

KUNEX®

Thermoplastic joint tapes



Sealing ■ Thermal insulation ■ Formwork ■ Sound insulation ■ Reinforcement ■ Connection ■ Accessories
Sealing ■ Thermal insulation ■ Formwork ■ Sound absorption ■ Reinforcement ■ Connection ■ Accessories

Forward
Constructing.



OUR MISSION: FORWARD CONSTRUCTING.

It is our mission not only to provide the very latest building technology, but also to be one crucial step ahead of the game at all times. That is why we are constantly undertaking pioneering work in all product areas. Our employees consistently put their extensive practical experience and creativity to use in the interests of our customers. In constant dialogue with our target groups on a partnership basis, we are already developing the products today that will be needed tomorrow. Our momentum continues to set new benchmarks in structural engineering – yesterday, today and tomorrow, too. This is what we mean by “forward constructing”.

CONTENTS

04 ■ KUNEX® Joint tapes

For sealing construction and expansion joints in concrete

18 ■ KUNEX® ABS

Shuttering element for internal construction joint tapes

22 ■ KUNEX® Clamp joint

Component connection between new building and existing stock

28 ■ KUNEX® ASF

For construction joints subject to minor loads

32 ■ KUNEX® Star tubes

For sealing crack control joints in concrete

36 ■ KUNEX® Formed parts and accessories

Joint tape systems with corners, crossovers and T-shapes

42 ■ KUNEX® Planning information

48 ■ Service & contact

We are at your service.
Wherever you are, you can count on us.



KUNEX® Joint tapes

FOR SEALING
CONSTRUCTION AND
EXPANSION JOINTS
IN CONCRETE

THE PRODUCT

KUNEX® internal or external thermoplastic joint tapes are used for sealing construction and expansion joints in concrete. Thanks to the design of the joint tape profile, the circulation path of standing water in the joint is extended, thereby sealing the joint. Thermoplastic joint tapes can be welded together to ensure water-tightness.

ADVANTAGES

- Joint tapes in accordance with DIN 18541
- Joint tapes in accordance with company standard (with abP)
- Steel-reinforced joint tapes
- Joint tapes with eyelets
- Very good welding properties

APPLICATION

KUNEX® quality joint tapes are used in all construction and expansion joints, horizontal or vertical, against pressing and non-pressing water, and against soil moisture:

- Foundation slab-wall, or wall-ceiling construction joint
- Floor-floor, wall-wall, or ceiling-ceiling construction and expansion joints
- Dummy joints in in-situ concrete or element walls

KUNEX® joint tapes are suitable for use in structures in accordance with watertight structure guidelines.

TECHNICAL INFORMATION

MATERIALS

PVC-P raw material in the following quality classes:

- DIN 18541 compatible with bitumen (BV) or not compatible with bitumen (NB)
- Company standard compatible with bitumen (BV) or not compatible with bitumen (NB)

TPE raw material in the following quality class:

- Company standard compatible with bitumen (BV)

COMPATIBILITY WITH BITUMEN

Joint tapes correspond as standard to the quality class NB (not compatible with bitumen). The joint tapes are optionally available in the quality class BV (compatible with bitumen).

PVC-P IN ACCORDANCE WITH DIN 18541

Joint tapes made of soft PVC in the "DIN" quality class are ideal for use in structures under very high load. These joint tapes comply with the high standards of DIN 18541. Continuous production inspections guarantee a consistently high level of quality. The special formula further improves the characteristic properties of these joint tapes. They are more elastic and have a higher yield point and tensile strength.

PVC-P IN ACCORDANCE WITH COMPANY STANDARD

Joint tapes made of soft PVC in the "company standard" quality class are ideal for use in concrete structures under normal load. The advantages of this quality class are its good workability, welding properties, resistance and optimised cost-effectiveness. Its usability is regulated in a general supervisory test certificate (abP), labelled with the Ü conformity mark and monitored accordingly.

TPE IN ACCORDANCE WITH COMPANY STANDARD

Joint tapes made of thermoplastic elastomer (TPE) combine the simple processing method of a plastic and the positive qualities of an elastomer, such as resistance, flexibility at low temperatures, yield point and tensile strength. TPE joint tapes are PVC-free and completely recyclable.

MATERIAL CHARACTERISTICS

Properties	PVC-P		TPE
	DIN 18541	Company standard	Company standard
Tensile strength in accordance with DIN EN ISO 527	≥ 10 N/mm ²	≥ 9 N/mm ²	≥ 11 N/mm ²
Yield point in accordance with DIN EN ISO 527	≥ 350%	≥ 230%	≥ 600%
Shore A hardness in accordance with DIN 53505	67 ± 5	67 ± 5	80 ± 5
Fire properties in accordance with DIN EN 13501	Normally flammable (material class E)		
Temperature resistance	-20 to +60 °C		-40 to +80 °C

TRANSPORTATION AND STORAGE



TRANSPORTATION

The joint tape must be loaded and unloaded carefully and secured for transportation. It must be examined for damage and completeness on delivery. At high ambient temperatures, joint tapes must be transported without being subject to tension and must be laid out flat at the installation site.



STORAGE IN WINTER

In winter, joint tapes made from PVC-P must be stored in closed rooms and on a solid, dry base (transport pallet) where possible. To allow easier installation and processing, we recommend interim storage in a heated room before use.

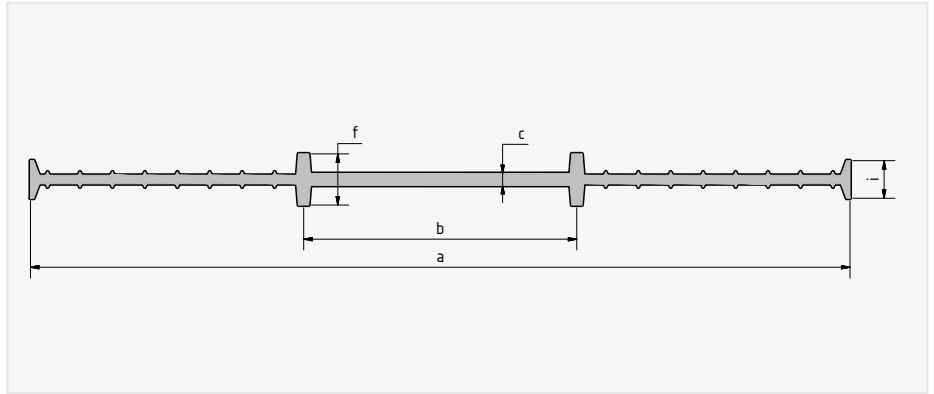
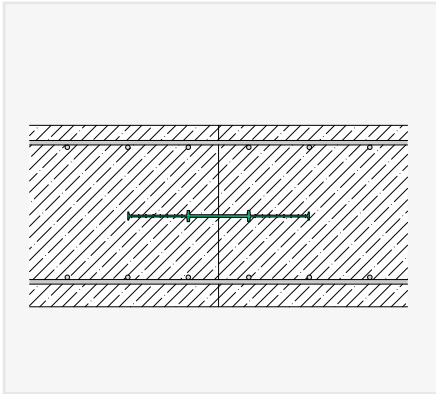


STORAGE IN SUMMER

It is important to store joint tapes in a cool and dry place in summer. In addition, joint tapes must be protected from direct sunlight (e.g. by covering them).

TECHNICAL INFORMATION

KUNEX® INTERNAL CONSTRUCTION JOINT TAPE



DIMENSIONS

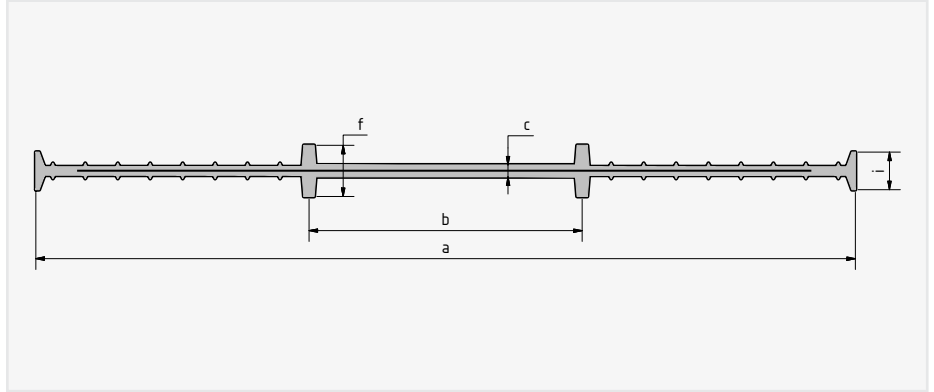
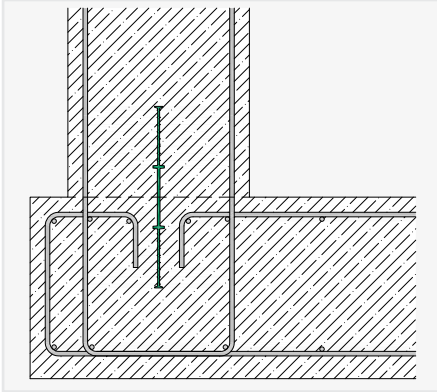
Type DIN 18541	Type Company standard	a [mm]	f [mm]	b [mm]	c [mm]	i [mm]
–	A100	100	8	47	2.0	8
–	A150	150	15	55	3.0	11
–	A190	190	15	70	3.0	11
A240 DIN	A240	240	15	80	3.5	11
A320 DIN	A320	320	15	100	4.5	11
A500 DIN	A500	500	20	150	6.0	11

Joint tapes up to 320 mm wide can, upon request, be provided with fastening eyelets on one side (o) or on both sides (o2).

The distance between the eyelets is 200 mm. The fastening eyelets replace the joint tape clips which would otherwise be necessary to fasten the joint tapes.

TECHNICAL INFORMATION

KUNEX® STEEL-REINFORCED CONSTRUCTION JOINT TAPE



DIMENSIONS

Type Company standard	a [mm]	f [mm]	w [mm]	c [mm]	i [mm]
A100S	100	15	40	3.5	11
A150S	150	15	58	3.5	11
A190S	190	15	78	4.0	11
A240S	240	15	85	4.0	11
A320S	320	15	100	4.5	11

Joint tapes up to 320 mm wide can, upon request, be provided with fastening eyelets on one side (o) or on both sides (o2).

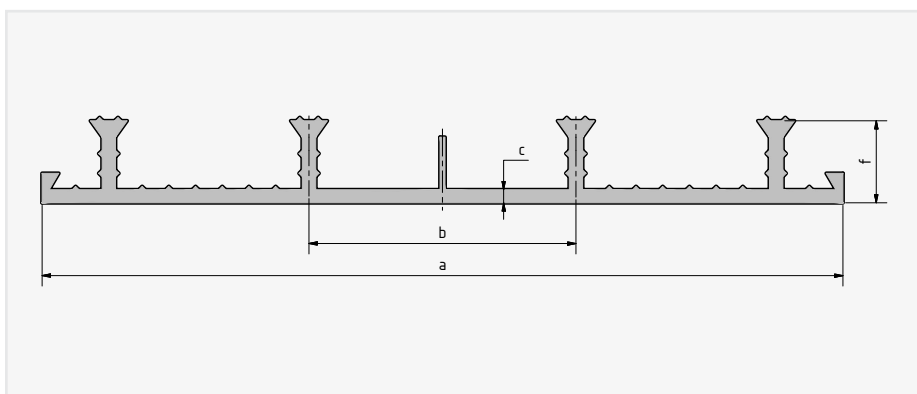
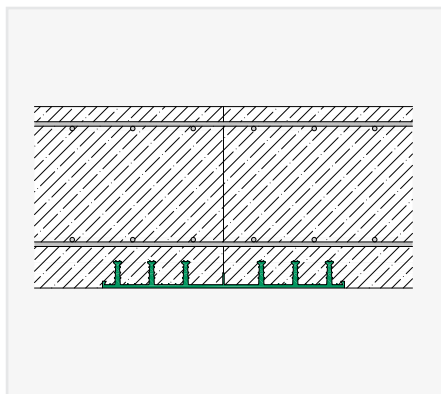
The distance between the eyelets is 200 mm. The fastening eyelets replace the joint tape clips which would otherwise be necessary to fasten the joint tapes.

Rod spacing:

100 mm (S)	= 10 x spring steel inserts/m	(example type: A190 S)
125 mm (SL)	= 8 x spring steel inserts/m	(example type: A190 SL)
150 mm (SL7)	= 7 x spring steel inserts/m	(example type: A190 SL7)
175 mm (SL6)	= 6 x spring steel inserts/m	(example type: A190 SL6)
200 mm (SL5)	= 5 x spring steel inserts/m	(example type: A190 SL5)

TECHNICAL INFORMATION

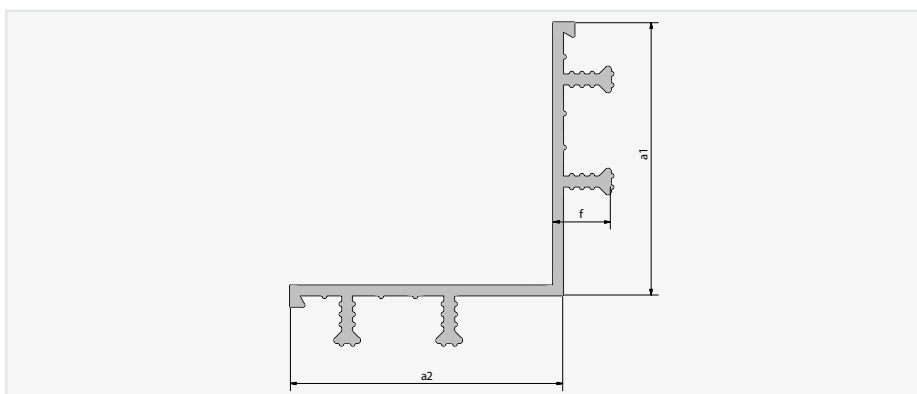
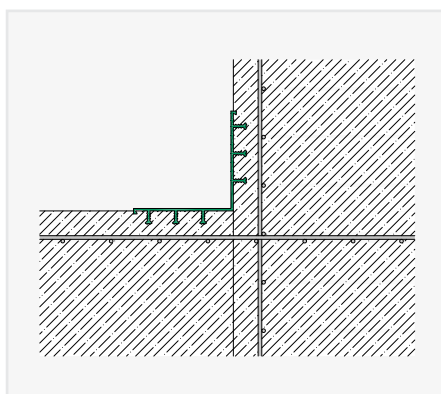
KUNEX® EXTERNAL CONSTRUCTION JOINT TAPE



DIMENSIONS

Type DIN 18541	Type Company standard	a [mm]	f [mm]	w [mm]	c [mm]	Sealing anchors [unit]
	AA190/17	190	17	80	3.7	4
AA240/20 DIN	AA240/20	240	20	80	4.0	4
AA240/25 DIN	AA240/25	240	25	80	4.0	4
AA240/35 DIN	AA240/35	240	35	84	4.0	4
	AA320/20	320	20	100	4.0	6
AA320/25 DIN	AA320/25	320	25	100	4.0	6
AA320/35 DIN	AA320/35	320	35	100	4.0	6
AA500/35 DIN	AA500/35	500	35	120	4.0	8

KUNEX® CORNER JOINT TAPE FOR CONSTRUCTION JOINTS

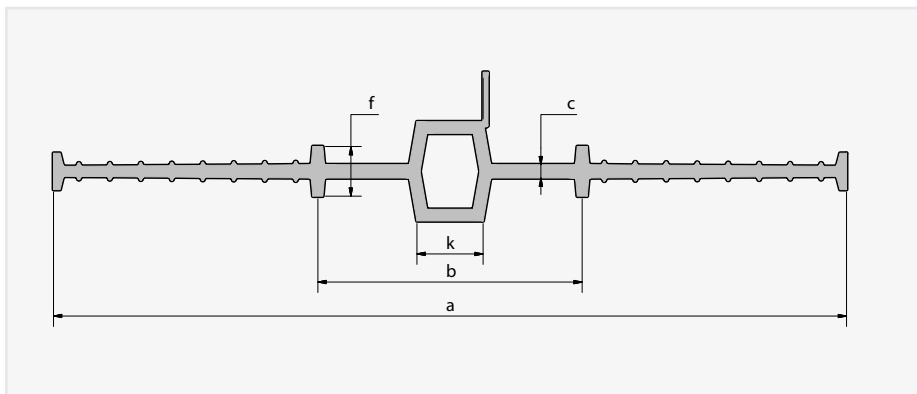
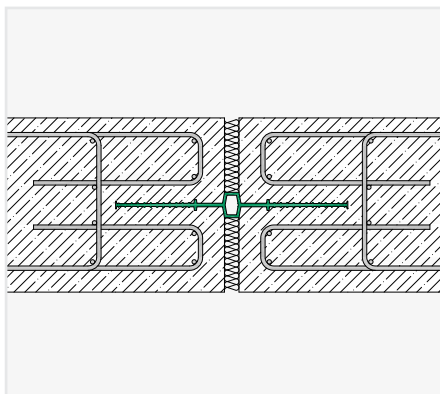


DIMENSIONS

Type DIN 18541-2	Type Company standard	a1 [mm]	a2 [mm]	f [mm]	Sealing anchor [unit]
AA120/120 EA DIN	AA120/120 EA	120	120	25	4
AA165/165 EA DIN	AA165/165 EA	165	165	25	6

TECHNICAL INFORMATION

KUNEX® INTERNAL EXPANSION JOINT TAPE



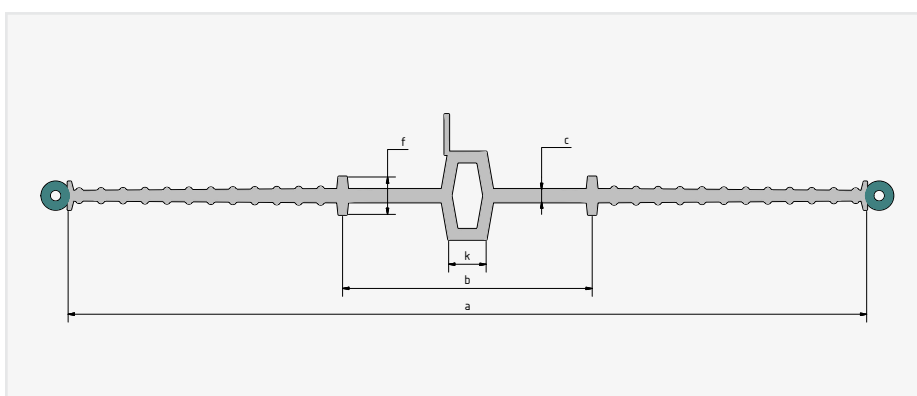
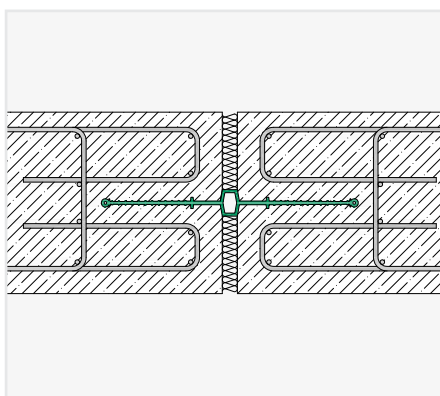
DIMENSIONS

Type DIN 18541	Type Company standard	a [mm]	k [mm]	f [mm]	b [mm]	c [mm]
	D150	150	10	15	55	3.5
	D190	190	10	15	70	3.5
D240 DIN	D240	240	20	15	80	4.0
D320 DIN	D320	320	20	15	100	5.0
D400 DIN	D400	400	20	16	125	5.2
D500 DIN	D500	500	20	20	150	6.0

Joint tapes up to 320 mm wide can, upon request, be provided with fastening eyelets on one side (o) or on both sides (o2).

The distance between the eyelets is 200 mm. The fastening eyelets replace the joint tape clips which would otherwise be necessary to fasten the joint tapes.

KUNEX® INTERNAL EXPANSION JOINT TAPE WITH INJECTION HOSE



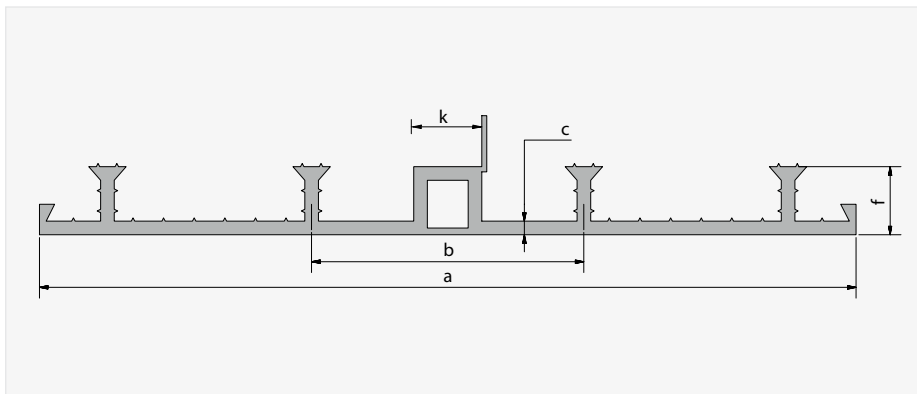
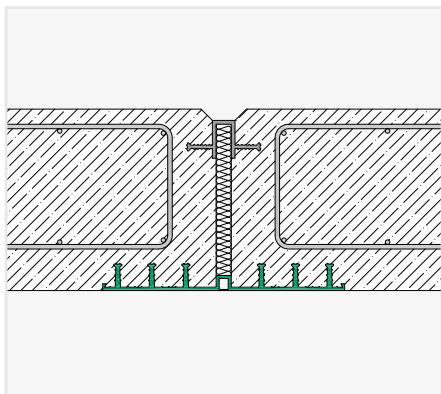
DIMENSIONS

Type DIN 18541-2	Type Company standard	a [mm]	k [mm]	f [mm]	b [mm]	c [mm]
D240 C11 DIN	D240 C11	240	20	15	80	4.0
D320 C11 DIN	D320 C11	320	20	15	100	5.0
D500 C11 DIN	D500 C11	500	20	20	150	6.0

Injection hose dimensions: External 11 mm, internal 6 mm.

TECHNICAL INFORMATION

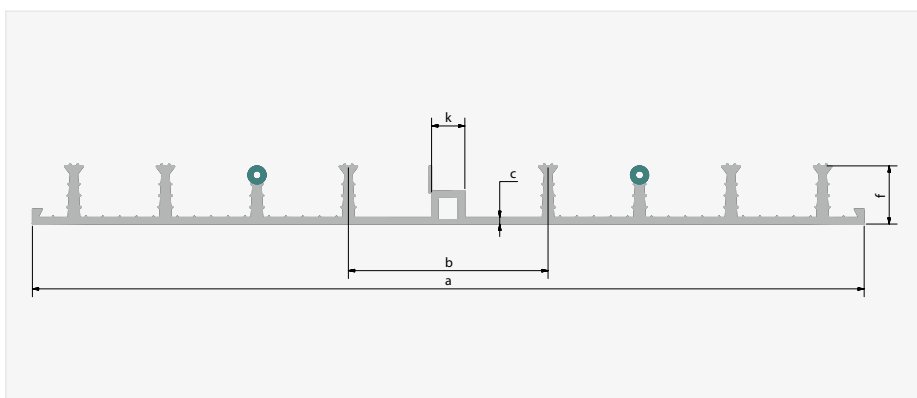
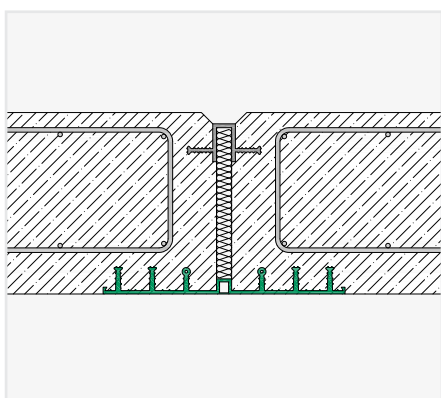
KUNEX® EXTERNAL EXPANSION JOINT TAPE



DIMENSIONS

Type DIN 18541	Type Company standard	a [mm]	k [mm]	f [mm]	b [mm]	c [mm]	Sealing anchor [unit]
–	DA190/17	190	20	17	80	3.7	4
DA240/20 DIN	DA240/20	240	20	20	80	4.0	4
DA240/35 DIN	DA240/35	240	20	35	84	4.0	4
–	DA320/20	320	20	20	100	4.0	6
DA320/25 DIN	DA320/25	320	20	25	100	4.0	6
DA320/35 DIN	DA320/35	320	20	35	100	4.0	6
DA500/35 DIN	DA500/35	500	20	35	120	4.0	8

KUNEX® EXTERNAL EXPANSION JOINT TAPE WITH INJECTION HOSE



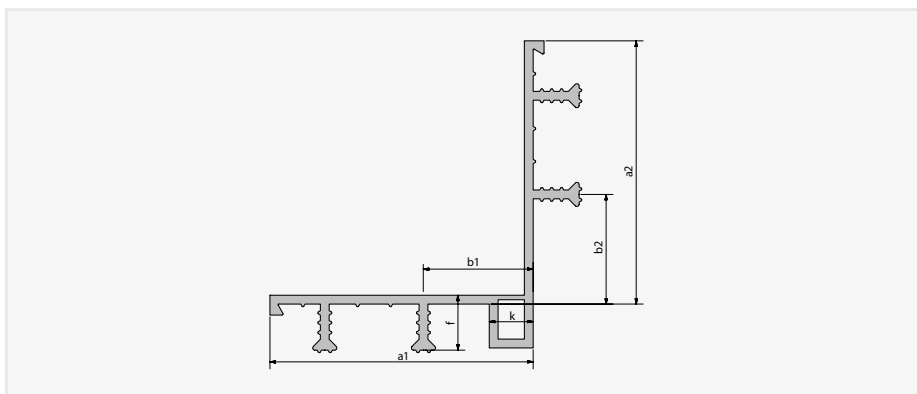
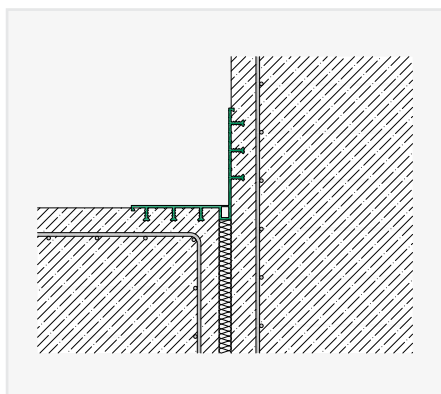
DIMENSIONS

Type DIN 18541-2	Type Company standard	a [mm]	k [mm]	f [mm]	b [mm]	c [mm]	Sealing anchor [unit]
DA240/20 C11 DIN	DA240/20 C11	240	20	20	80	4.0	4
DA240/35 C11 DIN	DA240/35 C11	240	20	35	84	4.0	4
DA320/25 C11 DIN	DA320/25 C11	320	20	25	100	4.0	6
DA320/35 C11 DIN	DA320/35 C11	320	20	35	100	4.0	6
DA500/35 C11 DIN	DA500/35 C11	500	20	35	120	4.0	8

Injection hose dimensions: External 11 mm, internal 6 mm. The number and position of the injection hoses can be altered.

TECHNICAL INFORMATION

KUNEX® CORNER JOINT TAPE FOR EXPANSION JOINTS



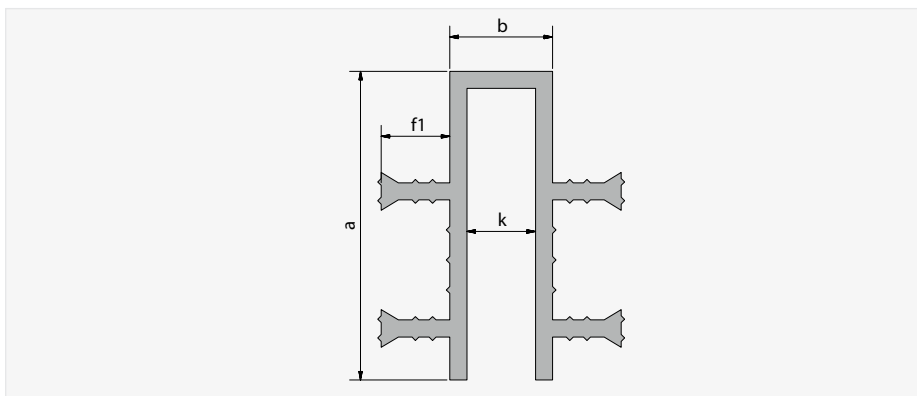
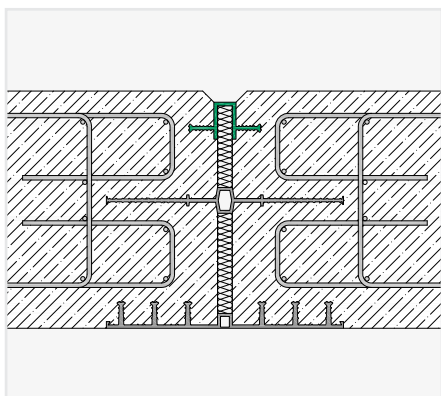
DIMENSIONS

Type DIN 18541-2	Type Company standard	a1/a2 [mm]	k [mm]	f [mm]	b1/b2 [mm]	Sealing anchor [unit]
DA120/120 EA DIN	DA 120/120 EA	120/120	20	25	50/50	4
DA165/165 EA DIN	DA 165/165 EA	165/165	20	25	50/50	6

TECHNICAL INFORMATION

KUNEX® JOINT CLOSING TAPE

KUNEX® grey PVC-P joint closing tape for covering the surface of movement joints.

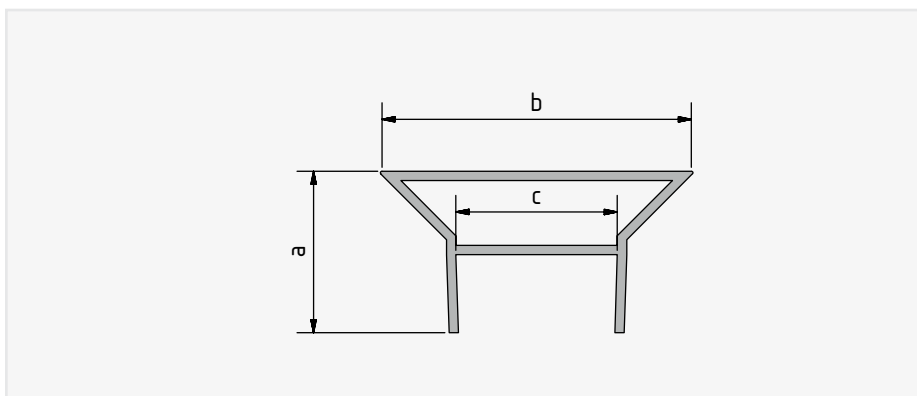
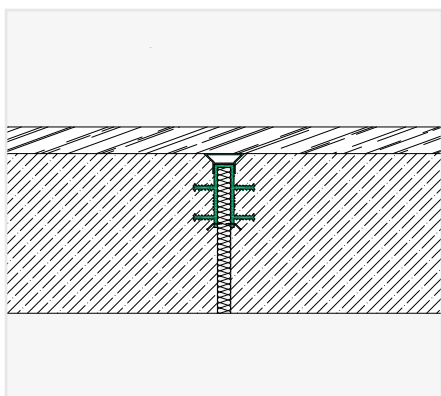


DIMENSIONS

Type DIN 18541	Type Company standard	a [mm]	f1 [mm]	w [mm]	k [mm]	Sealing anchor [unit]
FA50/20 DIN	FA50/20	50	20	30	20	2
FA50/30 DIN	FA50/30	50	30	30	20	2
FA70/40 DIN	FA70/40	70	40	30	20	2
FA90/20 DIN	FA90/20	90	20	30	20	4
FA95/30 DIN	FA95/30	95	30	30	20	4
FA130/20 DIN	FA130/20	130	20	30	20	6

KUNEX® JOINT END STRIP

KUNEX® hard PVC joint end strip for use as a suitable fitting aid for joint closing tapes.

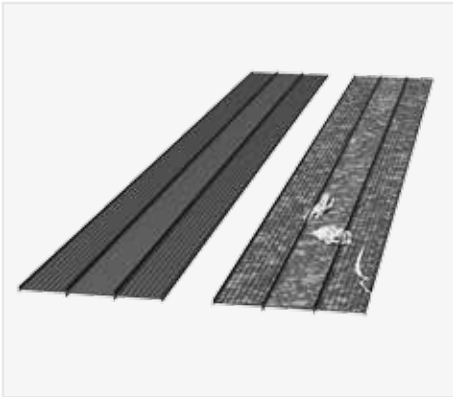


DIMENSIONS

Type	a [mm]	b [mm]	c [mm]	Length [m]
FL30/60	30	60	30	2.50

INSTALLATION INSTRUCTIONS

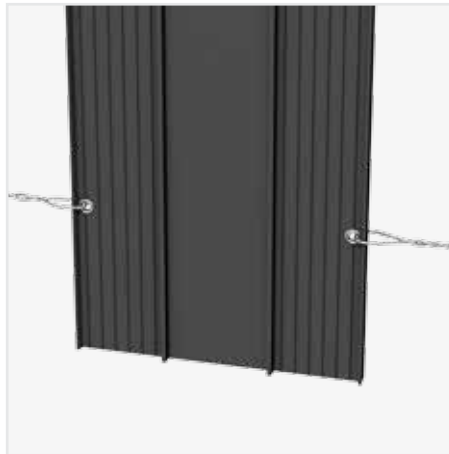
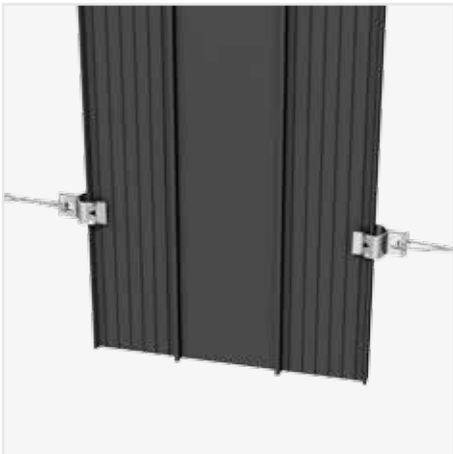
INSTALLATION AND PROCESSING BEFORE INSTALLATION



Joint tapes

- must be checked for damage, contamination and deformation.
- must be installed without folds or kinks.
- must only be processed when the material temperature is $> 0^{\circ}\text{C}$.
- must be checked to ensure that they are free from ice when concreting.

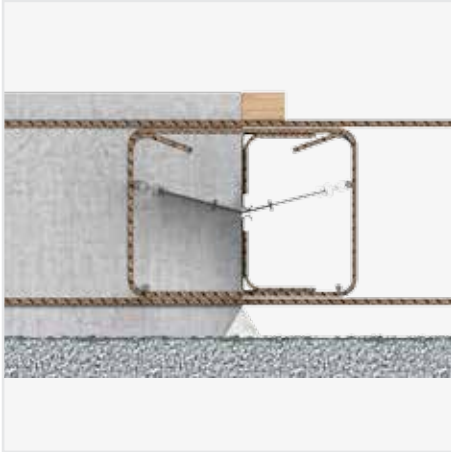
FASTENING



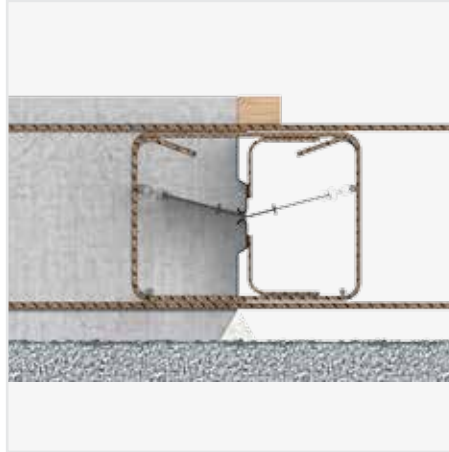
Fastening with eyelets or clips. The maximum spacing should not exceed 250 mm.

INSTALLATION INSTRUCTIONS

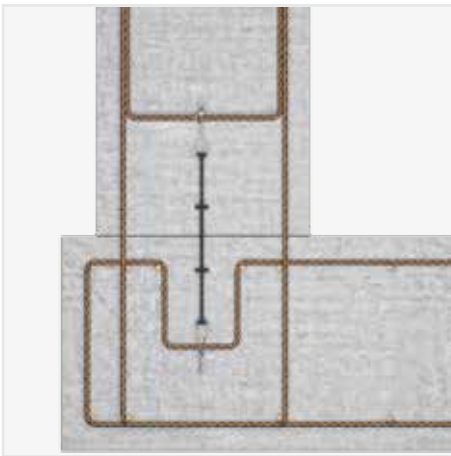
POSITIONING STABILITY



Floor-floor construction joint: Shuttering with ABS-R for coarse joints.



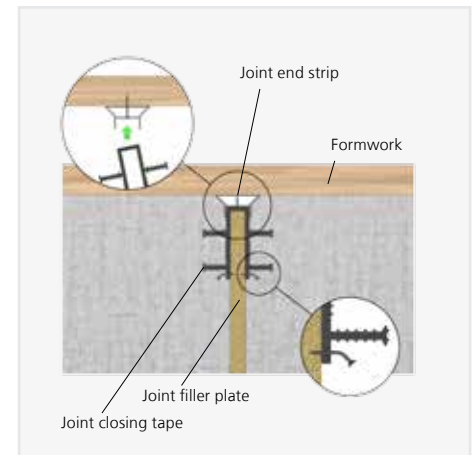
Floor-floor construction joint: Shuttering with ABS-V for interlocking joints.



Floor-wall construction joint: Fastening to the reinforcement.



Wall-wall construction joint: Fastening to the formwork.

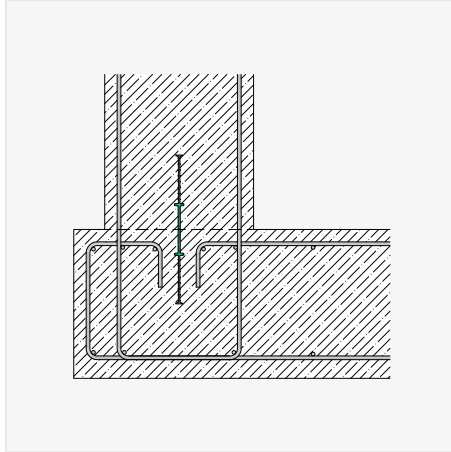
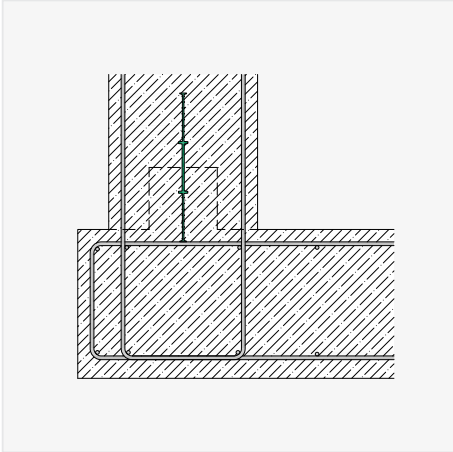


Wall-wall expansion joint: Fastening the joint closing tape to the formwork using the joint end strip.

Bend horizontal joints into a V shape at an angle of $\sim 15^\circ$. Only use nails in the outer edge area of the joint tapes.

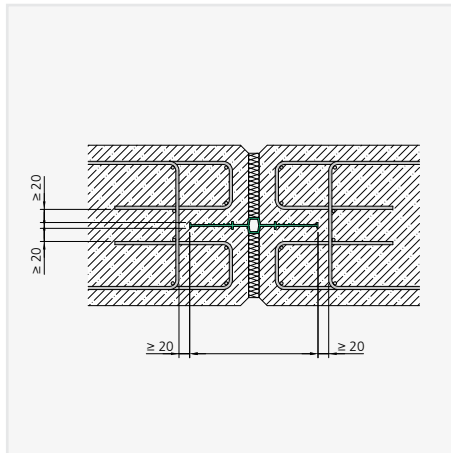
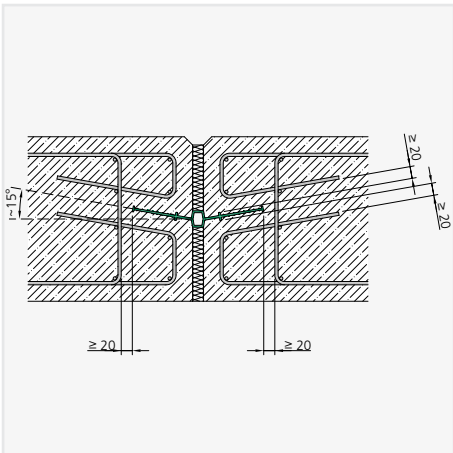
INSTALLATION INSTRUCTIONS

BASE PLATE-WALL CONNECTION



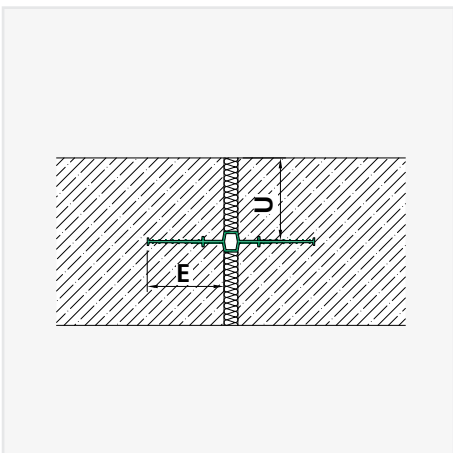
Version with concrete upstand or without upstand for corresponding reinforcement layout.

DISTANCE TO REINFORCEMENT



The distance between the joint tape and the reinforcement must be at least 20 mm.

CONCRETE COVER AND ANCHORING DEPTH

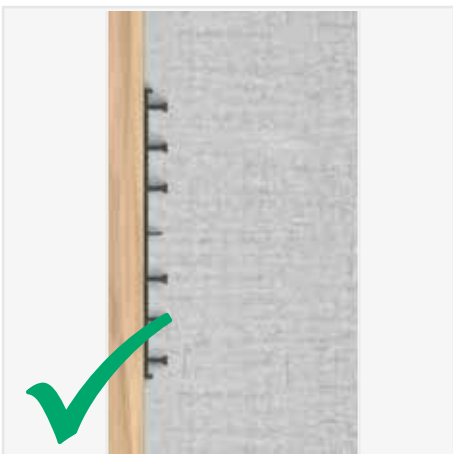
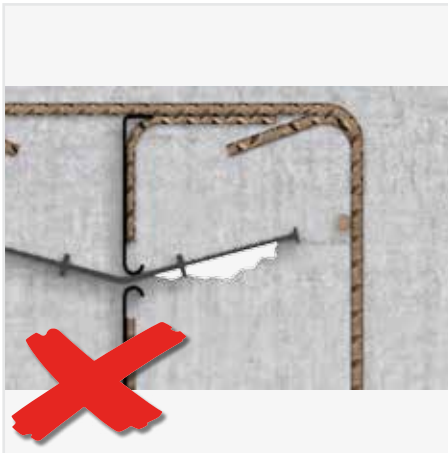


Internal joint tapes should be positioned centrally in the component, roughly corresponding to the component thickness. The anchoring depth (E) should not exceed the cover (U).

The minimum component thicknesses in accordance with the watertight structure guidelines must be complied with.

INSTALLATION INSTRUCTIONS

CONCRETING

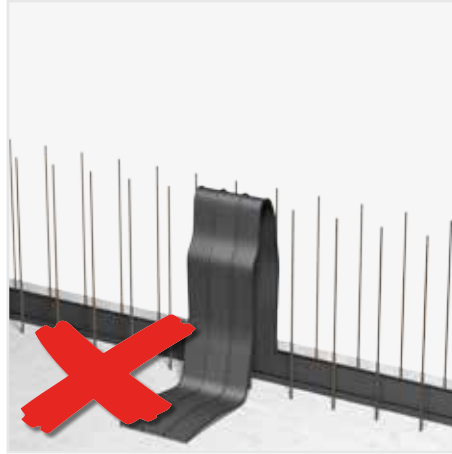


REMOVAL



INSTALLATION INSTRUCTIONS

STORAGE



INSPECTION AND DOCUMENTATION



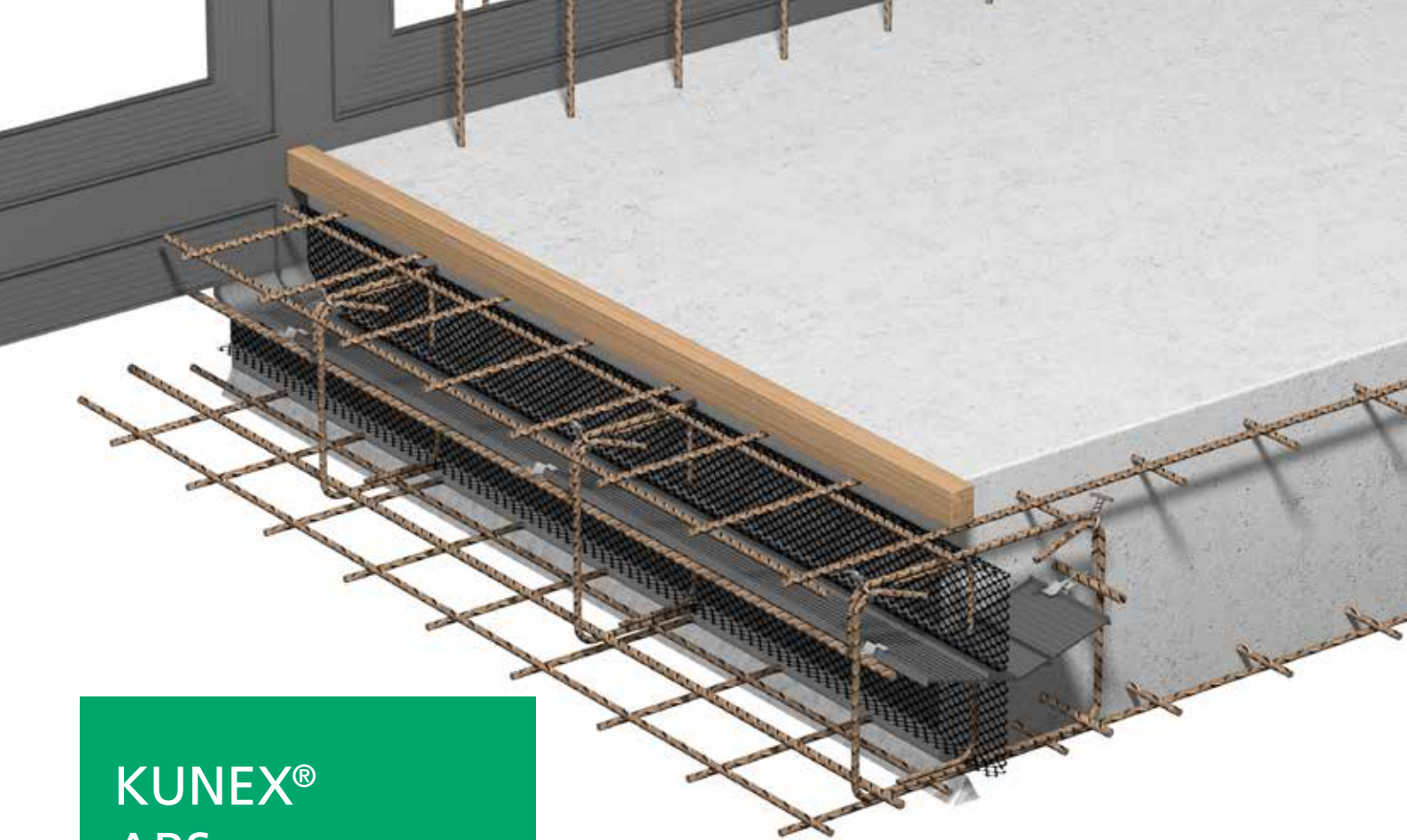
INSPECTION

After shuttering, the visible areas of the joint tapes must be checked for damage. Any defects found must be rectified immediately.



DOCUMENTATION

The handling, processing and installation of the joint tapes on the construction site must be monitored and documented in line with the specific quality assurance procedures applicable to the property. Our CAD drawings of the joint band systems as well as the test report for joints at the building site in DIN 18197 can be used as a basis for this.



KUNEX® ABS

SHUTTERING ELEMENT FOR INTERNAL CONSTRUCTION JOINT TAPES

THE PRODUCT

The KUNEX® shuttering element is a combination of construction joint tape and profiled formwork. The joint is reliably sealed by the joint tape. The shuttering is created using dimensionally stable metal mesh elements, which are reinforced using a special stirrup construction. The ABS element can be supplied as a coarse or interlocking joint (ABS-R, ABS-V).

ADVANTAGES

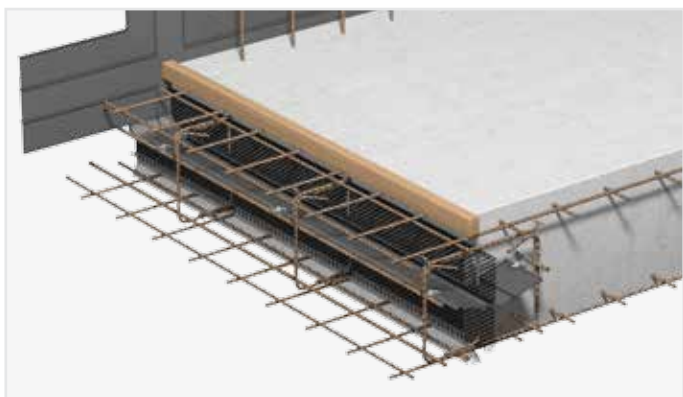
- High shear strength in the bonding joint
- For continuous reinforcement
- Two-part cage for quick joint tape installation
- Distance to reinforcement in accordance with DIN

APPLICATION AREA

KUNEX® ABS provides shuttering for construction joints in reinforced concrete components that are exposed to water (floors, walls and ceilings), particularly for applications that require bonding joints with a high shear strength.



TECHNICAL INFORMATION

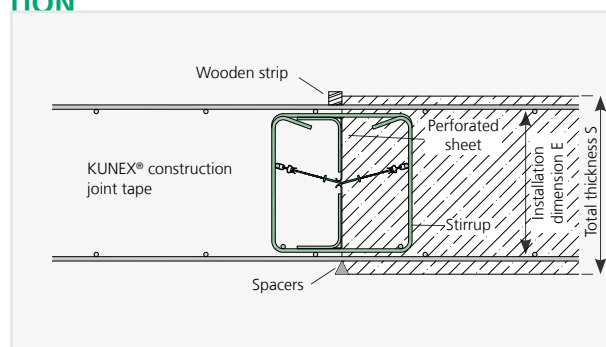


BASIC INFORMATION

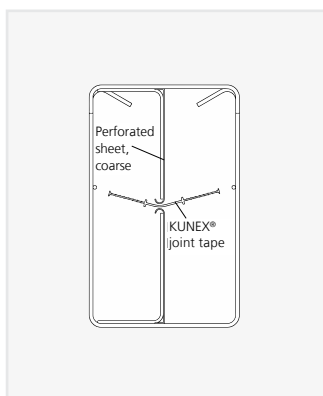
- KUNEX® joint tape A240/A320
- Standard shuttering element length: $L = 2.40 \text{ m}$
- Fixed lengths possible
- Installation dimension: $E \geq 150 \text{ mm}$
- Special forms are possible



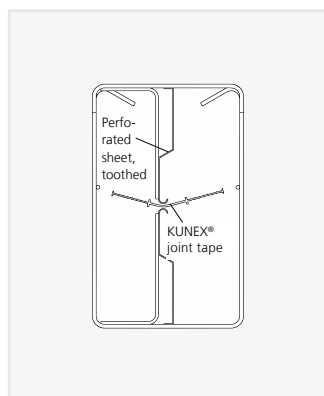
SYSTEM SECTION



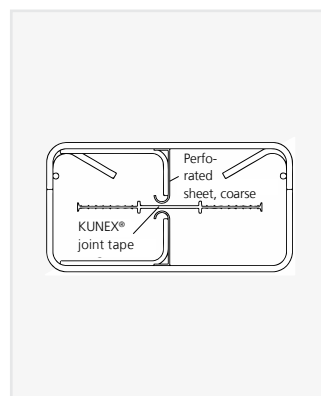
VERSIONS



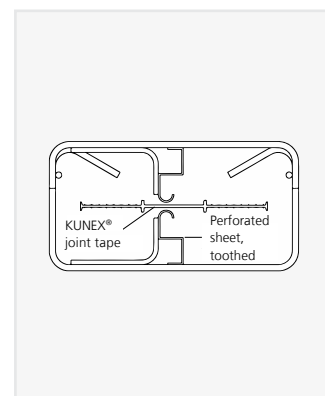
KUNEX® ABS-R floor/floor
(ceiling/ceiling) coarse joint.



KUNEX® ABS-V floor/floor
(ceiling/ceiling) interlocking
joint in accordance with EC2.

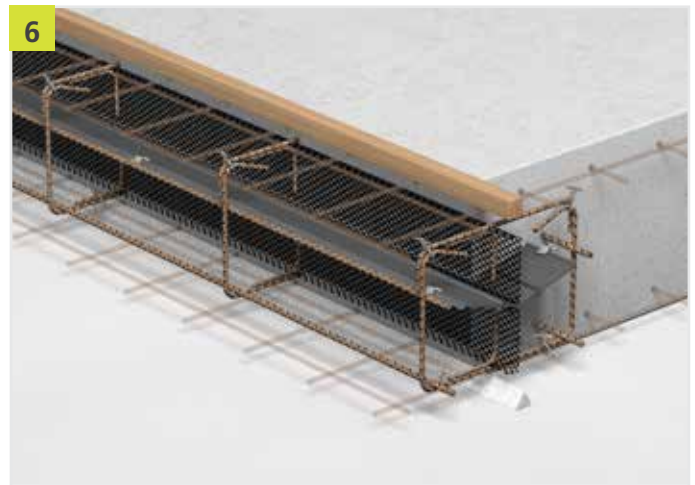
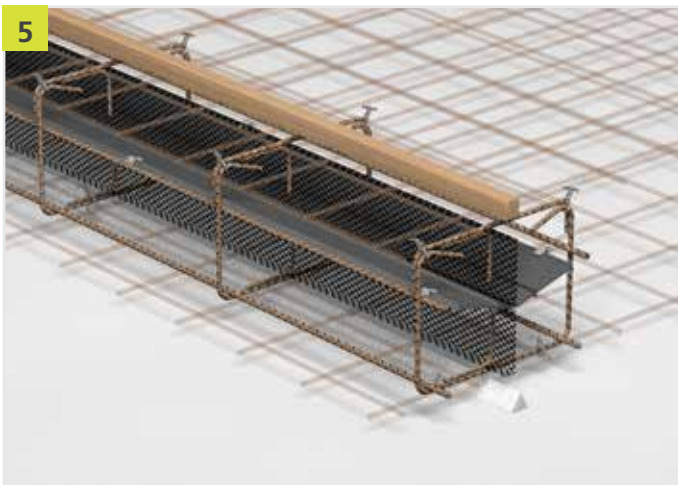
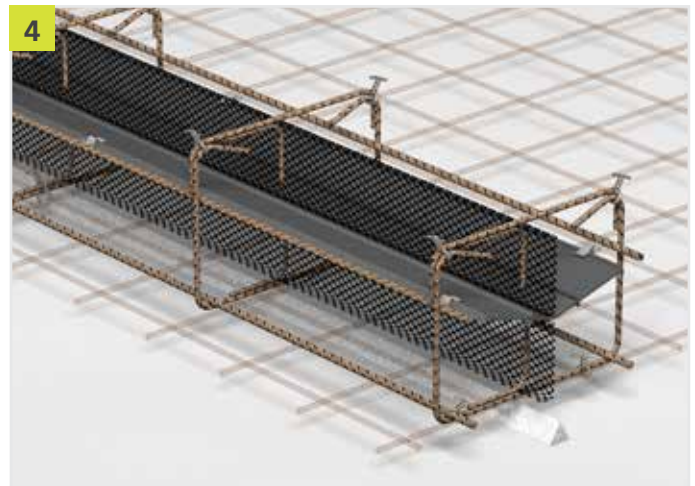
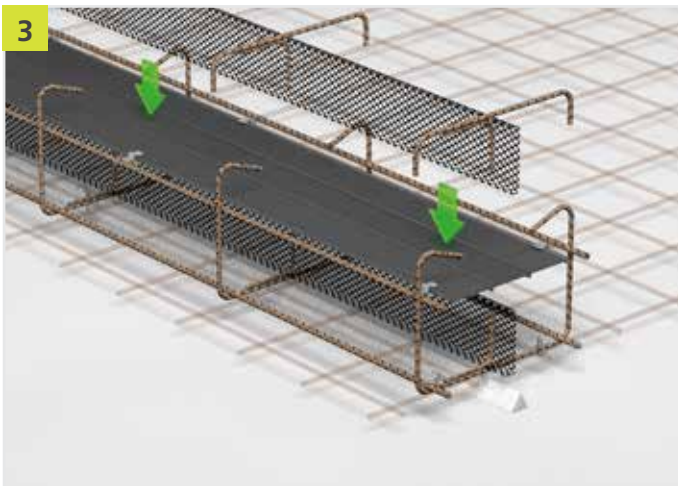
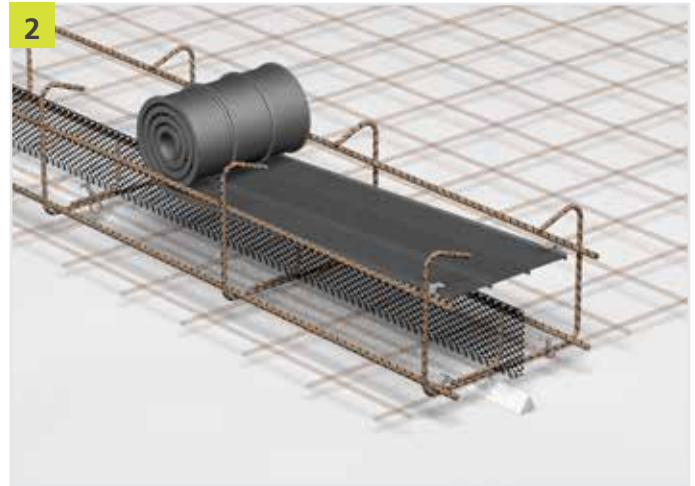
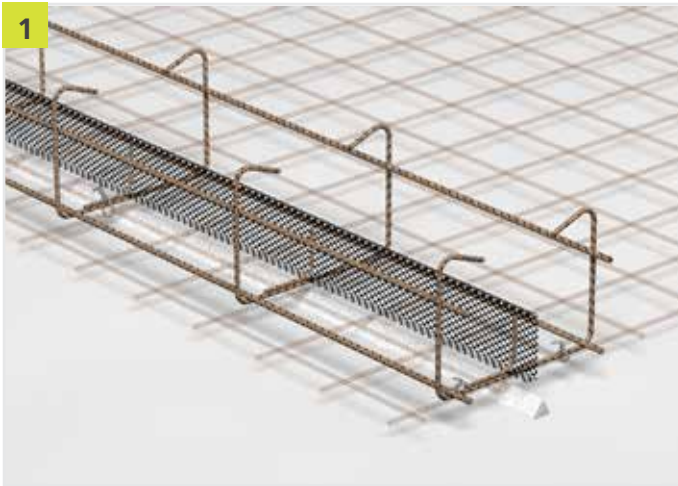


KUNEX® ABS-R wall/wall,
coarse joint.



KUNEX® ABS-V wall/wall,
interlocking joint in accordance
with EC2.

INSTALLATION INSTRUCTIONS (FLOOR/FLOOR, CEILING/CEILING)





KUNEX® Clamp joint

COMPONENT
CONNECTION BETWEEN
NEW BUILDING AND
EXISTING STOCK

abP

THE PRODUCT

KUNEX® clamp joints are the ideal solution to the complex problems posed by a “new to old” building joint. The system consists of a primer, joint tapes in accordance with DIN 18541-2, steel profiles, anchors and a crude rubber strip. The function of the clamp joint is based on pressing the joint tape onto the existing stock using clamp profiles, as well as integrating the joint tape into the newly concreted components.

ADVANTAGES

- Tested system solution with abP*
- Components from a single source
- Very good joint tape welding properties
- Clamp joint in accordance with customer requirements

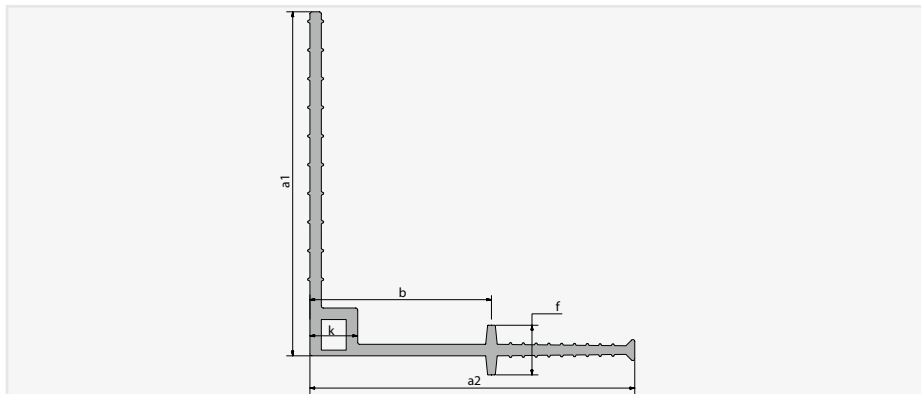
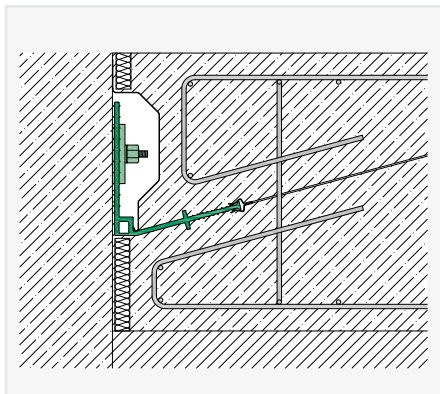
APPLICATION

The KUNEX® clamp joints are intended for use when forming water-impervious movement joints on building connections. The joint width of the movement joint may be up to 30 mm, and the resulting deformation (v_r) may be up to 20 mm. The system is suitable for water exchange zones and meets the requirements of usage class A for stress classes 1 and 2 in accordance with the watertight structure guidelines.

*Tested up to 2.5 bar; 0.5 bar permitted in accordance with the abP (safety factor of 5.0).

TECHNICAL INFORMATION

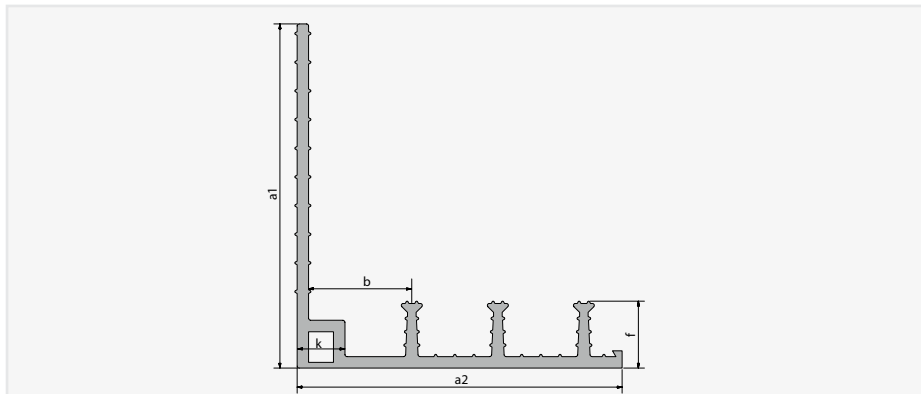
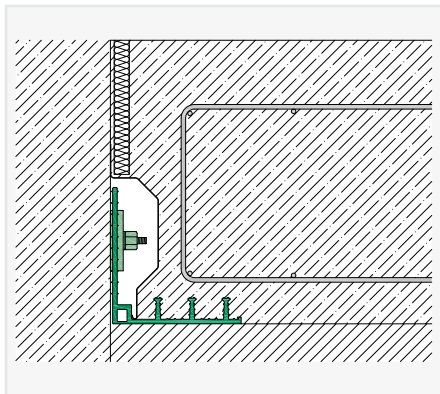
KUNEX® INTERNAL FLANGED JOINT TAPE



DIMENSIONS

Type DIN 18541-2	a1/a2 [mm]	k [mm]	f [mm]	w [mm]
D 180/170K DIN	180/170	20	26	95

KUNEX® EXTERNAL FLANGED JOINT TAPE



DIMENSIONS

Type DIN 18541-2	a1/a2 [mm]	k [mm]	f [mm]	b [mm]	Sealing anchor [unit]
DA 180/170K DIN	180/170	20	35	60	3

INSTALLATION INSTRUCTIONS

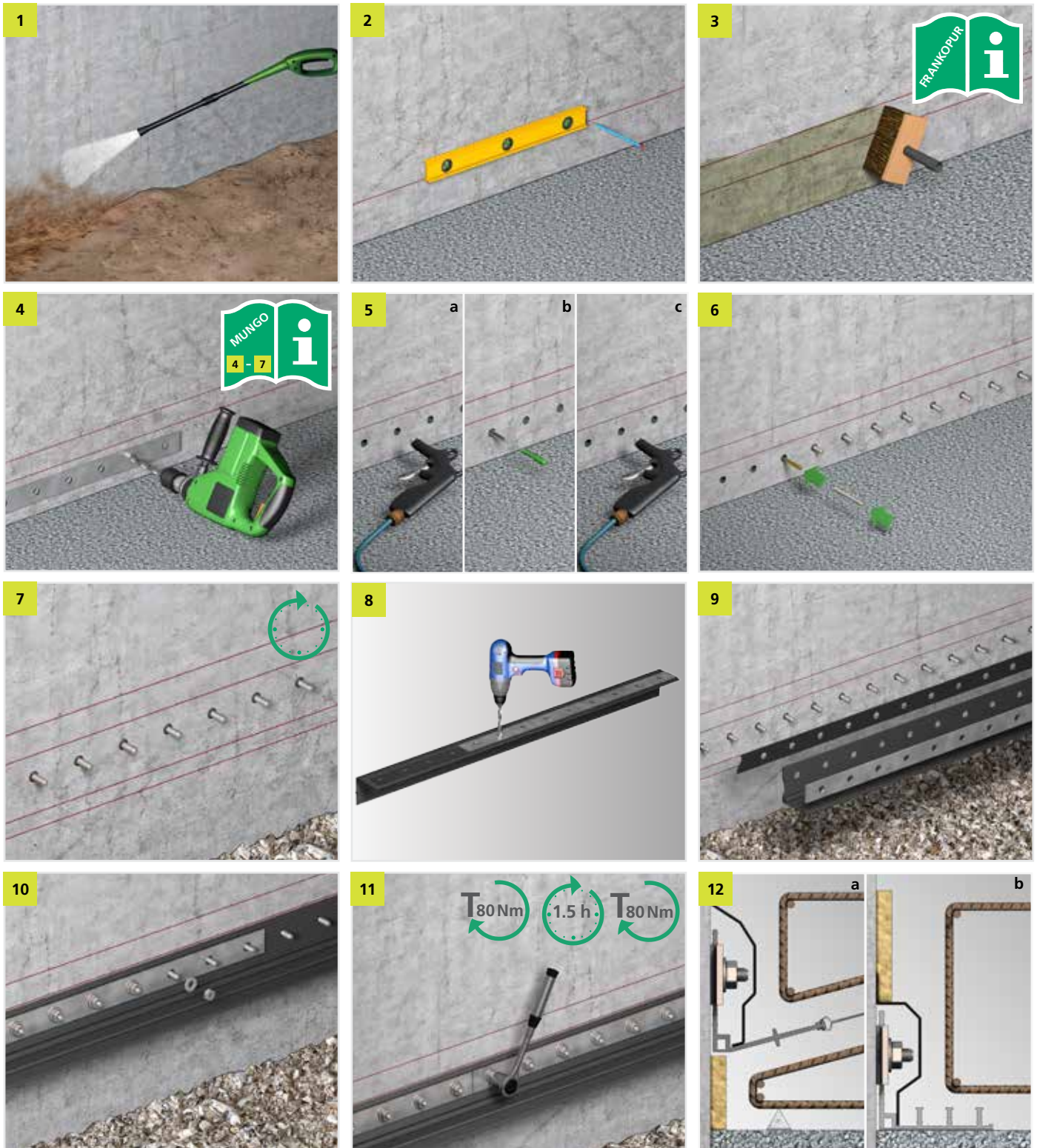
PRELIMINARY NOTES

The surface of the existing stock must be in the following condition:

- ≥ 25 cm wide
- Clean, smooth, level and free from waves and recesses
- Free from cavities, cracks and loose parts
- Water-impervious
- Stable, surface tensile strength at least 1.5 N per mm², concrete quality \geq C25/30 (previously: B25 WU)



INSTALLATION INSTRUCTIONS

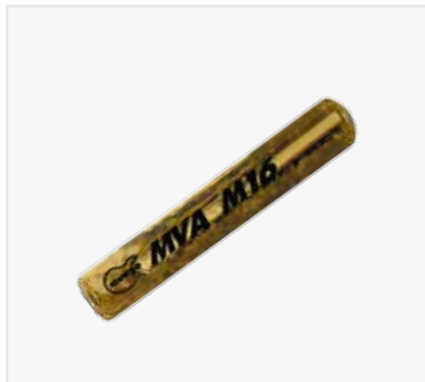


ACCESSORIES



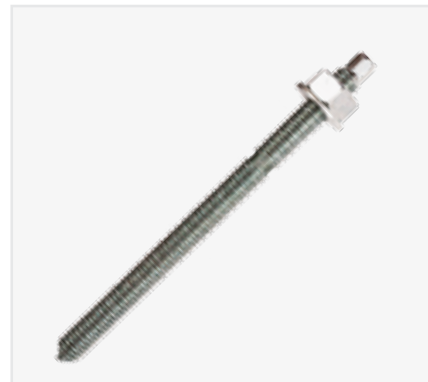
PRIMER

For preparing the concrete surface.*



SHEAR CONNECTOR

Type: M12, M16*, M20.
For glueing the anchor rod in.



ANCHOR ROD

Type: M12/160, M16/190*, M20/230.
Galvanised or V4A incl. nut and U-washer.



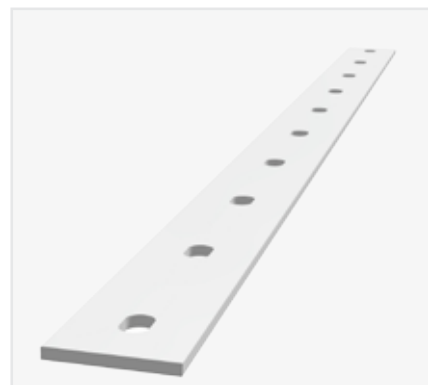
CONCRETE BOLT

Type: TSM 14M16*, galvanised or V4A incl. nut and U-washer.
Alternative fastening option to the shear connector system.



CRUDE RUBBER STRIP

Type: 80 x 4*, 100 x 4*.
Adhesive on one side for sealing the building connection joint.



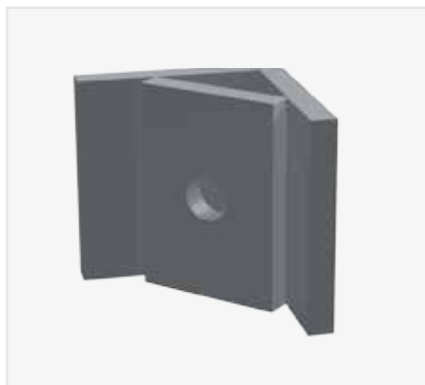
CLAMPING RAIL

Type: 80 x 8* (16/30, 20/30*), 100 x 10 (24/38). With slotted hole every 150 mm, galvanised (l = 1450 mm) or V4A (l = 1300 mm).



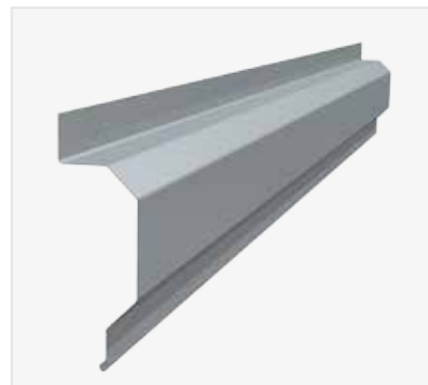
OUTER CORNER

Special profile, 80 x 10 x 200 mm.
Galvanised or V4A.



INTERNAL CORNER

Special profile, 80 x 10 x 100 mm.
Galvanised or V4A.



CLAMPING PROTECTION PROFILE

Made of galvanised sheet metal, incl. knock-in anchors. For protecting.

* The embodiment with KUNEX® clamping construction according to General Appraisal Certificate P-5316/053/14 MPA-BS requires the use of the components marked with*.



KUNEX® ASF

FOR CONSTRUCTION
JOINTS SUBJECT
TO MINOR LOADS

abP

THE PRODUCT

KUNEX® ASF thermoplastic joint tapes are used to seal construction joints that are subject to minor loads. Thanks to the special profile design, an excellent sealing effect is achieved at an anchoring depth of just 30 mm.

ADVANTAGES

- With general supervisory test certificate (abP)*
- Anchoring depth is just 30 mm
- Very good joint tape welding properties

APPLICATION

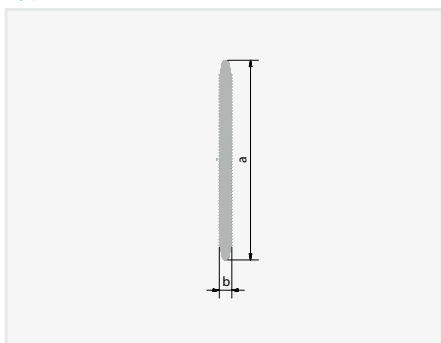
KUNEX® ASF joint tapes are used as internal joint seals for forming water-impervious construction joints. The system is suitable for water exchange zones and meets the requirements of usage class A for stress classes 1 and 2 in accordance with the watertight structure guidelines.

*Tested up to 1.0 bar; 0.4 bar permitted in accordance with the abP (safety factor of 2.5).

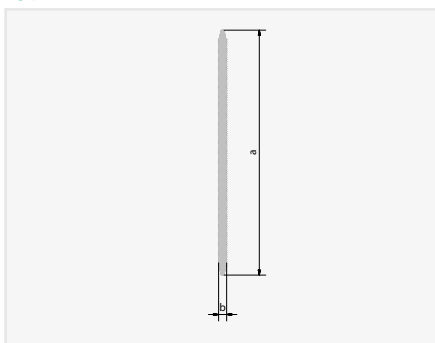
TECHNICAL INFORMATION

KUNEX® ASF

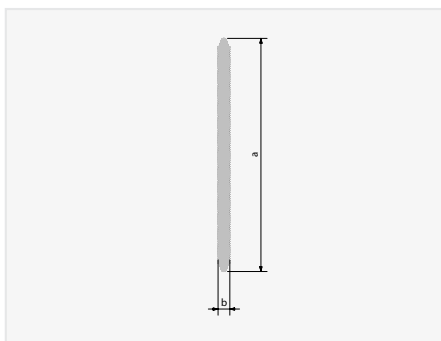
Type: ASF 80/5 ■ a = 80 mm, b = 5 mm



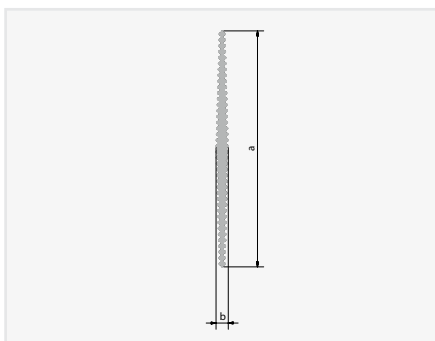
Type: ASF 120/4 ■ a = 120 mm, b = 4 mm



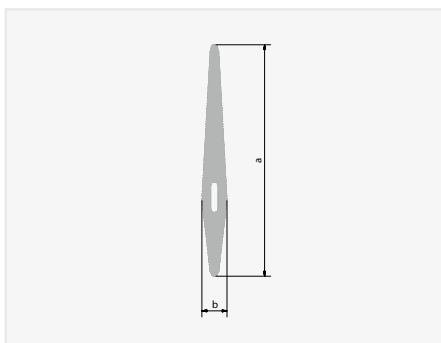
Type: ASF 120/6 ■ a = 120 mm, b = 6 mm



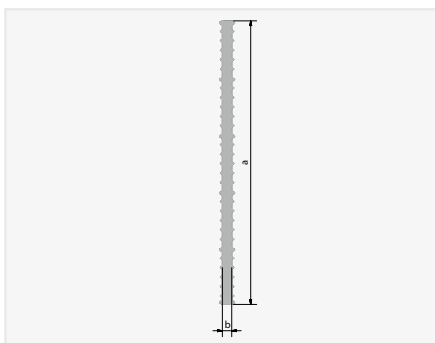
Type: ASF 120/8 ■ a = 120 mm, b = 8 mm



Type: ASF 120/12 ■ a = 120 mm, b = 12 mm



Type: ASF 150/5 ■ a = 120 mm, b = 5 mm

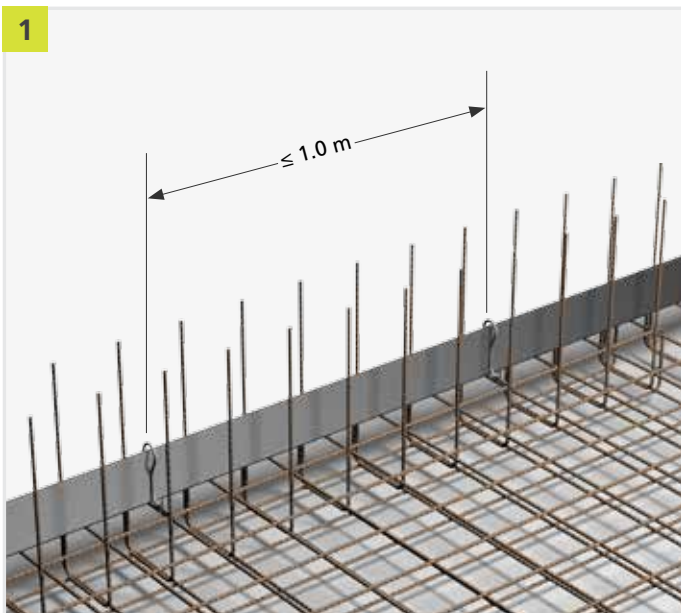


MATERIAL CHARACTERISTICS

Properties	Tensile strength in accordance with DIN EN ISO 527	Yield point in accordance with DIN EN ISO 527	Shore A hardness in accordance with DIN 53505	Fire properties in accordance with DIN EN 13501	Temperature resistance
PVC-P company standard	≥ 8 N/mm ²	≥ 150%	≥ 89 ± 7	Normally flammable (material class E)	-20 to +60 °C

INSTALLATION INSTRUCTIONS

- Check joint tapes for any possible damage or deformation before use
- The ASF joint tape must be free from contamination and ice
- Roll out the joint tape and lay it out flat on the upper reinforcement layer without tension **1**
- As a rule, the tape is installed centrally in the construction joint **1**
- Corner formations are bent with a bending radius which is ≥ 150 mm **2**
- Joints are connected using butt joint welded connections
- Movement and floating upwards should be avoided during concreting **1 + 2**
- The joint tape must be embedded without any cavities
- The anchoring depth is ≥ 30 mm





KUNEX® Star tubes

FOR SEALING CRACK
CONTROL JOINTS IN
CONCRETE

abP

THE PRODUCT

KUNEX® thermoplastic (PVC-P) star tubes are used to seal dummy joints and crack control joints in concrete. Star tubes consist of a soft PVC casing with four sealing anchors and two crack formation lips. The casing is stabilised by the hard PVC inner tube.

The two crack formation lips are used to form the crack at a predetermined point, which is simultaneously sealed again by the four sealing anchors.

ADVANTAGES

- With general supervisory test certificate (abP)*
- Raw material PVC-P
- PVC-U inner tube for stabilisation
- Star tube also available with cutout and eyelets
- Can be used with KUNEX® joint tapes and PENTAFLEX KB® seam sheets in accordance with the abP

APPLICATION

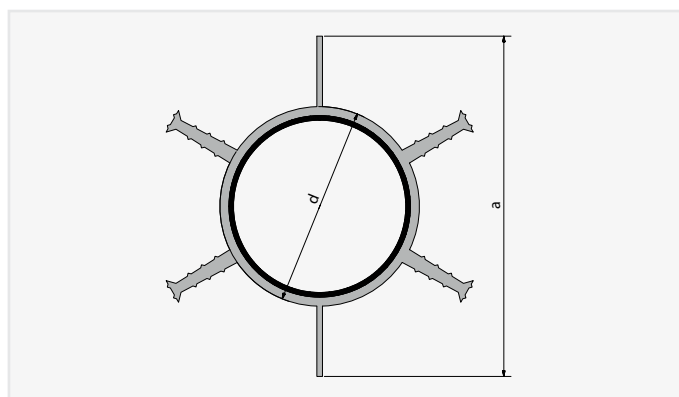
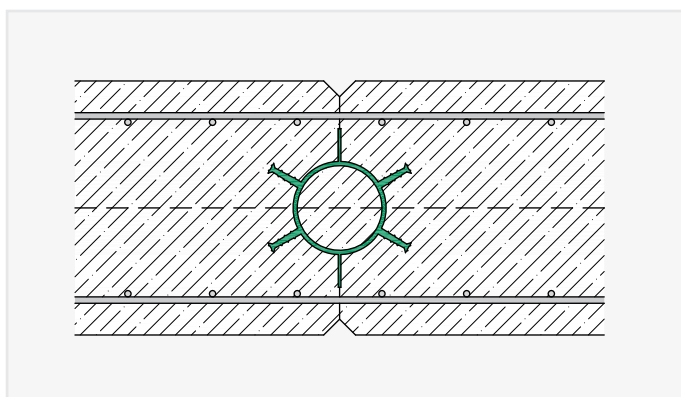
KUNEX® star tubes are used as internal seals for forming dummy joints and crack control joints. The system is suitable for water exchange zones and meets the requirements of usage class A for stress classes 1 and 2 in accordance with the watertight structure guidelines.

*Tested up to 5.0 bar; 2.0 bar permitted in accordance with the abP (safety factor of 2.5).

TECHNICAL INFORMATION

KUNEX® STAR TUBES

KUNEX® star tube made of a soft PVC casing with four sealing anchors and a hard PVC inner tube in the "dust grey"-coloured version.

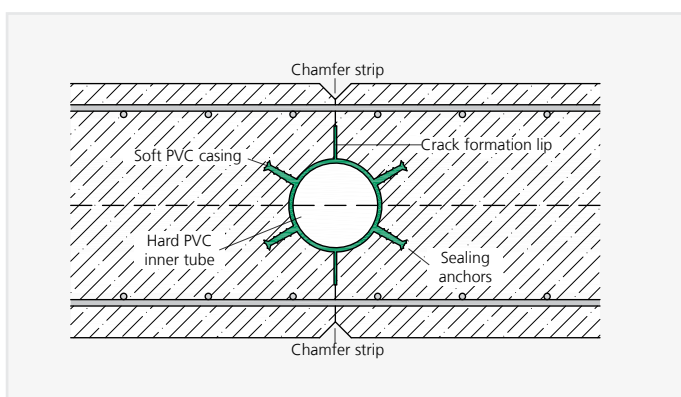


DIMENSIONS

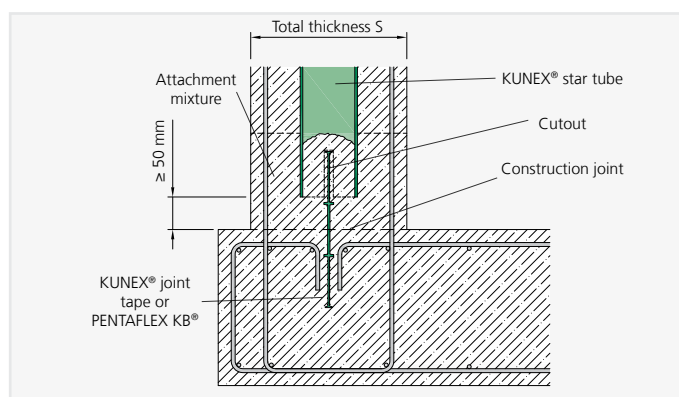
Type	d [mm]	a [mm]	For wall thickness [mm]	Standard lengths [m]
Q60	60	100	≤ 240	2.50; 3.00; 4.00 (other lengths available on request)
Q88	88	150	≤ 350	
Q175	175	235	> 350–500	

Star tubes can, upon request, be delivered with a cutout for placement on the joint closure and/or with fixing eyelets on both sides (O2). The eyelet spacing is 200 mm.

SYSTEM SECTION

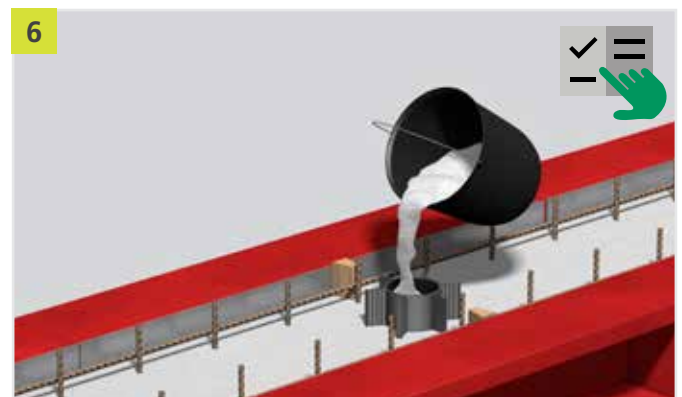
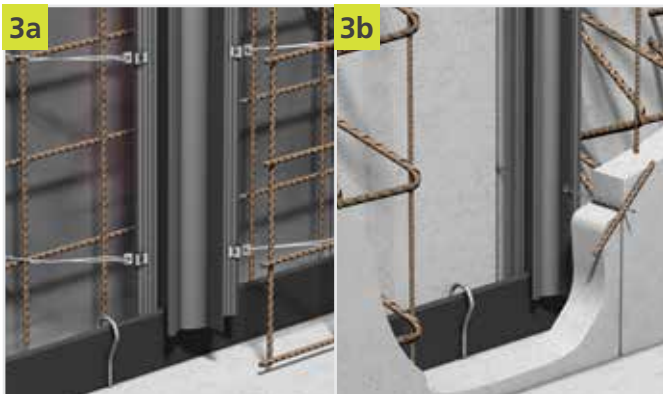
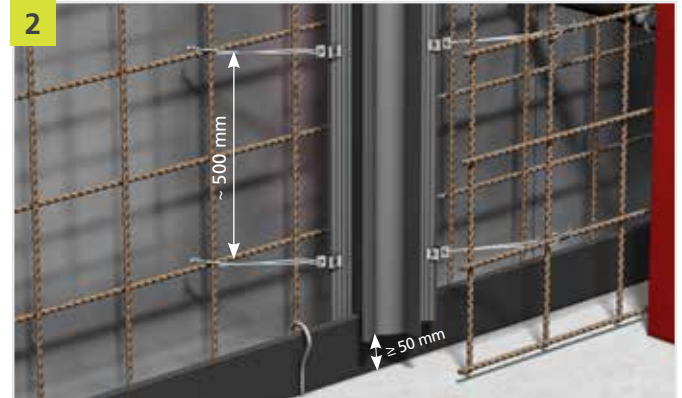
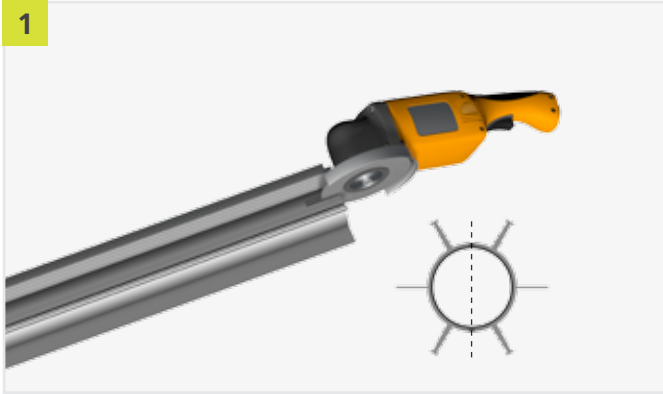


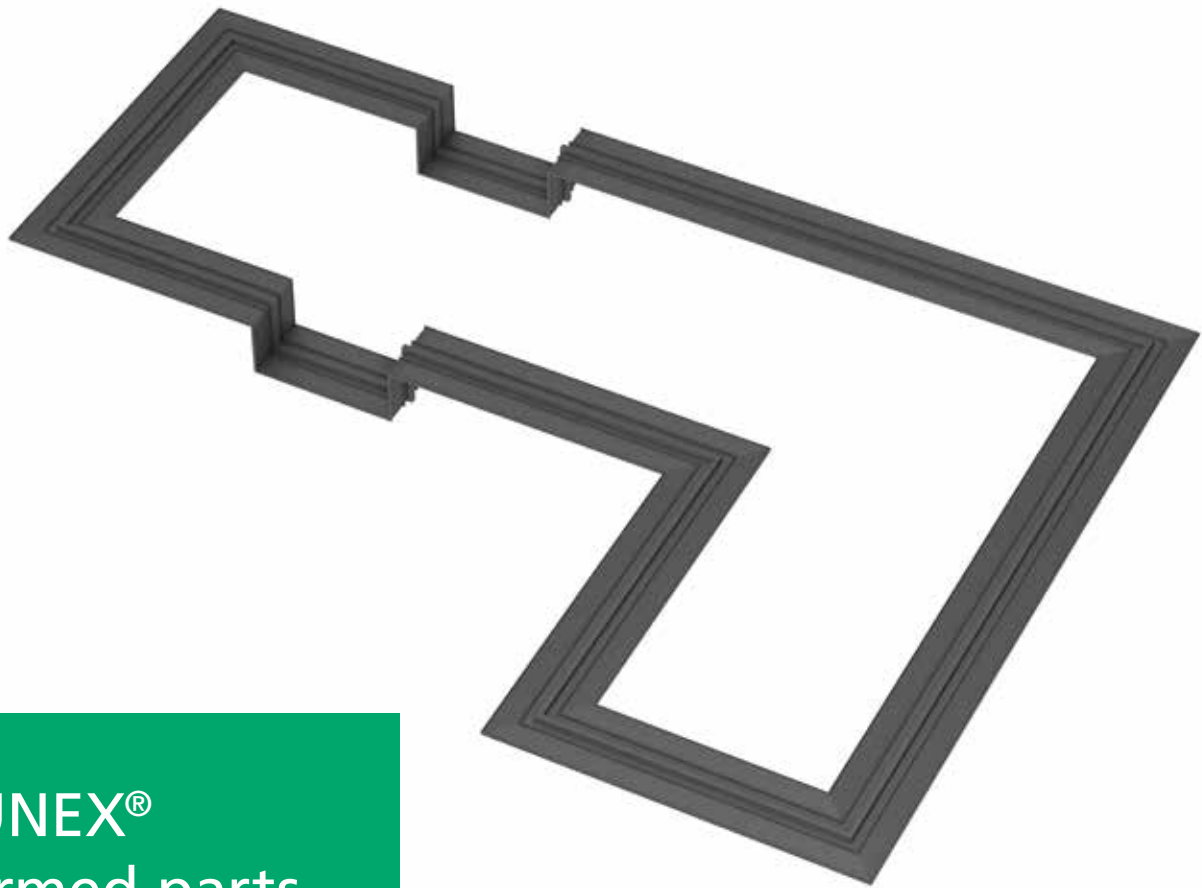
View from above of wall/wall star tube



Connection between star tube and joint closure

INSTALLATION INSTRUCTIONS





KUNEX® Formed parts and accessories

JOINT TAPE SYSTEMS
WITH CORNERS,
CROSSOVERS AND
T-SHAPES

THE PRODUCT

KUNEX® joint tapes and formed parts are used to create closed joint tape systems for sealing water-impervious concrete structures. These are prefabricated in the factory in sections of up to 25 m, so that only minor butt joint welded connections are necessary at the building site.

ADVANTAGES

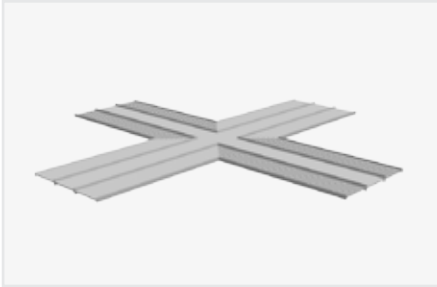
- Ex-works welded connections
- Standard formed parts
- Welded structures in accordance with customer requirements
- Welding training courses
- Welding equipment for the building site

APPLICATION

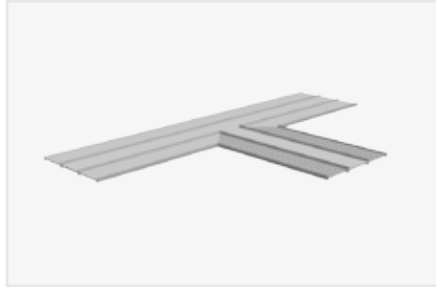
KUNEX® formed parts are used as internal or external joint seals for forming water-impervious construction or movement joints. The systems are suitable for water exchange zones and meet the requirements of usage class A for stress classes 1 and 2 in accordance with the watertight structure guidelines. KUNEX® accessories are used when handling joint tapes on the construction site.

STANDARD FORMED PARTS

Shape 1 ■ flat crossover



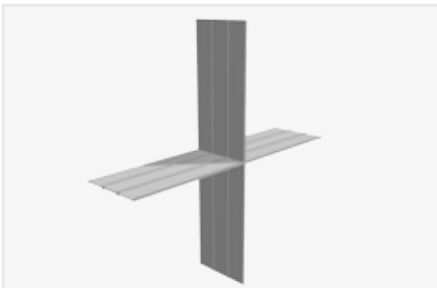
Shape 2 ■ flat T



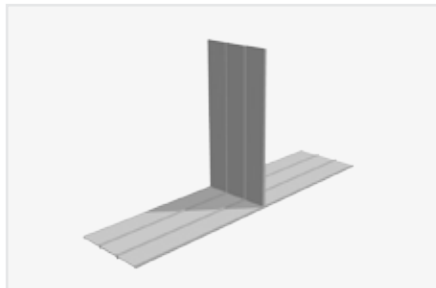
Shape 3 ■ flat corner



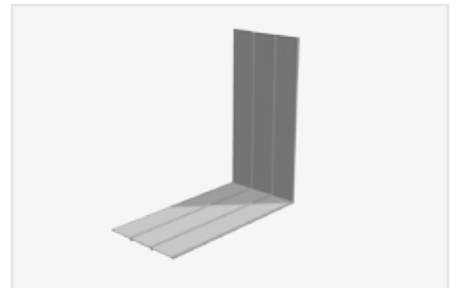
Shape 4 ■ vertical crossover



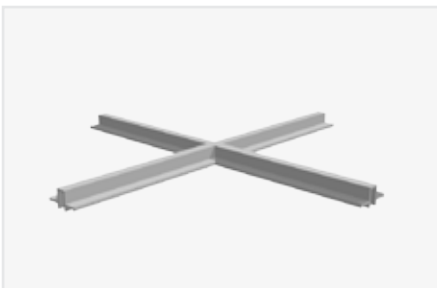
Shape 5 ■ vertical T



Shape 6 ■ vertical corner



Shape 7 ■ vertical crossover



Shape 8 ■ vertical T



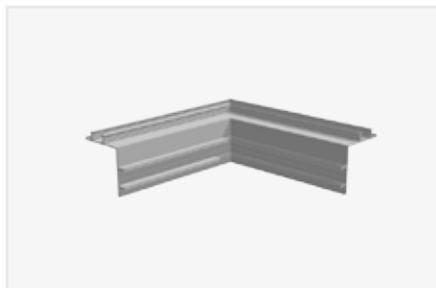
Shape 9 ■ vertical corner



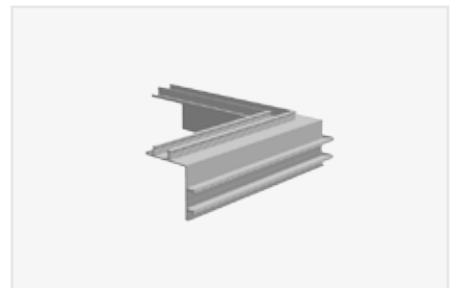
Shape 10 ■ flat corner, external cover plate



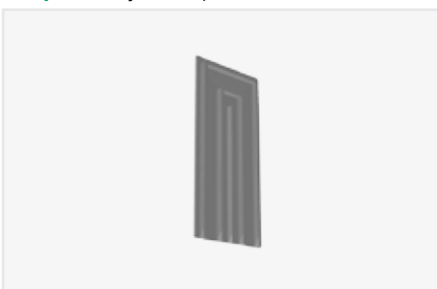
Shape 11 ■ mirrored corner



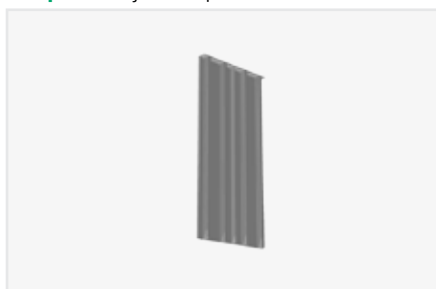
Shape 12 ■ double-angled corner



Shape 13 ■ joint tape lock

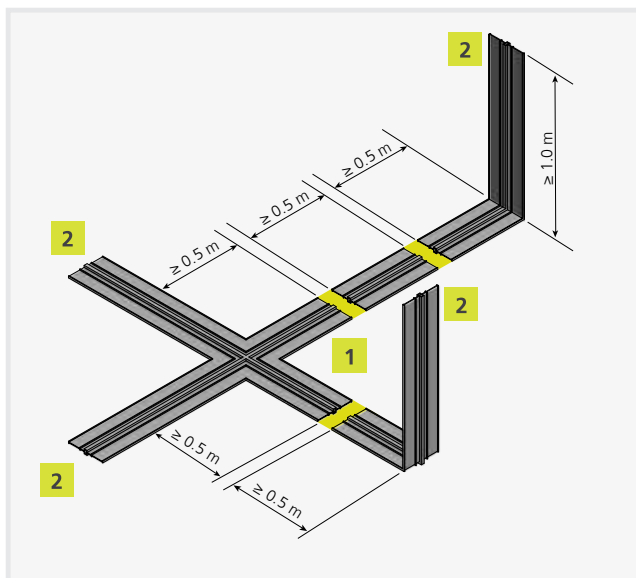


Shape 14 ■ joint tape closure



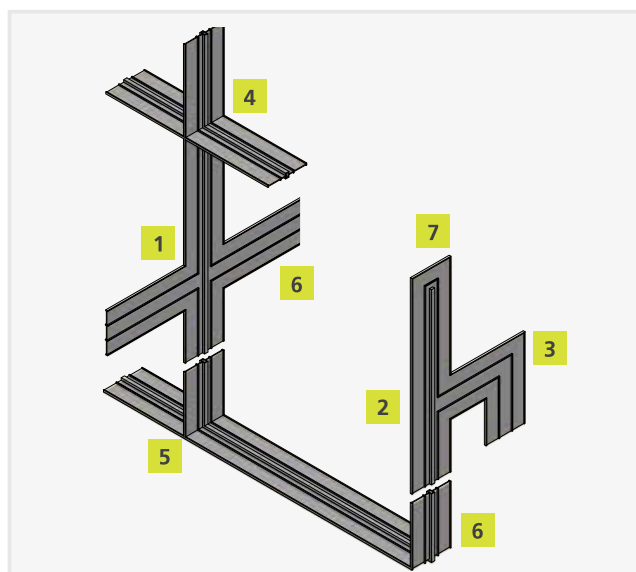
We manufacture to your drawings and specifications. Contact us for more information. **Order forms** for simple joint tape systems can be found at www.h-bau.de.

JOINT TAPE DESIGNS



- 1 First concreting section
- 2 Free joint tape end

Joint at building site



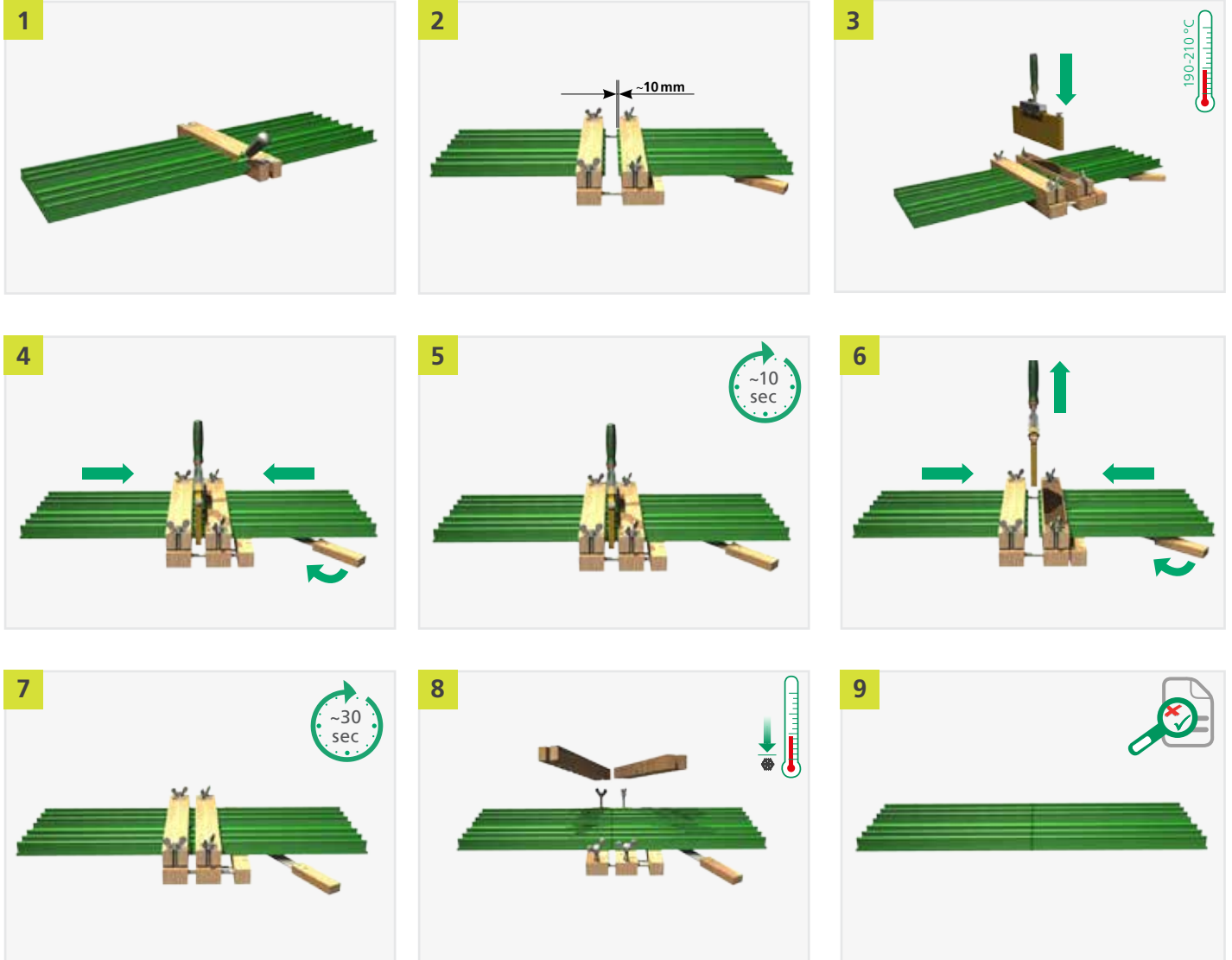
- 1 Flat crossover
- 2 Flat T
- 3 Flat corner
- 4 Vertical crossover
- 5 Vertical T
- 6 Vertical corner
- 7 Joint tape lock

Joint at building site

Alongside standard formed parts made of construction joint tapes, expansion joint tapes or joint closing tapes, we also produce joint tape designs in accordance with customer requests.

Our Application Technology department would be pleased to assist you in finding further solutions.
 Phone: +49 (0) 7742 9215-300
 Fax: +49 (0) 7742 9215-319
 E-mail: technik@h-bau.de

BUTT JOINT WELDING ON THE BUILDING SITE



Joints at the building site must only be produced by qualified personnel. Visit www.h-bau.de for more information regarding qualifications

ACCESSORIES



WELDING GAUGE

Type: SL320.

This base element is used for holding the KUNEX® templates.

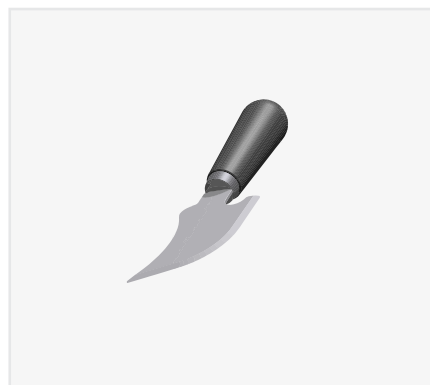


TEMPLATE

Type: A-D 190, 240, 320.

Type: AA-DA 190, 240, 320.

Used to guide the KUNEX® joint tapes when cutting and welding.



JOINT TAPE KNIFE

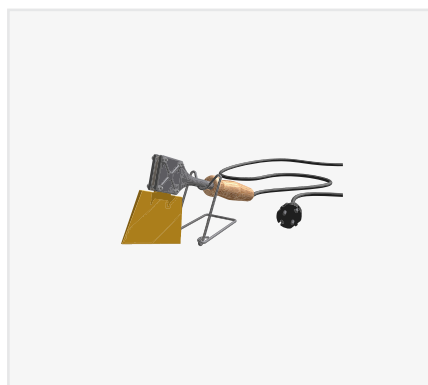
For cutting joint tapes.



WELDING PLATE

Type: SSP 550.

For jointing thermoplastic joint tapes.



WELDING IRON

Power: 125 W, 200 W, 250 W, 300 W.



EXCHANGE REGULATOR

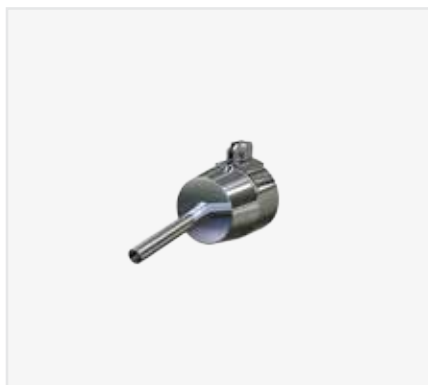
230 V.

AC voltage regulator for resistive loads.



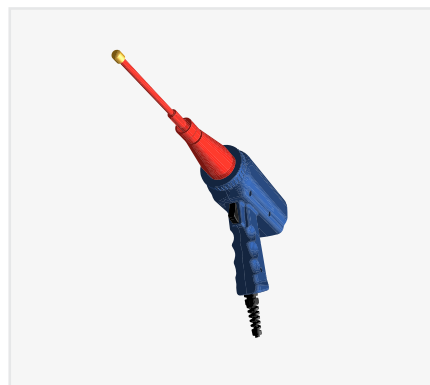
HOT AIR GUN

Hot air welding equipment, 1600 W/230 V. For exchangeable nozzles; supplied without nozzle in plastic case.



TUBULAR NOZZLE

5 mm diameter, as an accessory for the hot air gun.

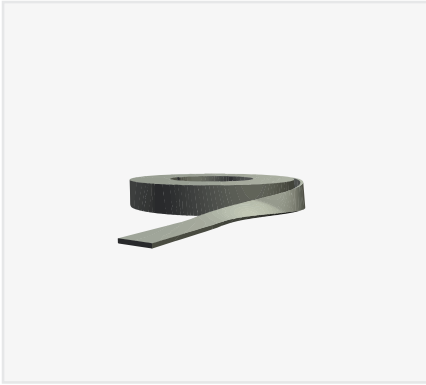


SPARK TESTER

230 V, 50/60 Hz.

Test voltage: 10 – 55 kV adjustable, flexible rod electrode, 150 mm long.

ACCESSORIES



WELDING TAPE

Type: ■ 25/3 ■ 30/2 – also available as a version compatible with bitumen.
For reinforcing joint tape welded connections.



JOINT TAPE CLIP

For fastening joint tapes. Required: 4 units per running metre and side.



OMEGA STIRRUP

Used for fastening and stably positioning ASF joint tapes.



PENTAFLEX® FBA

The FBA joint tape connection is a clamping device for connecting PENTAFLEX® elements to all types of joint tapes.

GENERAL INFORMATION

GUIDELINES

The most suitable joint tape must be specified on the basis of the anticipated loads. Ensure the tape is applied to the structure effectively.

- Joint profiles should be as straight as possible, clearly visible, and without any elevation differences
- Necessary changes in the direction of the joint profile should run at right angles where possible
- Concise drawings of the joint tapes, the joint profile, connections and crossovers **1**
- Joint tapes must create a closed sealing system.
- Joint tapes should be laid at least 300 mm above the design flood level and sealed at the ends with a joint tape lock **2**

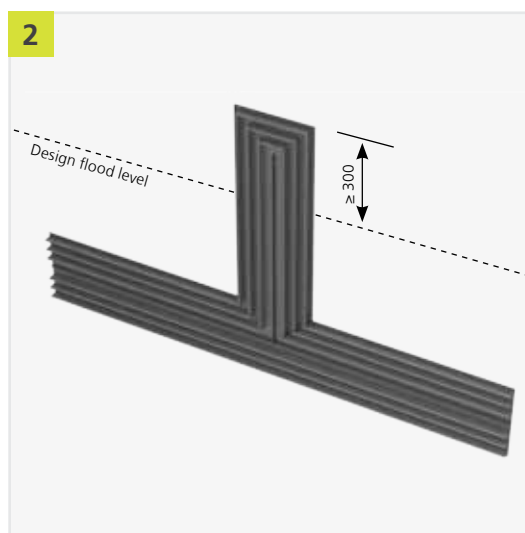
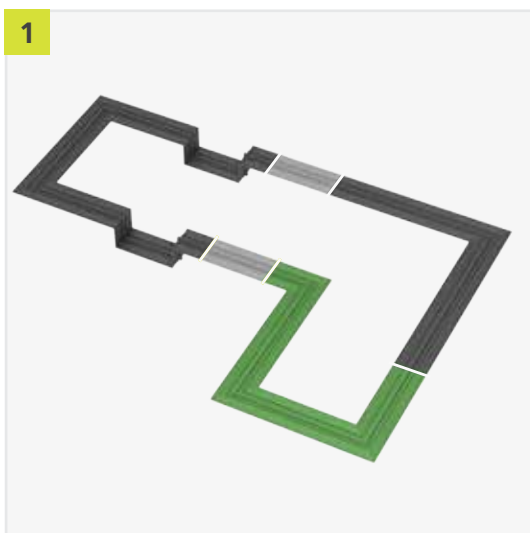
SELECTING A JOINT TAPE

Joint tapes should be selected depending on the following limiting conditions:

- Type of joint – construction joint or movement joint
- Internal or external sealing plane
- Compatible with bitumen (BV) or not compatible with bitumen (NB)
- Joint tape width depending on the design flood level, the strength of the component and, if applicable, the resulting deformation of the joint
- Joint tape in accordance with DIN or company standard (abP)

REGULATIONS

- DIN 18197 – Planning, design, handling, processing and installation of joint tapes
- DIN 18541-1 – Shape, dimensions and markings of PVC-P joint tapes in accordance with DIN
- DIN 18541-2 – Material properties of PVC-P joint tapes in accordance with DIN
- AbP – Shape, dimensions, markings and material properties of PVC-P joint tapes in accordance with company standard
- DAfStb Watertight Concrete Structures guideline (Wasserundurchlässige Bauwerke aus Beton) – general regulations dealing with watertight structures



DETERMINING THE JOINT TAPE TO BE USED

DESIGN FLOOD LEVEL

The maximum ground water, strata water or high water level expected to occur within the planned useful life, taking into account observations over many years and the expected future circumstances – the highest planned water level.

(Source: Watertight structure guidelines)

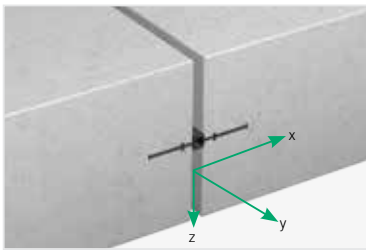
JOINT TYPE

The type of joint tape is determined on the basis of the type of joint:

- Construction joint – internal or external construction joint tape
- Movement joint – internal or external expansion joint tape
- Joint closing tape for closing the joint at the surface at the same time

DEFORMATION STRESS

For movement joints, the deformation in the joint affects the maximum water pressure that the joint tapes can accommodate. The resulting deformation can be determined as follows:

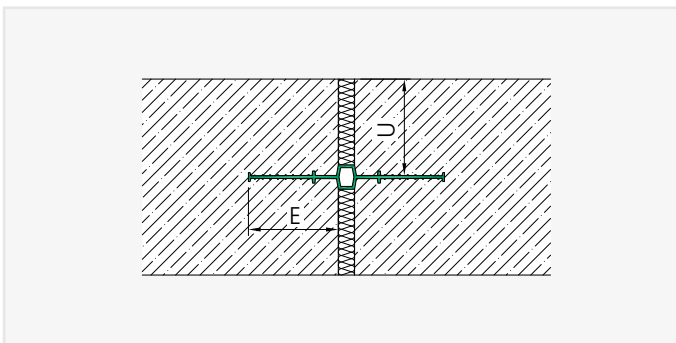


$$v_r = \sqrt{v_x^2 + v_y^2 + v_z^2}$$

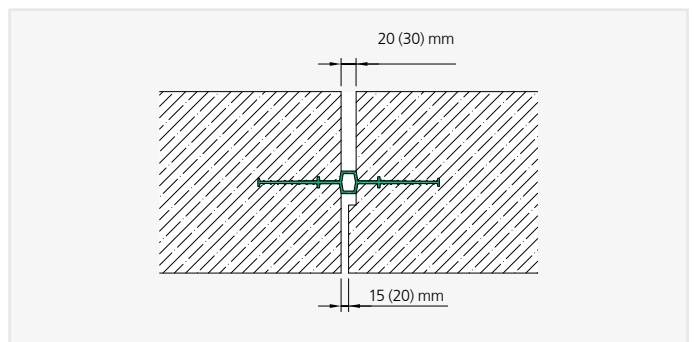
v_r = resulting deformation
 v_x = deformation along the x-axis
 v_y = deformation along the y-axis
 v_z = deformation along the z-axis

Use/joint type		Type
Construction joints	No planned deformation	A, AA
Movement joints		$v_r \leq 30 \text{ mm}$ D, DA, FA
		$v_r \leq 35 \text{ mm}$ DA, FA
		$v_r \leq 40 \text{ mm}$ FA
Press joints		Without shear deformation D, DA

JOINT TAPE WIDTH AND COMPRESSION LIMIT



Internal joint tapes should be positioned centrally in the component, roughly corresponding to the component thickness. The anchoring depth (E) should not exceed the cover (U).

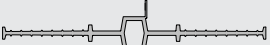




Stepped joint routes prevent the expansion chamber in joint tapes from being compressed when the joint undergoes strong deformation.

INFORMATION FOR CONSTRUCTION

NOMINAL JOINT WIDTH

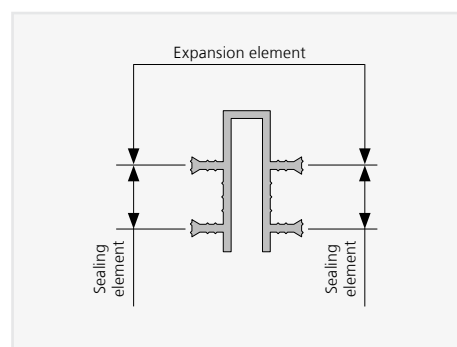
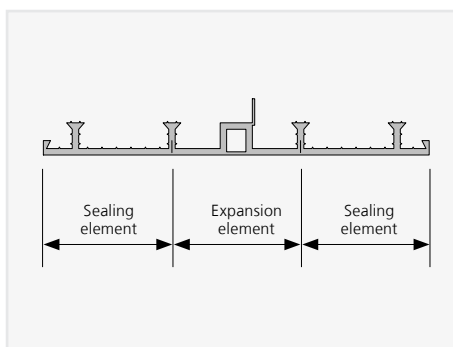
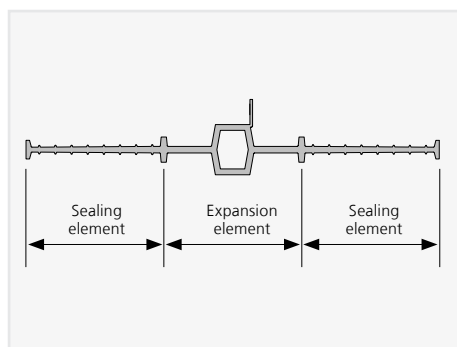
For standard joint tapes, the following maximum permitted joint widths must be taken into account:

Joint tape	Type	Joint width
	D	20 – 30 mm
	FA	
	DA	20 mm

In addition, special joint tapes are possible, in coordination with our Application Technology department.

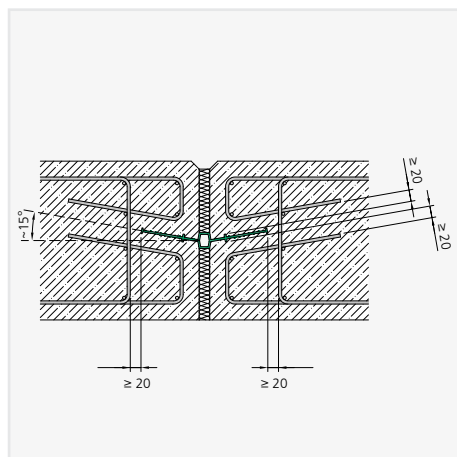
FUNCTIONAL AREAS

Joint tapes are divided in terms of their function into sealing elements and expansion elements.

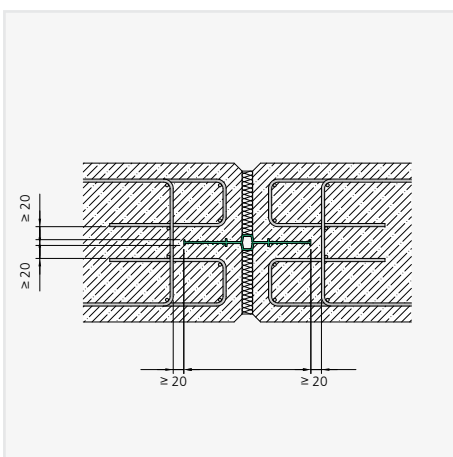


EDGE CLEARANCES

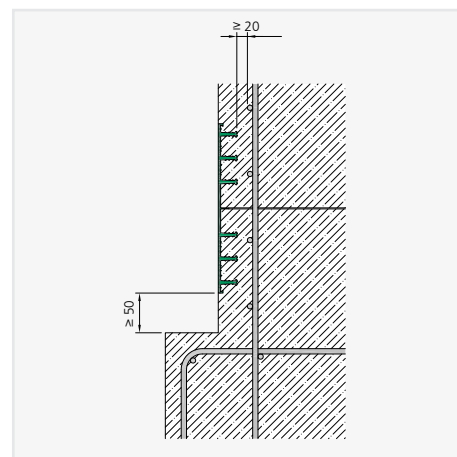
- Distance from edge to static reinforcement ≥ 20 mm
- Distance from edge to grooves and borders ≥ 50 mm



Internal expansion joint tape in a base plate, bent at an angle of 15° – distance to static reinforcement.



Internal expansion joint tape in a wall – distance to static reinforcement.

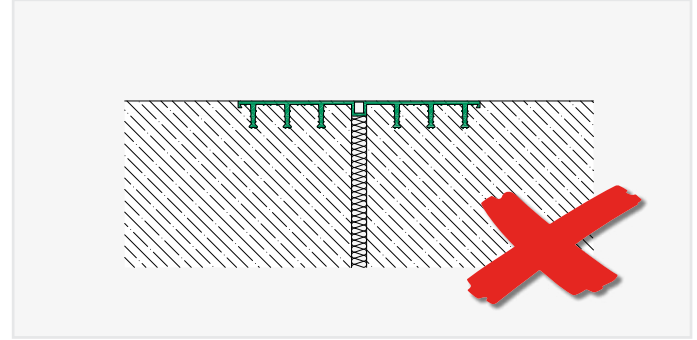
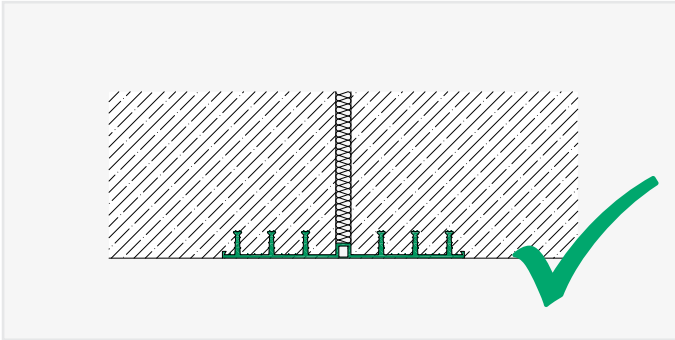


External construction joint tape in a wall – distance to offset ≥ 50 mm.

INFORMATION FOR CONSTRUCTION

ARRANGEMENT OF EXTERNAL JOINT TAPES

- In general, external joint tapes should be placed on the side of the component that faces the pressing water.
- In floor-floor joints, external joint tapes should always be placed on the underside. Concreting on the underside is not permitted.

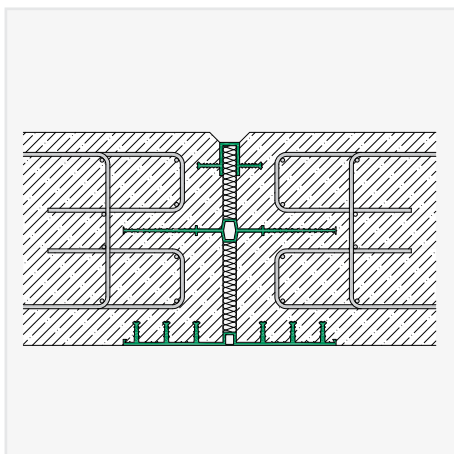


CHANGING THE DIRECTION OF THE JOINT PROFILE

As a rule, formed parts should be used for forming corners (see p. 39). Alternatively, they can be formed with a redirection, taking into account the following bending radii.

Type of joint tape			Bending radius
Internal	Construction joint tapes (type A)		$\geq 15 \text{ cm}$
	Expansion joint tapes (type D)		$\geq 25 \text{ cm}$
External	Construction joint tapes (type AA)		$\geq 50 \times \text{sealing anchor height}$
	Expansion joint tapes (type DA)		$\geq 50 \times \text{sealing anchor height}$
Joint closing tapes (type FA)			$\geq 30 \times \text{sealing anchor height}$ (bend around the x-axis)
			$\geq 30 \times \text{profile width}$ (bend around the y-axis)

PROTECTING THE JOINT



Joint filler plates are used to protect the movement joint and the joint tape centre hose during concreting. The joint is protected against contamination by the joint closing tape.

AVAILABLE JOINT TAPES

INTERNAL JOINT TAPES IN ACCORDANCE WITH DIN

p [bar]	p [m]	Resulting deformation v_r [mm]								
		0	0	5	10	15	20	25	30	
0.000	0.00	A240 DIN	D240 DIN	D240 DIN	D240 DIN	D240 DIN	D240 DIN	D320 DIN	D500 DIN	
0.100	1.00	A240 DIN	D240 DIN	D240 DIN	D240 DIN	D240 DIN	D320 DIN	D500 DIN		
0.200	2.00	A240 DIN	D240 DIN	D240 DIN	D240 DIN	D240 DIN	D320 DIN	D500 DIN		
0.300	3.00	A240 DIN	D240 DIN	D240 DIN	D240 DIN	D320 DIN	D320 DIN	D500 DIN		
0.400	4.00	A320 DIN	D320 DIN	D320 DIN	D320 DIN	D320 DIN	D320 DIN	D500 DIN		
0.500	5.00	A320 DIN	D320 DIN	D320 DIN	D320 DIN	D320 DIN	D320 DIN			
0.600	6.00	A320 DIN	D320 DIN	D320 DIN	D320 DIN	D320 DIN	D500 DIN			
0.700	7.00	A320 DIN	D320 DIN	D320 DIN	D320 DIN	D320 DIN	D500 DIN			
0.800	8.00	A320 DIN	D320 DIN	D320 DIN	D320 DIN	D320 DIN	D500 DIN			
0.900	9.00	A320 DIN	D320 DIN	D320 DIN	D320 DIN	D320 DIN				
1.000	10.00	A320 DIN	D320 DIN	D320 DIN	D320 DIN	D320 DIN				
1.100	11.00	A500 DIN	D500 DIN	D500 DIN	D500 DIN	D500 DIN				
1.200	12.00	A500 DIN	D500 DIN	D500 DIN	D500 DIN	D500 DIN				

EXTERNAL JOINT TAPES IN ACCORDANCE WITH DIN

p [bar]	p [m]	v_r [mm]								
		0	0	5	10	15	20	25	30	35
0,000	0,00	AA240/20 DIN	DA240/20 DIN	DA240/20 DIN	DA240/20 DIN	DA240/20 DIN	DA240/20 DIN	DA240/35 DIN	DA320/35 DIN	DA500/35 DIN
0,100	1,00	AA240/35 DIN	DA240/35 DIN	DA240/35 DIN	DA240/35 DIN	DA240/35 DIN	DA240/35 DIN	DA320/25 DIN	DA500/35 DIN	
0,200	2,00	AA240/35 DIN	DA240/35 DIN	DA240/35 DIN	DA240/35 DIN	DA240/35 DIN	DA240/35 DIN	DA320/35 DIN	DA500/35 DIN	
0,300	3,00	AA320/25 DIN	DA320/25 DIN	DA320/25 DIN	DA320/25 DIN	DA320/25 DIN	DA320/25 DIN	DA320/35 DIN	DA500/35 DIN	
0,400	4,00	AA320/35 DIN	DA320/35 DIN	DA320/35 DIN	DA320/35 DIN	DA320/35 DIN	DA320/35 DIN	DA500/35 DIN		
0,500	5,00	AA320/35 DIN	DA320/35 DIN	DA320/35 DIN	DA320/35 DIN	DA320/35 DIN	DA320/35 DIN	DA500/35 DIN		
0,600	6,00	AA320/35 DIN	DA320/35 DIN	DA320/35 DIN	DA320/35 DIN	DA320/35 DIN	DA320/35 DIN	DA500/35 DIN		
0,700	7,00	AA320/35 DIN	DA320/35 DIN	DA320/35 DIN	DA320/35 DIN	DA320/35 DIN	DA320/35 DIN			
0,800	8,00	AA500/35 DIN	DA500/35 DIN	DA500/35 DIN	DA500/35 DIN	DA500/35 DIN	DA500/35 DIN			
0,900	9,00	AA500/35 DIN	DA500/35 DIN	DA500/35 DIN	DA500/35 DIN	DA500/35 DIN	DA500/35 DIN			
1,000	10,00	AA500/35 DIN	DA500/35 DIN	DA500/35 DIN	DA500/35 DIN	DA500/35 DIN	DA500/35 DIN			

JOINT CLOSING TAPES IN ACCORDANCE WITH DIN

p [bar]	p [m]	v_r [mm]								
		0	5	10	15	20	25	30	35	40
0.000	0.00	FA70/40 DIN	FA70/40 DIN	FA70/40 DIN	FA70/40 DIN	FA70/40 DIN	FA70/40 DIN	FA70/40 DIN	FA70/40 DIN	FA70/40 DIN
0.100	1.00	FA90/20 DIN	FA90/20 DIN	FA90/20 DIN	FA90/20 DIN	FA90/20 DIN				
0.200	2.00	FA130/20 DIN	FA130/20 DIN	FA130/20 DIN	FA130/20 DIN	FA130/20 DIN				
0.300	3.00	FA130/20 DIN	FA130/20 DIN	FA130/20 DIN	FA130/20 DIN	FA130/20 DIN				

AVAILABLE JOINT TAPES

INTERNAL JOINT TAPES IN ACCORDANCE WITH COMPANY STANDARD

p [bar]	p [m]	v _r [mm]								
		0	0	5	10	15	20	25	30	
0,000	0,00	A100	D150	D150	D150	D190	D240	D320	D500	
0,010	0,10	A100	D150	D150	D150	D190	D320	D500		
0,100	1,00	A150	D150	D150	D150	D190	D320	D500		
0,140	1,40	A190	D190	D190	D190	D240	D320	D500		
0,255	2,55	A240	D240	D240	D240	D320	D320	D500		
0,850	8,50	A320	D320	D320	D320	D320				
1,020	10,20	A500	D500	D500	D500	D500				

EXTERNAL JOINT TAPES IN ACCORDANCE WITH COMPANY STANDARD

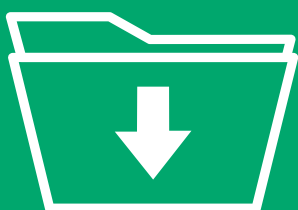
p [bar]	p [m]	v _r [mm]								
		0	0	5	10	15	20	25	30	35
0,000	0,00	AA190/17	DA190/17	DA190/17	DA190/17	DA190/17	DA240/20	DA240/35	DA320/35	DA500/35
0,140	1,40	AA190/17	DA190/17	DA240/35	DA240/35	DA240/35	DA240/35	DA320/35	DA500/35	
0,150	1,50	AA240/20	DA240/20	DA240/35	DA240/35	DA240/35	DA240/35	DA320/35	DA500/35	
0,170	1,70	AA240/35	DA240/35	DA240/35	DA240/35	DA240/35	DA240/35	DA320/35	DA500/35	
0,200	2,00	AA320/20	DA320/20	DA320/25	DA320/25	DA320/25	DA320/25	DA320/35	DA500/35	
0,255	2,55	AA320/25	DA320/25	DA320/25	DA320/25	DA320/25	DA320/25	DA320/35	DA500/35	
0,595	5,95	AA320/35	DA320/35	DA320/35	DA320/35	DA320/35	DA320/35			
0,850	8,50	AA500/35	DA500/35	DA500/35	DA500/35	DA500/35	DA500/35			

JOINT CLOSING TAPES IN ACCORDANCE WITH COMPANY STANDARD

p [bar]	p [m]	v _r [mm]								
		0	5	10	15	20	25	30	35	40
0,000	0,00	FA50/20	FA50/20	FA50/20	FA50/20	FA50/20				
0,000	0,00	FA50/30	FA50/30	FA50/30	FA50/30	FA50/30	FA50/30	FA50/30		
0,000	0,00	FA70/40	FA70/40	FA70/40	FA70/40	FA70/40	FA70/40	FA70/40	FA70/40	FA70/40
0,085	0,85	FA90/20	FA90/20	FA90/20	FA90/20	FA90/20				
0,085	0,85	FA95/30	FA95/30	FA95/30	FA95/30	FA95/30				
0,255	2,55	FA130/20	FA130/20	FA130/20	FA130/20	FA130/20				

FORWARD CONSTRUCTING SERVICE: YOU CAN COUNT ON US.

You can rely on our excellent service: We accompany you through every phase of the project – either over the phone, online or in person, directly at your site. As a true partner, we place special value on offering our customers added value – take a look at our comprehensive range of services and see for yourself.



READY TO GO: OUR TENDER DOCUMENTS.

Our tender document templates can be quickly and easily embedded in your tender program, e.g. with the tender managers at www.ausschreiben.de or www.heinze.de.



EVERYTHING ONLINE: OUR DOWNLOAD AREA.

You can download all brochures, test reports, approvals, our current price list and much more from our website.



FOR PLANNING AND APPLICATION: OUR VIDEOS AND SOFTWARE.

In addition to our installation and reference films, we also provide you with various software solutions, such as calculation programs, free of charge on our website.



HOTLINES

Personalised support when planning and executing projects:

Answers to any questions you have about delivery times, shipping, sales prices and the entire process of fulfilling your orders:

APPLICATION TECHNOLOGY

Hotline: +49 7742 9215-300
E-mail: technik@h-bau.de

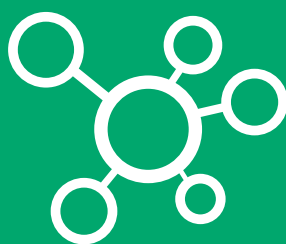
SALES (GERMANY)

Hotline: +49 7742 9215-200
E-mail: vertrieb@h-bau.de



**INDIVIDUAL:
OUR SPECIAL CONSTRUCTIONS.**

Unable to find what you're looking for in our wide range of products and services? Our engineers and applications specialists can develop tailor-made product solutions for you on request.



**FROM PERSON TO PERSON:
OUR NETWORK OF CONSULTANTS.**

Get the answers to your technical questions face-to-face at your site: Our consultant engineers will be happy to come to your site.



**THE LATEST NEWS:
OUR NEWSLETTER.**

Subscribe to our newsletter and you will always be kept up-to-date: Find out more about our product innovations, trade shows and current trends in the sector.

Answers to any questions you have about delivery times, shipping, sales prices and the entire process of fulfilling your orders at an international level:

SALES (INTERNATIONAL)

Hotline: +49 7742 9215-250
E-mail: export@h-bau.de

We will be happy to send you our technical brochures and planning documents:

HEAD OFFICE

Hotline: +49 7742 9215-0
E-mail: info@h-bau.de

FORWARD CONSTRUCTING CONTACTS: WHEREVER YOU ARE, YOU CAN COUNT ON US.

Thanks to our global sales network, expert specialist advisors are available to you on a national level and on an international level. If there is no contact partner listed for your country, contact our Head Office in Klettgau – we will be happy to provide you with further assistance.



HEAD OFFICE

H-BAU TECHNIK GMBH

Am Güterbahnhof 20
79771 Klettgau, Germany
Phone: +49 (0) 7742 9215-0
Fax: +49 (0) 7742 9215-129
E-mail: info@h-bau.de
www.h-bau.com

PRODUCTION: NORTH-EAST

Brandenburger Allee 30
14641 Nauen OT Wachow, Germany
Phone: +49 (0) 33239 775-0
Fax: +49 (0) 33239 775-90
E-mail: info.berlin@h-bau.de

PRODUCTION CHEMNITZ

Beyerstraße 21
09113 Chemnitz, Germany
Phone: +49 (0) 371 40041-0
Fax: +49 (0) 371 40041-99
E-mail: info.chemnitz@h-bau.de

J&P-BAUTECHNIK VERTRIEB

Our products are sold in Germany exclusively through the following subsidiaries of J&P-Bautechnik Vertriebs GmbH:

ESSEN

J&P-Bautechnik Vertriebs GmbH
Carnaperhof 7
45329 Essen, Germany
Phone: +49 (0) 201 289660
Fax: +49 (0) 201 2896620
E-mail: essen@jp-bautechnik.de

NUREMBERG

J&P-Bautechnik Vertriebs GmbH
Lechstraße 21
90451 Nuremberg, Germany
Phone: +49 (0) 911 6427808
Fax: +49 (0) 911 6428472
E-mail: nuernberg@jp-bautechnik.de

MANNHEIM

J&P-Bautechnik Vertriebs GmbH
Markircher Straße 14
68229 Mannheim, Germany
Phone: +49 (0) 621 4840340
Fax: +49 (0) 621 4840344
E-mail: mannheim@jp-bautechnik.de

You are also welcome to contact our Head Office in Klettgau directly. You can find more information about J&P-Bautechnik Vertriebs GmbH at www.jp-bautechnik.de

GLOBAL PARTNERS

SWITZERLAND

JORDAHL H-BAU AG
 Wasterkingerweg 2
 8193 Eglisau, Switzerland
 Phone: +41 (0) 44 8071717
 Fax: +41 (0) 44 8071718
 E-mail: info@jordahl-hbau.ch
 www.jordahl-hbau.ch

AUSTRIA

JORDAHL H-BAU
 Österreich GmbH
 Straubingstrasse 19
 4030 Linz, Austria
 Phone: +43 (0) 732 321900
 Fax: +43 (0) 732 321900-99
 E-mail: office@jordahl-hbau.at
 www.jordahl-hbau.at

FRANCE

JORDAHL H-BAU France SARL
 Siège
 7 rue des Vallières Sud
 25220 Chalezeule, France
 Phone: +33 (0) 381 250465
 Fax: +33 (0) 381 250796
 E-mail: info@jordahl-hbau.fr
 www.jordahl-hbau.fr

NETHERLANDS

JORDAHL H-BAU
 Bezoekadres
 Jan Tinbergenstraat 221
 7559 SP Hengelo, Netherlands
 Phone: +31 (0) 74 2505737
 Fax: +31 (0) 74 2503321
 E-mail: info@jordahl-hbau.nl
 www.jordahl-hbau.nl

DENMARK

Jordahl & Pfeifer Byggeteknik A/S
 Risgårdevej 66
 9640 Farsø, Denmark
 Phone: +45 (0) 98 631900
 Phone: +45 (0) 98 631939
 E-mail: info@jordahl-pfeifer.dk
 www.jordahl-pfeifer.dk

HUNGARY

PFEIFER Garant Kft.
 Gyömrői út 128
 1103 Budapest, Hungary
 Phone: +36 (0) 1 2601014
 Fax: +36 (0) 1 2620927
 E-mail: info@pfeifer-garant.hu
 www.pfeifer-garant.hu

UNITED KINGDOM

J&P Building Systems Ltd.
 Unit 5
 Thame Forty
 Jane Morbey Road
 THAME, OXON OX9 3RR, UK
 Phone: +44 (0) 1844 215200
 Fax: +44 (0) 1844 263257
 enquiries@jandpbuildingsystems.com
 www.jp-uk.com

UKRAINE

JORDAHL & PFEIFER
 Technika Budowlana
 ul. Pawlyka 17a
 76-018 Ivano-Frankivsk, Ukraine
 Phone Reg. East: +380 (0) 67442 8578
 Phone Reg. West: +380 (0) 67442 8579
 E-mail: info@j-p.com.ua

CZECH REPUBLIC

JORDAHL & PFEIFER
 Stavební technika s.r.o.
 Bavorská 856/14
 15500 Prague 5, Czech Republic
 Phone: +420 (0) 272 700701
 Fax: +420 (0) 272 700704
 E-mail: info@jpcz.cz
 www.jpcz.cz

SPAIN

PFEIFER Cables y Equipos de Elevación, S.L.
 Avda.de Los Pirineos, 25 – Nave 20
 San Sebastian de los Reyes
 28700 Madrid, Spain
 Phone: +34 (0) 91 659 3185
 Fax: +34 (0) 91 659 3139
 E-mail: p-es@pfeifer.de
 www.pfeifer.es

SINGAPORE

J&P Building Systems Pte Ltd.
 No. 48 Toh Guan Road East
 #08-104 Enterprise Hub
 SINGAPORE 608586
 Phone: +65 (0) 6569 6131
 Fax: +65 (0) 6569 5286
 E-mail: info@jnp.com.sg
 www.jnp.com.sg

ROMANIA

S.C. JORDAHL & PFEIFER TEHNICĂ DE
 ANCORARE S.R.L
 Str. Malului Nr. 7, et.1
 550197 Sibiu jud. Sibiu, Romania
 Phone: +40 (0) 269 246098
 Fax: +40 (0) 269 246099
 E-mail: info@jordahl-pfeifer.ro
 www.jordahl-pfeifer.ro

POLAND

JORDAHL & PFEIFER TECHNIKA
 BUDOWLANA SP. Z O. O.
 ul. Wrocławska 68
 55-330 Krępiec k/Wrocławia, Poland
 Phone: +48 (0) 71 3968264
 Fax: +48 (0) 71 3968105
 E-mail: biuro@jordahl-pfeifer.pl
 www.j-p.pl

Disclaimer

1. This work and all parts thereof are protected by copyright law. Use of this work is not be permitted without the agreement of H-BAU Technik GmbH.
 2. All texts and diagrams in this printed product have been developed and compiled with the utmost care and are designed to provide preliminary information. Nevertheless, errors cannot be completely excluded. The publisher shall assume no liability, irrespective of the legal grounds for this. Previous documents shall become invalid with the issue of this document.

Forward Constructing.

H-BAU TECHNIK GMBH

Am Güterbahnhof 20

79771 Klettgau, Germany

Phone: +49 (0) 7742 9215-0

Fax: +49 (0) 7742 9215-129

E-mail: info@h-bau.de