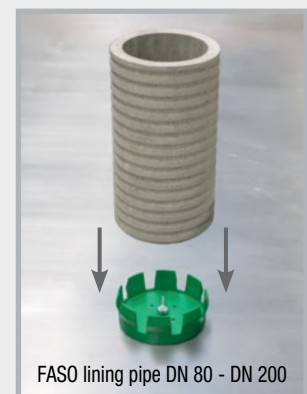
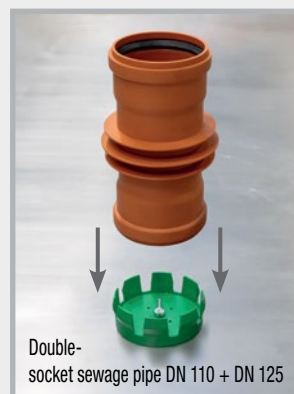
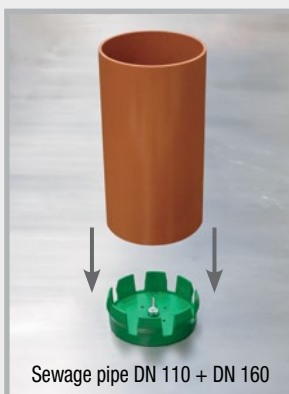
Fastening without screw adapter with nails. For easy stripping of formwork, do not use screws.



## Steel formwork



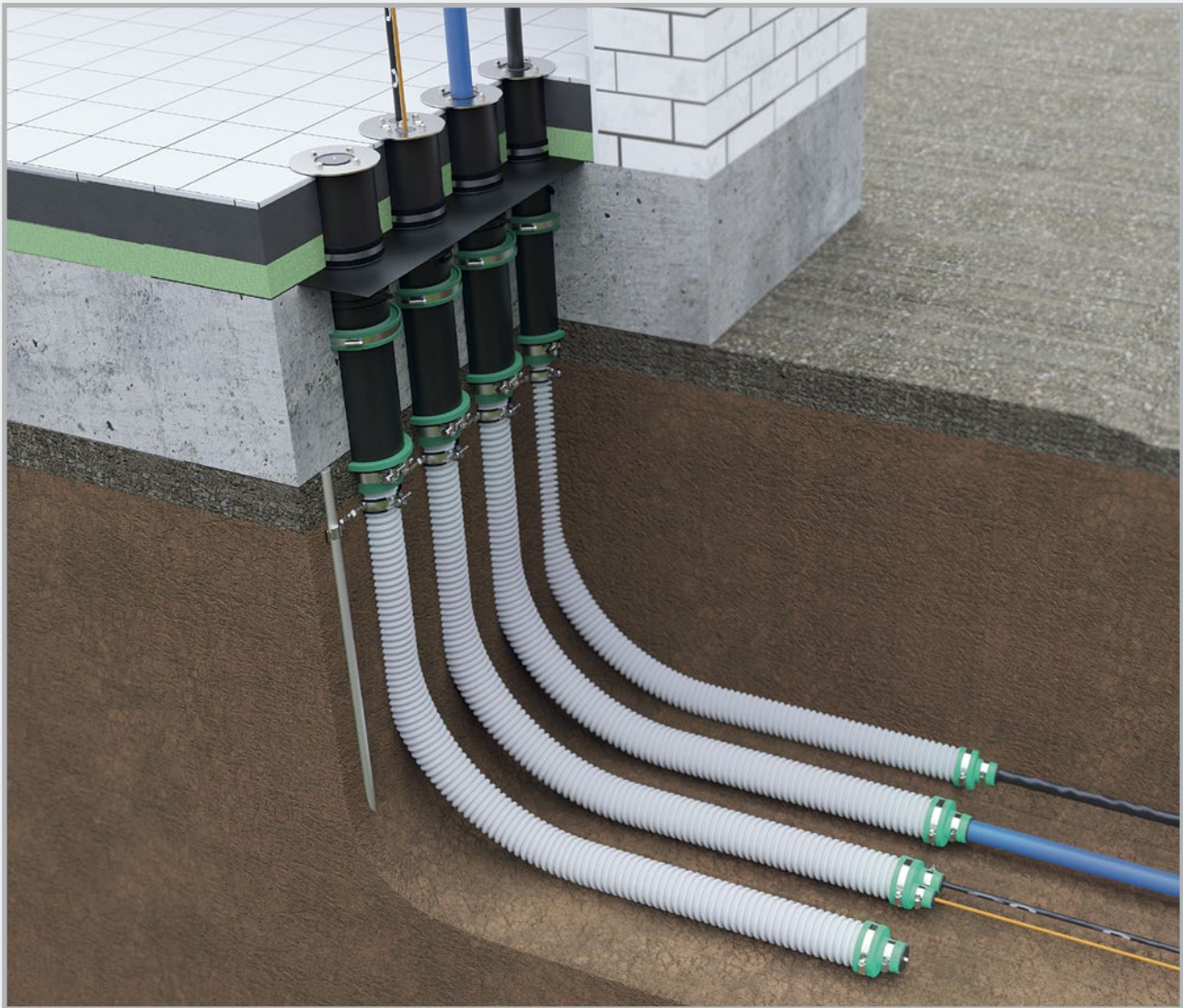
Position the FIX formwork aid using the FIX Magnet and simply push on the desired lining pipe.





# Master-Home-Connect (MHC)

Service duct system for house connections  
for electricity, water and telecommunications



**Certified service duct system according to DVGW VP 601  
03/2007 chapter 4.5**  
**Impermeability to gas and water of the installed service duct**



**Each individual component has been tested additionally for  
pressure water-tightness**



**Test for impermeability to radon when installed**



# Master-Home-Connect single-utility Solo

for on-site cable conduit, for floor slab installation

Art.Gr.  
410

Art. no.	Description	PU	Weight per set
080034	<b>MHC single-utility Solo</b> The <b>MHC single-utility Solo</b> set comprises: <ul style="list-style-type: none"> <li>– 0.6 m lining pipe (with protective cover for the duration of construction) incl. sealing collar, with factory-installed Connector and installation scale</li> <li>– MHC Solo gasket insert</li> <li>– Solid ground stake Ø 20 mm</li> <li>– Dual-thread clamp and connecting clamp</li> <li>– 1 set each of MHC Solo and Duo spacers</li> <li>– Solo cable conduit end cap with Multi insert</li> </ul>	1 set	7.42 kg



## Master-Home-Connect single-utility

incl. cable conduit Ø 75 mm, for floor slab installation

Art.Gr.  
410


Art. no.	Description	PU	Weight per set
	The basic equipment of <b>MHC single-utility</b> comprises: <ul style="list-style-type: none"> <li>– 0.6 m lining pipe (with protective cover for the duration of construction) incl. sealing collar, with factory-installed Connector and installation scale</li> <li>– MHC Solo gasket insert</li> <li>– Solid ground stake Ø 20 mm</li> <li>– Dual-thread clamp and connecting clamp</li> <li>– 1 set each of MHC Solo and Duo spacers</li> <li>– Solo cable conduit end cap with Multi insert</li> </ul>		
080035	<b>MHC single-utility 3 m</b> The <b>MHC single-utility 3 m</b> set contains the above basic equipment and in addition <ul style="list-style-type: none"> <li>– 3.0 m cable conduit Ø 75 mm (external)</li> </ul>	1 set	9.14 kg
<b>NEW!</b> 080036	<b>MHC single-utility 6 m</b> The <b>MHC single-utility 6 m</b> set contains the above basic equipment and in addition <ul style="list-style-type: none"> <li>– 6.0 m cable conduit Ø 75 mm (external)</li> </ul>	1 set	10.61 kg
080037	<b>MHC single-utility 10 m</b> The <b>MHC single-utility 10 m</b> set contains the above basic equipment and in addition <ul style="list-style-type: none"> <li>– 10.0 m cable conduit Ø 75 mm (external)</li> </ul>	1 set	13.13 kg
<b>NEW!</b> 080014	<b>MHC single-utility 15 m</b> The <b>MHC single-utility 15 m</b> set contains the above basic equipment and in addition <ul style="list-style-type: none"> <li>– 15.0 m cable conduit Ø 75 mm (external)</li> </ul>	1 set	16.44 kg



# MHC multi-utility triple sets

for floor slab installation


Art.Gr.  
410

Art. no.	Description	PU	Weight per set
	<p>The basic equipment of <b>MHC multi-utility triple set</b> comprises:</p> <ul style="list-style-type: none"> <li>– 3 x 0.6 m lining pipes (with protective cover for the duration of construction) incl. sealing collar, with factory-installed Connector and installation scale</li> <li>– 2 x MHC Solo gasket inserts</li> <li>– 1 x MHC Multi gasket insert for telecommunications line</li> <li>– 2 x solid ground stakes Ø 20 mm and connection clamps</li> <li>– 3 x dual-thread clamps</li> <li>– 2 sets MHC Duo spacers</li> <li>– 2 x Solo cable conduit end caps with Multi insert</li> <li>– 1 x Duo cable conduit end cap with Multi insert</li> </ul>		
080038	<p><b>MHC multi-utility triple/3 metre</b></p> <p>The <b>MHC multi-utility triple/3 metre</b> set contains the above basic equipment and in addition:</p> <ul style="list-style-type: none"> <li>– 3 x 3.0 m cable conduits outside Ø 75 mm</li> </ul>	1 set	25.34 kg
<b>NEW!</b> 080039	<p><b>MHC multi-utility triple/6 metre</b></p> <p>The <b>MHC multi-utility triple/6 metre</b> set contains the above basic equipment and in addition:</p> <ul style="list-style-type: none"> <li>– 3 x 6.0 m cable conduits outside Ø 75 mm</li> </ul>	1 set	29.75 kg
080040	<p><b>MHC multi-utility triple/10 metre</b></p> <p>The <b>MHC multi-utility triple/10 metre</b> set contains the above basic equipment and in addition:</p> <ul style="list-style-type: none"> <li>– 3 x 10.0 m cable conduits outside Ø 75 mm</li> </ul>	1 set	37.31 kg
<b>NEW!</b> 080015	<p><b>MHC multi-utility triple/15 metre</b></p> <p>The <b>MHC multi-utility triple/15 metre</b> set contains the above basic equipment and in addition:</p> <ul style="list-style-type: none"> <li>– 3 x 15.0 m cable conduits outside Ø 75 mm</li> </ul>	1 set	44.06 kg

# MHC multi-utility quadruple sets

for floor slab installation

Art.Gr.  
410

Art. no.	Description	PU	Weight per set
	<p>The basic equipment of <b>MHC multi-utility quadruple set</b> comprises:</p> <ul style="list-style-type: none"> <li>– 4 x 0.6 m lining pipes (with protective cover for the duration of construction) incl. sealing collar, with factory-installed Connector and installation scale</li> <li>– 3 x MHC Solo gasket inserts</li> <li>– 1 x MHC Multi gasket insert for telecommunications line</li> <li>– 2 x solid ground stakes Ø 20 mm and connection clamps</li> <li>– 4 x dual-thread clamps</li> <li>– 3 sets MHC Duo spacers</li> <li>– 3 x Solo cable conduit end caps with Multi insert</li> <li>– 1 x Duo cable conduit end cap with Multi insert</li> </ul>		
080041	<p><b>MHC multi-utility quadruple/3 metre</b></p> <p>The <b>MHC multi-utility quadruple/3 metre</b> set contains the above basic equipment and in addition:</p> <ul style="list-style-type: none"> <li>– 4 x 3.0 m cable conduits outside Ø 75 mm</li> </ul>	1 set	30.48 kg
<b>NEW!</b> 080042	<p><b>MHC multi-utility quadruple/6 metre</b></p> <p>The <b>MHC multi-utility quadruple/6 metre</b> set contains the above basic equipment and in addition:</p> <ul style="list-style-type: none"> <li>– 4 x 6.0 m cable conduits outside Ø 75 mm</li> </ul>	1 set	36.36 kg
080043	<p><b>MHC multi-utility quadruple/10 metre</b></p> <p>The <b>MHC multi-utility quadruple/10 metre</b> set contains the above basic equipment and in addition:</p> <ul style="list-style-type: none"> <li>– 4 x 10.0 m cable conduits outside Ø 75 mm</li> </ul>	1 set	46.44 kg
<b>NEW!</b> 080016	<p><b>MHC multi-utility quadruple/15 metre</b></p> <p>The <b>MHC multi-utility quadruple/15 metre</b> set contains the above basic equipment and in addition:</p> <ul style="list-style-type: none"> <li>– 4 x 15.0 m cable conduits outside Ø 75 mm</li> </ul>	1 set	55.44 kg

# MHC single-utility – wall









for wall installation

Art.Gr.  
**410**

Art. no.	Description	PU	Weight per set
<b>080044</b>	<b>MHC single-utility – wall – Solo</b> The <b>MHC single-utility – wall – Solo</b> set comprises: <ul style="list-style-type: none"> <li>– 0.365 m lining pipe (with protective cover for the duration of construction) incl. sealing collar and length scale</li> <li>– Connector for connecting the cable conduit</li> <li>– MHC Solo gasket insert</li> <li>– 1 set each of MHC Solo and Duo spacers</li> <li>– Solo cable conduit end cap with Multi insert</li> </ul>	1 set	3.78 kg
<b>080045</b>	<b>MHC single-utility – wall – Multi</b> The <b>MHC single-utility – wall – Multi</b> set comprises: <ul style="list-style-type: none"> <li>– 0.365 m lining pipe (with protective cover for the duration of construction) incl. sealing collar and length scale</li> <li>– Connector for connecting the cable conduit</li> <li>– MHC Multi gasket insert for telecommunications line</li> <li>– 1 set each of MHC Solo and Duo spacers</li> <li>– Duo cable conduit end cap with Multi insert</li> </ul>	1 set	3.80 kg

## Master-Home-Connect accessories

Art.Gr.  
**410**

Art. no.	Description	PU	Weight per pc.	
<b>080052</b>	<b>MHC Solo end cap (Set)</b> 1 media line: 4-40 mm	1 set	0.25 kg per set	
<b>080053</b>	<b>MHC Duo end cap (Set)</b> up to 2 media lines: each 4-25 mm	1 set	0.25 kg per set	
<b>080047</b>	<b>MHC Multi gasket insert</b> up to 4 media lines: 2 x 4-25 mm + 2 x 10 mm	1 pc.	0.81 kg	
<b>080046</b>	<b>MHC Solo gasket insert</b> 1 media line: 4-40 mm	1 pc.	0.79 kg	
<b>080050</b>	<b>MHC Solo spacer</b>	1 set	0.02 kg per set	
<b>080051</b>	<b>MHC Duo spacer</b>	1 set	0.04 kg per set	
<b>080012</b>	<b>Cable conduit Ø 75 mm</b>	1 m	0,53 kg per m	
<b>080033</b>	<b>Foil flange for MHC,</b> quadruple, size: 800 x 250 mm, suitable for on-site adjustment	1 pc.	0.47 kg	

# Master-Home-Connect (MHC)

## Individual components



### Lining pipe

Plastic lining pipe with length of 0.6 m and pre-installed RONDO Base sealing collar, Connector connection seal and length scale. The sealing collar seals off the transition between the concrete and lining pipe so that it is impermeable to pressurised water and gas.

The Connector connection seals connect the cable conduits DN 75 mm so that they are pressure water-tight.



### Cable conduit

Pressure-resistant protective conduit DN 75 mm for electrical, water and telecommunications lines laid in the soil.

Alongside its excellent pressure resistance, the protective conduit which is classified as N750 according to DIN EN 61386-24, provides perfect insertion properties thanks to the sliding, green inner layer.



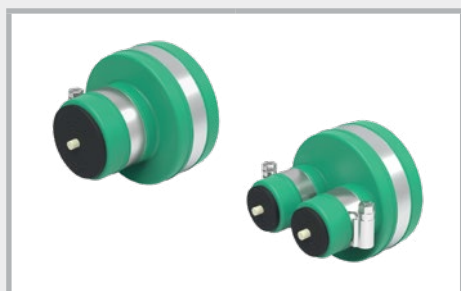
### Fastening material

**Dual-thread clamps** for positioning multiple cable conduits with defined spacing in a row or as a package.

**Connection clamp** for connection of the dual-thread clamps to the ground stake.

**Solid ground stake** for positioning the dual-thread clamps in the ground.

**MHC Solo and Duo spacers** for connection and plumb alignment of the lining pipes.



### MHC end caps

Rubber end seal for waterproofing the ends of the cable conduit at the transition point.

The Multi insert allows adaptation to the media line being inserted.

**MHC Solo end cap (set):** 1 media line 4-40 mm

**MHC Duo end cap (set):** up to 2 media lines, each 4-25 mm



### MHC gasket inserts

Gasket insert for waterproofing the transition of the lining pipe to the inserted media line.

The gasket insert can be adapted to all common medium pipes thanks to the Multi inserts which can be adjusted to the medium pipe.

**MHC Solo gasket insert:**

1 media line 4-40 mm

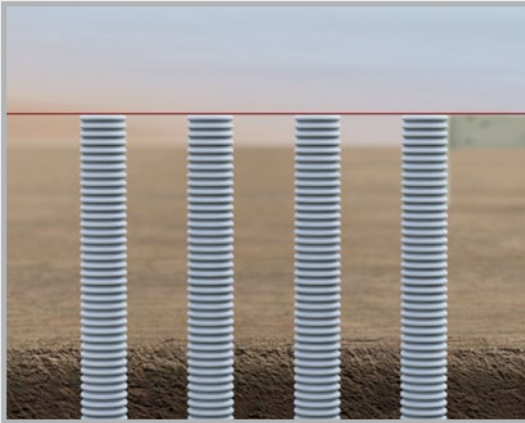
**MHC Multi gasket insert:**

up to 4 media lines 2 x 4-25 mm + 2 x 10 mm

The 130 mm pressure plate covers the transition area between the lining pipe and floor covering with its projection.

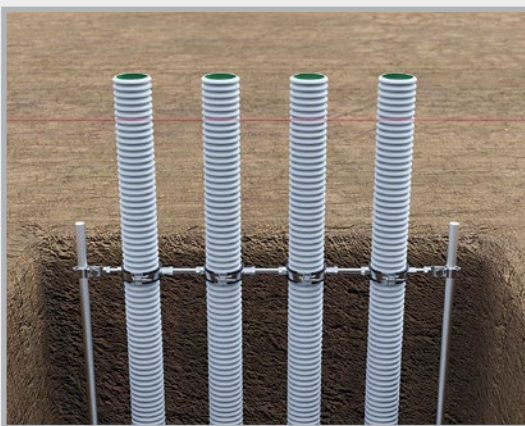


# Master-Home-Connect (MHC) Installation



## Laying the cable conduit

The cable conduits are directed from the transition point up to the desired insertion point under the floor slab, and up to at least the height of the top edge of the floor slab with a bending radius  $> 350$  mm.



## Fastening the cable conduit

The cable conduits are connected with the spacing in a row defined for the installation using the dual-thread clamps. The connection clamp is used to establish a connection between the dual-thread clamps and the ground stake on both sides, which is driven into the soil beforehand. The height position of the connection clamp is positioned at least 400 mm underneath the top edge of the floor slab, and secured with screws.



## Sealing the cable conduit/backfilling

The ends of the cable conduit are sealed with the supplied construction protective covers. The trench for the cable conduits can then be filled with suitable filling material and waterproofed in layers.



## Installation of the MHC lining pipe

The cable conduits are then cut 360 mm underneath the top edge of the floor slab. The end of the MHC lining pipe, which is equipped with the Connector, is pushed over the end of the cable conduit, and secured by tightening the metal clamp.

The plumb position of the lining pipe is not yet relevant at this point.

# Master-Home-Connect (MHC) Installation



## Connection of the MHC lining pipes

The MHC lining pipes are connected to each other using Duo spacers. For this purpose, the pipes are clipped into the spacers and secured using the supplied rubber fastening straps.

The spacers are positioned at the height of the upper layer of reinforcement.



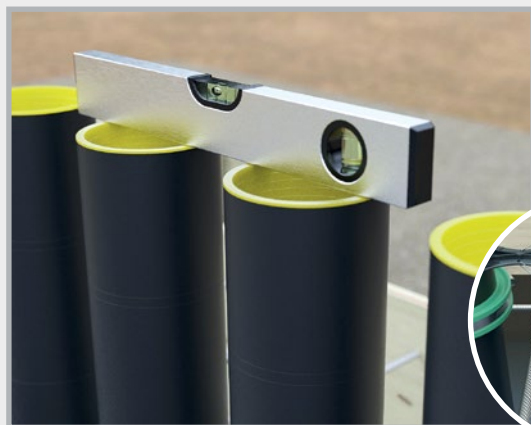
## Floor slab substrate

The substrate for the floor slab can subsequently be prepared in the form of gravel or grit bedding. When concreting a blinding layer, the MHC service duct must be shuttered. As a result, the elastic bearing remains in place for subsequent plumb alignment.



## Preparation of the floor slab

The formwork of the floor slab is put in place. The reinforcement of the floor slab is inserted.

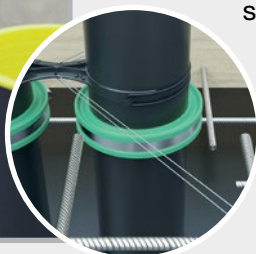


## Plumb alignment/concreting

After inserting the upper layer of reinforcement, the MHC lining pipes are aligned plumb.

The securing holes of the spacers can be used to secure the plumb position to the upper layer of reinforcement using tie wire.

After alignment and securing, the floor slab can be concreted.





# Master-Home-Connect (MHC) Installation



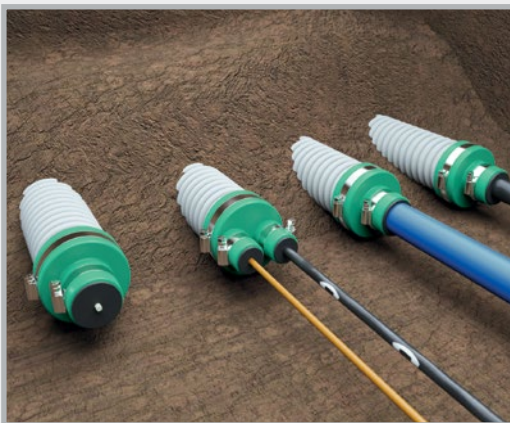
## Connection of the floor slab vapour barrier

A foil flange seal made of PVC foil with a thickness of 1.5 mm, suitable for the MHC service duct system, for the integration of the surface-wide vapour barrier on the floor slab, is available. It is designed in the factory for the quadruple row arrangement. The foil flange is pushed over the lining pipes from the inside of the structure and clamped to the pipe body with fastening straps. The surface waterproofing is processed on the flange. When using fewer than 4 lining pipes, the foil flange can be cut off on site.



## Floor construction

The planned floor construction, generally comprising thermal insulation, impact sound insulation, underfloor heating as applicable, screed and covering layer, can then be applied. The length of the lining pipes is designed for a floor construction with a slab-to-floor height of up to 250 mm. For a visually appealing result, for a floor construction < 250 mm, cutting off the projecting lining pipes to the level of the top edge of the finished floor is recommended. This can be done before or after preparing the floor construction.



## Installation of end caps/ insertion of media lines

The end caps are pushed onto the cable conduits at the transition point and the media lines are inserted.

**Solo end cap:** 1 media line 4-40 mm

**Duo end cap:** 2 media lines each 4-25 mm

The end caps are secured both to the cable conduit and the media line using the supplied clamps.



## Installation of the MHC gasket insert

Finally, the MHC gasket inserts are installed from the inside of the structure:

**MHC Solo gasket insert:** 1 media line 4-40 mm

**MHC Multi gasket insert:**

up to 2 media lines 2 x 4-25 mm + 2 x 10 mm

You will find detailed installation instructions for adapting to the media line on page 134, and for installation of the gasket insert on page 136.

# Lining pipes

Pressure water-tight  
recess pipes for installation flush  
with formwork

Simple installation with the  
FIX formwork aid



**UniCut lining pipe**

page 121



**FASO lining pipes**

pages 122 – 124



**WELLO active lining pipe**

page 125



**DURO Plus  
High-pressure lining pipe**

page 126



**MKD cable bushing**

page 127



**Lining pipe accessories** pages 128 – 129  
**Closure plugs +  
MASTERTEC Connector connection seal**

For the subsequent, professional introduction of pipes and lines into buildings, the use of lining pipes is essential. The 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 and sealed with MASTER-Ring gasket inserts or MASTER-SEAL modular seals.



# UniCut lining pipe

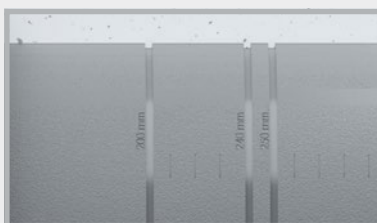
The lining pipe for stock keeping.  
24 installation options with 3 products

- Suitable for wall thickness 200 to 500 mm
- Easy on-site cutting on saw groove or in fixed length
- Pressure water-tight “Novo” waterstop
- Trowel flange for the connection of the outer seal
- Suitable for gasket inserts and modular seals
- Supplied with 2 closure plugs



## Dimensions

						Page 110
Art. no.	Description		Wall thickness/ length mm	PU	Weight per pc.	Order FIX formwork aid separately
082504	UniCut lining pipe DN 100	Fixed length	200	1 pc.	0.87 kg	
082505	UniCut lining pipe DN 100	Fixed length	240	1 pc.	0.95 kg	
082506	UniCut lining pipe DN 100	Fixed length	250	1 pc.	0.97 kg	
082507	UniCut lining pipe DN 100	Fixed length	300	1 pc.	1.07 kg	
082508	UniCut lining pipe DN 100	Fixed length	350	1 pc.	1.17 kg	
082509	UniCut lining pipe DN 100	Fixed length	365	1 pc.	1.20 kg	
082511	UniCut lining pipe DN 100	Fixed length	400	1 pc.	1.27 kg	
082510	<b>UniCut lining pipe DN 100</b>	<b>Stock length</b>	500	1 pc.	1.42 kg	
082512	UniCut lining pipe DN 150	Fixed length	200	1 pc.	1.10 kg	
082513	UniCut lining pipe DN 150	Fixed length	240	1 pc.	1.22 kg	
082514	UniCut lining pipe DN 150	Fixed length	250	1 pc.	1.25 kg	
082516	UniCut lining pipe DN 150	Fixed length	300	1 pc.	1.40 kg	
082517	UniCut lining pipe DN 150	Fixed length	350	1 pc.	1.55 kg	
082518	UniCut lining pipe DN 150	Fixed length	365	1 pc.	1.59 kg	
082519	UniCut lining pipe DN 150	Fixed length	400	1 pc.	1.70 kg	
082515	<b>UniCut lining pipe DN 150</b>	<b>Stock length</b>	500	1 pc.	1.89 kg	
082521	UniCut lining pipe DN 200	Fixed length	200	1 pc.	1.33 kg	
082522	UniCut lining pipe DN 200	Fixed length	240	1 pc.	1.49 kg	
082523	UniCut lining pipe DN 200	Fixed length	250	1 pc.	1.53 kg	
082524	UniCut lining pipe DN 200	Fixed length	300	1 pc.	1.72 kg	
082525	UniCut lining pipe DN 200	Fixed length	350	1 pc.	1.92 kg	
082526	UniCut lining pipe DN 200	Fixed length	365	1 pc.	1.98 kg	
082527	UniCut lining pipe DN 200	Fixed length	400	1 pc.	2.12 kg	
082520	<b>UniCut lining pipe DN 200</b>	<b>Stock length</b>	500	1 pc.	2.35 kg	



With saw grooves for cutting to length at the construction site



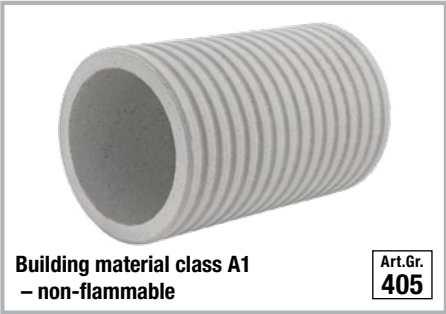
With waterstop



Fastening using the trowel flange

# FASO lining pipe

Lining pipe made of fibre cement for lead-through of pipes and cables



- Tested based on the German WU directive for Water-Impermeable Concrete Buildings against pressurised water and non-pressurised water
- The external corrugation bonds homogeneously with the concrete and is water-tight.  
No additional external waterproofing is required.
- Diameter DN 50 to DN 800 immediately available in stock for delivery in all lengths
- Suitable for gasket inserts and modular seals
- DN 50 to DN 800 can be extended up to 1600 mm.  
We use PROTECT BK 2K (Art. No. 040100) for this purpose.

## Special lengths

- Any intermediate lengths can be supplied
- DN 50 to DN 400 available for delivery with closure plug, please order separately.
- We will inform you whether delivery is to be made by freight forwarder or courier.

Page 128 / 110

FASO	outer	Standard lengths												Order closure plug or FIX formwork aid separately
inner Ø	Ø	200	240	250	300	350	365	400	500	600	800	1000	1200	
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	
DN 50	90	080020	080021	080022	080023	080024	080025	080026	080027	080028	080029	080030	080031	
Weight/pc.		1.82 kg	2.18 kg	2.27 kg	2.73 kg	3.18 kg	3.32 kg	3.64 kg	4.55 kg	5.46 kg	7.27 kg	9.09 kg	10.91 kg	
DN 80	120	080210	080211	080212	080213	080214	080215	080216	080217	080218	080918	080950	080219	
Weight/pc.		2.58 kg	3.09 kg	3.22 kg	3.86 kg	4.51 kg	4.70 kg	5.15 kg	6.44 kg	7.73 kg	10.30 kg	12.88 kg	15.46 kg	
DN 100	140	080220	080221	080222	080223	080224	080225	080226	080227	080228	080921	080952	080229	
Weight/pc.		3.39 kg	4.07 kg	4.24 kg	5.09 kg	5.94 kg	6.19 kg	6.78 kg	8.48 kg	10.18 kg	13.33 kg	16.96 kg	20.35 kg	
DN 125	165	080230	080231	080232	080233	080234	080235	080236	080237	080238	080922	080954	080239	
Weight/pc.		3.81 kg	4.57 kg	4.76 kg	5.71 kg	6.66 kg	6.95 kg	7.62 kg	9.52 kg	11.42 kg	15.45 kg	19.04 kg	22.85 kg	
DN 150	190	080240	080241	080242	080243	080244	080245	080246	080247	080248	080924	080956	080249	
Weight/pc.		4.32 kg	5.18 kg	5.40 kg	6.48 kg	7.56 kg	7.88 kg	8.64 kg	10.80 kg	12.96 kg	17.27 kg	21.59 kg	25.91 kg	
DN 200	250	080250	080251	080252	080253	080254	080255	080256	080257	080258	080926	080958	080259	
Weight/pc.		7.18 kg	8.62 kg	8.98 kg	10.78 kg	12.57 kg	13.11 kg	14.37 kg	17.96 kg	21.55 kg	28.74 kg	35.92 kg	43.10 kg	
DN 250	300	080260	080261	080262	080263	080264	080265	080266	080267	080268	080928	080960	080269	
Weight/pc.		8.94 kg	10.73 kg	11.17 kg	13.41 kg	15.64 kg	16.31 kg	17.88 kg	22.35 kg	26.82 kg	35.76 kg	44.70 kg	53.64 kg	
DN 300	350	080270	080271	080272	080273	080274	080275	080276	080277	080278	080930	080962	080279	
Weight/pc.		10.07 kg	12.09 kg	12.59 kg	15.11 kg	17.63 kg	18.38 kg	20.14 kg	25.18 kg	30.22 kg	40.29 kg	50.36 kg	60.43 kg	
DN 350	400	080280	080281	080282	080283	080284	080285	080286	080287	080288	080932	080964	080289	
Weight/pc.		11.59 kg	13.91 kg	14.49 kg	17.39 kg	20.28 kg	21.15 kg	23.18 kg	28.98 kg	34.77 kg	46.36 kg	57.96 kg	69.55 kg	
DN 400	460	080290	080291	080292	080293	080294	080295	080296	080297	080298	080934	080966	080299	
Weight/pc.		15.76 kg	18.91 kg	19.70 kg	23.64 kg	27.58 kg	28.77 kg	31.52 kg	39.41 kg	47.29 kg	63.05 kg	78.81 kg	94.57 kg	
DN 450	510	080300	080301	080302	080303	080304	080305	080306	080307	080308	080936	080968	080309	No closure plug available DN 450 – DN 800
Weight/pc.		18.08 kg	21.70 kg	22.60 kg	27.12 kg	31.64 kg	33.00 kg	36.16 kg	45.20 kg	54.24 kg	72.33 kg	90.41 kg	108.49 kg	
DN 500	570	080310	080311	080312	080313	080314	080315	080316	080317	080318	080938	080970	080319	
Weight/pc.		23.70 kg	28.44 kg	29.63 kg	35.56 kg	41.48 kg	43.26 kg	47.41 kg	59.26 kg	71.11 kg	94.82 kg	118.52 kg	142.22 kg	
DN 600	670	080320	080321	080322	080323	080324	080325	080326	080327	080328	080940	080972	080329	
Weight/pc.		28.32 kg	33.98 kg	35.39 kg	42.47 kg	49.55 kg	51.67 kg	56.63 kg	70.79 kg	84.94 kg	113.26 kg	141.57 kg	169.88 kg	
DN 700	780	080330	080331	080332	080333	080334	080335	080336	080337	080338	080942	080974	080339	No closure plug available DN 450 – DN 800
Weight/pc.		38.22 kg	45.86 kg	47.77 kg	57.32 kg	66.88 kg	69.74 kg	76.43 kg	95.54 kg	114.65 kg	152.86 kg	191.08 kg	229.29 kg	
DN 800	880	080340	080341	080342	080343	080344	080345	080346	080347	080348	080944	080976	080349	No closure plug available DN 450 – DN 800
Weight/pc.		42.17 kg	50.61 kg	52.72 kg	63.26 kg	73.80 kg	76.96 kg	84.35 kg	105.43 kg	126.52 kg	168.69 kg	210.86 kg	253.03 kg	

# FASO lining pipe, split



When media lines have already been laid, the split version FASO lining pipes can be installed and bonded afterwards.

- Against pressurised and non-pressurised water
- Diameters DN 50 to DN 400 available for immediate delivery



FASO split inner Ø mm	outer Ø mm	Standard lengths										
		200 mm	240 mm	250 mm	300 mm	350 mm	365 mm	400 mm	500 mm	600 mm	800 mm	1000 mm
<b>DN 50</b> Weight/pc.	<b>90</b>	080020T 1.82 kg	080021T 2.18 kg	080022T 2.27 kg	080023T 2.73 kg	080024T 3.18 kg	080025T 3.32 kg	080026T 3.64 kg	080027T 4.55 kg	080028T 5.46 kg	080029T 7.27 kg	080030T 9.09 kg
<b>DN 80</b> Weight/pc.	<b>120</b>	080210T 2.58 kg	080211T 3.09 kg	080212T 3.22 kg	080213T 3.86 kg	080214T 4.51 kg	080215T 4.70 kg	080216T 5.15 kg	080217T 6.44 kg	080218T 7.73 kg	080918T 10.30 kg	080950T 12.88 kg
<b>DN 100</b> Weight/pc.	<b>140</b>	080220T 3.39 kg	080221T 4.07 kg	080222T 4.24 kg	080223T 5.09 kg	080224T 5.94 kg	080225T 6.19 kg	080226T 6.78 kg	080227T 8.48 kg	080228T 10.18 kg	080921T 13.33 kg	080952T 16.96 kg
<b>DN 125</b> Weight/pc.	<b>165</b>	080230T 3.81 kg	080231T 4.57 kg	080232T 4.76 kg	080233T 5.71 kg	080234T 6.66 kg	080235T 6.95 kg	080236T 7.62 kg	080237T 9.52 kg	080238T 11.42 kg	080922T 15.45 kg	080954T 19.04 kg
<b>DN 150</b> Weight/pc.	<b>190</b>	080240T 4.32 kg	080241T 5.18 kg	080242T 5.40 kg	080243T 6.48 kg	080244T 7.56 kg	080245T 7.88 kg	080246T 8.64 kg	080247T 10.80 kg	080248T 12.96 kg	080924T 17.27 kg	080956T 21.59 kg
<b>DN 200</b> Weight/pc.	<b>250</b>	080250T 7.18 kg	080251T 8.62 kg	080252T 8.98 kg	080253T 10.78 kg	080254T 12.57 kg	080255T 13.11 kg	080256T 14.37 kg	080257T 17.96 kg	080258T 21.55 kg	080926T 28.74 kg	080958T 35.92 kg
<b>DN 250</b> Weight/pc.	<b>300</b>	080260T 8.94 kg	080261T 10.73 kg	080262T 11.17 kg	080263T 13.41 kg	080264T 15.64 kg	080265T 16.31 kg	080266T 17.88 kg	080267T 22.35 kg	080268T 26.82 kg	080928T 35.76 kg	080960T 44.70 kg
<b>DN 300</b> Weight/pc.	<b>350</b>	080270T 10.07 kg	080271T 12.09 kg	080272T 12.59 kg	080273T 15.11 kg	080274T 17.63 kg	080275T 18.38 kg	080276T 20.14 kg	080277T 25.18 kg	080278T 30.22 kg	080930T 40.29 kg	080962T 50.36 kg
<b>DN 350</b> Weight/pc.	<b>400</b>	080280T 11.59 kg	080281T 13.91 kg	080282T 14.49 kg	080283T 17.39 kg	080284T 20.28 kg	080285T 21.15 kg	080286T 23.18 kg	080287T 28.98 kg	080288T 34.77 kg	080932T 46.36 kg	080964T 57.96 kg
<b>DN 400</b> Weight/pc.	<b>460</b>	080290T 15.76 kg	080291T 18.91 kg	080292T 19.70 kg	080293T 23.64 kg	080294T 27.58 kg	080295T 28.77 kg	080296T 31.52 kg	080297T 39.41 kg	080298T 47.29 kg	080934T 63.05 kg	080966T 78.81 kg

## Installation



1. Place the supplied spacers on the cut edge of the lower shell and apply PROTECT Easy 1K (art. no. 040030) on the cut edges (usage: approx. 150 g/m on both sides). The PROTECT Easy 1K concrete adhesive must be ordered separately.



2. Fit the upper shell and press it on so that the adhesive is pressed out of the joint. In the process, you must make sure that the spacers remain in position. Smooth the joints inside the lining pipe in order to achieve a clean surface for possible installation of a gasket insert.

## Bonding



PROTECT Easy 1K

**PROTECT Easy 1K (art. no. 040030)**  
**Single-component polymer-based concrete adhesive**  
For water-tight bonding of split FASO lining pipes. **You will find the adhesive on page 104 in our complete catalogue.**

# FASO lining pipe with installed flange

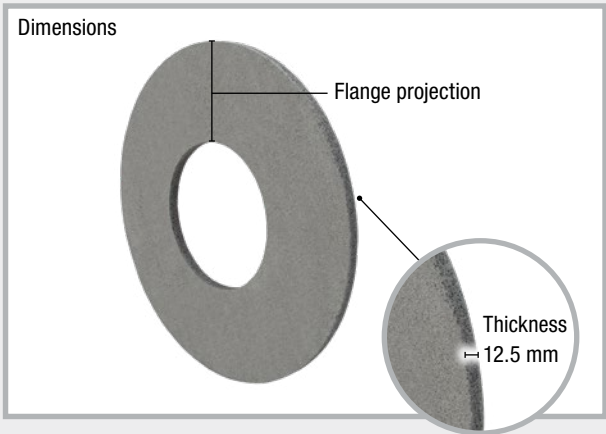
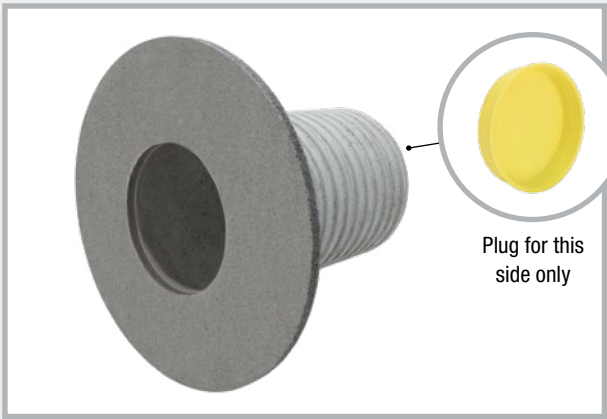


- Against pressurised and non-pressurised water
- With adhesive flange according to DIN 18533
- Can be used in conjunction with the following waterproofing materials:
  - Thick coating
  - All common types of external waterproofing
  - Waterproofing slurries
  - Connection of fresh concrete compound foil (FBV) using liquid plastic



Page 128 / 110

FASO inner Ø mm	Flange dimensions: Outer diameter x thickness	Flange projection mm	Standard lengths									Order closure plug or FIX formwork aid separately
			200 mm	240 mm	250 mm	300 mm	350 mm	365 mm	400 mm	500 mm	600 mm	
<b>DN 50</b> Weight/pc.	250 x 12.5 mm	100	080020F 2.42 kg	080021F 2.78 kg	080022F 2.87 kg	080023F 3.33 kg	080024F 3.78 kg	080025F 3.92 kg	080026F 4.24 kg	080027F 5.15 kg	080028F 6.06 kg	
<b>DN 80</b> Weight/pc.	250 x 12.5 mm	85	080210F 3.13 kg	080211F 3.64 kg	080212F 3.77 kg	080213F 4.41 kg	080214F 5.06 kg	080215F 5.25 kg	080216F 5.70 kg	080217F 6.99 kg	080218F 8.28 kg	
<b>DN 100</b> Weight/pc.	300 x 12.5 mm	100	080220F 4.19 kg	080221F 4.87 kg	080222F 5.04 kg	080223F 5.89 kg	080224F 6.74 kg	080225F 6.99 kg	080226F 7.58 kg	080227F 9.28 kg	080228F 10.98 kg	
<b>DN 125</b> Weight/pc.	325 x 12.5 mm	100	080230F 4.71 kg	080231F 5.47 kg	080232F 5.66 kg	080233F 6.61 kg	080234F 7.56 kg	080235F 7.85 kg	080236F 8.52 kg	080237F 10.42 kg	080238F 12.32 kg	
<b>DN 150</b> Weight/pc.	350 x 12.5 mm	100	080240F 5.32 kg	080241F 6.18 kg	080242F 6.40 kg	080243F 7.48 kg	080244F 8.56 kg	080245F 8.88 kg	080246F 9.64 kg	080247F 11.80 kg	080248F 13.96 kg	
<b>DN 200</b> Weight/pc.	400 x 12.5 mm	100	080250F 8.38 kg	080251F 9.82 kg	080252F 10.18 kg	080253F 11.98 kg	080254F 13.77 kg	080255F 14.31 kg	080256F 15.57 kg	080257F 19.16 kg	080258F 22.75 kg	
<b>DN 250</b> Weight/pc.	450 x 12.5 mm	100	080260F 10.34 kg	080261F 12.13 kg	080262F 12.57 kg	080263F 14.81 kg	080264F 17.04 kg	080265F 17.71 kg	080266F 19.28 kg	080267F 23.75 kg	080268F 28.22 kg	
<b>DN 300</b> Weight/pc.	500 x 12.5 mm	100	080270F 11.67 kg	080271F 13.69 kg	080272F 14.19 kg	080273F 16.71 kg	080274F 19.23 kg	080275F 19.98 kg	080276F 21.74 kg	080277F 26.78 kg	080278F 31.82 kg	



The flange is applied to the desired lining pipe on our premises.



# WELLO active lining pipe


 Art.Gr.  
404

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

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



Tested for impermeability up to 20 m water column

WELLO inner Ø mm	Standard lengths									Page 128 / 110
	200 mm	240 mm	250 mm	300 mm	350 mm	365 mm	400 mm	500 mm	600 mm	Order closure plug or FIX formwork aid separately
<b>DN 100</b> Weight/pc.	<b>080130</b> 0.17 kg	<b>080131</b> 0.19 kg	<b>080132</b> 0.20 kg	<b>080133</b> 0.23 kg	<b>080134</b> 0.26 kg	<b>080135</b> 0.26 kg	<b>080136</b> 0.28 kg	<b>080137</b> 0.34 kg	<b>080138</b> 0.40 kg	
<b>DN 125</b> Weight/pc.	<b>080140</b> 0.26 kg	<b>080141</b> 0.30 kg	<b>080142</b> 0.31 kg	<b>080143</b> 0.36 kg	<b>080144</b> 0.41 kg	<b>080145</b> 0.42 kg	<b>080146</b> 0.46 kg	<b>080147</b> 0.56 kg	<b>080148</b> 0.65 kg	
<b>DN 150</b> Weight/pc.	<b>080150</b> 0.29 kg	<b>080151</b> 0.33 kg	<b>080152</b> 0.35 kg	<b>080153</b> 0.40 kg	<b>080154</b> 0.45 kg	<b>080155</b> 0.47 kg	<b>080156</b> 0.51 kg	<b>080157</b> 0.62 kg	<b>080158</b> 0.72 kg	
<b>DN 200</b> Weight/pc.	<b>080160</b> 0.57 kg	<b>080161</b> 0.66 kg	<b>080162</b> 0.68 kg	<b>080163</b> 0.80 kg	<b>080164</b> 0.92 kg	<b>080165</b> 0.95 kg	<b>080166</b> 1.03 kg	<b>080167</b> 1.27 kg	<b>080168</b> 1.50 kg	
<b>*DN 250</b> Weight/pc.	<b>080170</b> 0.86 kg	<b>080171</b> 1.01 kg	<b>080172</b> 1.04 kg	<b>080173</b> 1.23 kg	<b>080174</b> 1.41 kg	<b>080175</b> 1.46 kg	<b>080176</b> 1.59 kg	<b>080177</b> 1.96 kg	<b>080178</b> 2.33 kg	
<b>DN 300</b> Weight/pc.	<b>080180</b> 1.20 kg	<b>080181</b> 1.41 kg	<b>080182</b> 1.46 kg	<b>080183</b> 1.72 kg	<b>080184</b> 1.99 kg	<b>080185</b> 2.06 kg	<b>080186</b> 2.25 kg	<b>080187</b> 2.77 kg	<b>080188</b> 3.30 kg	
<b>*DN 350</b> Weight/pc.	<b>080190</b> 1.67 kg	<b>080191</b> 1.97 kg	<b>080192</b> 2.05 kg	<b>080193</b> 2.42 kg	<b>080194</b> 2.80 kg	<b>080195</b> 2.91 kg	<b>080196</b> 3.17 kg	<b>080197</b> 3.92 kg	<b>080198</b> 4.67 kg	
<b>DN 400</b> Weight/pc.	<b>080200</b> 2.10 kg	<b>080201</b> 2.48 kg	<b>080202</b> 2.57 kg	<b>080203</b> 3.04 kg	<b>080204</b> 3.52 kg	<b>080205</b> 3.66 kg	<b>080206</b> 3.99 kg	<b>080207</b> 4.94 kg	<b>080208</b> 5.89 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**

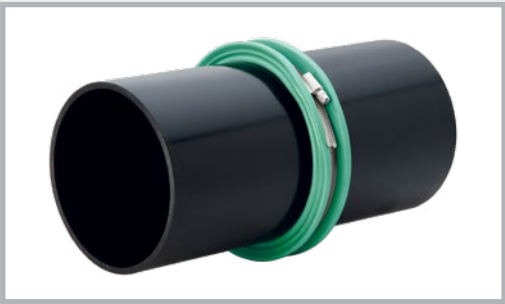
# DURO Plus









## high-pressure lining pipe



Art.Gr.  
**403**

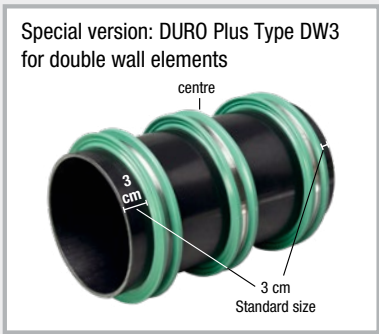
DURO Plus are high pressure-resistant lining pipes for secure and permanent routing of pipes and cables in buildings. A sealing collar which can withstand water pressures of up to a 70 m water column is fitted to the lining pipes at the factory and provides reliable protection from radon penetration. 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.



														Page 128 / 110
DURO inner Ø mm	Ø Outside mm	Standard lengths												Order clo- sure plug or FIX formwork aid separately
		200 mm	240 mm	250 mm	300 mm	350 mm	365 mm	400 mm	500 mm	600 mm	800 mm	1000 mm	1200 mm	
DN 50 Weight/pc.	54	090010 0.35 kg	090013 0.37 kg	090016 0.38 kg	090019 0.40 kg	090022 0.42 kg	090025 0.43 kg	090028 0.45 kg	090031 0.49 kg	090034 0.54 kg	090037 0.63 kg	090040 0.73 kg	090043 0.82 kg	
DN 80 Weight/pc.	85	090050 0.31 kg	090053 0.35 kg	090056 0.36 kg	090059 0.41 kg	090062 0.46 kg	090065 0.47 kg	090068 0.51 kg	090071 0.60 kg	090074 0.70 kg	090077 0.89 kg	090080 1.09 kg	090083 1.28 kg	
DN 100 Weight/pc.	110	090110 0.67 kg	090113 0.76 kg	090116 0.79 kg	090119 0.91 kg	090122 1.04 kg	090125 1.07 kg	090128 1.16 kg	090131 1.41 kg	090134 1.65 kg	090137 2.15 kg	090140 2.64 kg	090143 3.13 kg	
DN 125 Weight/pc.	137	090150 0.78 kg	090153 0.90 kg	090156 0.93 kg	090159 1.08 kg	090162 1.23 kg	090165 1.27 kg	090168 1.38 kg	090171 1.67 kg	090174 1.97 kg	090177 2.56 kg	090180 3.16 kg	090183 3.75 kg	
DN 150 Weight/pc.	162	090210 0.91 kg	090213 1.05 kg	090216 1.08 kg	090219 1.26 kg	090222 1.44 kg	090225 1.49 kg	090228 1.61 kg	090231 1.97 kg	090234 2.32 kg	090237 3.03 kg	090240 3.73 kg	090243 4.44 kg	
DN 200 Weight/pc.	214	090250 1.44 kg	090253 1.68 kg	090256 1.74 kg	090259 2.03 kg	090262 2.32 kg	090265 2.41 kg	090268 2.62 kg	090271 3.20 kg	090274 3.79 kg	090277 4.96 kg	090280 6.14 kg	090283 7.31 kg	
DN 250 Weight/pc.	264	090310 1.71 kg	090313 2.00 kg	090316 2.07 kg	090319 2.42 kg	090322 2.77 kg	090325 2.88 kg	090328 3.13 kg	090331 3.83 kg	090334 4.54 kg	090337 5.95 kg	090340 7.37 kg	090343 8.78 kg	
DN 300 Weight/pc.	316	090350 2.57 kg	090353 3.00 kg	090356 3.11 kg	090359 3.66 kg	090362 4.21 kg	090365 4.37 kg	090368 4.75 kg	090371 5.85 kg	090374 6.94 kg	090377 9.13 kg	090380 11.31 kg	090383 13.50 kg	

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

**We recommend installation with closure plugs**



Production possible according to your individual specifications

# MASTERTEC

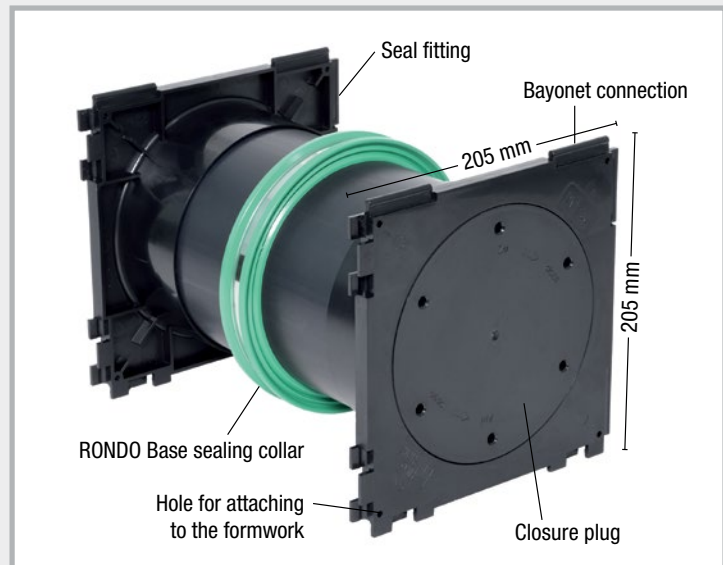
## MKD 150 cable bushing



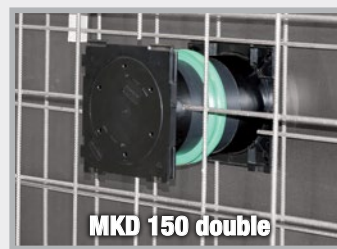
Stay flexible with the MKD 150 cable bushing

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 a water column of 25 m. The bayonet connections are compatible with all standard systems.

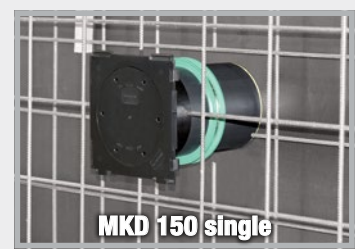
- Flexible connection of cables in new buildings
- Sealing with RONDO Base sealing collar
- Stable design due to solid wall material
- Compatible with all standard systems



**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

Art.Gr.  
**411**

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.	1.40 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.	1.95 kg	162490	365 mm	1 pc.	1.80 kg
162445	400 mm	1 pc.	2.10 kg	162495	400 mm	1 pc.	1.90 kg
162400	Key for opening the closure plug						

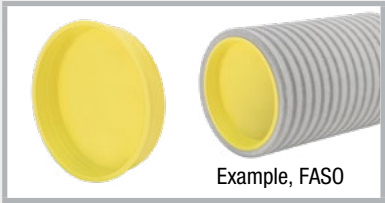
Other wall thicknesses are available on request

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.

Accessories for lining pipes

Closure plug + installation aid for lining pipes

Art.Gr. 452



	Diameter mm									
	50	80	100	125	150	200	250	300	350	400
<b>Art. no.</b>	<b>090403</b>	<b>090401</b>	<b>090400</b>	<b>090402</b>	<b>090404</b>	<b>090406</b>	<b>090408</b>	<b>090410</b>	<b>090412</b>	<b>090414</b>
<b>Weight/pc.</b>	0.005 kg	0.02 kg	0.02 kg	0.03 kg	0.05 kg	0.08 kg	0.12 kg	0.13 kg	0.40 kg	0.45 kg

Sewage socket ring for sewage pipe bushings

Flow direction type

Art.Gr. 451

Art. no.	Type	PU	Weight/pc.
<b>080476</b>	MFR 110	1 pc.	0.05 kg
<b>080477</b>	MFR 125	1 pc.	0.06 kg
<b>080478</b>	MFR 160	1 pc.	0.08 kg
<b>080479</b>	MFR 200	1 pc.	0.13 kg



Foil flange Solo

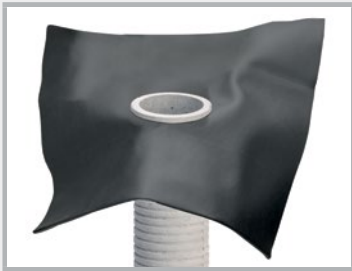
for lining pipes,  
Pressurised water test up to 14 m water column  
Dimension 50 x 50 cm, incl. mounting strap

Art.Gr. 453

	Lining pipe diameter in mm					
	50	80	100	125	150	200
<b>Art. no.</b>	<b>090388</b>	<b>090389</b>	<b>090390</b>	<b>090391</b>	<b>090392</b>	<b>090393</b>
<b>Weight/pc.</b>	0.19 kg	0.20 kg	0.43 kg	0.45 kg	0.47 kg	0.70 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

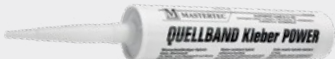


Suitable for WELLO, FASO, DURO, KG and KG 2000 lining pipes



Foil flange Solo fully assembled

For fixing the foil flange to the component, we recommend the **POWER** swelling tape adhesive (art. no. 010052) on page 12 of the complete catalogue.  
Also suitable for refurbishment or retrofitting.





# MASTERTEC Connector



## Connection seal

With the MASTERTEC Connector connection seal, corrugated cable conduits (corrugated pipes) or sewage pipes can be professionally connected to core drill holes or lining pipes.

- Pressure water-tight: Corrugated pipe: up to 10 m water column  
KG pipe (sewage pipe): up to 20 m water column
- Easy installation
- Adapted to common corrugated pipe outer diameters and sewage pipe Ø 110 mm

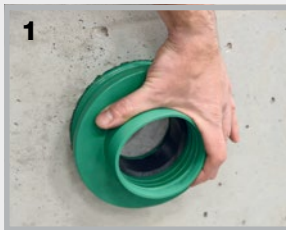


## Dimensions

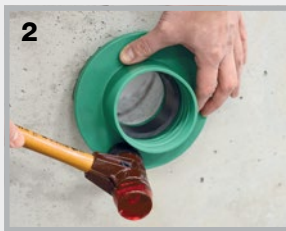
Art.Gr.  
**431**

Art. no.	Type	Ø lining pipe/ core drill hole	Ø connection pipe	PU	Weight per pc.
<b>090850</b>	MC 100 / 75W	100 mm	Corrugated pipe Ø 75 mm	1 pc.	0.57 kg
<b>090852</b>	MC 150 / 90W	150 mm	Corrugated pipe Ø 90 mm	1 pc.	1.01 kg
<b>090854</b>	MC 150 / 110W	150 mm	Corrugated pipe Ø 110 mm	1 pc.	0.91 kg
<b>090856</b>	MC 150 / 110 KG	150 mm	Sewage pipe Ø 110 mm	1 pc.	0.88 kg

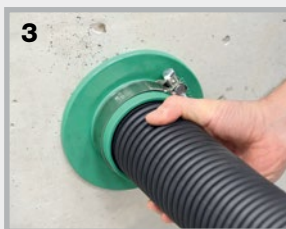
## Installation with corrugated pipe



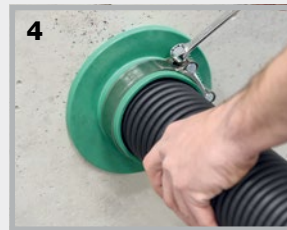
**1.** The connection seal is positioned in the core drill hole/lining pipe, ...



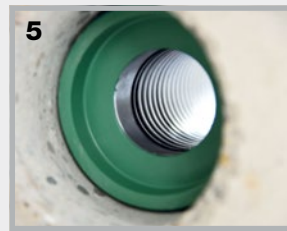
**2.** ... completely hammered in with a rubber mallet, ...



**3.** ... the clamp is placed over the connection seal and the connection pipe pushed in as far as it will go, ...

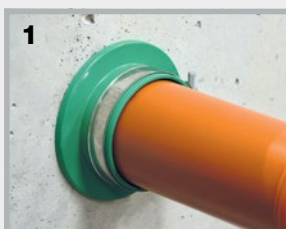


**4.** ... the clamp is hand-tightened with a ring spanner, ...



**5.** ... the cable conduit is connected to the core drill hole or the lining pipe and is pressure water-tight.

## Installation with sewage pipe



**1.** The installation is the same as for the cable conduit, ...



**2.** ... the sewage pipe is pushed completely through the seal and the clamp is hand-tightened with a ring spanner.

# Gasket inserts, modular seals + FLEX 2000



**MASTER-RING**  
Gasket insert page 131



**MASTER-RING Supersoft** page 132



**MASTER-RING blind plug** page 132



**MASTER-RING Multi** pages 133 – 134



**MASTER-RING Multi Multiple** page 135



**MASTER-RING Multiple** page 136



**FLEX 2000** page 137



**MASTER-SEAL**  
Modular seal pages 138 – 139

# 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
- Steel parts and screws made of V2A stainless steel
- Satisfy the requirements of the FHRK testing principles GE 101



Closed version



Split version

**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 1–2 hours.

Ø lining pipe/ core drill hole	Medium pipe in mm		Weight per pc.	Closed version	Art.Gr. 440	Split version	Art.Gr. 441
	from	to		Art. no.		Art. no.	
50	6	12	0.19 kg	120080			
80	20	28	0.39 kg	120100		NEW! 120100T	
80	32	40	0.36 kg	120105		NEW! 120105T	
80	48	50	0.32 kg	120095			
100	15	22	0.58 kg	120107			
100	20	28	0.60 kg	120110			
100	25	32	0.60 kg	120112			
100	32	40	0.58 kg	120115		NEW! 120115T	
100	36	44	0.56 kg	120120		NEW! 120120T	
100	46	56	0.48 kg	120125		120125T	
100	55	65	0.51 kg	120130		NEW! 120130T	
125	55	64	0.74 kg	120145		NEW! 120145T	
125	70	78	0.67 kg	120150		NEW! 120150T	
150	46	54	1.53 kg	120152			
150	56	66	1.31 kg	120153			
150	69	78	1.24 kg	120155			
150	79	91	1.17 kg	120160			
150	85	94	1.07 kg	120165			
150	98	110	0.96 kg	120170		120170T	
200	88	103	2.13 kg	120172			
200	108	115	2.03 kg	120175		120175T	
200	116	126	1.91 kg	120180		120180T	
200	132	141	1.51 kg	120185			
200	135	144	1.48 kg	120190			
200	150	160	1.41 kg	120192		120192T	
250	135	144	2.86 kg	120195			
250	140	149	3.02 kg	120197			
250	150	159	2.69 kg	120200			
250	157	162	2.65 kg	120205		120205T	
250	174	181	2.24 kg	120210			
250	178	187	2.16 kg	120215			
250	197	202	1.84 kg	120216		120216T	
250	204	210	1.77 kg	120218			
300	193	204	3.49 kg	120225			
300	218	226	3.17 kg	120230			
350	224	233	5.44 kg	120235			
350	249	258	4.98 kg	120240			
350	270	282	3.64 kg	120242			
400	270	280	6.14 kg	120245			
400	279	288	6.06 kg	120250			
400	304	313	5.47 kg	120255			
400	314	323	4.57 kg	120260			
400	320	330	4.44 kg	120265			

**Additional supply options:** Steel parts + screws in V4A stainless steel; rubber made of NBR or compliant with potable water quality standards available on request

# MASTER-RING Supersoft

Gasket insert for corrugated and thin-walled medium pipes

- Pressure-tight up to 10 m water column
- Soft rubber compound for corrugated and thin-walled medium pipes
- Rubber thickness 2 x 40 mm
- Steel parts and screws made of V2A stainless steel



Art.Gr.  
**437**

Core drill hole mm Lining pipe FASO/ WELLO/DURO Plus	Art. no.	Medium pipe in mm		PU	Weight per pc.
		from	to		
100	<b>120280</b>	46	56	1 pc.	0.73 kg
100	<b>120282</b>	55	65	1 pc.	0.72 kg
150	<b>120284</b>	69	78	1 pc.	1.88 kg
150	<b>120286</b>	85	94	1 pc.	1.57 kg
150	<b>120288</b>	98	110	1 pc.	1.32 kg
200	<b>120290</b>	108	115	1 pc.	3.04 kg
200	<b>120292</b>	119	128	1 pc.	2.52 kg
200	<b>120294</b>	150	160	1 pc.	1.95 kg
250	<b>120296</b>	156	165	1 pc.	3.70 kg

## Blind plugs made of stainless steel V2A for core drill hole and lining pipe

- Pressure-tight up to 15 m water column
- Rubber thickness 40 mm
- Steel parts and screws made of V2A stainless steel

Art.Gr.  
**438**

DN	Art. no.	PU	Weight per pc.
50	<b>120518</b>	1 pc.	0.20 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.	1.15 kg
150	<b>120535</b>	1 pc.	2.17 kg
200	<b>120540</b>	1 pc.	3.40 kg
250	<b>120545</b>	1 pc.	5.91 kg
300	<b>120550</b>	1 pc.	8.47 kg

Blind plugs up to DN 1500 mm available on request





# MASTER-RING Multi

## Gasket inserts with “onion ring” technology



A large number of installation options with only 4 sizes

Pressure-resistant: 30 metre water column for closed version  
7.5 metre water column for split version

Pressure plate material: V2A stainless steel

Screws and nuts: V2A stainless steel





Rubber material: EPDM

Width of rubber: 40 mm

Resistances: Excellent resistance to ageing,  
weathering and ozone



Art.Gr.  
**442**

			
<b>MASTER-RING Multi 100 closed</b> Art. no. 120135	<b>MASTER-RING Multi 150 closed</b> Art. no. 120171	<b>MASTER-RING Multi 200 closed</b> Art. no. 120193	<b>MASTER-RING Multi 250 closed</b> Art. no. 120222
<b>Weight/pc.</b> 0.61 kg	1.32 kg	1.73 kg	2.52 kg

Art.Gr.  
**443**

			
<b>MASTER-RING Multi 100 split</b> Art. no. 120135T	<b>MASTER-RING Multi 150 split</b> Art. no. 120171T	<b>MASTER-RING Multi 200 split</b> Art. no. 120193T	<b>MASTER-RING Multi 250 split</b> Art. no. 120222T
<b>Weight/pc.</b> 0.61 kg	1.32 kg	1.73 kg	2.52 kg

Medium pipe range	from 18 to 65 mm	from 62 to 110 mm	from 108 to 160 mm	from 158 to 210 mm
Without lid	18 – 20 mm	62 – 64 mm	108 – 110 mm	158 – 160 mm
1. ring	21 – 25 mm	74 – 76 mm	123 – 125 mm	168 – 170 mm
2. ring	26 – 30 mm	88 – 90 mm	138 – 140 mm	178 – 180 mm
3. ring	31 – 35 mm	108 – 110 mm	158 – 160 mm	198 – 200 mm
4. ring	36 – 40 mm			208 – 210 mm
5. ring	41 – 45 mm			
6. ring	46 – 50 mm			
7. ring	51 – 55 mm			
8. ring	56 – 60 mm			
9. ring	61 – 65 mm			

## 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: Multi 100

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



Remove the yellow plug.

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



After removing the plug, loosen the first ring ...



... 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: Multi 200

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



Remove the yellow plug.

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



Release the first ring and push it through the gasket.



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

## Protection of the core drill hole with epoxy resin

- With MC-Injekt 1264 compact, you preserve the core drill hole permanently.
- Application on dry substrate



# MASTER-RING Multi Multiple

Steel parts: V2A stainless steel  
Version: split  
Rubber material: EPDM  
Width of rubber: 40 mm  
Resistances: Excellent resistance to ageing, weathering and ozone



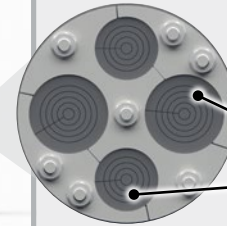
Art.Gr.  
**444**

Ø lining pipe / core drill hole	Art. no.	Media area				Weight per pc.
		Quantity of "Onion ring" elements	Ø /mm	Quantity of "Onion ring" elements	Ø /mm	
100	<b>120270</b>	3	4-32			0.82 kg
100	<b>120272</b>	2	4-32	2	4-25	0.78 kg
150	<b>120274</b>	3	22-54			1.70 kg
150	<b>120276</b>	6	4-32			1.86 kg
150	<b>120278</b>	2	4-32	2	22-54	1.72 kg

Art. no. 120270  
Ø 100 mm



Art. no. 120272  
Ø 100 mm



Explanation using the  
example of art. no.  
120272

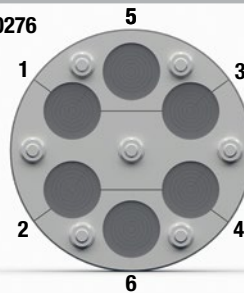
2 x "onion ring"  
elements 4-32 mm  
2 x "onion ring"  
elements 4-25 mm

Art. no. 120274  
Ø 150 mm



Art. no. 120276  
Ø 150 mm

1 – 4  
for  
subsequent  
installation  
5 – 6  
not for  
subsequent  
installation



Art. no. 120278  
Ø 150 mm



## Installation of Multi Multiple

Example for DN 100 core drill hole and medium pipe outer diameter 15 mm with art. no. 120270



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



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

Art.Gr.  
**439**



Split version



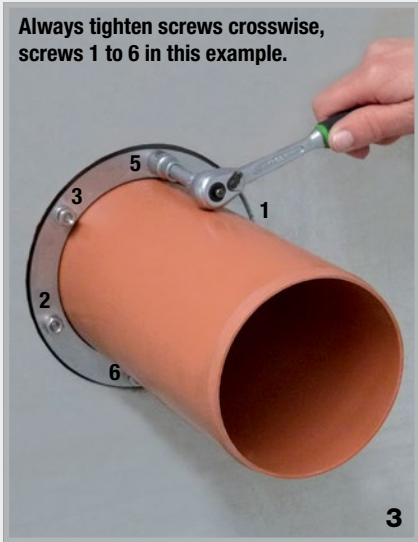
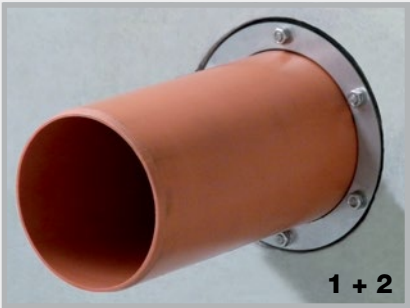
Mounted

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

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

## Tightening the MASTER-RING gasket inserts

1. Insert the gasket insert into the lining pipe or the core drill hole.
2. Push the medium pipe through.
3. Tighten the screws cross-wise through one turn. Repeat this process until all screws are tightened with the respective torque. Retighten the screws after 1-2 hours.



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

Nuts	Maximum torque (for dimensionally stable medium pipes)
M6	5 Nm
M8	10 Nm
M10	15 Nm
M12	20 Nm



# FLEX 2000



Plastic, vapour and waterproof sealing compound for waterproofing of pipe and cable bushings 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.Gr.  
**450**



Art. no.	Description	PU	Secondary packaging	Weight
<b>120610</b>	<b>FLEX 2000 sealing compound</b> Foil bag 850 g	1 pc.	1 Carton of 20 foil bags	0.88 kg
<b>120620</b>	<b>Cartridge applicator</b> with flexible nozzle	1 pc.		1.06 kg
<b>120630</b>	<b>Flexible nozzle</b>	1 pc.		0.07 kg



FLEX 2000 sealing compound



Cartridge applicator



Flexible nozzle

## 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

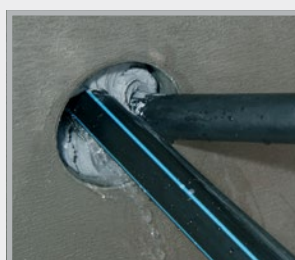
The substrate may be dry, damp or wet. The substrate must be free from grease, tar, oil and loose particles. Suitable substrates are: concrete, brick, mortar, plaster and all other mineral construction materials as well as ceramics, PVC, polyethylene and polypropylene.



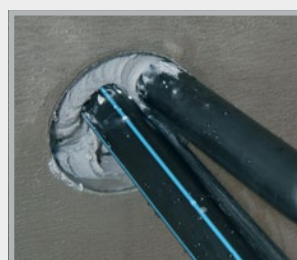
Inflowing water



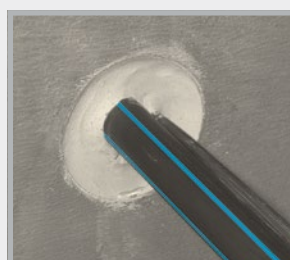
Injection of FLEX 2000



Filling of the annular gap



No more leakage



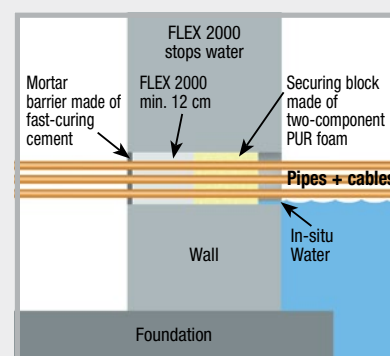
Smooth off excess material  
with a filling knife



Skim coat with fast-curing  
cement

## Application

Prior to application, FLEX 2000 is heated to approx. 35-40°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 foil bag 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 bushings, 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

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



Art.Gr.  
**445**



Area of installation of core drill hole in mm Lining pipe FASO / WELLO / DURO Plus	Medium pipe Outer Ø mm		Type	Weight	Stainless steel	Galvanised
	from	to			Art. no.	Art. no.
50	11	19	4 x 275	0.08 kg	<b>110250</b>	<b>110600</b>
50	20	25	4 x 200	0.08 kg	<b>110255</b>	<b>110605</b>
80	20	33	4 x 350	0.32 kg	<b>110260</b>	<b>110610</b>
80	34	44	5 x 300	0.30 kg	<b>110265</b>	<b>110615</b>
80	45	49	6 x 250	0.14 kg	<b>110267</b>	<b>110617</b>
80	50	55	7 x 200	0.14 kg	<b>110268</b>	<b>110618</b>
100	27	38	4 x 375	0.50 kg	<b>110270</b>	<b>110620</b>
100	39	50	6 x 350	0.46 kg	<b>110275</b>	<b>110625</b>
100	56	64	6 x 300	0.36 kg	<b>110280</b>	<b>110630</b>
100	65	69	8 x 250	0.19 kg	<b>110281</b>	<b>110631</b>
100	70	75	9 x 200	0.20 kg	<b>110282</b>	<b>110632</b>
125	41	44	4 x 475	1.04 kg	<b>110283</b>	<b>110633</b>
125	45	52	4 x 415	0.96 kg	<b>110284</b>	<b>110634</b>
125	53	63	5 x 375	0.65 kg	<b>110285</b>	<b>110635</b>
125	64	78	7 x 350	0.56 kg	<b>110290</b>	<b>110640</b>
125	79	90	8 x 300	0.48 kg	<b>110295</b>	<b>110645</b>
125	90	94	11 x 250	0.26 kg	<b>110296</b>	<b>110646</b>
125	96	100	11 x 200	0.24 kg	<b>110297</b>	<b>110647</b>
150	58	69	5 x 475	1.30 kg	<b>110298</b>	<b>110648</b>
150	63	76	5 x 415	1.20 kg	<b>110300</b>	<b>110650</b>
150	75	82	6 x 375	0.75 kg	<b>110305</b>	<b>110655</b>
150	88	103	9 x 350	0.68 kg	<b>110310</b>	<b>110660</b>
150	106	115	10 x 300	0.60 kg	<b>110315</b>	<b>110665</b>
150	113	118	14 x 250	0.34 kg	<b>110316</b>	<b>110666</b>
150	120	124	14 x 200	0.31 kg	<b>110317</b>	<b>110667</b>
200	108	118	7 x 475	1.82 kg	<b>110325</b>	<b>110675</b>
200	115	122	7 x 415	1.68 kg	<b>110330</b>	<b>110680</b>
200	125	138	9 x 375	1.12 kg	<b>110335</b>	<b>110685</b>
200	140	153	13 x 350	1.00 kg	<b>110340</b>	<b>110690</b>
200	156	165	14 x 300	0.81 kg	<b>110345</b>	<b>110695</b>
200	164	168	19 x 250	0.46 kg	<b>110346</b>	<b>110696</b>
200	171	174	19 x 200	0.42 kg	<b>110347</b>	<b>110697</b>



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


 Art.Gr.  
445

Area of installation of core drill hole in mm Lining pipe FASO / WELLO / DURO Plus	Medium pipe Outer Ø mm		Type	Weight	Stainless steel	Galvanised
	from	to			Art. no.	Art. no.
250	114	130	6 x 500	3.72 kg	110350	110700
250	137	158	8 x 575	3.32 kg	110355	110705
250	159	166	9 x 475	2.34 kg	110360	110710
250	166	178	7 x 400	2.11 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	1.31 kg	110372	110722
250	194	202	9 x 325	1.22 kg	110373	110723
250	208	213	18 x 300	1.04 kg	110374	110724
300	188	204	10 x 575	4.18 kg	110375	110725
300	206	217	12 x 475	3.10 kg	110380	110730
300	215	226	12 x 415	2.88 kg	110385	110735
300	228	236	15 x 375	1.86 kg	110386	110736
300	232	242	9 x 425	2.28 kg	110387	110737
300	244	253	11 x 325	1.49 kg	110388	110738
300	258	263	22 x 300	1.28 kg	110389	110739
350	219	231	9 x 500	5.57 kg	110390	110740
350	239	253	12 x 575	4.99 kg	110395	110745
350	265	275	14 x 415	3.33 kg	110400	110750
350	276	286	18 x 375	2.23 kg	110405	110755
350	314	317	35 x 250	0.84 kg	110408	110758
400	239	256	10 x 650	9.26 kg	110410	110760
400	265	274	11 x 500	6.81 kg	110415	110765
400	314	328	12 x 400	3.62 kg	110420	110770
400	343	350	15 x 325	2.03 kg	110425	110775
450	358	370	19 x 475	4.90 kg	110430	110780
450	366	379	14 x 400	4.23 kg	110435	110785
450	393	405	17 x 325	2.30 kg	110440	110790
500	311	326	8 x 600	14.69 kg	110443	110793
500	340	358	13 x 650	12.04 kg	110445	110795
500	390	407	18 x 575	7.49 kg	110450	110800
500	409	419	21 x 475	5.42 kg	110455	110805
550	390	408	14 x 650	12.96 kg	110460	110810
550	415	435	15 x 500	9.29 kg	110465	110815
550	440	457	20 x 575	8.32 kg	110470	110820
550	457	470	23 x 475	5.93 kg	110475	110825
600	410	440	10 x 600	18.36 kg	110480	110830
600	440	458	16 x 650	14.82 kg	110485	110835
600	490	505	22 x 575	9.15 kg	110490	110840
600	515	528	19 x 400	5.74 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				

# RONDO Standard

## Sealing collars

Reliable sealing against penetrating water and radon



with test report for corrugated pipes

Dimensions Technical details pages 143 – 144

100 m water column

Art.Gr. 400

Art. no.	Type	for pipe outer diameters/mm	Suitable for outer dia. from (mm) to (mm)		PU	Secondary packaging	Weight per pc.	Also for corrugated pipes
090890	R0 10	for lightning protection round conductors	8	10	1 pc.	Carton of 100 pcs.	0.12 kg	
090892	R0 flat	for earthing strap	30x3.5 + 30x3		1 pc.		0.18 kg	
090988	R0 EFP	for hexagon fixed earthing terminal			1 pc.	Bag of 25 pcs.	0.04 kg	
090900	R0 25	25	25	25	1 pc.		0.16 kg	
090902	R0 32	32	31	32	1 pc.		0.20 kg	
090904	R0 40	40	39	42	1 pc.		0.24 kg	✓
090906	R0 50	50	48	53	1 pc.		0.26 kg	✓
090908	R0 63	63	61	64	1 pc.		0.28 kg	✓
090910	R0 75	75	72	80	1 pc.		0.34 kg	✓
090912	R0 90	90	87	92	1 pc.		0.38 kg	✓
090914	R0 110	Sewage pipe DN 100 110	107	115	1 pc.	Carton of 50 pcs.	0.47 kg	✓
090916	R0 125	Sewage pipe DN 125 125	123	130	1 pc.	Carton of 40 pcs.	0.52 kg	✓
090918	R0 140	140	137	147	1 pc.		0.54 kg	
090920	R0 160	Sewage pipe DN 150 160	157	166	1 pc.	Carton of 35 pcs.	0.63 kg	✓
090921	R0 170	170	167	177	1 pc.		0.62 kg	
090922	R0 180	180	177	187	1 pc.		0.66 kg	
090924	R0 200	Sewage pipe DN 200 200	197	207	1 pc.	Carton of 30 pcs.	0.77 kg	✓
090926	R0 225	225	220	230	1 pc.		0.80 kg	
090928	R0 250	Sewage pipe DN 250 250	245	260	1 pc.		0.88 kg	
090930	R0 280	280	275	290	1 pc.		0.96 kg	
090932	R0 315	Sewage pipe DN 300 315	310	324	1 pc.		1.10 kg	
090934	R0 355	355	350	365	1 pc.		1.22 kg	
090936	R0 400	Sewage pipe DN 400 400	395	410	1 pc.		1.38 kg	
090938	R0 450	450	445	460	1 pc.		1.54 kg	
090940	R0 500	Sewage pipe DN 500 500	495	510	1 pc.		1.68 kg	
090942	R0 560	560	555	570	1 pc.		1.90 kg	
090944	R0 630	630	625	640	1 pc.		2.16 kg	
090946	R0 710	710	705	720	1 pc.		2.40 kg	

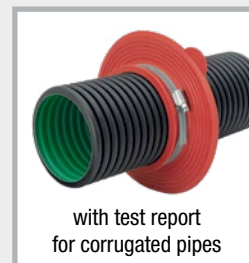
Other sizes are available on request.  
Installation note: The sealing collars are even easier to install if placed in warm water beforehand (10 minutes).



# RONDO Protect

Sealing collars for use in  
slurry/liquid manure/silage effluent  
and biogas facilities and where maximum  
resistance is required.

National technical approval (abZ):  
Z-74.9-198



## Dimensions

Technical details pages 143 – 144

100 m water column

Art.Gr.  
**409**

Art. no.	Type	for pipe outer diameters/mm	Suitable for outer dia. from (mm) to (mm)	PU	Weight per pc.	Also for corrugated pipes
091225	ROPRO 10	for lightning protection round conductors	8 10	1 pc.	0.12 kg	
091226	ROPRO flat	for earthing strap	30x3.5 + 30x3	1 pc.	0.18 kg	
091227	ROPRO 25	25	25 25	1 pc.	0.18 kg	
091228	ROPRO 32	32	31 32	1 pc.	0.20 kg	
091229	ROPRO 40	40	39 42	1 pc.	0.22 kg	✓
091230	ROPRO 50	50	48 53	1 pc.	0.26 kg	✓
091231	ROPRO 63	63	61 64	1 pc.	0.30 kg	✓
091232	ROPRO 75	75	72 80	1 pc.	0.34 kg	✓
091233	ROPRO 90	90	87 92	1 pc.	0.38 kg	✓
091234	ROPRO 110	Sewage pipe DN 100 110	107 115	1 pc.	0.44 kg	✓
091235	ROPRO 125	Sewage pipe DN 125 125	123 130	1 pc.	0.48 kg	✓
091236	ROPRO 140	140	137 147	1 pc.	0.54 kg	
091237	ROPRO 160	Sewage pipe DN 150 160	157 166	1 pc.	0.60 kg	✓
091238	ROPRO 170	170	167 177	1 pc.	0.62 kg	
091239	ROPRO 180	180	177 187	1 pc.	0.66 kg	
091240	ROPRO 200	Sewage pipe DN 200 200	197 207	1 pc.	0.72 kg	✓
091241	ROPRO 225	225	220 230	1 pc.	0.82 kg	
091242	ROPRO 250	Sewage pipe DN 250 250	245 260	1 pc.	0.90 kg	
091243	ROPRO 280	280	275 290	1 pc.	0.98 kg	
091244	ROPRO 315	Sewage pipe DN 300 315	310 324	1 pc.	1.10 kg	
091245	ROPRO 355	355	350 365	1 pc.	1.22 kg	
091246	ROPRO 400	Sewage pipe DN 400 400	395 410	1 pc.	1.36 kg	
091248	ROPRO 450	450	445 460	1 pc.	1.54 kg	
091250	ROPRO 500	500	495 510	1 pc.	1.68 kg	
091252	ROPRO 560	560	555 570	1 pc.	1.88 kg	
091254	ROPRO 630	630	625 640	1 pc.	2.14 kg	
091256	ROPRO 710	710	705 720	1 pc.	2.34 kg	

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

# RONDO Ecco

The economical sealing collar for waterproofing of pipes and cables



80 m water column

Art.Gr.  
**401**

## Dimensions

Art. no.	Type	Suitable for from to	PU	Secondary packaging	Weight per pc.
091050	RO Ecco 110	107-115 mm	1 pc.	1 carton of 80 pcs.	0.26 kg
091053	RO Ecco 125	122-130 mm	1 pc.	1 carton of 70 pcs.	0.30 kg
091056	RO Ecco 160	157-170 mm	1 pc.	1 carton of 60 pcs.	0.36 kg
091059	RO Ecco 200	197-210 mm	1 pc.	1 carton of 50 pcs.	0.42 kg

# RONDO Base

The sealing collar with only one fastening strap



70 m water column

Art.Gr.  
**402**

## Dimensions

Art. no.	Type	for pipe outer diameters/mm	PU	Secondary packaging	Weight per pc.
090978	RO Base 110	110	1 pc.	1 carton of 25 pcs.	0.18 kg
090980	RO Base 125	125	1 pc.	1 carton of 25 pcs.	0.19 kg
090984	RO Base 160	160	1 pc.	1 carton of 25 pcs.	0.20 kg
090990	RO Base 200	200	1 pc.	1 carton of 25 pcs.	0.27 kg

# RONDO sealing collars

Water pressure-tight sealing for pipe ducts through concrete parts



## RONDO Standard

page 140

- Pressure water-tight up to 100 m water column
- Radon-tight
- Good resistances
- For corrugated pipes with outer diam. of up to 200 mm
- Pressure water-tight up to 30 m water column



## RONDO Protect

page 141

- Pressure water-tight up to 100 m water column
- DIBt approval for slurry/liquid manure/silage effluent facilities
- Also for agricultural buildings
- Highest resistances
- For corrugated pipes with outer diam. of up to 200 mm
- Pressure water-tight up to 30 m water column



## RONDO Ecco

page 142

- Pressure water-tight up to 80 m water column
- Radon-tight



## RONDO Base

page 142

- Pressure water-tight up to 70 m water column

Wherever pipes or other lines are routed through concrete parts, they must be sealed against the permeation of water and/or gases present, such as methane gas or the radioactive radon gas that is sometimes present in the soil.

The RONDO sealing collars create a cost-effective and easy-to-install solution for sealing penetrations. They are available in all common nominal diameters of pipes and lines as standard.

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



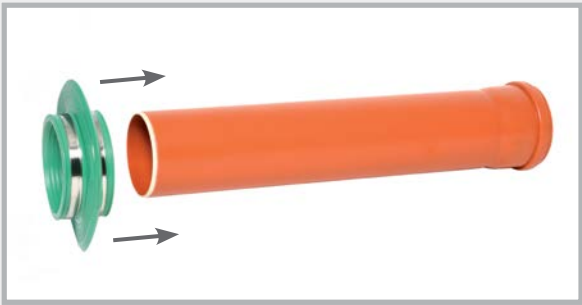
Technical data

	RONDO Standard	RONDO Protect	RONDO Ecco	RONDO Base
Colour	green	red	green	green
Material	TPE	modified TPE	TPE	TPE
Size	10-710 mm	10-710 mm	110-200 mm	110-200 mm
Height of waterstop	4 cm	4 cm	3 cm	1.5 cm
Number of waterstops	1	1	1	2
Bearing width	6 cm	6 cm	4.5 cm	2.5 cm
Pressure test	100 m water column	100 m water column	80 m water column	70 m water column
Resistance				
Diluted acids	✓	✓	✓	✓
Alkalis	✓	✓	✓	✓
Ground water	✓	✓	✓	✓
Radon	✓	✓	✓	✓
Liquid manure	✓	✓	✓	✓
Slurry	✓	✓	✓	✓
Fermentation mash		✓		
Methane gas		✓		
Animal excretions		✓		
Silage effluent		✓		
Diluted sulphuric acid		✓		
Further resistances are available on request				

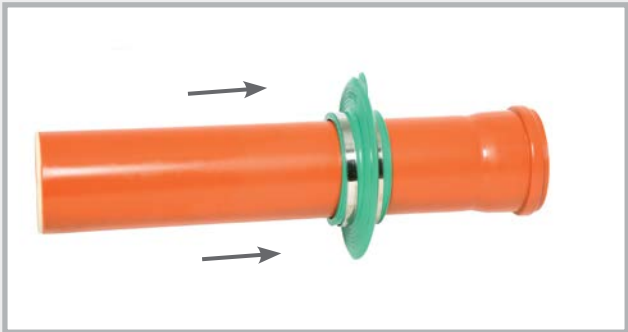
Installation using the example of the RONDO Standard sealing collar



Sewage pipe and RONDO Standard 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.



# Pipe bushing systems

Pressure water-tight installation parts for  
wall and floor slab penetration of sewer pipes



**Pipe bushing  
UniCut**

pages 146 – 147



**Pipe bushing  
Base / Novo**

page 148



**Pipe bushing  
Special versions**

pages 149 – 150

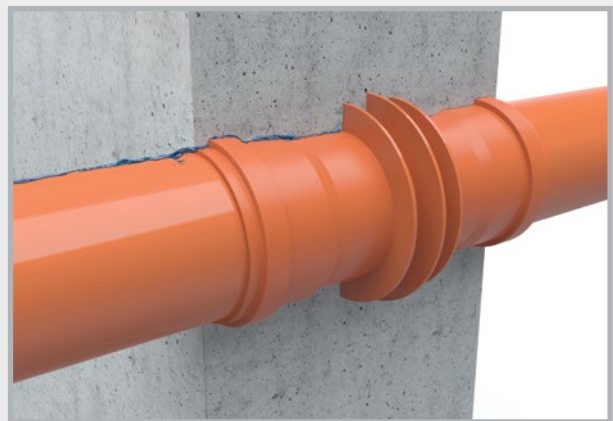


**Ground drains  
+ Accessories**

pages 151 – 152

Sewer pipes are among the most common kinds of pipes to pass through concrete parts.

Our pipe bushing systems offer ready-to-install system solutions for wall and floor slab ducts for the common materials (KG and KG 2000).



Pipe bushing Novo as a pressure water-tight wall duct.

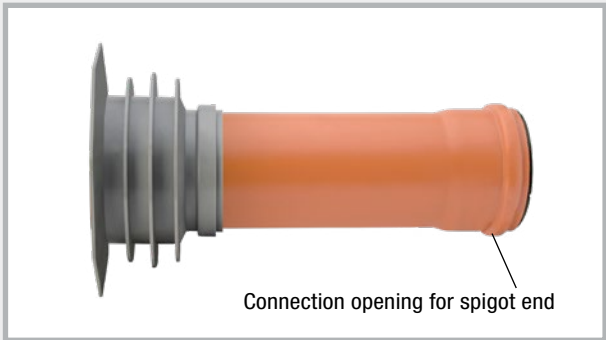
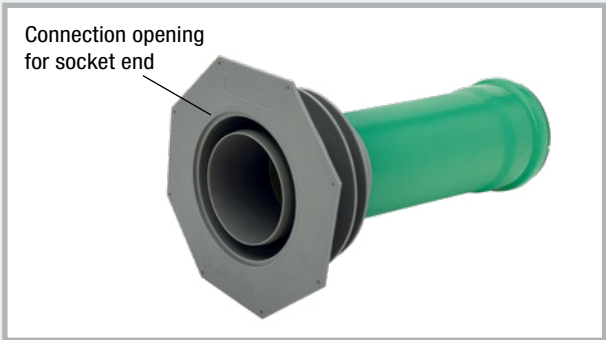
# UniCut pipe bushing

prefabricated for the respective wall thickness

- Diameter: 110 mm
- Prefabricated pipe bushing available in the following wall thicknesses:  
200 / 240 / 250 / 300 / 350 / 365 / 400 mm
- Pressure water-tight “Novo” waterstop
- Trowel flange for the connection of the outer seal
- Nail holes for fixing to the formwork
- Maintains the flow direction
- Supplied with 2 closure plugs



Art. no.	Description	DN mm	Wall thicknesses	PU	Weight per pc.
081520	UniCut pipe bushing, KG	110	200 mm	1 pc.	1.01 kg
081521	UniCut pipe bushing, KG	110	240 mm	1 pc.	1.06 kg
081522	UniCut pipe bushing, KG	110	250 mm	1 pc.	1.07 kg
081523	UniCut pipe bushing, KG	110	300 mm	1 pc.	1.13 kg
081524	UniCut pipe bushing, KG	110	350 mm	1 pc.	1.19 kg
081525	UniCut pipe bushing, KG	110	365 mm	1 pc.	1.20 kg
081526	UniCut pipe bushing, KG	110	400 mm	1 pc.	1.24 kg
081530	UniCut pipe bushing, KG 2000	110	200 mm	1 pc.	1.12 kg
081531	UniCut pipe bushing, KG 2000	110	240 mm	1 pc.	1.19 kg
081532	UniCut pipe bushing, KG 2000	110	250 mm	1 pc.	1.20 kg
081533	UniCut pipe bushing, KG 2000	110	300 mm	1 pc.	1.28 kg
081534	UniCut pipe bushing, KG 2000	110	350 mm	1 pc.	1.36 kg
081535	UniCut pipe bushing, KG 2000	110	365 mm	1 pc.	1.38 kg
081536	UniCut pipe bushing, KG 2000	110	400 mm	1 pc.	1.44 kg

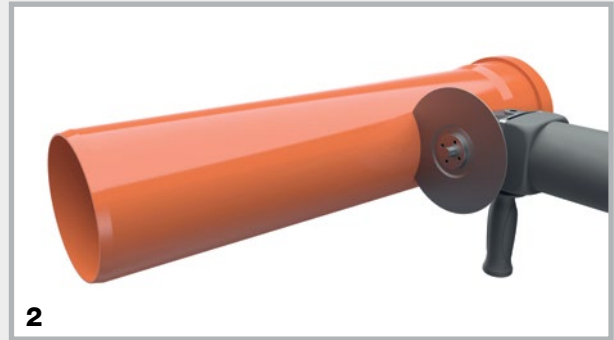


Art. no.	Description	PU	Secondary packaging	Weight per pc.	
081510	UniCut flange part “SOLO” Ø 110 mm with plug and seal, for on-site connection of KG and KG 2000 pipes Ø 110 mm	1 pc.	Carton of 20 pcs.	0.69 kg	

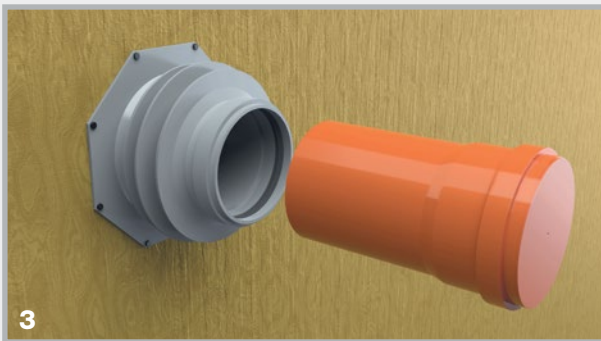
## Installation of UniCut pipe bushing



1 Fastening the UniCut pipe bushing



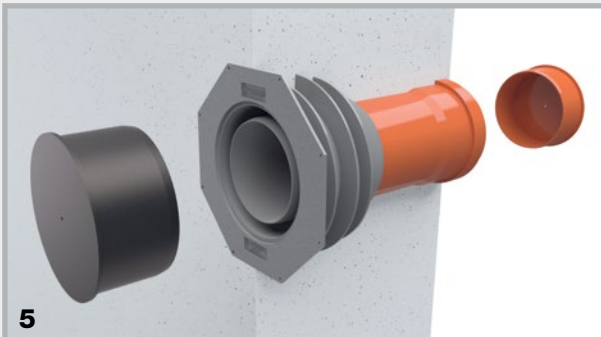
2 Cut the KG or KG 2000 pipe to length:  
Wall thickness minus 8.5 cm



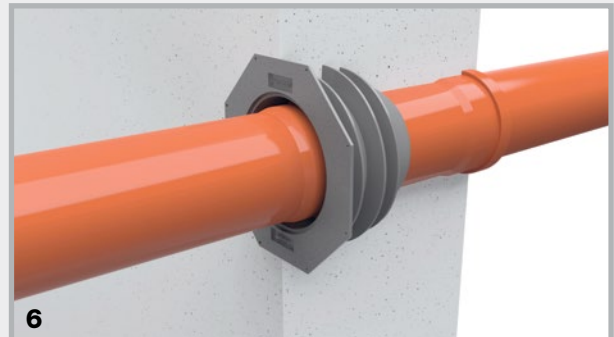
3 Insert the pipe into the UniCut pipe bushing.



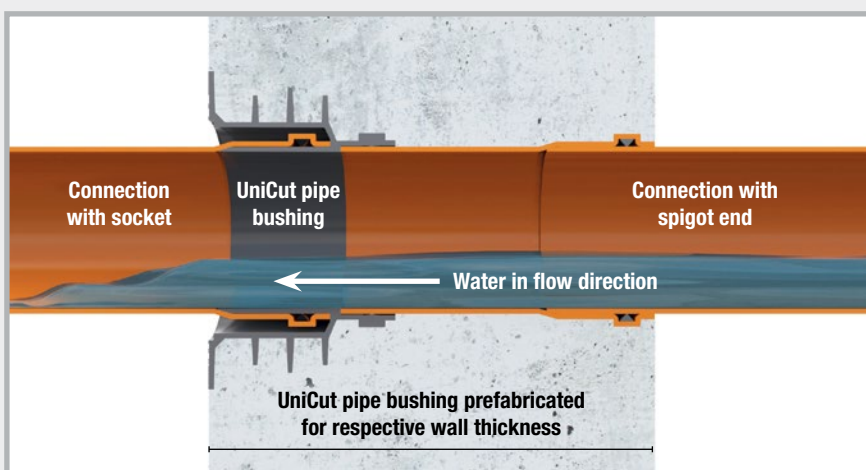
4 Concreting and careful sealing



5 Remove the plugs after concreting



6 The drainpipes in KG or KG 2000 can be inserted  
on the left into the socket end and on the right into  
the spigot end.



### Function:

When installing the UniCut pipe bushing, the direction of flow of the water is guaranteed.

# Sewage pipe bushing systems

## Double socket type (DM)



### Advantages of the Base and Novo double socket

- Delivered as solid wall version
- Manufactured for corresponding wall thickness
- Incl. 2 plugs as installation aid
- With lip seal
- Radon-tight
- Pre-installed waterstop

KG DM Base type  
KG 2000 DM Base type



Pressurised water test up to 70 m water column

KG DM Novo type  
KG 2000 DM Novo type





Pressurised water test up to 80 m water column

### KG DM type product range



Technical details page 150

Art.Gr.  
412

Sewage pipe Ø DN mm	Wall thicknesses							Page 110 Order FIX formwork aid separately
	180 mm	200 mm	240 mm	250 mm	300 mm	365 mm	400 mm	
	Base double socket		Novo double socket					
DN 110 Weight/pc.	080404 0.76 kg	080405 0.78 kg	080350 0.66 kg	080351 0.67 kg	080352 0.74 kg	080353 0.83 kg	080354 0.85 kg	
DN 125 Weight/pc.	080419 0.95 kg	080420 0.99 kg	080355 0.87 kg	080356 0.90 kg	080357 1.01 kg	080358 1.11 kg	080359 1.19 kg	
DN 160 Weight/pc.	not producible according to DIN	080433 1.41 kg	080434 1.50 kg	080436 1.58 kg	080438 1.71 kg	080440 2.02 kg	080442 2.31 kg	
DN 200 Weight/pc.	not producible according to DIN	080443 2.14 kg	080444 2.39 kg	080445 2.44 kg	080446 2.74 kg	080448 2.99 kg	080450 3.20 kg	

### KG 2000 DM type product range

Art.Gr.  
412

KG 2000 Ø DN mm	Wall thicknesses						Page 110 Order FIX formwork aid separately
	200 mm	240 mm	250 mm	300 mm	365 mm	400 mm	
	Base double socket	Novo double socket					
DN 110 Weight/pc.	080750 0.80 kg	080800 0.65 kg	080801 0.67 kg	080802 0.73 kg	080803 0.81 kg	080804 0.86 kg	
DN 125 Weight/pc.	080762 1.07 kg	080805 0.88 kg	080806 0.89 kg	080807 1.02 kg	080808 1.10 kg	080809 1.20 kg	
DN 160 Weight/pc.	080774 1.69 kg	080776 1.45 kg	080778 1.48 kg	080780 1.84 kg	080782 2.21 kg	080784 2.31 kg	
DN 200 Weight/pc.	080786 2.61 kg	080788 2.15 kg	080790 2.24 kg	080792 3.00 kg	080794 3.27 kg	080796 3.49 kg	

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



## Flow direction (FR) type Base + Novo

Sewage pipe bushing  
KG FR Base type  
KG 2000 FR Base type





Sewage pipe bushing  
KG FR Novo type  
KG 2000 FR Novo type



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

### KG FR type product range



Art.Gr.  
414

Sewage pipe Ø DN mm	Wall thicknesses							Page 110 Order FIX formwork aid separately
	180 mm	200 mm	240 mm	250 mm	300 mm	365 mm	400 mm	
	Base flow direction			Novo flow direction				
<b>DN 110</b> Weight/pc.	<b>090710</b> 0.75 kg	<b>090713</b> 0.80 kg	<b>090716</b> 0.90 kg	<b>090719</b> 0.90 kg	<b>090722</b> 1.00 kg	<b>090725</b> 1.10 kg	<b>090728</b> 1.20 kg	
<b>DN 125</b> Weight/pc.	<b>090731</b> 1.00 kg	<b>090734</b> 1.00 kg	<b>090737</b> 1.10 kg	<b>090740</b> 1.10 kg	<b>090743</b> 1.25 kg	<b>090749</b> 1.45 kg	<b>090752</b> 1.65 kg	
<b>DN 160</b> Weight/pc.	<b>not producible according to DIN</b>	<b>not producible according to DIN</b>	<b>090758</b> 1.85 kg	<b>090761</b> 1.85 kg	<b>090764</b> 2.05 kg	<b>090770</b> 2.25 kg	<b>090773</b> 2.50 kg	
<b>DN 200</b> Weight/pc.	<b>not producible according to DIN</b>	<b>not producible according to DIN</b>	<b>090779</b> 3.00 kg	<b>090782</b> 3.20 kg	<b>090785</b> 3.35 kg	<b>090788</b> 3.60 kg	<b>090791</b> 3.70 kg	

Other wall thicknesses available

### KG 2000 FR type product range

Art.Gr.  
414

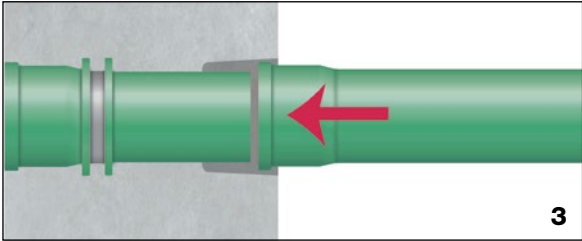
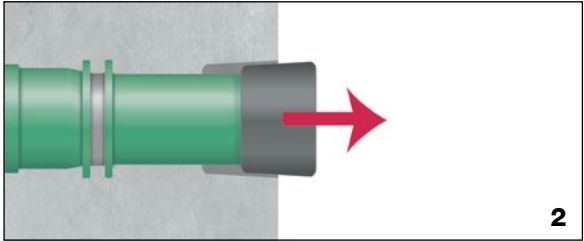
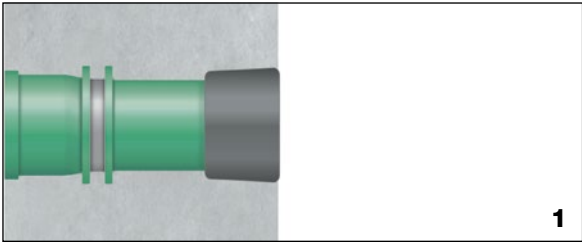
KG 2000 Ø DN mm	Wall thicknesses						Page 110 Order FIX formwork aid separately
	200 mm	240 mm	250 mm	300 mm	365 mm	400 mm	
	Base flow direction		Novo flow direction				
DN 110 Weight/pc.	080820 0.80 kg	080825 0.85 kg	080830 0.90 kg	080835 1.10 kg	080845 1.30 kg	080850 1.40 kg	
DN 125 Weight/pc.	080855 1.10 kg	080860 1.20 kg	080865 1.20 kg	080870 1.30 kg	080880 1.50 kg	080885 1.60 kg	
DN 160 Weight/pc.	not producible according to DIN	080890 1.80 kg	080895 2.00 kg	080905 2.30 kg	080915 2.60 kg	080920 2.80 kg	
DN 200 Weight/pc.	not producible according to DIN	080923 3.10 kg	080925 3.20 kg	080933 3.20 kg	080935 3.70 kg	080945 3.85 kg	

Other wall thicknesses available

Flow direction (FR) type

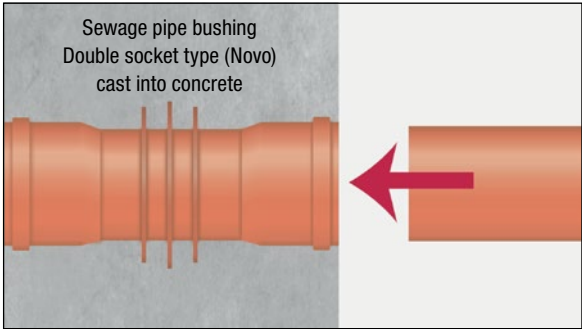
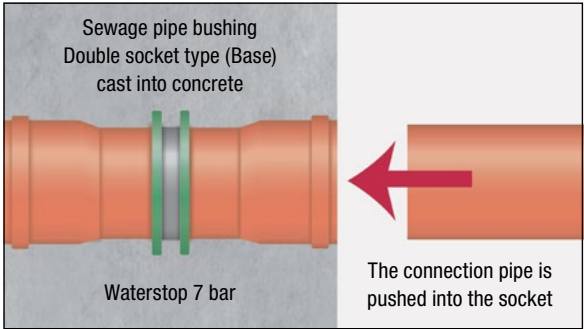
Function and technology

- 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.



KG type Base and Novo double socket

Function and technology



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

Double socket double wall (DM DW) type

Additional waterstops in the shell area of cavity walls.

Sewage pipe bushing  
DM DW type



KG 2000 pipe bushing  
DM DW type



Available on request



# Ground drains



## KG sewage ground drains Solid wall pipes

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



Art.Gr.  
**418**

Type	Sewage pipe Ø DN mm	Length mm	WITHOUT plug		WITH plug		Novo type DN 110 + 125 mm	Base type DN 160 + 200 mm
			Art. no.	Weight per pc.	Art. no.	Weight per pc.		
DL 110/500	110	500	<b>080366</b>	0.88 kg	<b>080366D</b>	0.90 kg		
DL 125/500	125	500	<b>080368</b>	1.14 kg	<b>080368D</b>	1.17 kg		
DL 160/500	160	500	<b>080470</b>	2.03 kg	<b>080470D</b>	2.08 kg		
DL 200/500	200	500	<b>080475</b>	3.21 kg	<b>080475D</b>	3.29 kg		

## KG 2000 sewage ground drains Solid wall pipes

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



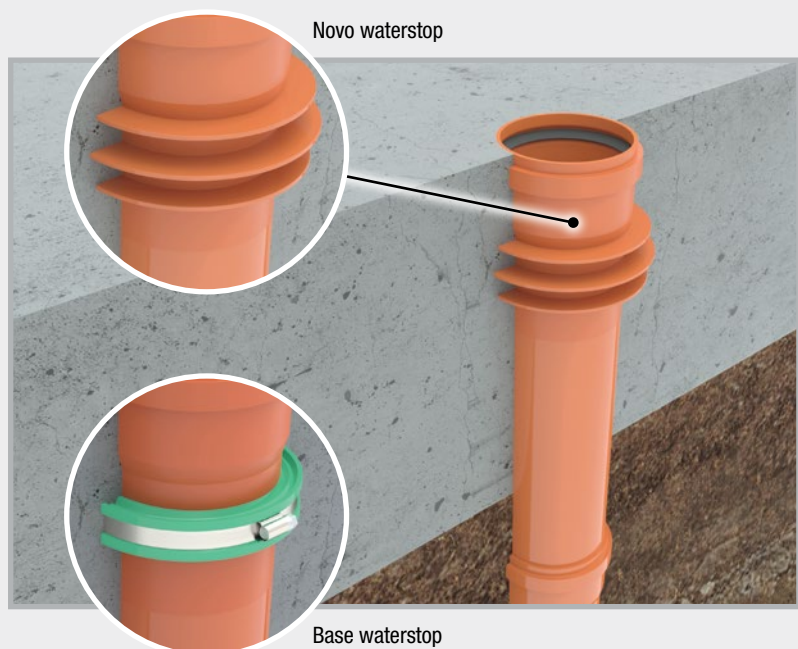
Art.Gr.  
**418**

Type	Sewage pipe Ø DN mm	Length mm	WITHOUT plug		WITH plug		Novo type DN 110 + 125 mm	Base type DN 160 + 200 mm
			Art. no.	Weight per pc.	Art. no.	Weight per pc.		
DL2000 110/500	110	500	<b>080827</b>	0.89 kg	<b>080827D</b>	0.91 kg		
DL2000 125/500	125	500	<b>080828</b>	1.12 kg	<b>080828D</b>	1.15 kg		
DL2000 160/500	160	500	<b>080986</b>	2.24 kg	<b>080986D</b>	2.29 kg		
DL2000 200/500	200	500	<b>080989</b>	3.64 kg	<b>080989D</b>	3.72 kg		

## Function and technology

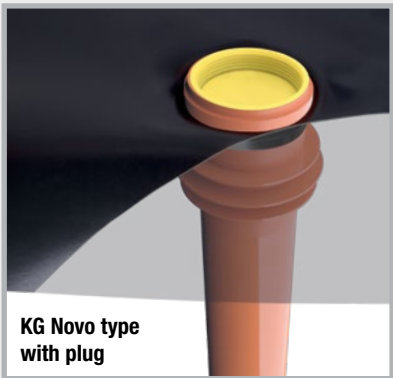
KG and KG 2000 ground drains are used for floor slab penetrations.

The ground drains are connected to the sewer base lines and concreted in up to the top edge of the floor slab. The transition from the pipe to the concrete is reliably and permanently sealed against pressing water or gases rising from the ground by the “Novo” or “Base” waterstop.



# 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.Gr.  
**419**

Type	Sewage pipe Ø DN mm	Length mm	WITHOUT plug		WITH plug	
			Art. no.	Weight per pc.	Art. no.	Weight per pc.
DL 110/500 FFL	110	500	<b>080451</b>	1.52 kg	<b>080451D</b>	1.54 kg
DL 125/500 FFL	125	500	<b>080452</b>	1.81 kg	<b>080452D</b>	1.84 kg
DL 160/500 FFL	160	500	<b>080454</b>	2.51 kg	<b>080454D</b>	2.56 kg
DL 200/500 FFL	200	500	<b>080456</b>	4.43 kg	<b>080456D</b>	4.51 kg



## KG 2000 ground drains with foil flange

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

Art.Gr.  
**419**

Type	Sewage pipe Ø DN mm	Length mm	WITHOUT plug		WITH plug	
			Art. no.	Weight per pc.	Art. no.	Weight per pc.
DL2000 110/500 FFL	110	500	<b>080992</b>	1.52 kg	<b>080992D</b>	1.54 kg
DL2000 125/500 FFL	125	500	<b>080994</b>	1.96 kg	<b>080994D</b>	1.99 kg
DL2000 160/500 FFL	160	500	<b>080996</b>	2.70 kg	<b>080996D</b>	2.75 kg
DL2000 200/500 FFL	200	500	<b>080998</b>	4.23 kg	<b>080998D</b>	4.31 kg

For fixing the foil flange to the component, we recommend the **POWER** swelling tape adhesive (art. no. 010052) on page 12 of the complete catalogue.





# LIGHTNING PROTECTION



**Earth conductors**  
pages 154 – 155



**Connectors**  
pages 156 – 161



**Fixed earthing terminals, wall bushings + accessories**  
pages 162 – 173

1

HYDROPHILIC  
WATERSTOPS

2

JOINT SHEET METALS

3

INJECTION HOSES  
CONSTRUCTION CHEMISTRY

4

SERVICE DUCTS

5

LIGHTNING  
PROTECTION

6

FORMWORK  
ACCESSORIES

# Earth conductors

Dimensions and materials according to DIN EN 62561-2

## Earthing straps

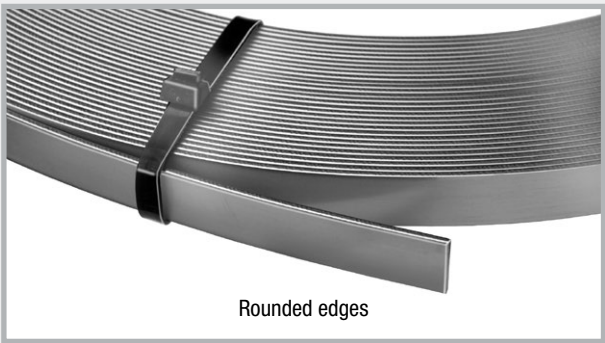
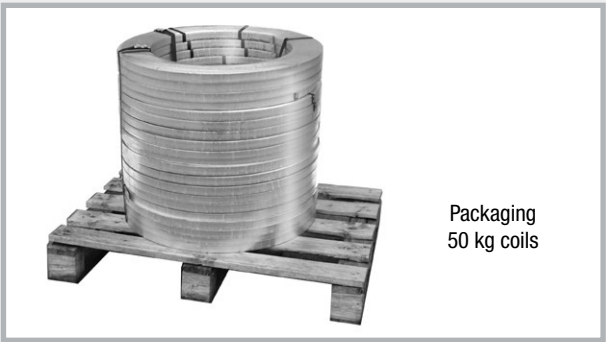
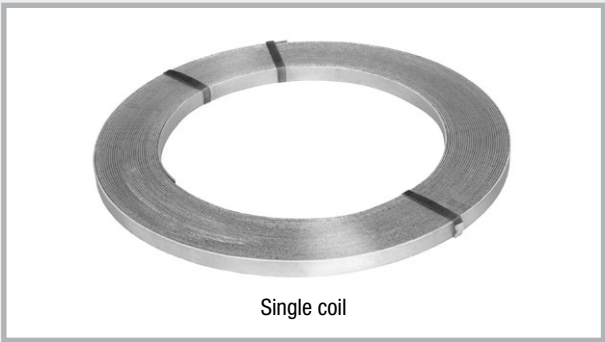
### Galvanised steel

Art.Gr.  
**500**

Art. no.	Size	Material	PU	Secondary packaging
<b>100014</b>	30 x 3.5 mm	Galvanised steel Z 500	1 roll of 25 kg = approx. 30 m	1 pallet = 40 rolls
<b>100016</b>	30 x 3.5 mm	Galvanised steel Z 500	1 roll of 50 kg = approx. 60 m	1 pallet = 20 rolls
<b>100022</b>	40 x 4.0 mm	Galvanised steel Z 500	1 roll of 50 kg = approx. 39 m	1 pallet = 20 rolls
<b>100024</b>	40 x 5.0 mm	Galvanised steel Z 500	1 roll of 50 kg = approx. 32 m	1 pallet = 20 rolls

### Stainless steel

Art. no.	Size	Material	PU	Secondary packaging
<b>100028</b>	30 x 3.5 mm <div>Art.Gr. 502</div>	V2A stainless steel according to DIN EN 62561-2	1 roll of 25 kg = approx. 30 m	1 pallet = 40 rolls
<b>100031</b>	30 x 3.5 mm <div>Art.Gr. 501</div>	V4A stainless steel according to DIN EN 62561-2	1 roll of 25 kg = approx. 30 m	1 pallet = 40 rolls
<b>100032</b>	30 x 3.5 mm <div>Art.Gr. 501</div>	V4A stainless steel according to DIN EN 62561-2	1 roll of 50 kg = approx. 60 m	1 pallet = 20 rolls
<b>100035</b>	40 x 4.0 mm <div>Art.Gr. 501</div>	V4A stainless steel according to DIN EN 62561-2	1 roll of 50 kg = approx. 39 m	1 pallet = 20 rolls



# Round wires



Single coil, galvanised

Single coil  
Stainless steel standardSingle coil  
Stainless steel SUPER-SOFTSingle coil  
Aluminium round wire

## Galvanised steel

Art.Gr.  
**505**

Art. no.	Size	Material	PU	Secondary packaging
<b>100041</b>	Ø 10 mm	Galvanised steel Z 350	1 roll of 25 kg = approx. 40.5 m	1 pallet = 40 rolls
<b>100042</b>	Ø 10 mm	Galvanised steel Z 350	1 roll of 50 kg = approx. 81 m	1 pallet = 20 rolls

## Stainless steel standard

Art. no.	Size	Material	PU	Secondary packaging
<b>100051</b>	Ø 10 mm <span>Art.Gr. 507</span>	V2A stainless steel according to DIN EN 62561-2	1 roll of 25 kg = approx. 40.5 m	1 pallet = 20 rolls
<b>100055</b>	Ø 10 mm <span>Art.Gr. 506</span>	V4A stainless steel according to DIN EN 62561-2	1 roll of 25 kg = approx. 40.5 m	1 pallet = 20 rolls
<b>100056</b>	Ø 10 mm <span>Art.Gr. 506</span>	V4A stainless steel according to DIN EN 62561-2	1 roll of 50 kg = approx. 81 m	1 pallet = 10 rolls
<b>100062</b>	Ø 10 mm <span>Art.Gr. 506</span>	V4A stainless steel according to DIN EN 62561-2	1 roll of 31 kg = approx. 50 m	1 pallet = 16 rolls

## 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.

Art.Gr.  
**508**

Art. no.	Size	Material	PU	Secondary packaging
<b>100061</b>	Ø 10 mm	SUPER-SOFT V4A according to DIN EN 62561-2, inner diameter 900 mm	1 roll of 25 kg = approx. 40.5 m	1 pallet = 40 rolls

## Aluminium

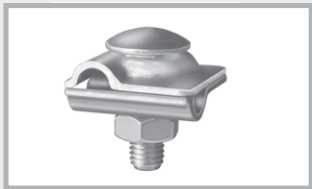
Art.Gr.  
**509**

Art. no.	Size	Material	PU	Secondary packaging
<b>100080</b>	Ø 8 mm	ALU AlMgSi soft-twistable	1 roll of 20 kg = approx. 148 m	1 pallet = 25 rolls

## Multi-purpose connecting clamps

with mushroom head bolt and protection against twisting

Art.Gr.  
511

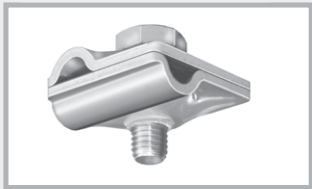


Art. no.	Description	PU	Secondary packaging	Weight per carton
100147	<b>Galvanised steel</b> , 2-part, round/round, Clamping range: Round conductor Ø 8 + 10 mm, with M10 mushroom head bolt and protection against twisting	1 carton of 50 pcs.	1 pallet = 5600 pcs.	5.05 kg
100149	<b>V2A stainless steel</b> , 2-part, round/round Clamping range: Round conductor Ø 8 + 10 mm, with M10 mushroom head bolt and protection against twisting	1 carton of 50 pcs.	1 pallet = 5600 pcs.	4.45 kg
100150	<b>V4A stainless steel</b> , 2-part, round/round Clamping range: Round conductor Ø 8 + 10 mm, with M10 mushroom head bolt and protection against twisting	1 carton of 50 pcs.	1 pallet = 5600 pcs.	4.50 kg

## Multi-purpose connecting clamps

with thread in lower part

Art.Gr.  
511

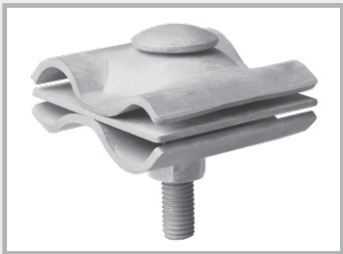


Art. no.	Description	PU	Secondary packaging	Weight per carton
100157	<b>Galvanised steel</b> , 2-part, round/round, Clamping range: Ø 8 + 10 mm, M10 screw, thread in lower part	1 carton of 50 pcs.	1 pallet = 5600 pcs.	4.45 kg
100159	<b>V4A stainless steel, 2-part</b> , round/round Clamping range: Ø 8 + 10 mm, M10 screw, thread in lower part	1 carton of 50 pcs.	1 pallet = 5600 pcs.	3.75 kg
100153	<b>Aluminium</b> , 2-part, round/round, Clamping range: Ø 8+ 10 mm, NIRO M10 screw, Thread in lower part	1 carton of 50 pcs.	1 pallet = 5600 pcs.	2.60 kg

## MAXI multi-purpose connecting clamp

for connection of round conductors to the reinforcement and conductive connection of steel reinforcement with up to Ø 25 mm

Art.Gr.  
511



Art. no.	Description	PU	Secondary packaging	Weight per carton
100148	<b>Galvanised steel</b> , round/round, Round conductor Ø 8-16 mm / Ø 15-25 mm, with mushroom head bolt and protection against twisting	1 carton of 25 pcs.	1 pallet = 1000 pcs.	11.10 kg



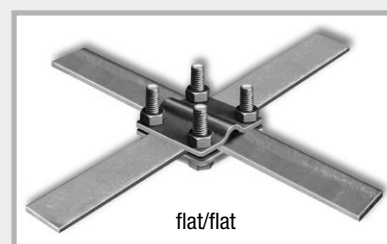
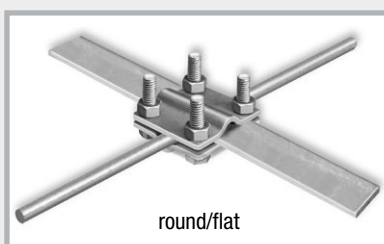
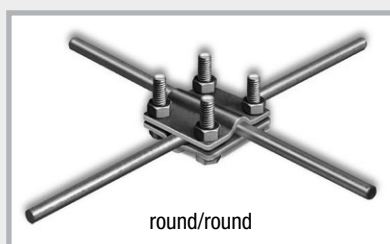
## Stainless steel cross connectors round/round

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

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

Art.Gr.  
**512**

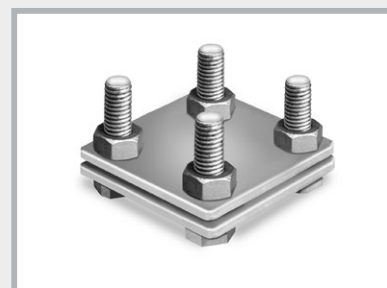
Art. no.	Description	PU	Secondary packaging	Weight per carton
<b>100143</b>	<b>V4A stainless steel</b> , 2-part, round/round universal, heavy duty version, M8 screws	1 carton of 50 pcs.	1 pallet = 3200 pcs.	9.55 kg
<b>100145</b>	<b>V4A stainless steel</b> , 2-part, round/round universal, light version, M6 screws	1 carton of 50 pcs.	1 pallet = 3200 pcs.	6.90 kg



## Galvanised cross connectors flat/flat

Clamping range: flat conductor up to 30 mm

Art.Gr.  
**512**



Art. no.	Description	PU	Secondary packaging	Weight per carton
<b>100100</b>	<b>Galvanised steel</b> , 2-part, flat/flat, heavy duty version, M8 screws	1 carton of 50 pcs.	1 pallet = 3200 pcs.	10.75 kg
<b>100106</b>	<b>Galvanised steel</b> , 2-part, flat/flat, light version, M6 screws	1 carton of 50 pcs.	1 pallet = 3200 pcs.	7.65 kg

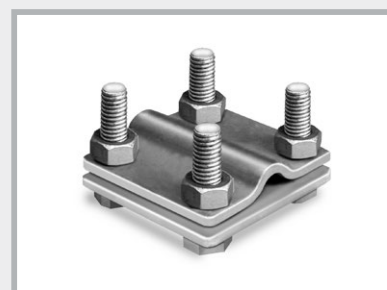
## Galvanised cross connectors flat/round

Clamping range:

round conductor Ø 8 + 10 mm,

flat conductor up to 30 mm

Art.Gr.  
**512**



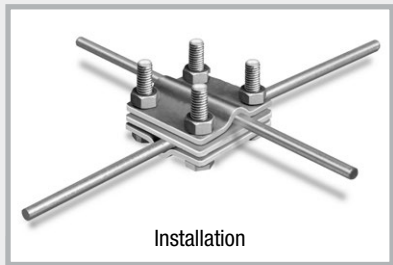
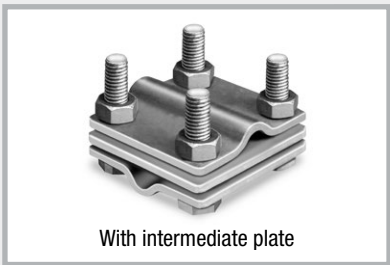
Art. no.	Description	PU	Secondary packaging	Weight per carton
<b>100115</b>	<b>Galvanised steel</b> , 2-part, flat/round, heavy duty version, M8 screws	1 carton of 50 pcs.	1 pallet = 3200 pcs.	10.80 kg
<b>100121</b>	<b>Galvanised steel</b> , 2-part, flat/round, light version, M6 screws	1 carton of 50 pcs.	1 pallet = 3200 pcs.	7.80 kg

# Galvanised cross connector (for flat conductors up to 30 mm) round/round

Universal for flat/flat, flat/round and round/round  
Clamping range: round conductor Ø 8 + 10 mm, flat conductor 30 mm

Art.Gr.  
**512**

Art. no.	Description	PU	Secondary packaging	Weight per carton
100127	<b>Galvanised steel</b> , 2-part, round/round, heavy duty version, M8 screws	1 carton of 50 pcs.	1 pallet = 3200 pcs.	10.95 kg
100130	<b>Galvanised steel</b> , 3-part, round/round, heavy duty version, M8 screws With intermediate plate	1 carton of 50 pcs.	1 pallet = 3200 pcs.	14.65 kg
100133	<b>Galvanised steel</b> , 2-part, round/round, light version, M6 screws	1 carton of 50 pcs.	1 pallet = 3200 pcs.	8.00 kg

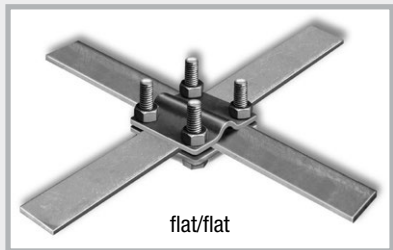
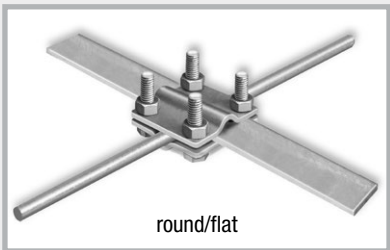
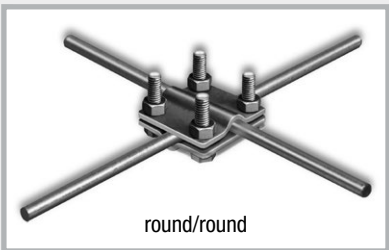


# Galvanised cross connector (for flat conductors up to 40 mm) round/round

Universal for flat/flat, flat/round and round/round  
Clamping range: round conductor Ø 8 + 10 mm, flat conductor 30 + 40 mm



Art.Gr.  
**512**

Art. no.	Description	PU	Secondary packaging	Weight per carton
100129	<b>Galvanised steel</b> , 2-part, round/round, heavy duty version, M8 screws	1 carton of 50 pcs.	1 pallet = 3200 pcs.	17.60 kg




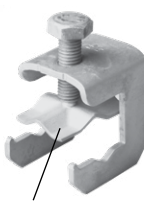
Art.Gr.  
518

## Connecting clamps for flat conductors

Art. no.	Description	PU	Secondary packaging	Weight per carton	Art. no. 100250 Art. no. 100251
100250	<b>Galvanised steel</b> , M10 screw, flat conductors up to 30 mm and constructional steel Ø 6-22 mm	1 carton of 50 pcs.	1 pallet = 4000 pcs.	6.95 kg	
100251	<b>Bright steel</b> , M10 screw, flat conductors up to 30 mm and constructional steel Ø 6-22 mm	1 carton of 50 pcs.	1 pallet = 4000 pcs.	6.45 kg	
100253	<b>Galvanised steel</b> , M10 screw, flat conductors up to 40 mm and constructional steel Ø 6-22 mm	1 carton of 50 pcs.	1 pallet = 3200 pcs.	6.05 kg	Art. no. 100252 Art. no. 100253 
100252	<b>V4A stainless steel</b> , M10 screw, flat conductors up to 40 mm and constructional steel Ø 6-22 mm	1 carton of 50 pcs.	1 pallet = 3200 pcs.	5.25 kg	


Art.Gr.  
518

## Connecting clamps for flat and round conductors

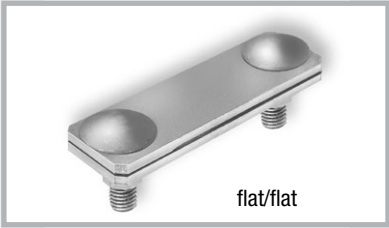
Art. no.	Description	PU	Secondary packaging	Weight per carton	Art. no. 100255 Art. no. 100257
100255	<b>Galvanised steel</b> , M10 screw, for flat conductors up to 30 mm, Round conductor Ø 8 + 10 mm, Constructional steel Ø 6-22 mm	1 carton of 50 pcs.	1 pallet = 3200 pcs.	9.30 kg	
100257	<b>V4A stainless steel</b> , M10 screw, for flat conductors up to 30 mm, Round conductor Ø 8 + 10 mm, Constructional steel 6-22 mm	1 carton of 50 pcs.	1 pallet = 3200 pcs.	8.05 kg	
100146	<b>Universal connecting clamp with pressure plate, Galvanised steel</b> , M10 screw, for flat conductors up to 30 mm, Round conductor Ø 8 + 10 mm, Constructional steel Ø 6-22 mm	1 carton of 50 pcs.	1 pallet = 3200 pcs.	7.55 kg	Art. no. 100146 Art. no. 100254  Pressure plate
100254	<b>Universal connecting clamp with pressure plate, V4A stainless steel</b> , M10 screw, for flat conductors up to 30 mm, Round conductor Ø 8 + 10 mm, Constructional steel Ø 6-22 mm	1 carton of 50 pcs.	1 pallet = 3200 pcs.	6.40 kg	

Art.Gr.  
518

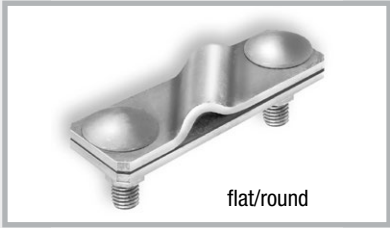
## Connecting clamps for round conductors

Art. no.	Description	PU	Secondary packaging	Weight per carton	Art. no. 100258 Art. no. 100259 Art. no. 100260 Art. no. 100261
100258	<b>Galvanised steel</b> , M10 screw, for round connector Ø 6-10 mm, Constructional steel Ø 6-10 mm	1 carton of 50 pcs.	1 pallet = 4000 pcs.	5.00 kg	
100259	<b>Galvanised steel</b> , M10 screw, for round conductors Ø 8 + 10 mm, Constructional steel Ø 6-22 mm	1 carton of 50 pcs.	1 pallet = 3200 pcs.	5.85 kg	
100261	<b>Bright steel</b> , M10 screw, for round conductors Ø 8 + 10 mm, Constructional steel Ø 6-22 mm	1 carton of 50 pcs.	1 pallet = 3200 pcs.	5.60 kg	
100260	<b>V4A stainless steel</b> , M10 screw, for round conductors Ø 8 + 10 mm, Constructional steel Ø 6-22 mm	1 carton of 50 pcs.	1 pallet = 3200 pcs.	5.10 kg	

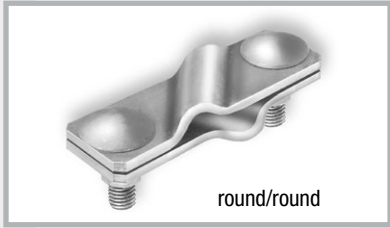
Double clamps



flat/flat



flat/round



round/round

Stainless steel double clamps

for earthing strap up to 40 mm width and round conductors Ø 8 + 10 mm

Art.Gr.  
**513**

Art. no.	Description	PU	Secondary packaging	Weight per carton
100273	<b>V4A stainless steel</b> , 2-part, flat/flat, heavy duty version, M10 screws	1 carton of 50 pcs.	1 pallet = 3200 pcs.	9.80 kg
100279	<b>V4A stainless steel</b> , 2-part, flat/round, heavy duty version, M10 screws	1 carton of 50 pcs.	1 pallet = 3200 pcs.	9.35 kg
100282	<b>V2A stainless steel</b> , 2-part, round/round heavy duty version, M10 screws	1 carton of 50 pcs.	1 pallet = 3200 pcs.	9.55 kg
100285	<b>V4A stainless steel</b> , 2-part, round/round heavy duty version, M10 screws	1 carton of 50 pcs.	1 pallet = 3200 pcs.	9.35 kg

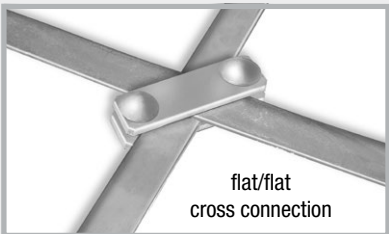
Galvanised double clamps

for earthing strap up to 40 mm width and round conductors Ø 8 + 10 mm

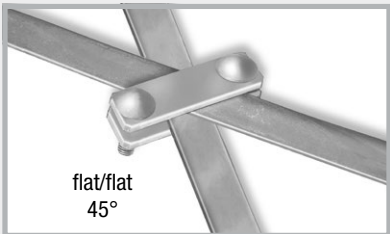
Art.Gr.  
**513**

Art. no.	Description	PU	Secondary packaging	Weight per carton
100220	<b>Galvanised steel</b> , 2-part, flat/flat, heavy duty version, M10 screws	1 carton of 50 pcs.	1 pallet = 3200 pcs.	12.15 kg
100225	<b>Galvanised steel</b> , 2-part, flat/round, heavy duty version, M10 screws	1 carton of 50 pcs.	1 pallet = 3200 pcs.	11.60 kg
100230	<b>Galvanised steel</b> , 2-part, round/round, heavy duty version, M10 screws	1 carton of 50 pcs.	1 pallet = 3200 pcs.	11.70 kg

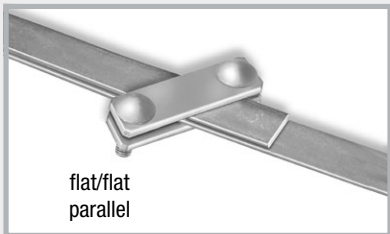
Possible clamping connections



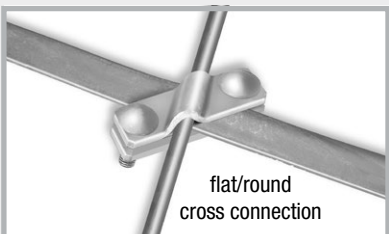
flat/flat  
cross connection



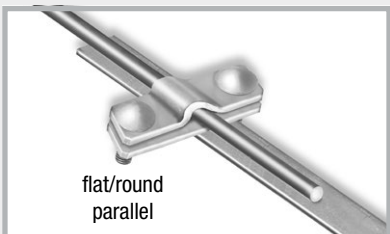
flat/flat  
45°



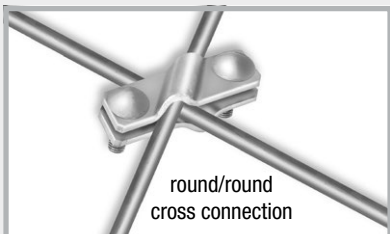
flat/flat  
parallel



flat/round  
cross connection



flat/round  
parallel



round/round  
cross connection



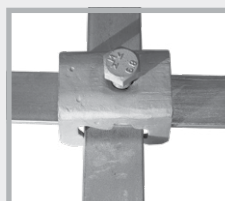
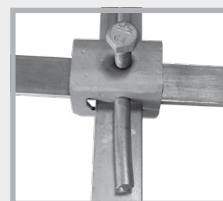
Art.Gr.  
**514**

## Single clamps

Art. no.	Description	PU	Secondary packaging	Weight per carton
<b>100163</b>	<b>Galvanised steel</b> , 1 M10 screw, for flat conductors up to 30 mm and round conductors Ø 8+ 10 mm, for T, cross and parallel connections	1 carton of 50 pcs.	1 pallet = 3200 pcs.	6.40 kg
<b>100162</b>	<b>V4A stainless steel</b> , 1 M10 screw, for flat conductors up to 30 mm and round conductors Ø 8+ 10 mm, for T, cross and parallel connections	1 carton of 50 pcs.	1 pallet = 3200 pcs.	5.25 kg



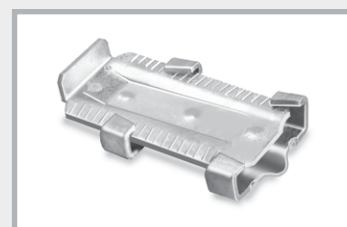
Single clamp

flat/flat  
parallel connectionflat/flat  
cross connectionflat/round  
parallel connectionflat/flat/round  
connection

## Parallel connectors

Art.Gr.  
**514**

Art. no.	Description	PU	Secondary packaging	Weight per carton
<b>100240</b>	<b>Galvanised steel</b> , 1 M10 screw, 2-part, for round conductors Ø 8 + 10 mm	1 carton of 50 pcs.	1 pallet = 5600 pcs.	7.35 kg
<b>100243</b>	<b>V4A stainless steel</b> , 1 M10 screw, 2-part, for round conductors Ø 8 + 10 mm	1 carton of 50 pcs.	1 pallet = 5600 pcs.	6.05 kg

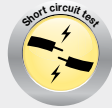
Art.Gr.  
**514**

## Wedge connector

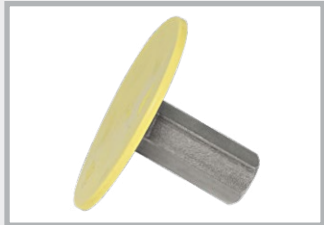
Art. no.	Description	PU	Secondary packaging	Weight per carton
<b>100160</b>	<b>Galvanised steel</b> , for round conductors Ø 10 mm and flat conductors up to 40 mm, with lock-in position in the wedge	1 carton of 50 pcs.	1 pallet = 3200 pcs.	10.90 kg

# Fixed earthing terminal M10/M12

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



Art.Gr.  
**519**



Art. no.	Description	PU	Weight per carton	
100187	Fixed earthing terminal M10/M12, V4A stainless steel, Ø 80 mm; without axis, with yellow protective cap, connection M10 + M12	1 carton of 10 pcs.	1.60 kg	
100202	Fixed earthing terminal M10/M12, V4A stainless steel, Ø 80 mm; with mounted, galvanised axis 200 mm, total length 230 mm, with yellow protective cap	1 carton of 10 pcs.	2.90 kg	
<b>NEW!</b> 100204	Fixed earthing terminal M10/M12, V4A stainless steel, Ø 80 mm; with mounted, galvanised axis 120 mm, total length 160 mm, with yellow protective cap	1 carton of 10 pcs.	2.60 kg	
<b>NEW!</b> 100203	Fixed earthing terminal M10/M12, V4A Edelstahl, Ø 80 mm; with mounted stainless steel axis 200 mm, total length 230 mm, with yellow protective cap	1 carton of 10 pcs.	2.90 kg	
100200	Fixed earthing terminal M10/M12, V4A stainless steel, Ø 80 mm; with mounted A2 multi-purpose connecting clamp, with yellow protective cap	1 carton of 10 pcs.	2.40 kg	

## Installation

Art. no. 100187

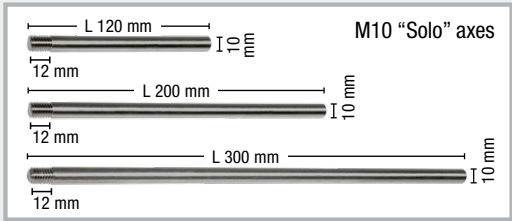


## Installation



# M10 “Solo” axes for fixed earthing terminal M10/M12

Art.Gr.  
**521**

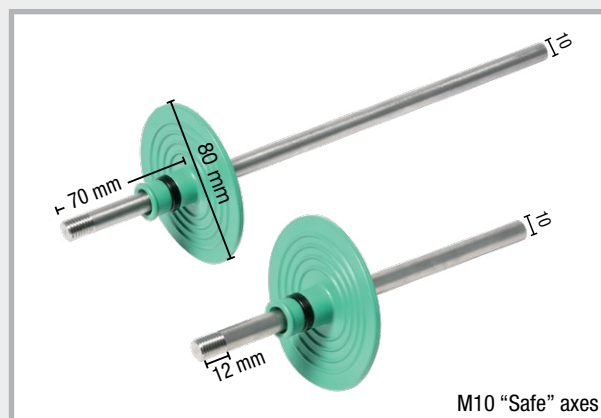


Art. no.	Description	PU	Weight/carton
<b>NEW!</b> 100256	galvanised, length 120 mm	1 carton of 50 pcs.	3.50 kg
100183	galvanised, length 200 mm	1 carton of 50 pcs.	6.00 kg
100185	galvanised, length 300 mm	1 carton of 50 pcs.	9.50 kg
100184	V4A stainless steel, length 200 mm	1 carton of 50 pcs.	6.00 kg
100186	V4A stainless steel, length 300 mm	1 carton of 50 pcs.	9.00 kg

## M10 "Safe" axes for pressure water-tight fixed earthing terminal M10/M12

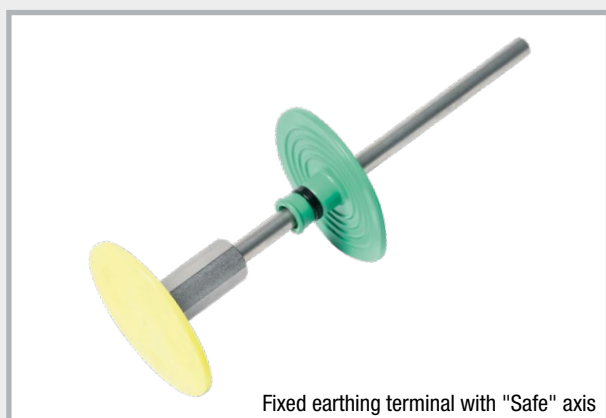


Art.Gr.  
521

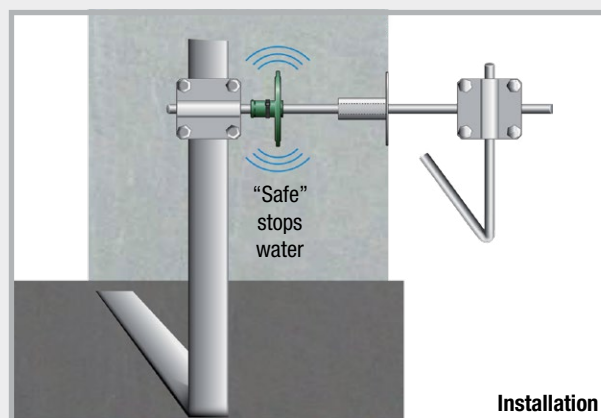


M10 "Safe" axes

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



Fixed earthing terminal with "Safe" axis



## Cross clamps for fixed earthing terminals M10/M12

Art.Gr.  
522

Art. no.	Description	PU	Weight per carton	Art. no. 100188 Art. no. 100189
100188	<b>Cross clamp for fixed earthing terminal M10/M12, galvanised,</b> M10 thread, Thread length 70 mm, for round conductors Ø 8 + 10 mm and flat conductors up to 40 mm	1 carton of 10 pcs.	3.80 kg	<p>Thread length 70 mm M10</p>
100189	<b>Cross clamp for fixed earthing terminal M10/M12, V4A stainless steel,</b> M10 thread, Thread length 70 mm, for round conductors Ø 8 + 10 mm and flat conductors up to 40 mm	1 carton of 10 pcs.	3.20 kg	<p><b>Installation</b> Fixed earthing terminal with screwed in cross clamp. Round and flat conductors can be connected.</p>

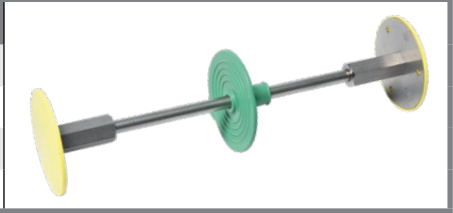
M10 “Safe” wall bushings with pre-assembled fixed earthing terminals

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

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

Art.Gr.  
520

Wall thickness	Art. no.	Weight/pc.
200 mm	100394	0.42 kg
240 mm	100396	0.45 kg
250 mm	100398	0.45 kg
300 mm	100400	0.48 kg



M10 connection axis “Safe” for wall bushings

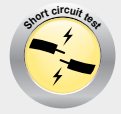
Stainless steel, diameter 10 mm, M10 thread at both ends, length of thread 12 mm

Art.Gr.  
521

Wall thickness	Art. no.	Weight/pc.
200 mm	100360	0.10 kg
240 mm	100365	0.13 kg
250 mm	100370	0.13 kg
300 mm	100375	0.16 kg



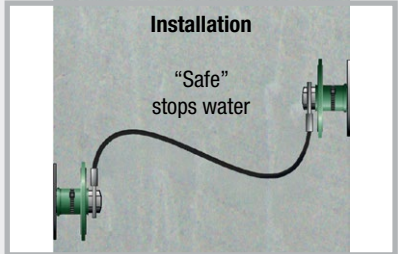
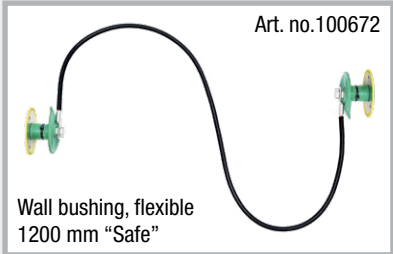
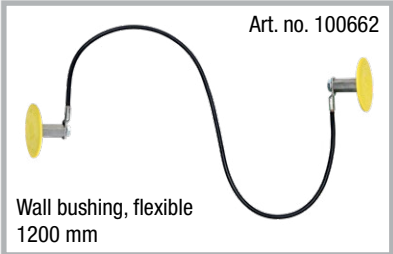
NEW! Wall bushing, flexible



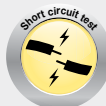
Flexible wall bushing M10 for vertically and horizontally offset positioning of earthing connections, fixed earthing terminal in V4A stainless steel, fine-wired copper cable 25 mm²

Art.Gr.  
535

Art. no.	Description	PU	Weight per pc.
100660	Wall bushing, flexible 600 mm, 2 x fixed earthing terminal with connecting clamp 1 x sheathed copper cable, length 600 mm	1 pc.	0.54 kg
100662	Wall bushing, flexible 1200 mm, 2 x fixed earthing terminal with connecting clamp 1 x sheathed copper cable, length 1200 mm	1 pc.	0.71 kg
100670	Wall bushing, flexible 600 mm “Safe”, sealed pressure water-tight with RONDO EFP, 2 x fixed earthing terminal with connecting clamp and RONDO EFP 1 x sheathed copper cable, length 600 mm	1 pc.	0.62 kg
100672	Wall bushing, flexible 1200 mm “Safe”, sealed pressure water-tight with RONDO EFP, 2 x fixed earthing terminal with connecting clamp and RONDO EFP 1 x sheathed copper cable, length 1200 mm	1 pc.	0.79 kg





**NEW! Connection set, flexible**

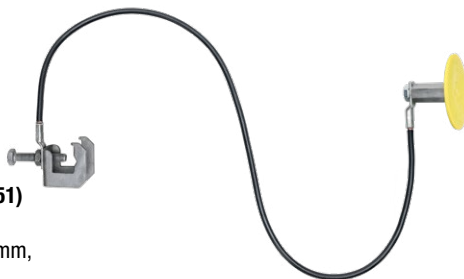
as a flexible connection to earthing systems or reinforcement bars,  
with connecting clamps, ready assembled and mounted,  
fixed earthing terminal M10/M12 in V4A stainless steel, fine-wired copper cable 25 mm<sup>2</sup>

Art.Gr.  
**535**

Art. no.	Description	PU	Weight/pc.
100663	<b>Connection set, flexible 600 mm with flexible connecting clamp,</b> 1 x connecting clamp (Art. no. 100251) 1 x fixed earthing terminal M10/M12 1 x sheathed copper cable, length 600 mm	1 pc.	0.31 kg
100664	<b>Connection set, flexible 1200 mm with flexible connecting clamp,</b> 1 x connecting clamp (Art. no. 100251) 1 x fixed earthing terminal M10/M12 1 x sheathed copper cable, length 1200 mm	1 pc.	0.48 kg

Art. no. 100664  
**Connection set, flexible 1200 mm**

**Connecting clamp**  
**Bright steel, (Art. no. 100251)**  
Connection options:  
constructional steel Ø 6-22 mm,  
flat conductors up to 30 mm

**Fixed earthing terminal M12**

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

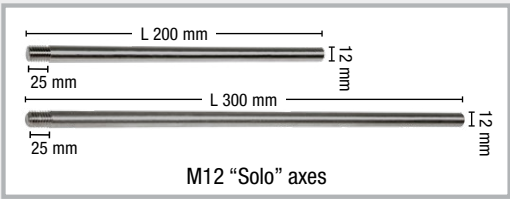
Art.Gr.  
**523**



Art. no.	Description	PU	Weight per carton	
100300	<b>Fixed earthing terminal M12, V4A stainless steel, with yellow protective cap,</b> Connection M12	1 carton of 10 pcs.	2.00 kg	
100304	<b>Fixed earthing terminal M12 "Safe" with yellow protective cap and waterstop,</b> Connection M12	1 carton of 10 pcs.	2.40 kg	
100308	<b>Connecting plate 40 x 4 mm, incl. screw M12 x 25</b>	1 carton of 10 pcs.	1.90 kg	
100312	<b>Fixed earthing terminal M12 with connecting plate and yellow protective cap,</b> Connection M12	1 carton of 10 pcs.	3.90 kg	

M12 “Solo” axes for fixed earthing terminal

Art.Gr.  
524



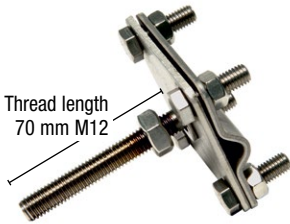
Art. no.	Description	PU	Weight/carton
101174	V4A stainless steel, length 200 mm	1 carton of 50 pcs.	9.00 kg
101176	V4A stainless steel, length 300 mm	1 carton of 50 pcs.	13.00 kg

Cross clamps for fixed earthing terminals M12

Art.Gr.  
525

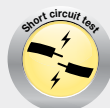
Art. no.	Description	PU	Weight/carton
100460	<b>Cross clamp for fixed earthing terminal M12, galvanised,</b> M12 thread, thread length 70 mm, for round conductors Ø 8 + 10 mm and flat conductors up to 40 mm	1 carton of 10 pcs.	4.20 kg
100462	<b>Cross clamp for fixed earthing terminal M12, V4A stainless steel,</b> M12 thread, thread length 70 mm, for round conductors Ø 8 + 10 mm and flat conductors up to 40 mm	1 carton of 10 pcs.	3.45 kg
100464	<b>Cross clamp for fixed earthing terminal M12, V4A stainless steel</b> M12 thread, thread length 200 mm, for round conductors Ø 8 + 10 mm and flat conductors up to 40 mm	1 carton of 10 pcs.	4.50 kg

Art. no. 100460 + 100462



Art. no. 100464

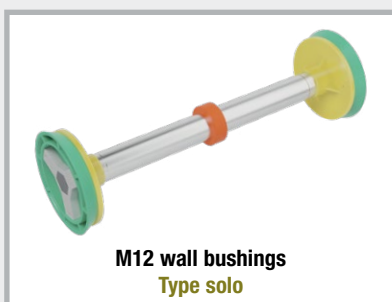


**NEW! M12 wall bushings**

The M12 wall bushings have a solid 25 mm conductive core and are pre-assembled and supplied in the exact wall thickness.

Time-consuming adjustments are not necessary.

Art.Gr.  
**526**



**M12 wall bushings**  
**Type solo**

Water pressure-tight wall bushing;  
M12 threaded connection on both sides;  
incl. nail adapter for fastening to the formwork



**M12 wall bushings**  
**Type connect**

Water pressure-tight wall bushing; M12 threaded  
connection on both sides with additional connec-  
tion plate for concrete-laid earthing conductors;  
incl. nail adapter for fastening to the formwork

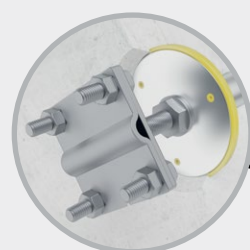


**M12 wall bushings**  
**Type iso**

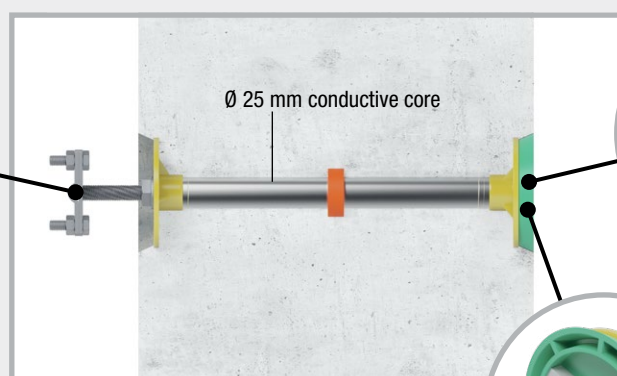
Water pressure-tight, insulated wall bushing;  
M12 threaded connection on both sides;  
incl. nail adapter for fastening to the formwork

Wall thickness mm	M12 wall bushings					
	Type solo		Type connect		Type iso	
	Art. no.	Weight per pc.	Art. no.	Weight per pc.	Art. no.	Weight per pc.
70	100366	0.42 kg	100366C	0.52 kg	100366I	0.52 kg
80	100367	0.47 kg	100367C	0.57 kg	100367I	0.57 kg
100	100368	0.52 kg	100368C	0.62 kg	100368I	0.62 kg
120	100369	0.60 kg	100369C	0.70 kg	100369I	0.70 kg
150	100371	0.72 kg	100371C	0.82 kg	100371I	0.82 kg
200	100372	0.93 kg	100372C	1.03 kg	100372I	1.03 kg
240	100373	1.09 kg	100373C	1.19 kg	100373I	1.19 kg
250	100374	1.14 kg	100374C	1.24 kg	100374I	1.24 kg
300	100376	1.34 kg	100376C	1.44 kg	100376I	1.44 kg

Art. no.	Description	PU	Weight
100377	Cross clamp for fixed earthing terminal M12, V4A stainless steel, M12 thread, thread length 70 mm, System component for wall bushings solo, connect and iso	1 pc.	0.30 kg

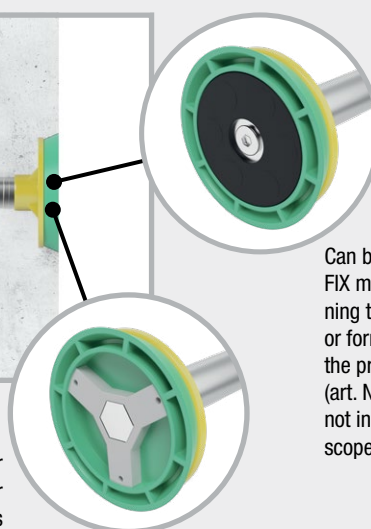


Cross clamp connection  
option for  
M12 wall bushings



Installation situation water-impermeable concrete wall

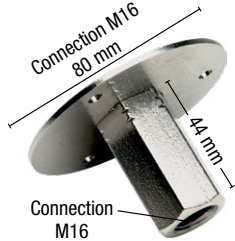
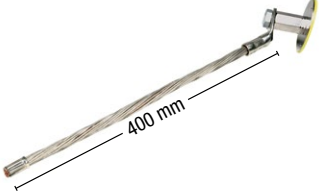

Standard nail adapter for  
fastening to wooden or  
plastic formwork panels



Can be combined with  
FIX magnet for faste-  
ning to steel formwork  
or formwork tables in  
the precast plant  
(art. No. 091410),  
not included in the  
scope of delivery

# Fixed earthing terminal M16 and accessories





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

Art. no.	Description	PU	Weight per pc.	
100455	<b>Fixed earthing terminal M16, V4A stainless steel, without axis, with yellow protective cap, Connection M16</b> <span>Art.Gr. 527</span>	1 carton of 10 pcs.	1.70 kg per carton	
100461	<b>Fixed earthing terminal M16, V4A stainless steel, with flexible connection conductor, Connection conductor CU/SN 95 mm², Conductor length 400 mm</b> <span>Art.Gr. 527</span>	1 pc.	0.66 kg	
100458	<b>Cross clamp for fixed earthing terminal M16, VA4 stainless steel, M16 thread, Thread length 30 mm, for round conductors Ø 8 + 10 mm and flat conductors up to 40 mm</b> <span>Art.Gr. 528</span>	1 carton of 10 pcs.	3.10 kg per carton	

## Wall bushings (N)

For subsequent installation of earthing conductors in borehole Ø 14 mm or distance tube. Threaded rod with fixed/loose flange made of V4A stainless steel, connecting clamp and nuts made of galvanised steel.


Art.Gr. 534

Wall thicknesses	Art. no.	PU	Weight per pc.	<p>Inside connection options: Round conductors with pre-installed multi-purpose connecting clamp; flat conductors with double clamp page 160: This clamp can be installed in place of the multi-purpose connecting clamp at the construction site.</p> <p><b>Inside connection</b></p>  <p><b>Outside connection M12</b></p>  <p>Outside connection options: Cross clamp M12, page 166 M12 "Solo" axes page 166</p>		
100-300 mm 	100310	1 set	0.66 kg			
300-500 mm 	100315	1 set	0.80 kg			
Description	Art. no.	PU	Weight/pc.			
<b>Connecting-clamp for wall bushing (N), galvanised</b> Connection: Threaded rod on multi-purpose connecting clamp, M10 screw, for round conductors 8-10 mm, with borehole Ø 13 mm	100181	1 pc.	0.14 kg			

## Gasket insert for round conductors, core drill hole 50 mm

Pressure water-tight lead-in with the MASTER-RING gasket insert


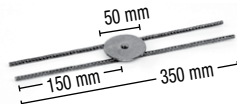
Art.Gr. 440

Art. no.	Description	PU	Weight/pc.	
120080	<b>Gasket insert for round conductors 8 +10 mm, Core drill hole Ø 50 mm, Medium pipe 6-12 mm</b>	1 pc.	0.38 kg	



## Accessories for fixed earthing terminal

Art.Gr.  
**529**

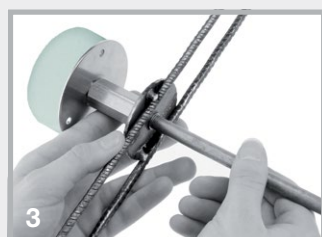
Art. no.	Description	PU	Weight per pc.	
<b>100198</b>	<b>Plastic foam for fixed earthing terminal</b> , self-adhesive on one side, Ø 76 mm, thickness 20 mm	1 bag of 10 pcs.	0.08 kg	
<b>100196</b>	<b>Fixing spider for fixed earthing terminal</b> , steel/bright	1 pc.	0.12 kg	



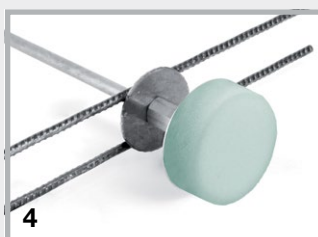
1 Remove protective cap of fixed earthing terminal



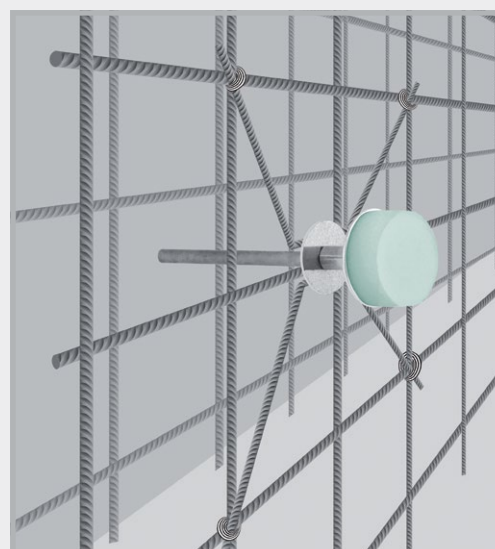
2 Stick on plastic foam



3 Screw axis through the fixing spider and fasten fixed earthing terminal



4 Installation complete



Fixed earthing terminal with fixing spider on the reinforcement



## FIX formwork aid

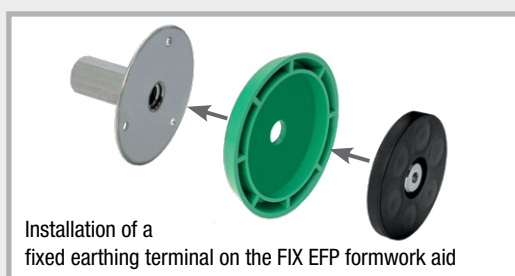
### Fastening systems

### for fixed earthing terminals in precast concrete plants

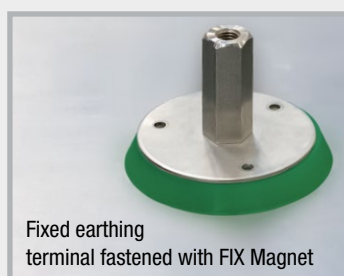
Fastening to steel formworks using the FIX Magnet

Art.Gr.  
**420**

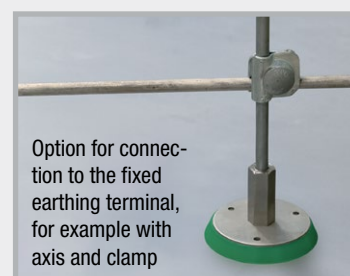
Art. no.	Description	PU	Weight/pc.	
<b>091410</b>	<b>FIX Magnet</b> for formwork aid Power Magnet for all FIX formwork aids, incl. screw and wing nut	25 pcs.	0.14 kg	
<b>090804</b>	<b>FIX EFP formwork aid</b> for fixed earthing terminals M10/12 and M12 Cone height 11 mm	25 pcs.	0.03 kg	



Installation of a fixed earthing terminal on the FIX EFP formwork aid



Fixed earthing terminal fastened with FIX Magnet



Option for connection to the fixed earthing terminal, for example with axis and clamp

# MultiCap

Protective cap  
to DIN 18014

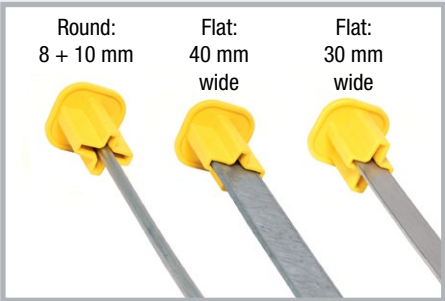
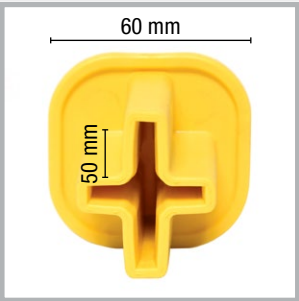
## PVC protective cap for round and flat conductors

Art.Gr.  
**530**



Art. no.	Description	PU	Weight/bag
100500	<b>MultiCap</b> , colour: yellow, area of application: round conductor: 8 + 10 mm flat conductor: 30 x 3.5 mm    40 x 4.0 mm 30 x 3.0 mm    40 x 5.0 mm	1 bag of 100 pcs.	5.15 kg

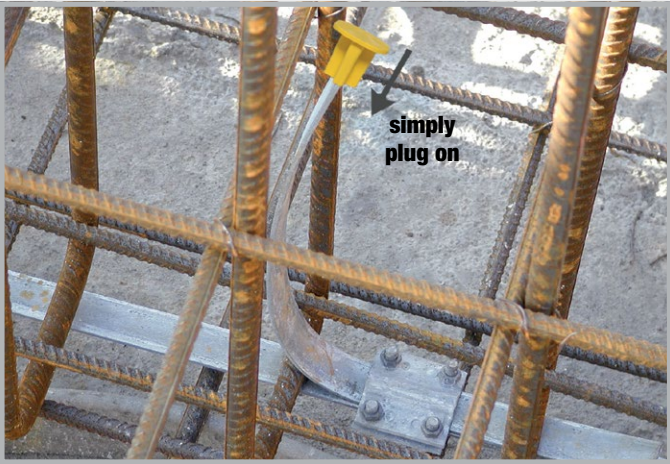
### Technical data



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

Excerpt from DIN 18014  
Foundation earth electrode:  
For safety reasons, the terminal lugs must be prominently marked during the construction phase.

# Terminal lugs

Round conductor rods, bevelled

Art.Gr.  
531

Art. no.	Description	Length	PU	Weight per bundle	
100555	V4A stainless steel round conductor Ø 10 mm	1.50 m	1 bundle of 10 pcs.	9.40 kg	
100560	V4A stainless steel round conductor Ø 10 mm	2.00 m	1 bundle of 10 pcs.	12.50 kg	
100565	V4A stainless steel round conductor Ø 10 mm	2.50 m	1 bundle of 10 pcs.	15.70 kg	
100570	V4A stainless steel round conductor Ø 10 mm	3.00 m	1 bundle of 10 pcs.	18.60 kg	

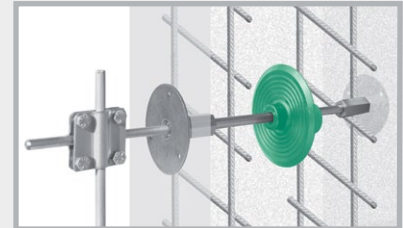
## RONDO Standard



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.Gr.  
400



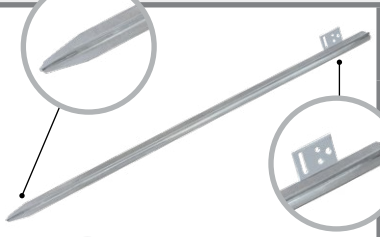
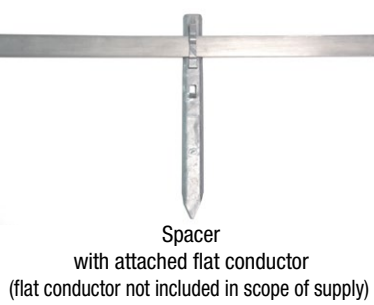
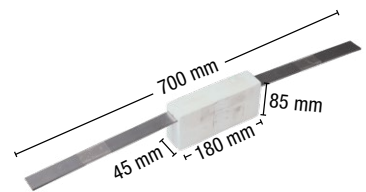
Art. no.	Description	PU	Secondary packaging	Weight per pc.	
090890	RONDO RO 10, for lightning protection conductors Ø 8 + 10 mm	1 pc.	1 carton of 100 pcs.	0.12 kg	
090892	RONDO RO flat, for earthing strap 30x3.5 + 30x3.0 mm	1 pc.		0.18 kg	
090988	RONDO EFP, for hexagon fixed earthing terminal	1 pc.	1 bag of 25 pcs.	0.04 kg	



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

Accessories


Art.Gr.  
530

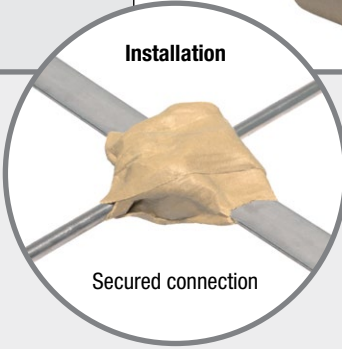
Art. no.	Description	PU	Weight per pc.	
100165	<b>Profiled earth rod, Length: 1.5 m,</b> galvanised, cross profile 50 x 50 mm, with terminal lug	1 pc.	3.90 kg	
100206	<b>Earth rod for the construction site, Length 1.2 m, Ø 20 mm,</b> galvanised, with impact tip, Connection with clamps from the earth rod range	1 pc.	2.86 kg	
100170	<b>Spacer for foundation earth electrode,</b> galvanised, for round connector Ø 8-10 mm, earthing strap 30 x 3.5 mm, length 280 mm, installation spacing 1-1.5 m	1 carton of 100 pcs.	9.80 kg per carton	
100176	<b>Expansion strip with polystyrene body, V2A stainless steel,</b> for routing of foundation earth electrode through expansion joints	1 pc.	0.70 kg	

Anti-corrosive tapes

for wrapping of overground and underground connections

Art.Gr.  
530

Art. no.	Description	PU	Weight per roll	
100190	<b>Anti-corrosive tapes,</b> Roll length 10 m certified by DVGW Size: 1.5 x 50 mm	1 carton of 40 rolls	0.71 kg	
100193	Size: 1.5 x 100 mm	1 carton of 20 rolls	1.20 kg	





# Earth rod

for use in earthing systems

Art.Gr.  
533

Art. no.	Design	PU	Weight per pc.	
100205	<b>Earth rod for the installation of earthing systems, galvanised,</b> Length 1500 mm, Ø 20 mm	1 pc.	3.60 kg	
100210	<b>Earth rod for the installation of earthing systems, V4A stainless steel,</b> Length 1500 mm, Ø 20 mm	1 pc.	3.70 kg	 The earth rods have a drilled hole on one side and a pin on the other. This produces a self-closing coupling.
100215	<b>Impact tip for driving in the first earth rod, bright steel</b>	1 pc.	0.04 kg	
100216	<b>Drive-in aid for earth rod, bright steel</b>	1 pc.	0.48 kg	
100218	<b>Connecting clamp for earth rod, galvanised,</b> heavy duty version with M10 screws for round conductors Ø 8 + 10 mm and flat conductors up to 40 mm	1 pc.	0.38 kg	
100217	<b>Connecting clamp for earth rod V4A stainless steel,</b> heavy duty version with M10 screws for round conductors Ø 8 + 10 mm and flat conductors up to 40 mm	1 pc.	0.30 kg	 Connecting clamp installed

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 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: 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, connector made of A4 stainless steel, galvanised in foundation  
Description: Wedge connectors are not permitted: unless installed in non-vibrated concrete  
4 x M6 screws above ground only and for arrester lines and down conductors  
4 x M8 or 2 x M10 screws and M10 multi-purpose connecting clamp for use in the following areas: subsoil, concrete, above ground, down conductors and arrester lines.

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

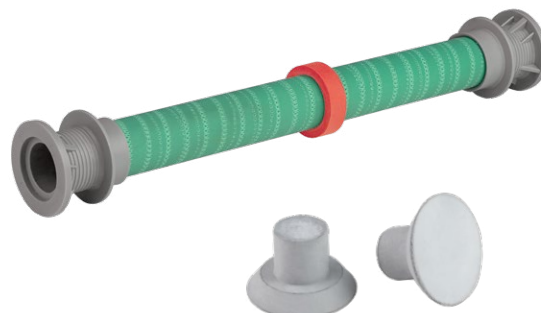
**COSTS** The cost of stainless steel round conductors is up to 33% less than stainless steel flat conductors. The round conductor, which can be installed as an alternative to the flat conductor, is easier to handle and therefore has a significantly higher workability.

# FORMWORK ACCESSORIES



**STOPPER SCREW +  
STOPPER**

pages 177 – 178



**STOPPER distance tube +  
STOPPER sealing cone**

pages 179 – 180



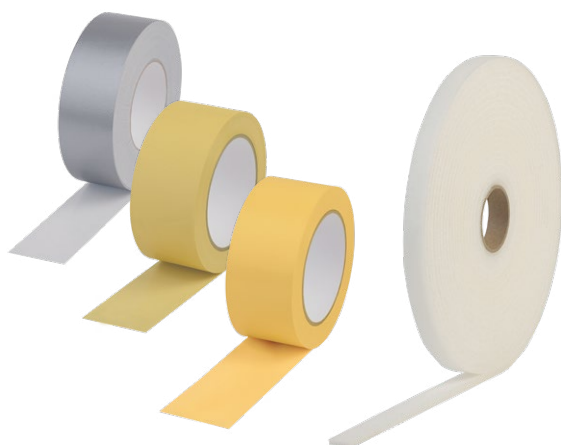
**RONDO MINI + ActiveRings**

page 180



**Corrugated bearings +  
impact sound insulation**

page 181



**KLEBO tapes**

page 182



**Damp proof courses**

page 183

1

HYDROPHILIC  
WATERSTOPS

2

JOINT SHEET METALS

3

INJECTION HOSES  
CONSTRUCTION CHEMISTRY

4

SERVICE DUCTS

5

LIGHTNING  
PROTECTION

6

FORMWORK  
ACCESSORIES

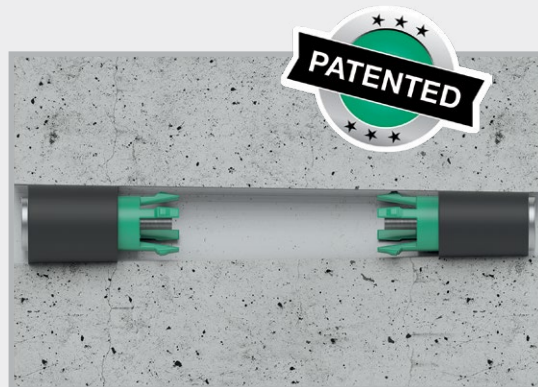
# WATERPROOFING TECHNOLOGY

for inner and outer waterproofing of plastic or fibre cement formwork tie points and conical anchor holes

## STOPPER SCREW



Screwed sealing of formwork tie points – maximum safety with superb appearance



## STOPPER



Inner seals for plastic and fibre cement distance tubes



## RONDO MINI



Sealing collars for waterproofing of plastic or fibre cement distance tubes



## ActiveRing



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





# STOPPER SCREW

Technical details page 184



Art.Gr.  
611

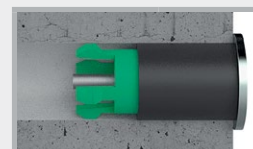


## STOPPER SCREW type in

Art. no.	Description	Tie point inner diameter	PU bucket	Secondary packaging	Weight per PU
046230	<b>STOPPER SCREW 17 in</b> Total length: 72 mm	17 to 19.5 mm	100 pcs. incl. 2 bits	1 pallet = 55 buckets	2.80 kg
046240	<b>STOPPER SCREW 20 in</b> Total length: 72 mm	19.5 to 22 mm	100 pcs. incl. 2 bits	1 pallet = 55 buckets	3.20 kg
046210	<b>STOPPER SCREW 22 in</b> Total length: 72 mm	21.5 to 23 mm	100 pcs. incl. 2 bits	1 pallet = 55 buckets	3.60 kg
046220	<b>STOPPER SCREW 23 in</b> Total length: 72 mm	22.3 to 25.4 mm	100 pcs. incl. 2 bits	1 pallet = 55 buckets	4.00 kg
046250	<b>STOPPER SCREW 25 in</b> Total length: 72 mm	25 to 28 mm	100 pcs. incl. 2 bits	1 pallet = 55 buckets	4.80 kg
046270	<b>STOPPER SCREW 28 in</b> Total length: 72 mm	27.5 to 29 mm	100 pcs. incl. 2 bits	1 pallet = 55 buckets	5.10 kg
046260	<b>STOPPER SCREW 31 in</b> Total length: 80 mm	31 to 34 mm	50 pcs. incl. 2 bits	1 pallet = 55 buckets	3.80 kg



Art.Gr.  
611



## STOPPER SCREW type covered

Art. no.	Description	Tie point inner diameter	PU bucket	Secondary packaging	Weight per PU
046330	<b>STOPPER SCREW 17 covered</b> Cover plate: 28 mm, total length: 75 mm	17 to 19.5 mm	100 pcs. incl. 2 bits	1 pallet = 55 buckets	3.85 kg
046340	<b>STOPPER SCREW 20 covered</b> Cover plate: 28 mm, total length: 75 mm	19.5 to 22 mm	100 pcs. incl. 2 bits	1 pallet = 55 buckets	4.30 kg
046310	<b>STOPPER SCREW 22 covered</b> Cover plate: 28 mm, total length: 75 mm	21.5 to 23 mm	100 pcs. incl. 2 bits	1 pallet = 55 buckets	4.80 kg
046320	<b>STOPPER SCREW 23 covered</b> Cover plate: 32 mm, total length: 75 mm	22.3 to 25.4 mm	100 pcs. incl. 2 bits	1 pallet = 55 buckets	5.40 kg
046350	<b>STOPPER SCREW 25 covered</b> Cover plate: 32 mm, total length: 75 mm	25 to 28 mm	100 pcs. incl. 2 bits	1 pallet = 55 buckets	6.30 kg
046370	<b>STOPPER SCREW 28 covered</b> Cover plate: 32 mm, total length: 75 mm	27.5 to 29 mm	100 pcs. incl. 2 bits	1 pallet = 55 buckets	6.60 kg
046360	<b>STOPPER SCREW 31 covered</b> Cover plate: 38.5 mm, total length: 83 mm	31 to 34 mm	50 pcs. incl. 2 bits	1 pallet = 55 buckets	4.80 kg

## Accessories

Art. no.	Description	PU	Weight per pc.	
046170	<b>Hand-held cleaning brush</b> Tie points of 17 – 34 mm	1 pc.	0.08 kg	
046171	<b>Mechanical cleaning brush</b> Tie points of 17 – 34 mm for drills or cordless screwdrivers	1 pc.	0.06 kg	
046183	<b>STOPPER SCREW torque set</b> 1 x torque bit holder, 2 x bits TX 20	1 set	0.04 kg	

# STOPPER

Inner seals for plastic and fibre cement distance tubes

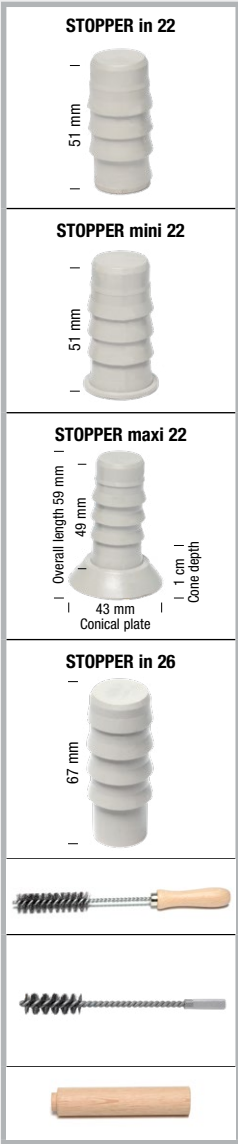


Technical details pages 185 – 186



Art. no.	Description	PU	Secondary packaging	Weight per bucket
046140	<b>STOPPER in 22</b> for distance tubes inner diameter 21.5-23 mm	Bucket of 250 pcs.	1 pallet = 48 buckets	6.50 kg
046150	<b>STOPPER mini 22</b> for distance tubes inner diameter 21.5-23 mm	Bucket of 250 pcs.	1 pallet = 48 buckets	6.75 kg
046160	<b>STOPPER maxi 22</b> for distance tubes inner diameter 21.5-23 mm	Bucket of 250 pcs.	1 pallet = 32 buckets	9.25 kg
046163	<b>STOPPER in 26</b> for distance tubes inner diameter 26 mm	Bucket of 250 pcs.	1 pallet = 32 buckets	10.75 kg
046170	<b>Hand-held cleaning brush</b> Tie points of 17 – 34 mm	1 pc.		0.08 kg per pc.
046171	<b>Mechanical cleaning brush</b> Tie points of 17 – 34 mm for drills or cordless screwdrivers	1 pc.		0.06 kg per pc.
046180	<b>Drive-in aid</b> for STOPPER 22 + 26 mm	1 pc.		0.08 kg per pc.

Art.Gr.  
**610**



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

## Product description

- STOPPERs are drive-in 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 must be stored above freezing point beforehand for a better installation.
- All-weather installation
- Seals immediately after driving in
- Little storage space required



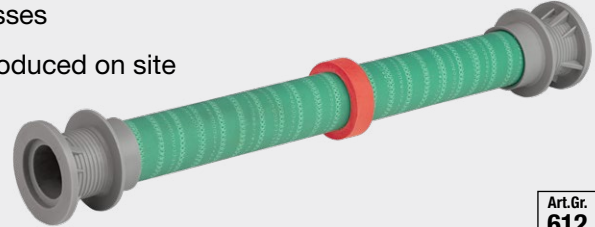
# STOPPER distance tube



## Pressure water-tight plastic distance tube with cone (Ø 22 mm) on both sides

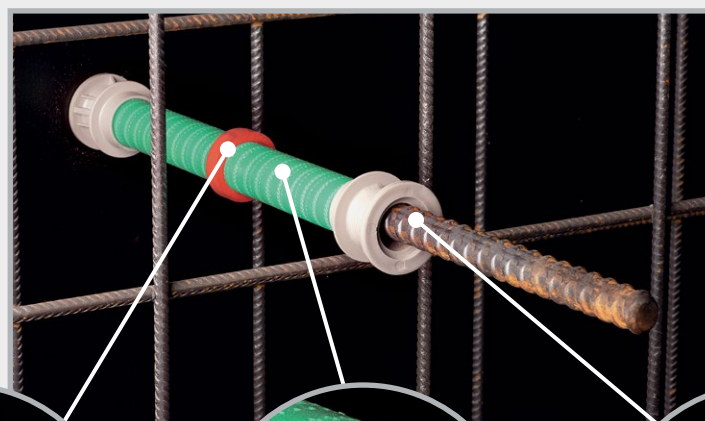
[Technical details page 187](#)

- Pressure water-tight transition to the concrete
- Ready-to-install delivery for all common wall thicknesses
- Special lengths available at short notice or can be produced on site
- Pressure water-tight system sealing for internal closure with:
  - STOPPER in / mini 30 m water column
  - STOPPER SCREW 70 m water column

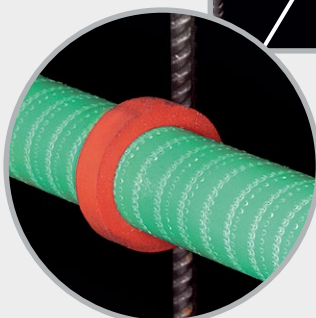

**Art.Gr.  
612**

Art. no.	Description	PU	Secondary packaging	Weight per 100 pcs.
048200	<b>STOPPER distance tube 22/200</b> Ø 22 mm, length 200 mm	100 pcs.	1 pallet = 18 bags	5.30 kg
048240	<b>STOPPER distance tube 22/240</b> Ø 22 mm, length 240 mm	100 pcs.	1 pallet = 16 bags	6.00 kg
048250	<b>STOPPER distance tube 22/250</b> Ø 22 mm, length 250 mm	100 pcs.	1 pallet = 16 bags	6.00 kg
048300	<b>STOPPER distance tube 22/300</b> Ø 22 mm, length 300 mm	100 pcs.	1 pallet = 16 bags	6.80 kg
048350	<b>STOPPER distance tube 22/350</b> Ø 22 mm, length 350 mm	100 pcs.	1 pallet = 14 bags	7.60 kg
048365	<b>STOPPER distance tube 22/365</b> Ø 22 mm, length 365 mm	100 pcs.	1 pallet = 14 bags	7.70 kg
048400	<b>STOPPER distance tube 22/400</b> Ø 22 mm, length 400 mm	100 pcs.	1 pallet = 12 bags	8.20 kg

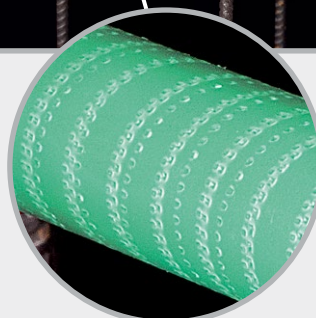
Other lengths are available at short notice.



Ready-to-install  
delivery for all  
common wall  
thicknesses.



Pressure water-tight concrete  
transition thanks to ActiveRing



Roughened tube surface for  
optimum concrete bond




For anchor bars  
Ø 15/17 mm

# STOPPER sealing cone

Exposed concrete cone made of fibre concrete for a visually appealing distance tube closure

Technical details page 187

Art.Gr.  
610

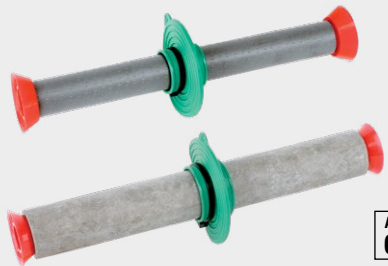
Art. no.	Description	PU	Secondary packaging	Weight per carton	
046200	<b>STOPPER sealing cone</b> Ø 22 mm	Carton of 100 pcs.	1 pallet = 40 cartons	2.97 kg	

# RONDO MINI





Sealing collars for waterproofing of plastic or fibre cement distance tubes

Technical details page 188



Art.Gr.  
630

Art. no.	Type	Description	PU	Weight per bag	
090870	<b>RONDO MINI 26</b> Suitable for 25-27 mm	for plastic distance tubes 22/26 mm Waterstop 2 cm Bearing width 2.7 cm	Bag of 50 pcs. including plastic fastening straps	1.50 kg	
090873	<b>RONDO MINI 40</b> Suitable for 38-42 mm	for fibre cement distance tubes 22/40 mm Waterstop 2 cm Bearing width 2.7 cm	Bag of 50 pcs. including plastic fastening straps	2.00 kg	

# ActiveRing





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

Technical details page 189



Art.Gr.  
620


Art. no.	Description	PU	Secondary packaging	Weight per bag	
047200	<b>ActiveRing mini</b> for outer pipe diameters 25-32 mm e.g. plastic distance tubes 22/26 26/31 26/32	Bag of 250 pcs.	1 pallet = 144 bags	1.75 kg	 ActiveRing mini
047250	<b>ActiveRing maxi</b> for outer pipe diameters 38-42 mm e.g. fibre cement distance tubes	Bag of 250 pcs.	1 pallet = 70 bags	2.50 kg	 ActiveRing maxi



# Corrugated bearings, impact sound insulation & construction bearing


## Corrugated bearing [Technical details page 190](#)

Art.Gr.  
**641**

Art. no.	Description	PU	Secondary packaging	Weight per roll	
<b>060010</b>	<b>Corrugated bearing 10 mm</b> Size: 10000 x 200 x 10 mm with 3 parting seams	1 roll = 2 m <sup>2</sup>	1 pallet = 30 rolls	15.60 kg	


## Impact sound insulation T1 rolls [Technical details page 191](#)

Art.Gr.  
**640**

Art. no.	Description	PU	Secondary packaging	Weight per roll	
<b>060240</b>	<b>Impact sound insulation roll T1</b> Size: 10000 x 100 x 5 mm	1 roll	1 pallet = 110 rolls	4.65 kg	
<b>060230</b>	<b>Impact sound insulation roll T1</b> Size: 10000 x 100 x 10 mm	1 roll	1 pallet = 60 rolls	8.25 kg	


## Impact sound insulation T1 strips

Art.Gr.  
**640**

Art. no.	Description	PU	Secondary packaging	Weight per strip	
<b>060210</b>	<b>Impact sound insulation strip T1</b> Size: 1000 x 100 x 10 mm	1 strip	1 pallet = 750 strips	0.89 kg	


## Impact sound insulation T1 boards

Art.Gr.  
**640**

Art. no.	Description	PU	Secondary packaging	Weight per board	
<b>060110</b>	<b>Impact sound insulation board T1</b> Size: 1000 x 1000 x 10 mm	1 board	1 pallet = 80 boards	9.00 kg	


## Construction bearing R1 roll [Technical details page 191](#)

Art.Gr.  
**642**

Art. no.	Description	PU	Secondary packaging	Weight per roll	
<b>060350</b>	<b>Construction bearing roll R1</b> Size: 10000 x 50 x 10 mm	1 roll	1 pallet = 80 rolls	6.95 kg	


## Construction bearing R1 strips

Art.Gr.  
**642**

Art. no.	Description	PU	Secondary packaging	Weight per strip	
<b>060330</b>	<b>Construction bearing strip R1</b> Size: 1000 x 100 x 10 mm	1 strip	1 pallet = 750 strips	1.55 kg	

## Construction bearing R1 boards

Art.Gr.  
**642**

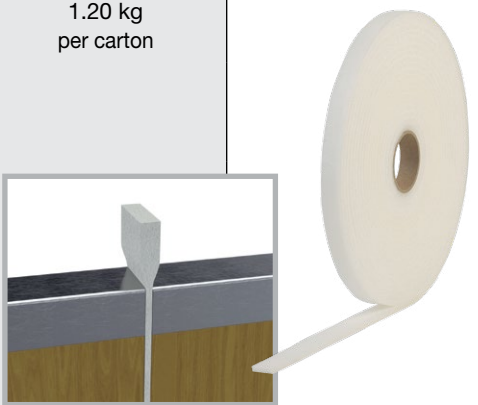
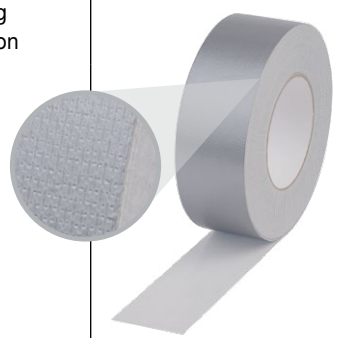
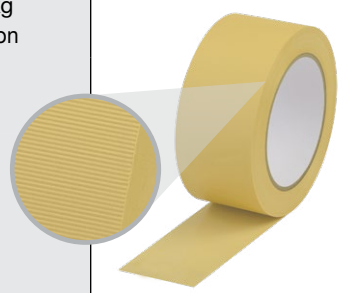
Art. no.	Description	PU	Weight/board	
<b>060300</b>	<b>Construction bearing board R1</b> Size: 1200 x 1000 x 10 mm	1 board	15.00 kg	

Tailor-made sizes available at short notice

# KLEBO tapes

## High-quality adhesive tapes for daily use on construction sites

Art.Gr.  
**660**

Art. no.	Description	PU	Weight	
044020	<p><b>KLEBO foam tape 19x6 mm</b> One-sided self-adhesive foam tape</p> <p>Colour: white      Roll length: 10 m Tape width: 19 mm Thickness: 6 mm</p> <p><b>Application:</b> For sealing formwork butt joints against leakage of cement paste; sealing against dust, draughts and moisture; <b>Technical data and properties:</b> Open-cell PU foam coated with a strong pressure-sensitive adhesive; High initial and permanent adhesive strength; Very good ageing resistance; <b>Application temperature:</b> +5°C to +40°C <b>Temperature resistance:</b> -5°C to +60°C</p>	<p>1 carton of 16 rolls</p> <p>1 pallet = 24 cartons</p>	1.20 kg per carton	
044040	<p><b>KLEBO Duct Tape Standard, 48 mm</b></p> <p>Colour: silver      Roll length: 50 m Bandbreite: 48 mm</p> <p><b>Application:</b> Fabric adhesive tape with high adhesive strength for standard bondings on rough and smooth substrates. <b>Technical data and properties:</b> Hand tearable; Moisture resistant; <b>Thickness 0.17 mm;</b> <b>Application temperature:</b> +5°C to +40°C <b>Temperature resistance:</b> -10°C to +70°C</p>	<p>1 carton of 24 rolls</p> <p>1 pallet = 30 cartons</p>	8.90 kg per carton	
044060	<p><b>KLEBO PVC adhesive tape, cross-grooved, 50 mm</b> Tear-resistant soft PVC adhesive tape</p> <p>Colour: yellow      Roll length: 33 m Tape width: 50 mm</p> <p><b>Application:</b> Formwork tape to prevent cement paste from flowing out; Painter's and plasterer's tape for short-term use; universal applications; <b>Technical data and properties:</b> The cross-grooved surface enables easy tearing by hand; Moisture-resistant – water-repellent; <b>Thickness 0.16 mm;</b> <b>Application temperature:</b> +5°C to +40°C <b>Temperature resistance:</b> -5°C to +60°C</p>	<p>1 carton of 36 rolls</p> <p>1 pallet = 27 cartons</p>	12.15 kg per carton	

# MURO-Top damp proof course

The barrier against rising damp

Art.Gr.  
600



## 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

Art. no.	Roll width	Roll length	Roll area	PU	Secondary packaging	Weight per roll
041115	11.5 cm	50 m	5.75 m <sup>2</sup>	1 roll	Pallet of 500 rolls	approx. 1.50 kg
041150	15.0 cm	50 m	7.50 m <sup>2</sup>	1 roll	Pallet of 400 rolls	approx. 2.25 kg
041175	17.5 cm	50 m	8.75 m <sup>2</sup>	1 roll	Pallet of 350 rolls	approx. 2.35 kg
041200	20.0 cm	50 m	10.00 m <sup>2</sup>	1 roll	Pallet of 300 rolls	approx. 2.55 kg
041240	24.0 cm	50 m	12.00 m <sup>2</sup>	1 roll	Pallet of 240 rolls	approx. 3.05 kg
041250	25.0 cm	50 m	12.50 m <sup>2</sup>	1 roll	Pallet of 240 rolls	approx. 3.70 kg
041300	30.0 cm	50 m	15.00 m <sup>2</sup>	1 roll	Pallet of 200 rolls	approx. 4.15 kg
041365	36.5 cm	50 m	18.25 m <sup>2</sup>	1 roll	Pallet of 160 rolls	approx. 4.85 kg
041425	42.5 cm	50 m	21.25 m <sup>2</sup>	1 roll	Pallet of 150 rolls	approx. 5.85 kg
041500	50.0 cm	50 m	25.00 m <sup>2</sup>	1 roll	Pallet of 120 rolls	approx. 6.30 kg
041750	75.0 cm	50 m	37.50 m <sup>2</sup>	1 roll	Pallet of 100 rolls	approx. 10.30 kg
041000	100.0 cm	50 m	50.00 m <sup>2</sup>	1 roll	Pallet of 80 rolls	approx. 13.85 kg

## 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
  - Compatible with bitumen
  - Petrol-resistant
  - Ground water-resistant
  - Alkali-resistant
  - Rot-proof
  - Diesel-resistant
  - Ground water-neutral

# STOPPER SCREW



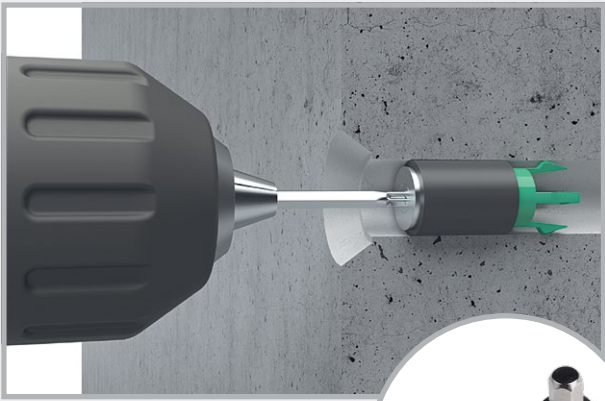
Screwed sealing of formwork tie points – maximum safety with superb appearance

- Pressure water-tight, soundproof and radon-tight
- Fire resistance class EI 240
- For fibre cement and plastic distance tubes
- For conical anchor holes
- Little storage space required
- All-weather installation



## Installation

Insert – Tighten – Tight



Torque set for ensuring the correct mounting torque

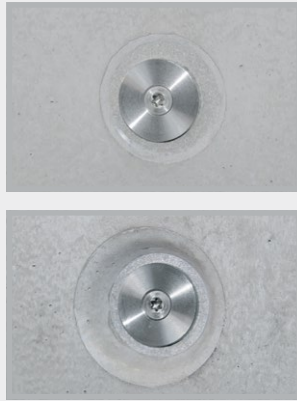


## Appearance

Type "in"



Type "covered"



Seal for distance tubes with lip seal (above) or with cone (below).

## Water pressure test



Type of formwork tie point	STOPPER SCREW Type "in" Water column	STOPPER SCREW Type "covered" Water column
Distance tube Ø 22 mm Plastic/fibre cement	70 m	70 m
Distance tube Ø 26 mm Plastic	40 m	40 m
Distance tube Ø 27 mm Fibre cement	40 m	40 m
Distance tube Ø 32 mm Plastic	40 m	40 m
Conical anchor holes	50 m	50 m



# STOPPER



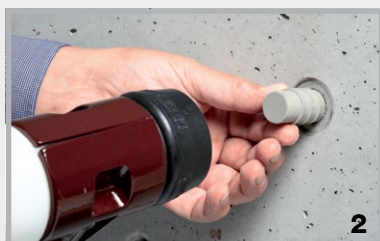
Inner seals for plastic and  
fibre cement distance tubes



## Installation of 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 seal.



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.

## Installation of STOPPER mini



Position and drive in the STOPPER mini



Sealing of distance tube with lip



Sealing of distance tube with cone

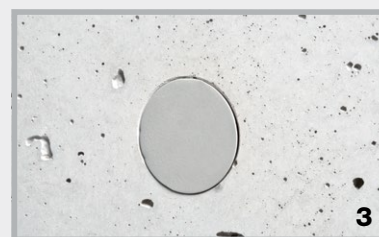
## Installation of STOPPER maxi



Push the STOPPER maxi into the distance tube



Drive in with rubber mallet



Pressure-tight and flush seal

STOPPER tests

Water



Tube type	STOPPER maxi 22 Water column	STOPPER mini 22 Water column	STOPPER in 22 Water column	STOPPER in 26 Water column
Plastic distance tube inner diameter approx. 21.5-23 mm	50 m	50 m	30 m	–
Fibre cement distance tube inner diameter approx. 22 mm, round	40 m	40 m	20 m	–
Steel distance tube inner diameter approx. 22.45 mm, round	40 m	40 m	20 m	–
Steel distance tube inner diameter approx. 23 mm, round	30 m	30 m	20 m	–
Plastic distance tube inner diameter 26 mm	–	–	–	50 m

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.
- Fire resistance class EI 240 (STOPPER in 22 / STOPPER in 26)
- 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
  - Liquid manure
  - Silage effluent
  - Fermentation mash
  - Radon + methane gas
  - UV radiation
  - Ozone
  - Bitumen
  - Diluted acids + alkalis
  - Oils
- Depending on the concentration  
(Please consult our team)

Sound insulation

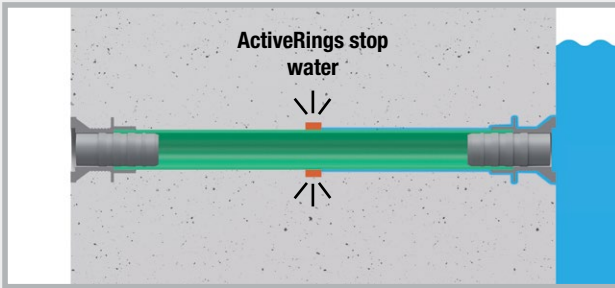


Standard sound level differential - test

MFPA test according 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.

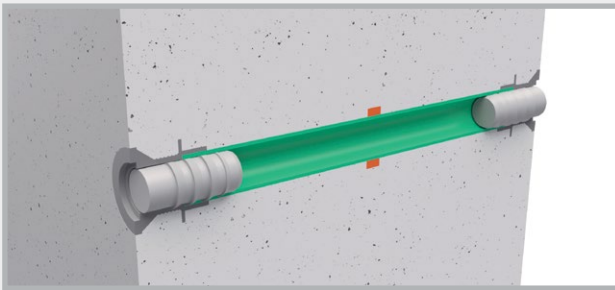
# STOPPER distance tube



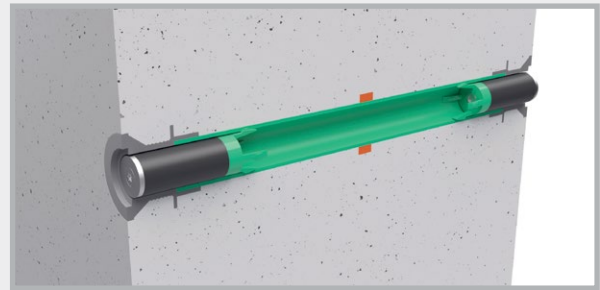
After stripping the formwork, the ActiveRing sits centrally in the concrete part. The ActiveRing seals the transition between the STOPPER distance tube and the concrete securely and permanently.



## Sealing options for the STOPPER distance tube



Pressurised water test up to 30 m water column



Pressurised water test up to 70 m water column

# STOPPER sealing cone

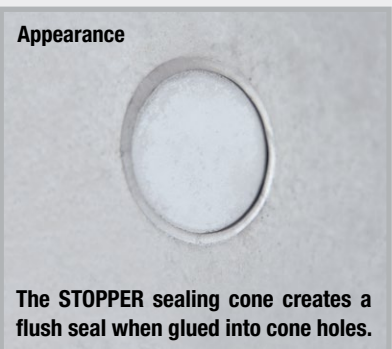
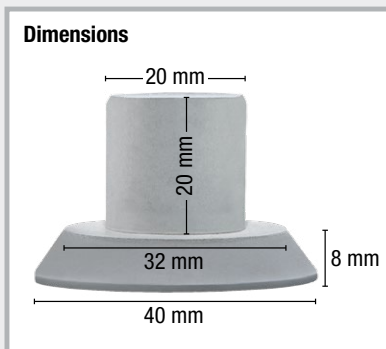
Exposed concrete cone made of fibre concrete for a visually appealing distance tube closure

Art.Gr.  
610

- For distance tubes Ø 22 mm
- Cone height 8 mm
- Building material class A1 – non-combustible
- Colour: cement grey

## Bonding options

Concrete adhesive for gluing into the cone holes can be found in product group 3 on page 104 in our full catalogue. The single-component PROTECT Easy 1K and the two-component PROTECT BK 2K have been specifically developed for this application.



PROTECT Easy 1K (Art. no. 040030)



PROTECT BK 2K (Art. no. 040100)



# RONDO MINI

## Sealing collars for waterproofing of plastic or fibre cement distance tubes



Art.Gr.  
630

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

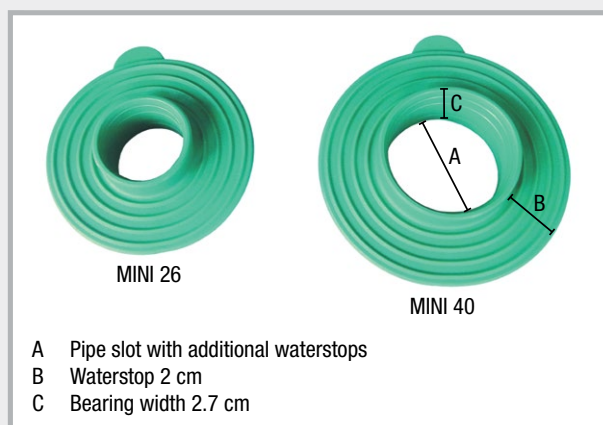
- Pressure test performed by MFPA Leipzig
- Easy and safe installation
- Good chemical resistance
- Very cost-effective
- Push on, fasten and tight

### Resistance

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



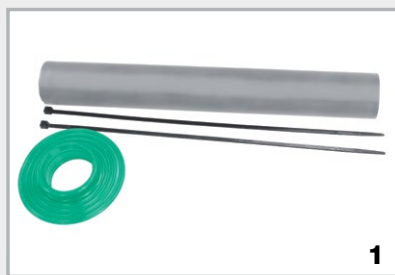
Pressure water-tight up to 30 m water column



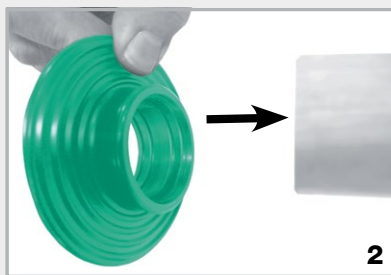
### Product description

Material: TPE polymer compound  
Installation: Temperature range -35°C to +70°C

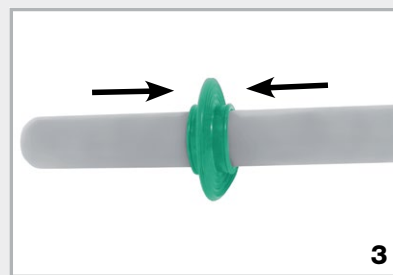
### Quick and easy installation



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



# ActiveRing



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

Art.Gr.  
620

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.

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



HYDROPHILIC  
WATERSTOPS

2

JOINT SHEET METALS

3

INJECTION HOSES  
CONSTRUCTION CHEMISTRY

4

SERVICE DUCTS

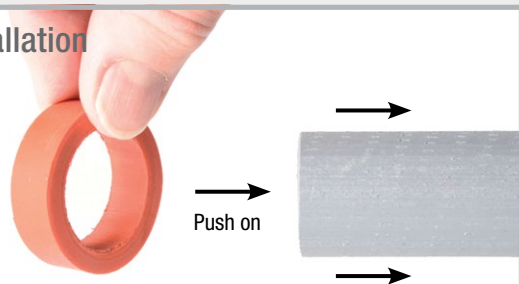
5

LIGHTNING  
PROTECTION

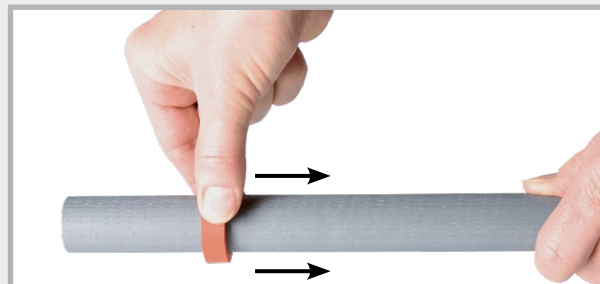
6

FORMWORK  
ACCESSORIES

### Installation

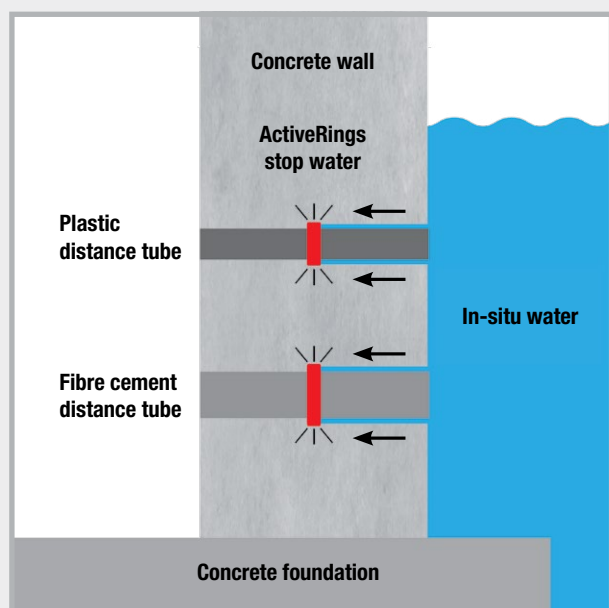


The ActiveRing is pushed onto the distance tube which requires waterproofing.



Position the ActiveRing towards the centre

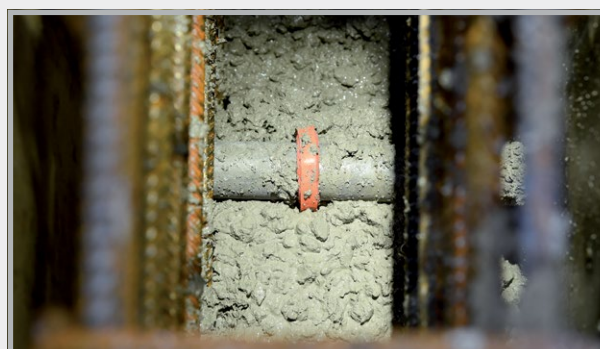
### ActiveRings provide security



This is how ActiveRings work: When the rings come into contact with water, they activate, swell up and the resultant swell pressure stops the flow of water and provides a reliable seal. The seal 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



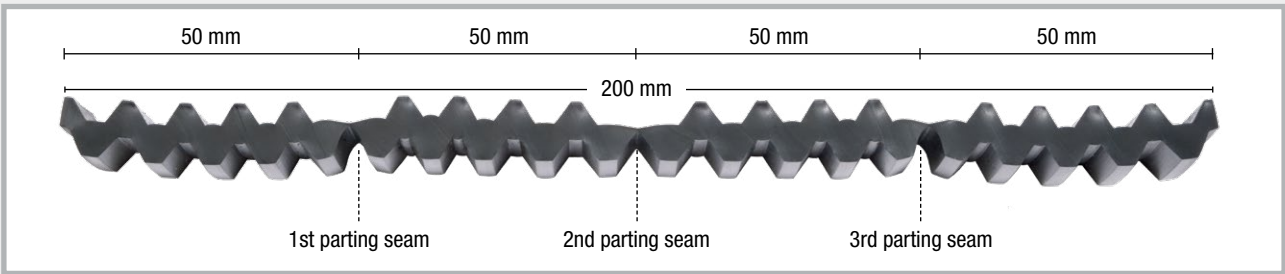
At the construction site

# Corrugated bearing

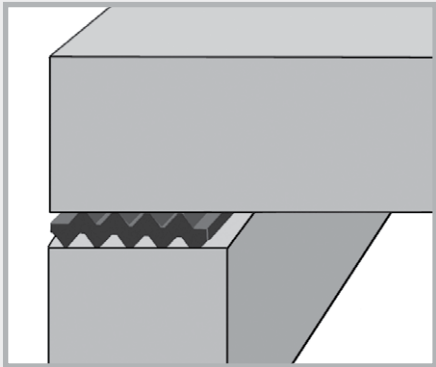


## Product description

- Material:** The corrugated bearing is a profiled bearing based on EPDM.
- Application:** For bearing of stairs and slabs  
Bearing of prefabricated elements



- Description:** 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

## Application



Corrugated bearing



The corrugated bearing 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.

# Impact sound insulation T1



## Product description

**Material:** The impact sound insulation bearing T1 is made of fine mixed elastomer fibres bonded with PUR.

**Application:** As bearing for stairs and slabs

**Description:** Rolls, strips and boards

**Testing:** Load test for thickness 10 mm up to 5 N/mm<sup>2</sup>

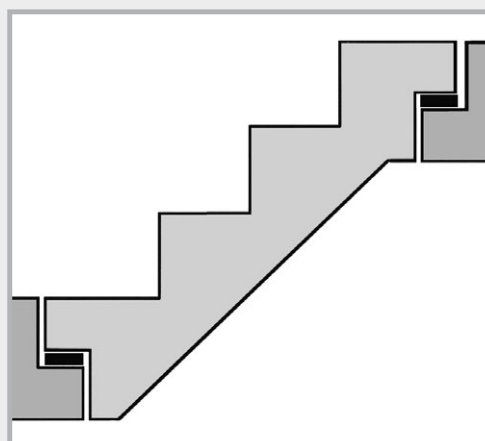
Impact sound reduction up to 19 dB

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

**Elongation at break:** >70%

**Reaction to fire:** Class E

**Environmental aspects:** UV-resistant



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

# Construction bearing R1

## Product description

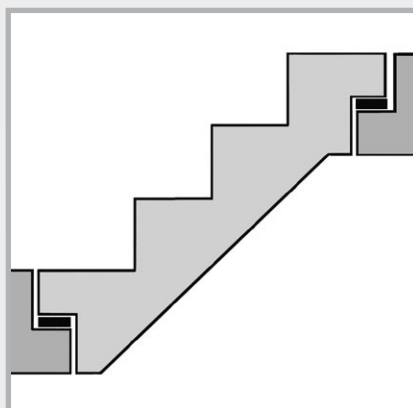
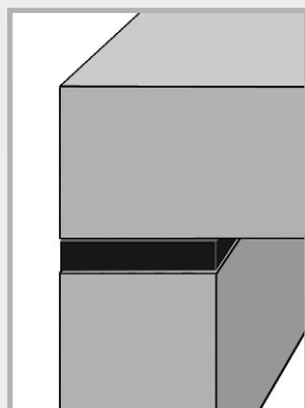
**Material:** NR-SBR copolymer

**Application:** Separation of 2 construction elements  
Bearing of staircases  
Levelling out of unevenness

**Description:** Strips, boards + rolls

**Temperature resistance:** -25°C to +70°C

**Elongation at break:** >200%



## Notes

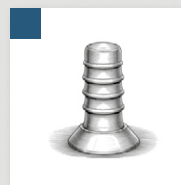
This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



## Notes

## Notes





■ **HYDROPHILIC WATERSTOPS**

■ **JOINT SHEET METALS**

■ **INJECTION HOSES**  
**CONSTRUCTION CHEMISTRY**

■ **PRESSURE WATER-TIGHT**  
**SERVICE DUCTS**

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