

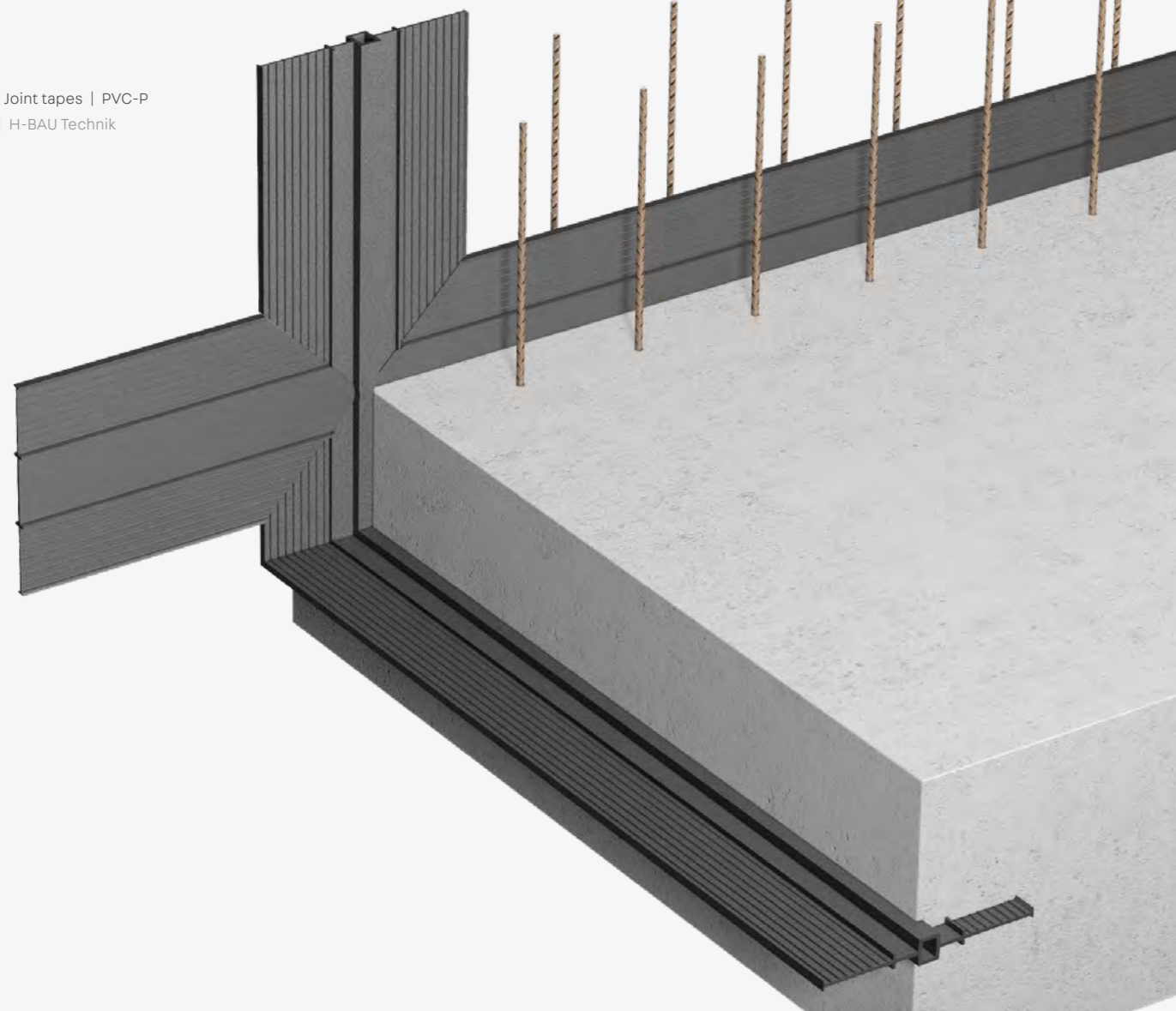
KUNEX[®] Joint tapes

Technical information



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KUNEX® PVC-P joint tapes

Technical information

Materials

PVC-P raw material in the following quality classes:

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

Compatibility with bitumen

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

PVC-P in line with DIN 18541

Joint tapes made of soft PVC in the DIN quality class are ideal for use in structures subject to very high loads. 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 elongation at break and tensile strength.

PVC-P in line with factory standard

Joint tapes made of soft PVC in the factory standard quality class are ideal for use in concrete structures subject to normal loads. The advantages of this material quality class are good workability, welding properties, resistance and optimised value for money.

Material parameters

| Properties | DIN 18541 | Factory standard |
|---|---|---|
| Tensile strength in line with DIN EN ISO 527 | ≥ 10 N / mm ² | ≥ 9 N / mm ² |
| Elongation at break in line with DIN EN ISO 527 | ≥ 350% | ≥ 230% |
| Hardness according to Shore A DIN 53505 | 67 ± 5 | 67 ± 5 |
| Reaction to fire in line with DIN EN 13501 | Normal flammability (building material class E) | Normal flammability (building material class E) |
| Temperature resistance | -20 to +60°C | -20 to +60°C |

KUNEX® Joint tapes

For sealing construction joints and expansion joints in concrete

The product

KUNEX® interior or exterior thermoplastic joint tapes are used to seal construction and expansion joints in concrete. The tape profile is designed to extend the circulation path of standing water in the joint, thereby sealing the joint. Thermoplastic joint tapes can be welded together to ensure water-tightness.

Application

KUNEX® high-quality joint tapes are used in all horizontal or vertical construction and expansion joints to resist water under pressure, water not under pressure and 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 wall constructions

KUNEX® joint tapes are suitable for use in structures in accordance with the German watertight concrete guideline.



Benefits

- Joint tapes in line with DIN 18541
- Joint tapes in line with factory standard (with abP (German building code test certificate))
- Steel-reinforced joint tapes
- Joint tapes with eyelets
- Excellent welding properties

Transport and storage



Transportation

The joint tape must be loaded and unloaded carefully and secured during transportation. It must be examined for damage and completeness after delivery. At high outside temperatures, joint tapes must be transported without being subjected to any tension and then laid out 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. We recommend storing the tapes in a heated room before use to make installation and processing easier.

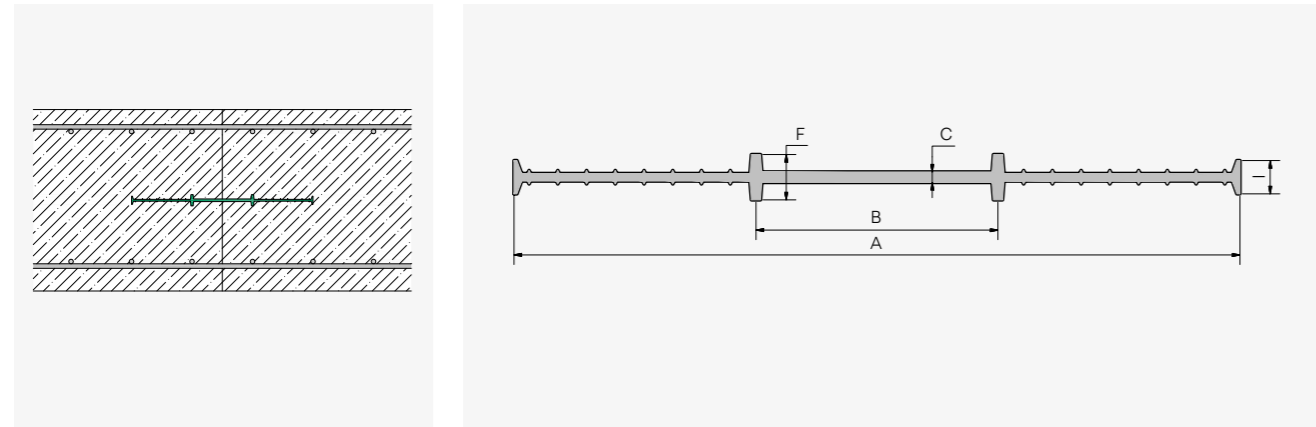


Storage in summer

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

KUNEX® construction joint tape, interior

Technical data



| Type DIN 18541 | Type Factory 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 be supplied with eyelets on one (o) or both sides (o2) on request. The eyelets are spaced 200 mm apart. The eyelets replace the joint tape clips that would otherwise be required to fix the joint tapes in place.

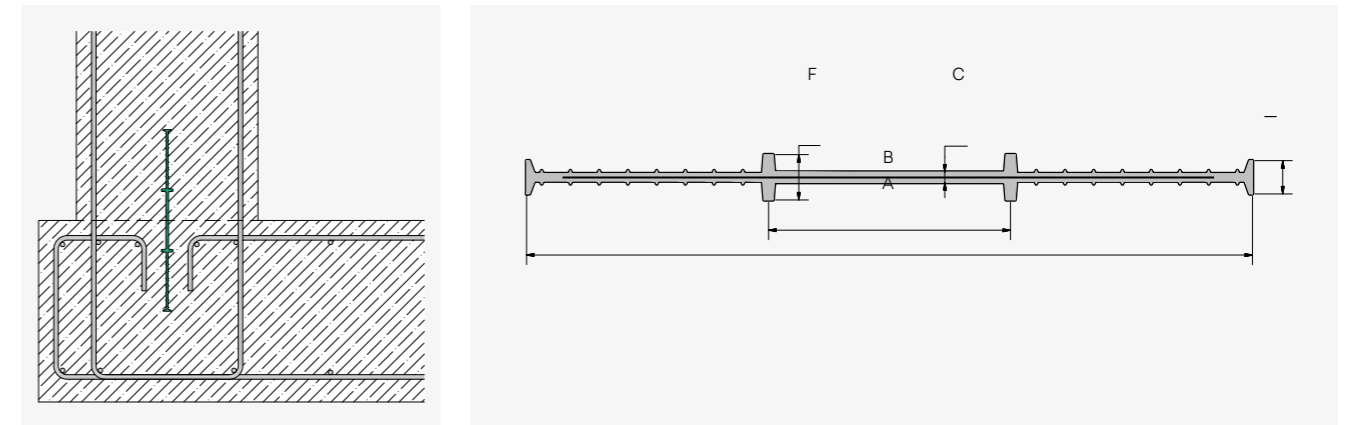


Example order KUNEX® construction joint tape, interior, A320 DIN

| Type | A | Standard |
|------|-----|----------|
| A | 320 | DIN |

KUNEX® Construction joint tape, interior, steel-reinforced

Technical data



| Type Factory standard | A mm | F mm | B 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 be supplied with eyelets on one (o) or both sides (o2) on request. The eyelets are spaced 200 mm apart. The eyelets replace the joint tape clips that would otherwise be required to fix the joint tapes in place.

Bar spacing

| | | | |
|--------------|---|----------------------------|--------------------------|
| 100 mm (S) | = | 10 × spring steel insert/m | (Type example: A190 S) |
| 125 mm (SL) | = | 8 × spring steel insert/m | (Type example: A190 SL) |
| 150 mm (SL7) | = | 7 × spring steel insert/m | (Type example: A190 SL7) |
| 175 mm (SL6) | = | 6 × spring steel insert/m | (Type example: A190 SL6) |
| 200 mm (SL5) | = | 5 × spring steel insert/m | (Type example: A190 SL5) |

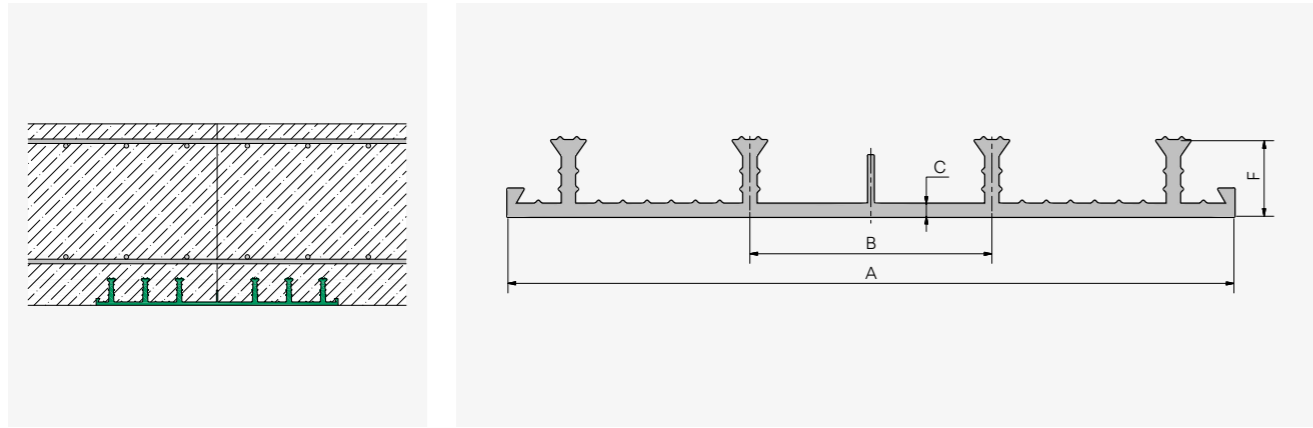


Example order KUNEX® construction joint tape steel-reinforced A320S


| Type | A | Bar spacing |
|------|-----|-------------|
| A | 320 | S |

KUNEX® Construction joint tape, exterior

Technical data



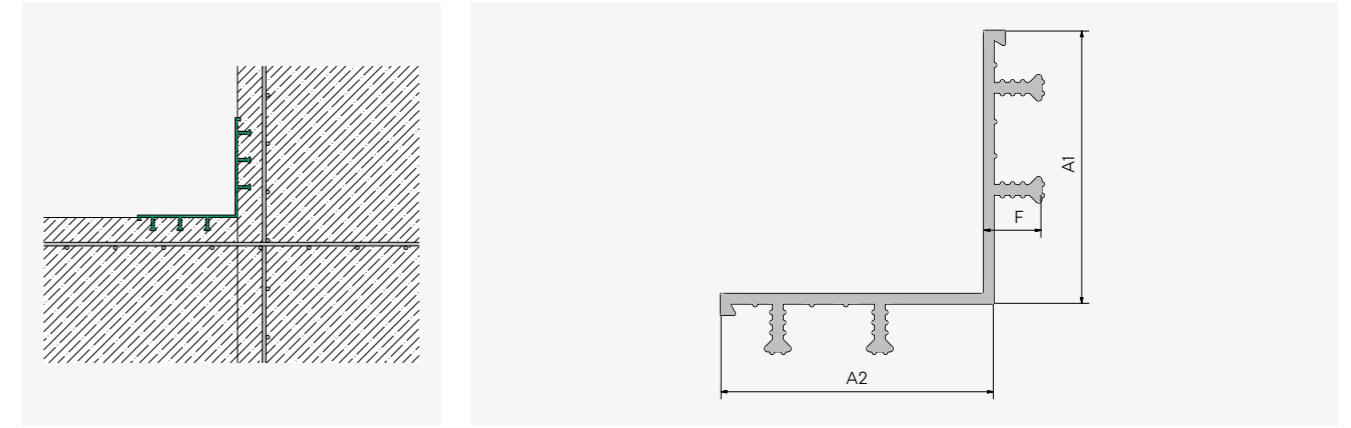
| Type DIN 18541 | Type Factory standard | A mm | F mm | B mm | C mm | No. of stop anchors |
|-------------------|--------------------------|---------|---------|---------|---------|------------------------|
| - | AA190/17 | 190 | 17 | 80 | 3.7 | 4 |
| AA240/20 DIN | AA240/20 | 240 | 20 | 80 | 4.0 | 4 |
| 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 |

 Example order KUNEX® construction joint tape, exterior, AA320/25 DIN


| Type | A | / | F | Standard |
|------|-----|---|----|----------|
| AA | 320 | / | 25 | DIN |

KUNEX® corner joint tape for construction joints

Technical data



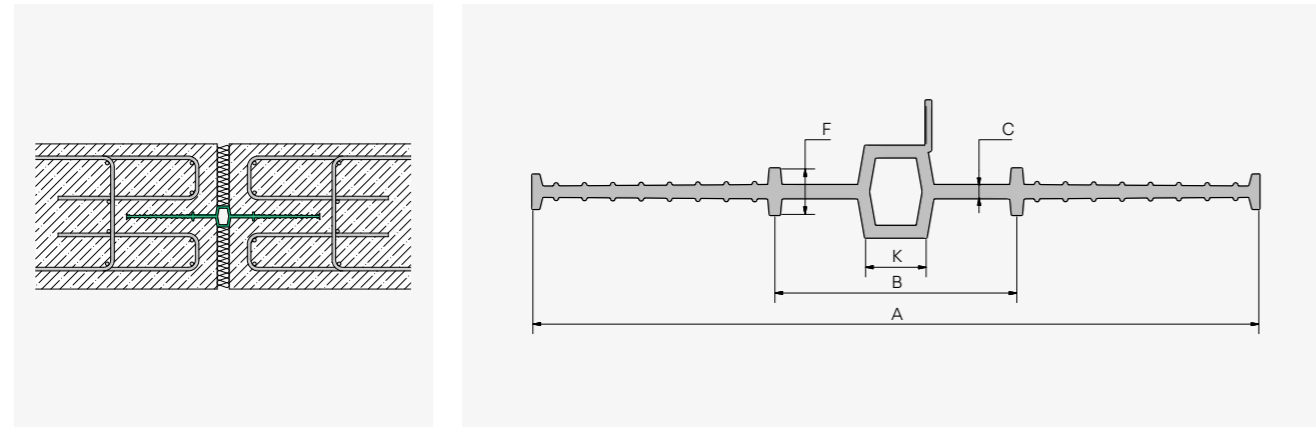
| Type DIN 18541-2 | Type Factory standard | A1 mm | A2 mm | F mm | No. of stop anchors |
|---------------------|--------------------------|----------|----------|---------|------------------------|
| AA120/120 EA DIN | AA120/120 EA | 120 | 120 | 25 | 4 |
| AA165/165 EA DIN | AA165/165 EA | 165 | 165 | 25 | 6 |

 Example order KUNEX® corner joint tape for construction joints AA120/120 EA

| Type | A1 | / | A2 | Construction | Standard |
|------|-----|---|-----|--------------|----------|
| AA | 120 | / | 120 | EA | - |

KUNEX® expansion joint tape, interior

Technical data



| Type DIN 18541 | Type Factory 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 be supplied with eyelets on one (o) or both sides (o2) on request. The eyelets are spaced 200 mm apart. The eyelets replace the joint tape clips that would otherwise be required to fix the joint tapes in place.

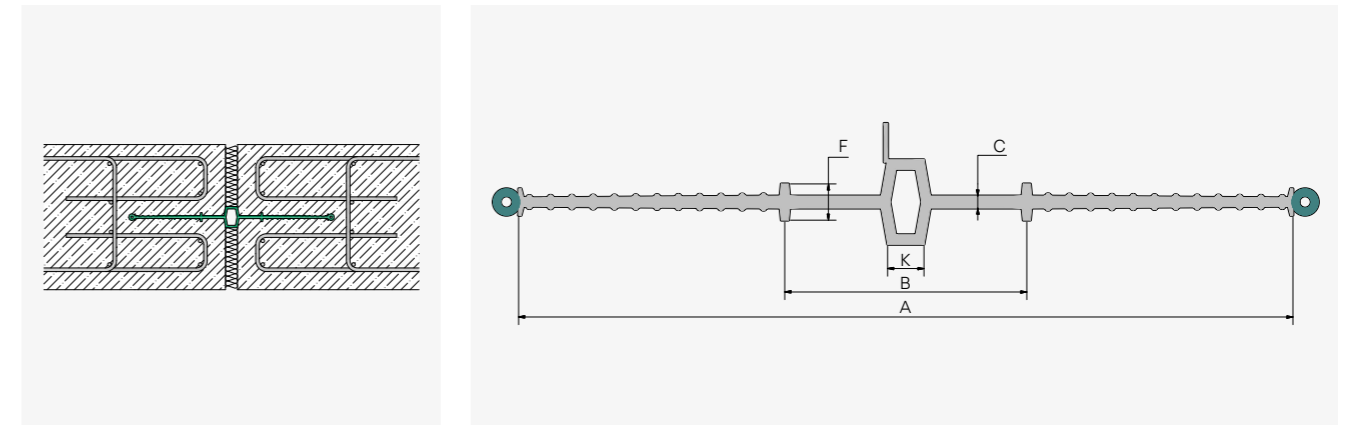


Example order KUNEX® expansion joint tape, interior, D320 DIN

| Type | A | Standard |
|------|-----|----------|
| D | 320 | DIN |

KUNEX® expansion joint tape, interior With injection hose

Technical data



| Type DIN 18541 | Type Factory 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: Outside 11 mm, inside 6 mm.

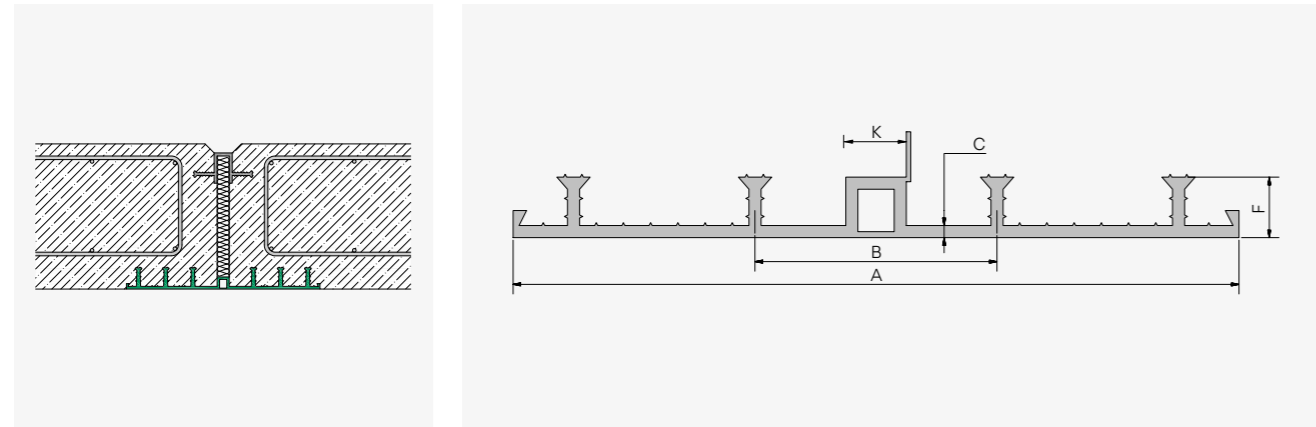


Example order KUNEX® expansion joint tape, interior, with injection hose D320 C11 DIN

| Type | A | Injection hose | Standard |
|------|-----|----------------|----------|
| D | 320 | C11 | DIN |


KUNEX® Expansion joint tape, exterior

Technical data



| Type DIN 18541 | Type Factory standard | A mm | K mm | F mm | B mm | C mm | No. of stop anchors |
|-------------------|--------------------------|---------|---------|---------|---------|---------|------------------------|
| - | 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 |

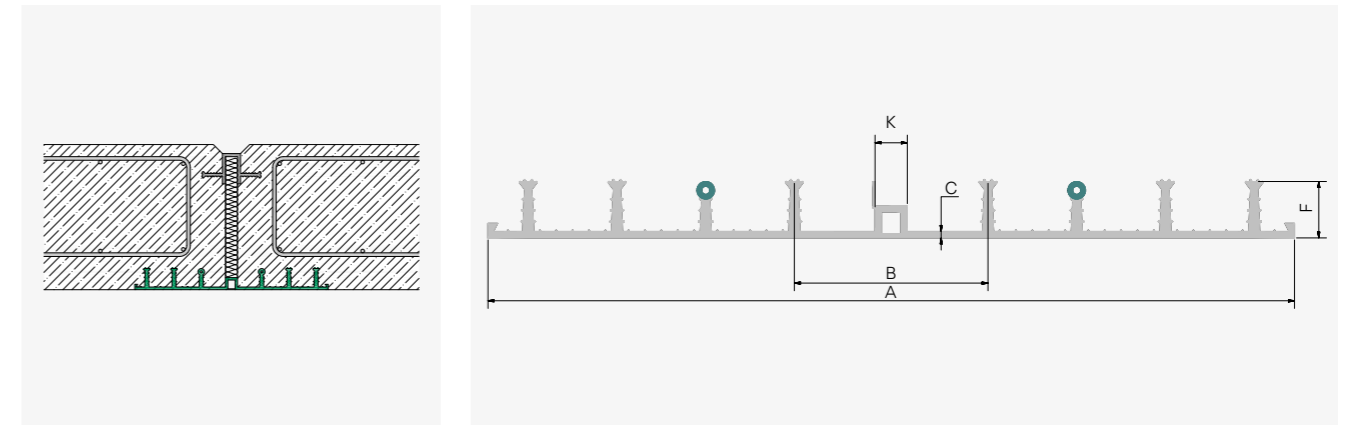
Joint tapes up to 320 mm wide can be supplied with eyelets on one (o1) or both sides (o2) on request. The eyelets are spaced 200 mm apart. The eyelets replace the joint tape clips that would otherwise be required to fix the joint tapes in place.

 **Example order** KUNEX® expansion joint tape, exterior, DA320/25 DIN

| Type | A | / | F | Standard |
|------|-----|---|----|----------|
| DA | 320 | / | 25 | DIN |


KUNEX® Expansion joint tape, exterior With injection hose

Technical data



| Type DIN 18541 | Type Factory standard | A mm | K mm | F mm | B mm | C mm | No. of stop anchors |
|-------------------|--------------------------|---------|---------|---------|---------|---------|------------------------|
| 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 |

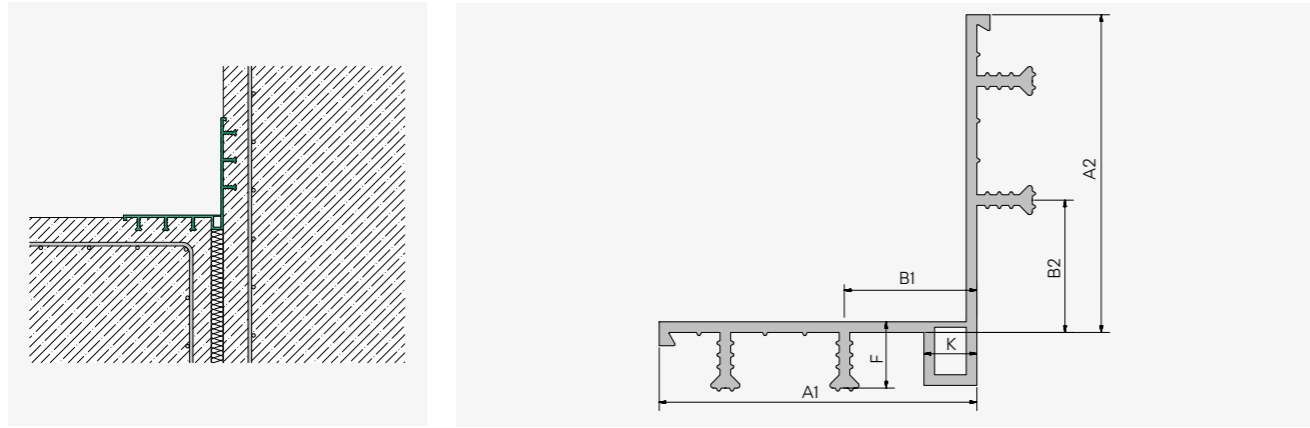
Injection hose dimensions: Outside 11 mm, inside 6 mm. The number and position of the injection hoses can be varied.

 **Example order** KUNEX® expansion joint tape, exterior, with injection hose DA320/25 C11 DIN

| Type | A | / | F | Injection hose | Standard |
|------|-----|---|----|----------------|----------|
| DA | 320 | / | 25 | C11 | DIN |

KUNEX® corner joint tape for expansion joints

Technical data



| Type DIN 18541-2 | Type Factory standard | A1 / A2 mm | K mm | F mm | B 1 / B2 mm | No. of stop anchors |
|---------------------|--------------------------|---------------|---------|---------|----------------|------------------------|
| 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 |

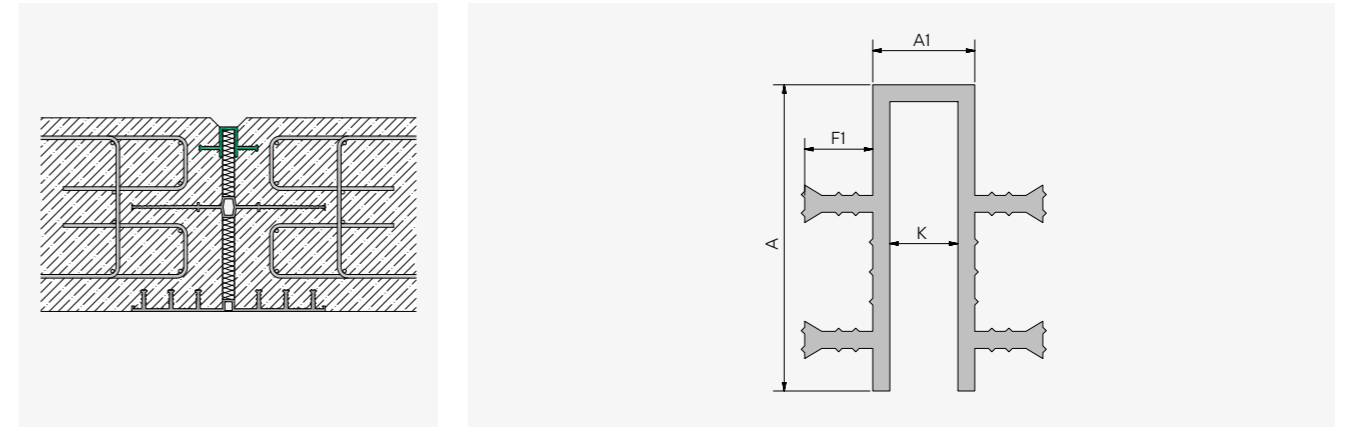


Example order KUNEX® corner joint tape for expansion joints DA 165/165 EA

| Type | A1 | / | A2 | Construction | Standard |
|------|-----|---|-----|--------------|----------|
| DA | 165 | / | 165 | EA | - |

KUNEX® joint end tape

Technical data



| Type DIN 18541 | Type Factory standard | A mm | F1 mm | B mm | K mm | No. of stop anchors |
|-------------------|--------------------------|---------|----------|---------|---------|------------------------|
| 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 tape in grey PVC-P for closing the surfaces of movement joints.

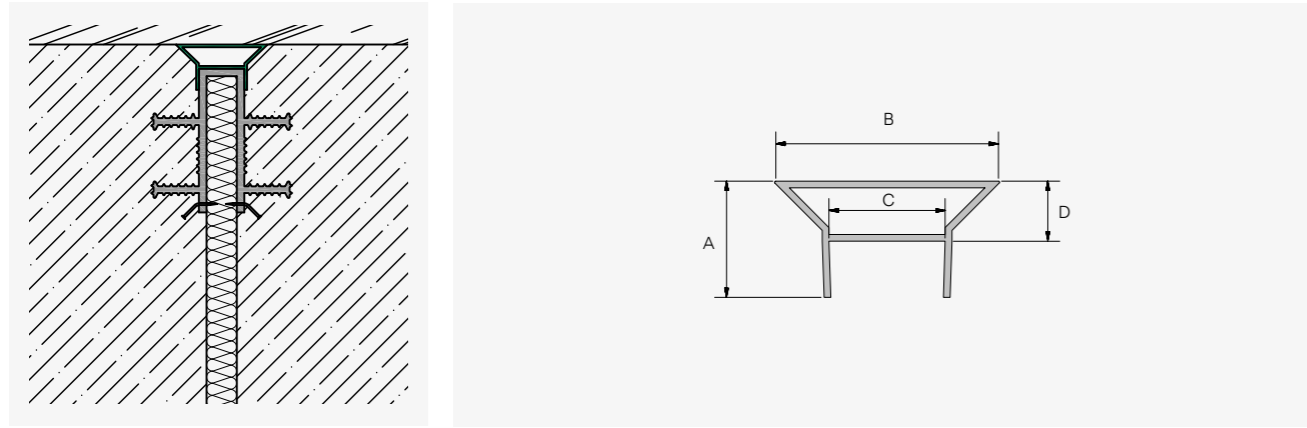


Example order KUNEX® joint end tape FA130/20 DIN

| Type | A | / | F1 | Standard |
|------|-----|---|----|----------|
| FA | 130 | / | 20 | DIN |

KUNEX® joint end strip

Technical information



| Type | A mm | B mm | C mm | D mm | Length m |
|---------|---------|---------|---------|---------|-------------|
| FL30/60 | 30 | 60 | 30 | 15 | 2.50 |

KUNEX® joint end strip made from hard PVC is a suitable assembly aid for joint end tapes.

Example order KUNEX® joint end strip FL30/60

| Type | A | / | B |
|------|----|---|----|
| FL | 30 | / | 60 |

KUNEX® TPE joint tapes

Technical information

Materials

TPE raw material in the following quality class:

- Factory standard compatible with bitumen (BV)

Compatibility with bitumen

Joint tapes correspond as standard to the quality class BV (compatible with bitumen)

TPE in line with factory 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 durability, flexibility at low temperatures, elongation at break and tensile strength). TPE joint tapes are PVC-free and completely recyclable. Their usability is governed by a German building code test certificate (abP), indicated by the **Ü compliance mark** and monitored accordingly.



Benefits

- Joint tapes in line with factory standard (with German building code test certificate (abP))
- Steel-reinforced joint tapes
- Joint tapes with eyelets
- Better properties than PVC
- PVC- and halogen- free
- Completely recyclable
- Excellent resistance (e.g. liquid manure, slurry, silage effluent) with inspection report

Stimmt diese Schreibweise?

Material parameters

| Properties | Factory standard |
|---|---|
| Tensile strength in line with DIN EN ISO 527 | ≥ 11 N / mm ² |
| Elongation at break in line with DIN EN ISO 527 | ≥ 500% |
| Hardness according to Shore A DIN 53505 | 74 ± 5 |
| Reaction to fire in line with DIN EN 13501 | Normal flammability (building material class E) |
| Temperature resistance | -40 to +80°C |

*NEW with German building code test certificate (abP)

Transport and storage



Transportation

The joint tape must be loaded and unloaded carefully and secured during transportation. It must be examined for damage and completeness after delivery. At high outside temperatures, joint tapes must be transported without being subjected to any tension and then laid out 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. We recommend storing the tapes in a heated room before use to make installation and processing easier.

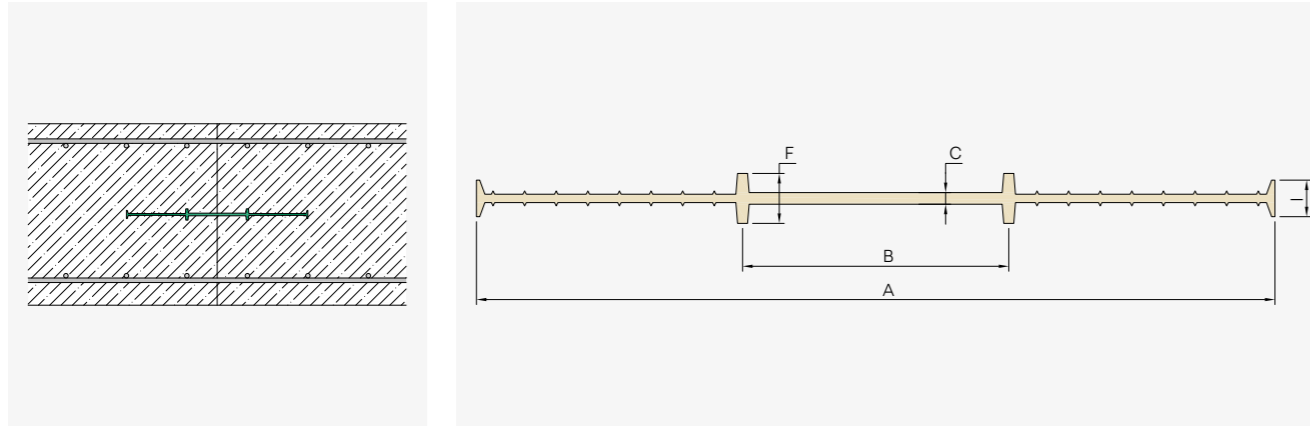


Storage in summer

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

KUNEX® TPE construction joint tape, interior

Technical data



| Type Factory standard | A mm | F mm | B mm | C mm | I mm |
|--------------------------|---------|---------|---------|---------|---------|
| A240 TPE | 240 | 14 | 80 | 3.5 | 11 |
| A320 TPE | 320 | 14 | 100 | 4.5 | 11 |
| A500 TPE | 500 | 20 | 150 | 6.0 | 11 |

Joint tapes up to 320 mm wide can be supplied with eyelets on one (o) or both sides (o2) on request. The eyelets are spaced 200 mm apart. The eyelets replace the joint tape clips that would otherwise be required to fix the joint tapes in place.

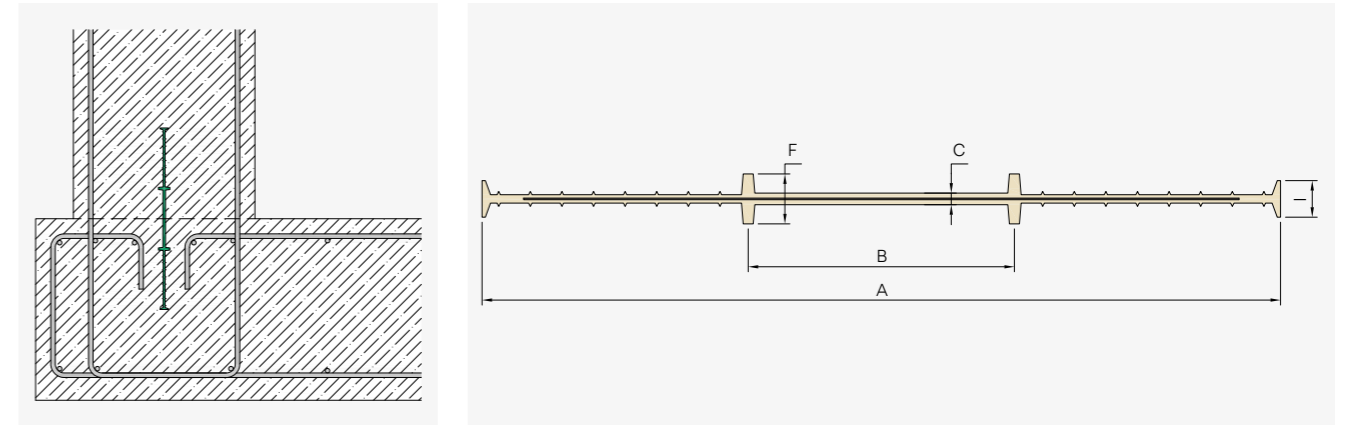


Example order KUNEX® Construction joint tape, interior, A320 TPE

| Type | A | Construction |
|------|-----|--------------|
| A | 320 | TPE |

KUNEX® TPE construction joint tape, interior, steel-reinforced

Technical data



| Type Factory standard | A mm | F mm | B mm | C mm | I mm |
|--------------------------|---------|---------|---------|---------|---------|
| A240SL7 TPE | 240 | 15 | 85 | 4.0 | 11 |
| A320SL7 TPE | 320 | 15 | 100 | 4.0 | 11 |

Joint tapes up to 320 mm wide can be supplied with eyelets on one (o) or both sides (o2) on request. The eyelets are spaced 200 mm apart. The eyelets replace the joint tape clips that would otherwise be required to fix the joint tapes in place.

Bar spacing

150 mm (SL7) = 7 × spring steel insert/m (Type example: A240 SL7)

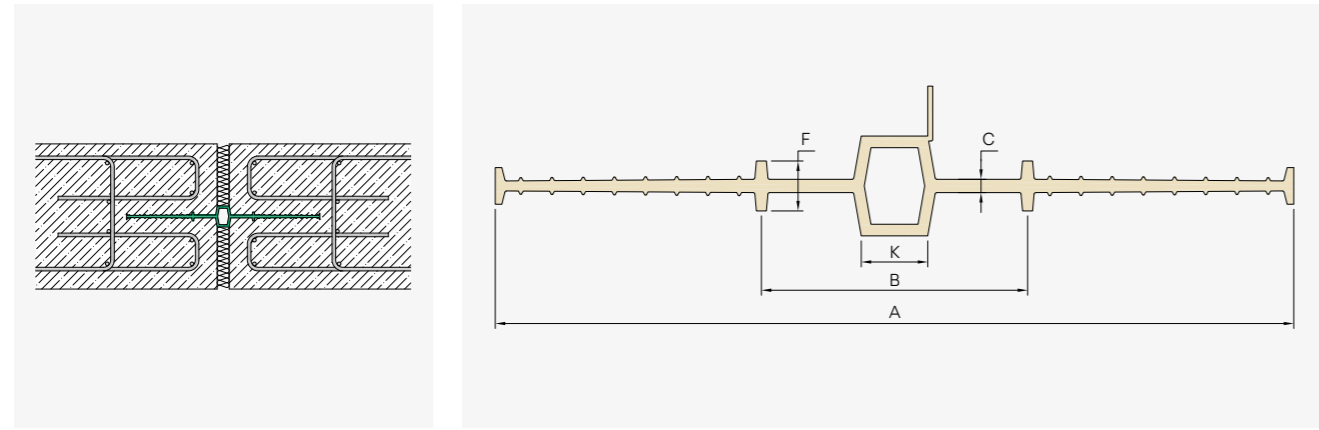


Example order KUNEX® Construction joint tape, interior, steel-reinforced A320SL7 TPE

| Type | A | Bar spacing | Construction |
|------|-----|-------------|--------------|
| A | 320 | SL7 | TPE |

KUNEX® TPE expansion joint tape, interior

Technical data



| Type | A | K | F | B | C |
|------------------|-----|----|----|-----|-----|
| Factory standard | mm | mm | mm | mm | mm |
| D240 TPE | 240 | 20 | 15 | 80 | 4.0 |
| D320 TPE | 320 | 20 | 15 | 100 | 5.0 |
| D500 TPE | 500 | 20 | 20 | 150 | 6.0 |

Joint tapes up to 320 mm wide can be supplied with eyelets on one (o) or both sides (o2) on request. The eyelets are spaced 200 mm apart. The eyelets replace the joint tape clips that would otherwise be required to fix the joint tapes in place.

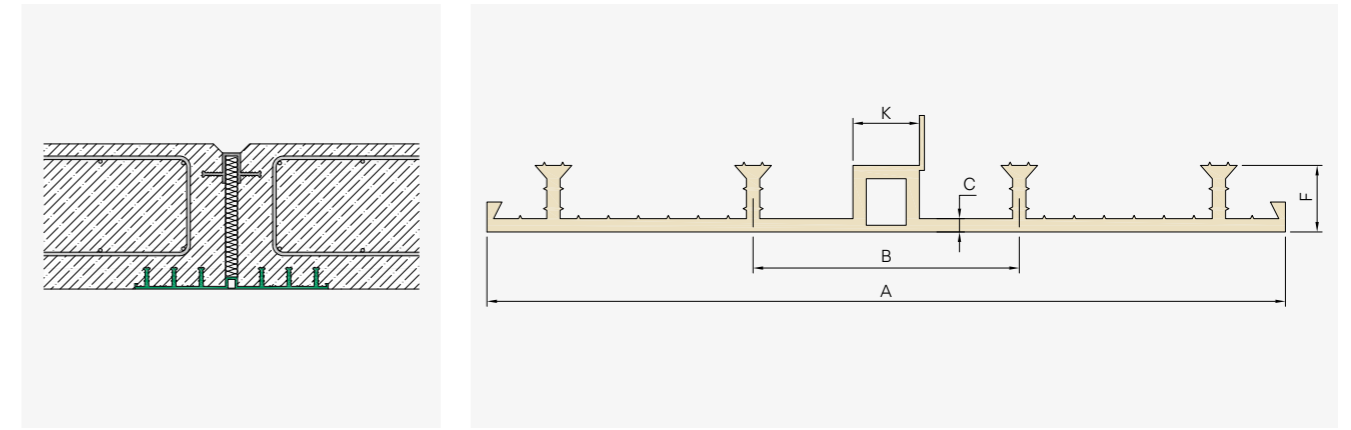


Example order KUNEX® expansion joint tape, interior, A320 TPE

| Type | A | Construction |
|------|-----|--------------|
| D | 320 | TPE |

KUNEX® TPE expansion joint tape, exterior

Technical data



| Type | A | K | F | B | C | No. of stop anchors |
|------------------|-----|----|----|-----|-----|---------------------|
| Factory standard | mm | mm | mm | mm | mm | |
| DA240/20 TPE | 240 | 20 | 20 | 80 | 4.0 | 4 |
| DA240/35 TPE | 240 | 20 | 35 | 84 | 4.0 | 4 |
| DA320/25 TPE | 320 | 20 | 25 | 100 | 4.0 | 6 |
| DA320/35 TPE | 320 | 20 | 35 | 100 | 4.0 | 6 |
| DA500/35 TPE | 500 | 20 | 35 | 120 | 4.0 | 8 |

Joint tapes up to 320 mm wide can be supplied with eyelets on one (o) or both sides (o2) on request. The eyelets are spaced 200 mm apart. The eyelets replace the joint tape clips that would otherwise be required to fix the joint tapes in place.

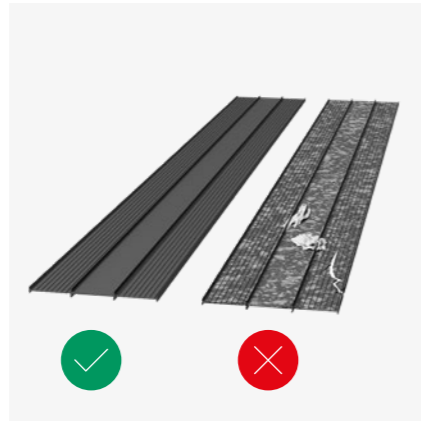


Example order KUNEX® expansion joint tape, exterior, DA320/25 TPE

| Type | A | / | F | Construction |
|------|-----|---|----|--------------|
| DA | 320 | / | 25 | TPE |

Installation instructions

Installation and processing



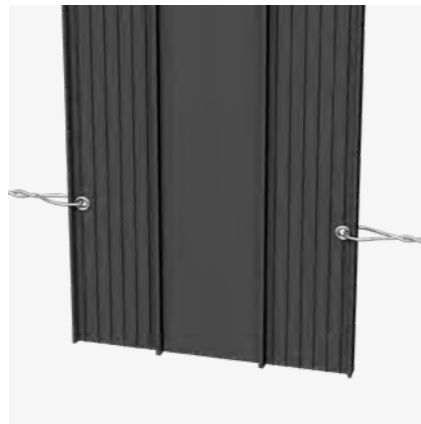
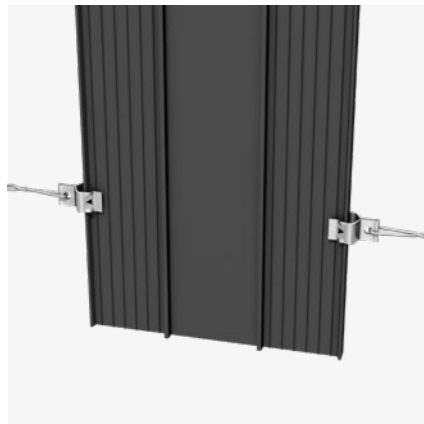
Before installation

Check the joint tapes

- for damage, contamination and deformation.
- Install without folds or distortions.
- Only process at material temperatures $> 0^{\circ}\text{C}$.
- Ensure that the concrete is free of ice when casting.

Attachment

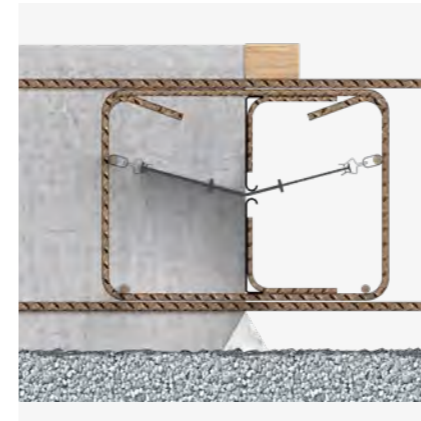
Fixed in place with eyes or clips. The maximum spacing must not exceed 250 mm.



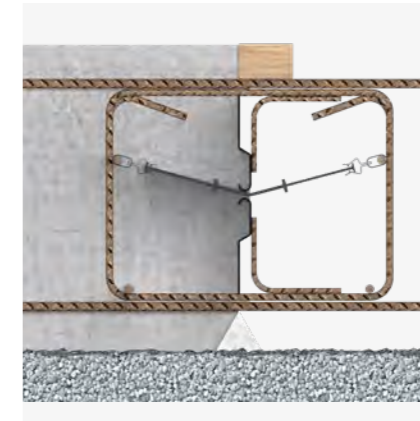
Installation instructions

Positional stability

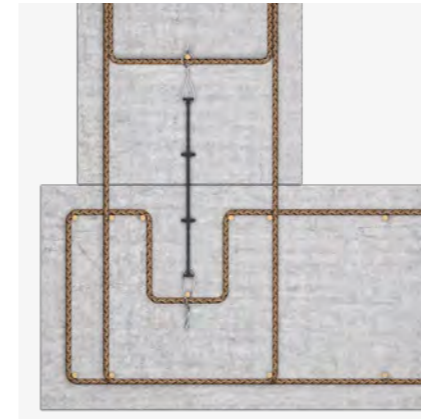
H2 hier entfernen?



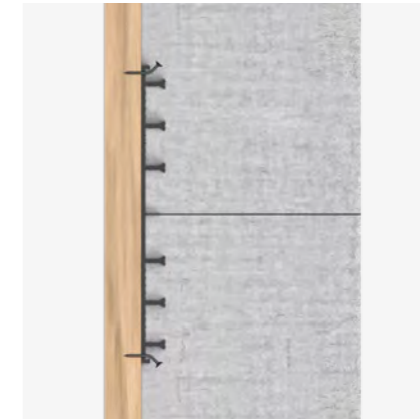
Floor/floor construction joint:
Shuttering with ABS R for rough joints.



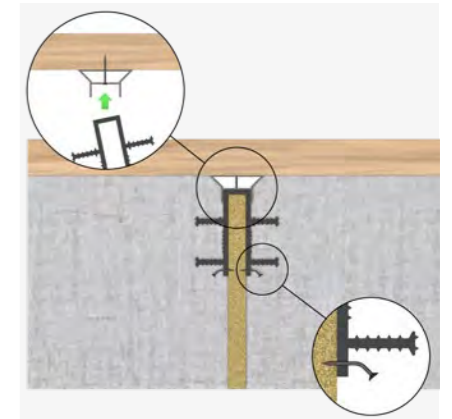
Floor/floor construction joint: Shuttering
with ABS V for interlocking joints.



Floor/wall construction joint:
Fixed to reinforcement.



Wall/wall construction joint:
Fixed to the formwork.



Wall/wall expansion joint: Fixed to the
joint end tape using the joint end strip
on the formwork.

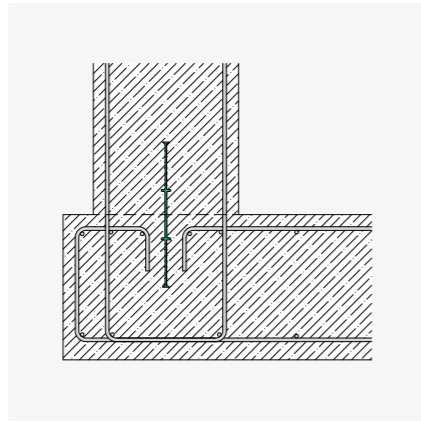
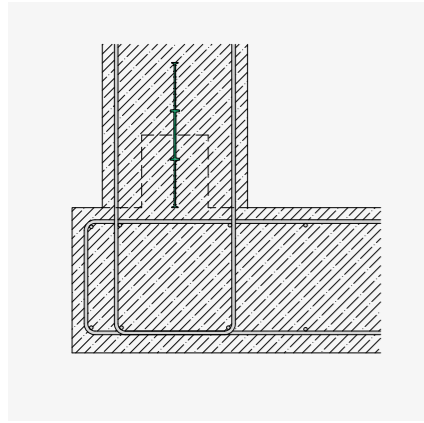


Bend horizontal joints into a V shape at an angle of -15° . Only use nails in the outer edge area of the joint tapes.

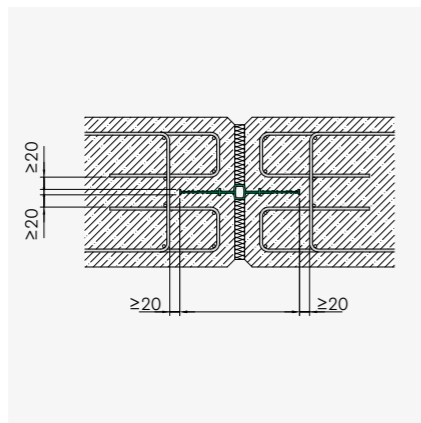
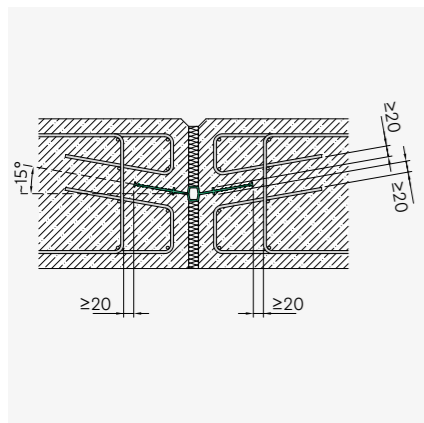
Installation instructions

H2 hier entfernen?

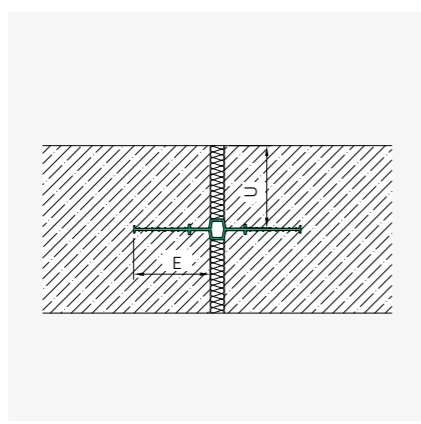
Positional stability



Floor slab/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.



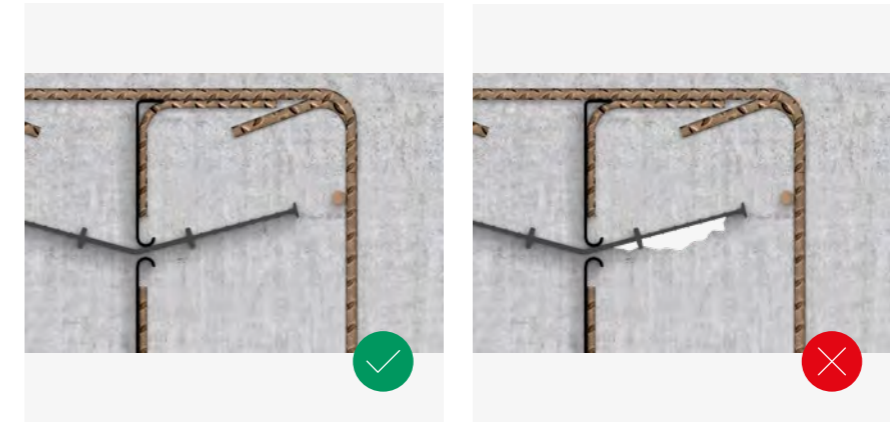
Concrete cover and anchoring depth
Interior joint tapes should roughly correspond to the component thickness and be positioned centrally in the component. The anchoring depth (E) must not exceed the cover (U).



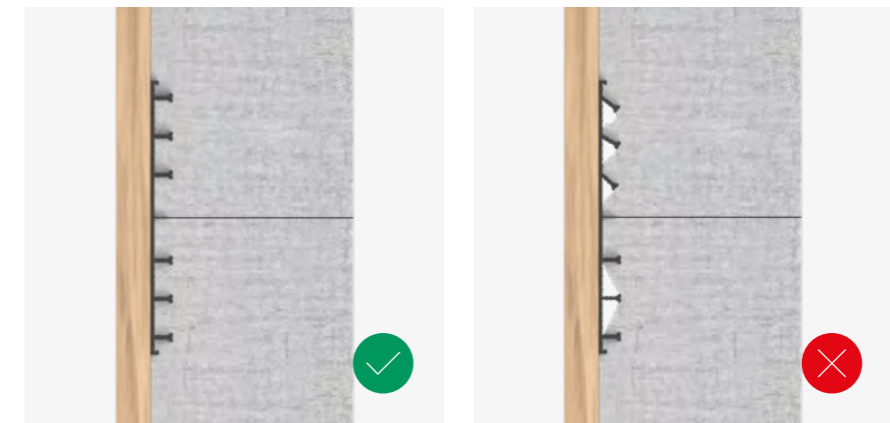
Minimum component thicknesses in accordance with the German watertight concrete guideline must be observed.

Installation instructions

H2 hier entfernen?



Casting

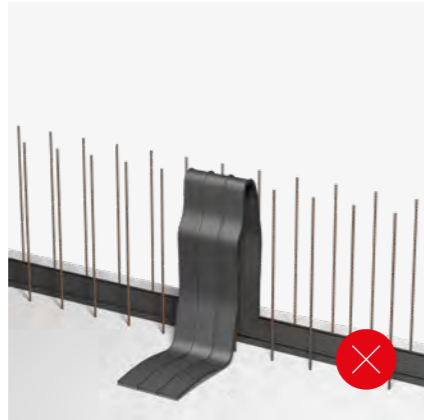
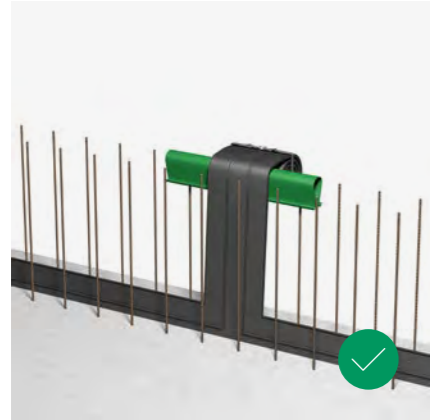


Removal



Installation instructions

H2 hier entfernen?



Care



Inspection
After removing the shuttering, inspect the visible areas of the joint tapes for damage. Rectify any defects immediately.

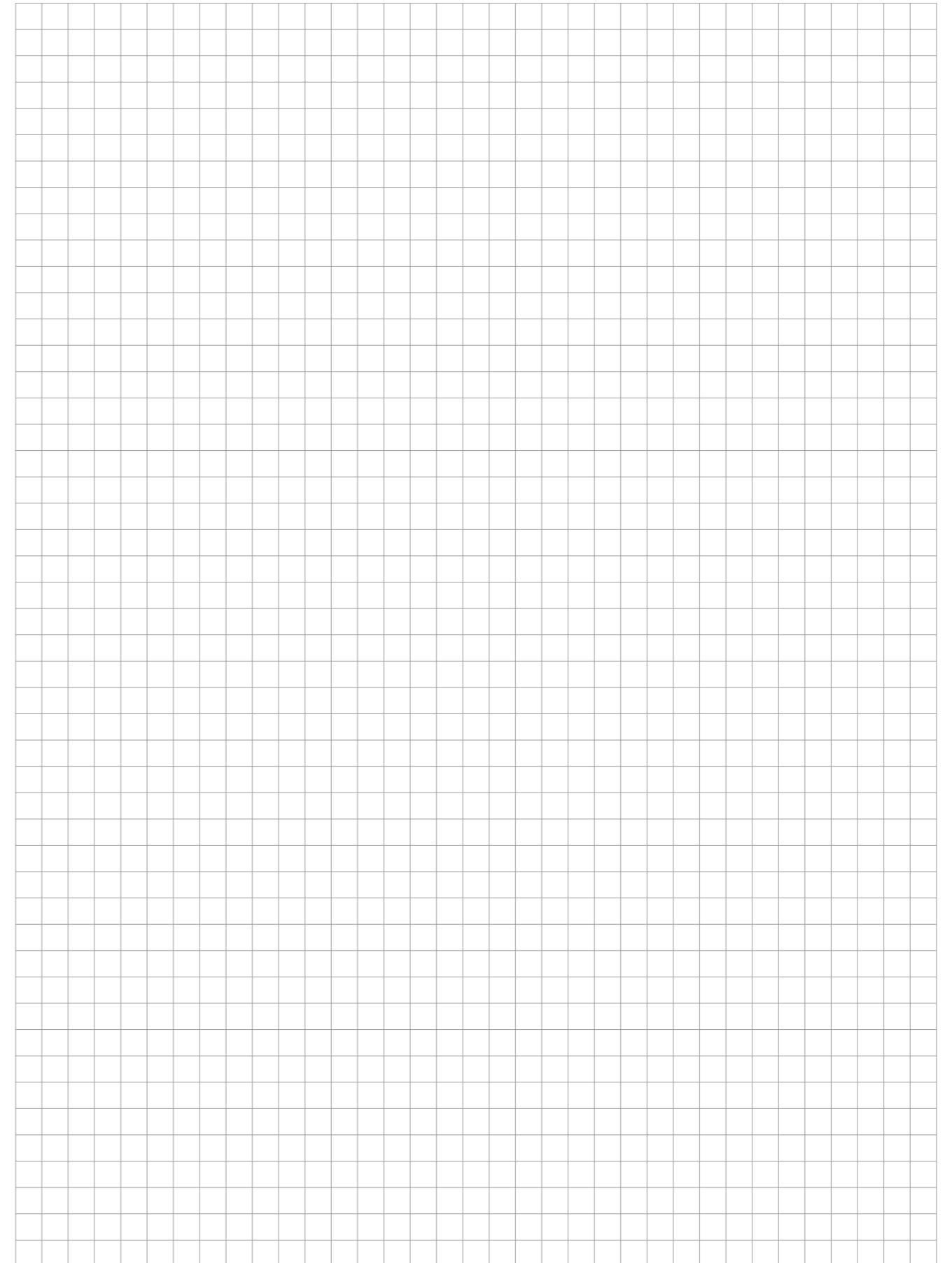


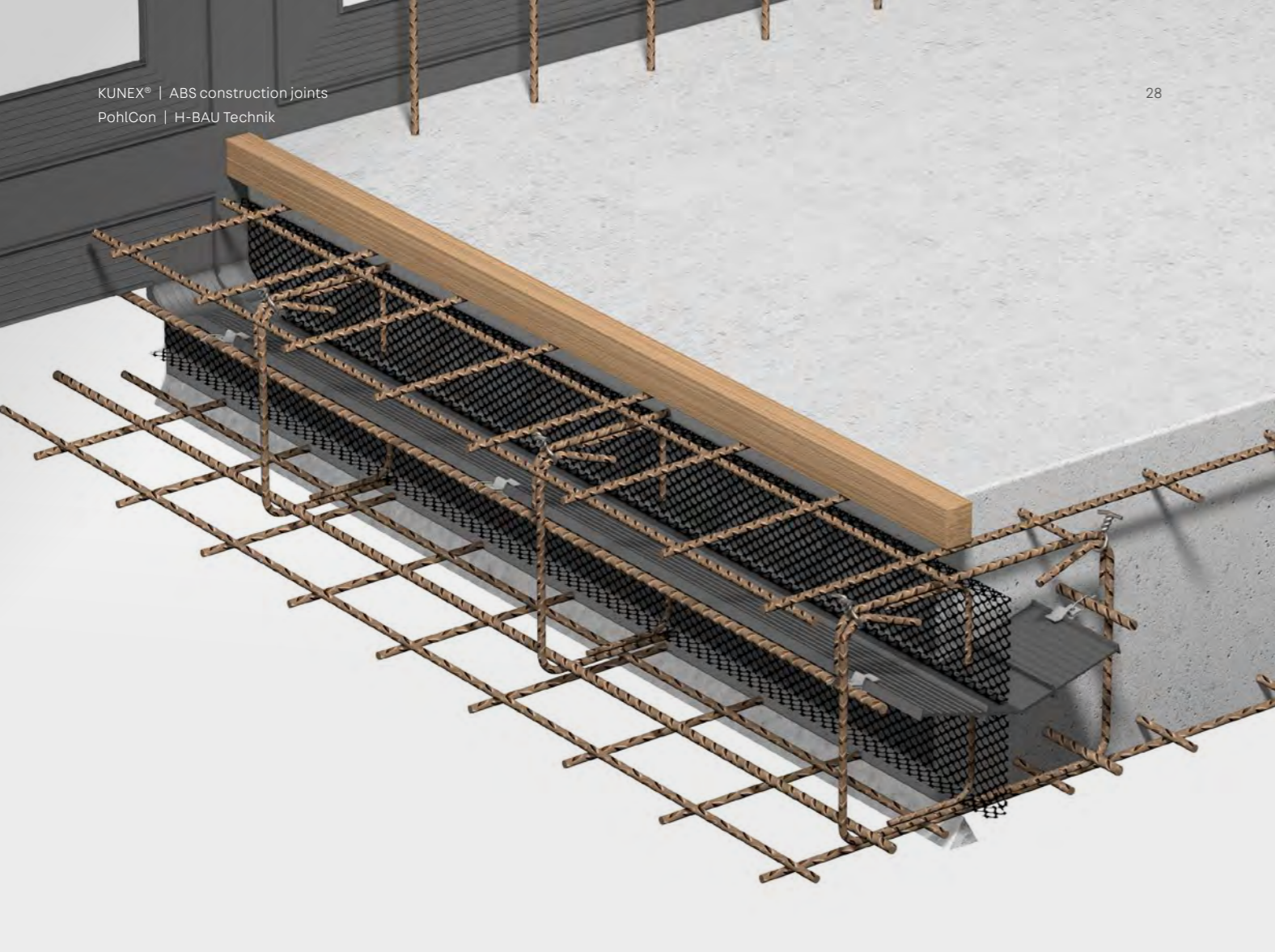
Documentation
The handling, processing and installation of the joint tapes on the construction site must be monitored and documented in line with the specific quality assurance procedures applicable to the property. Our CAD drawings of the joint tape systems and the test report for construction site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



Our Application Technology department will be happy to assist you with further solutions.

T +49 7742 9215-300
technik@h-bau.de





KUNEX® ABS construction joints

Shuttering element for interior 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 expanded metal elements reinforced using a special stirrup construction. The ABS element can be supplied for rough or interlocking joints (ABS A-R, ABS A-V).

Area of application

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



Benefits

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

Technical information



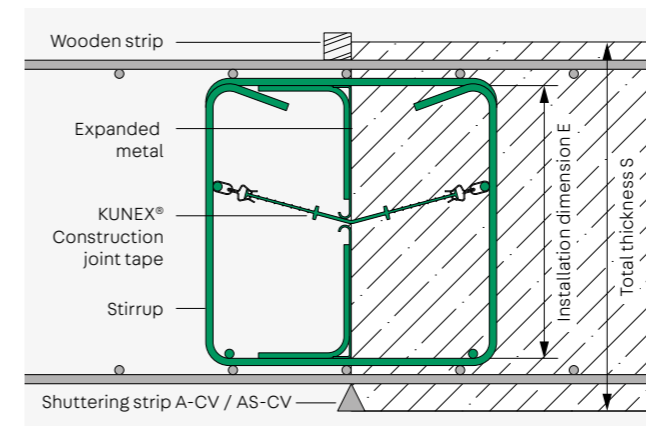
Basic information

- Two-part shuttering element for watertight construction joints in reinforced concrete construction
- Top and bottom parts consisting of expanded metal and steel stirrups
- Standard length of shuttering element: L = 2.4 m
- Special lengths and special forms available on request
- Installation dimension E = 150 - 500 mm

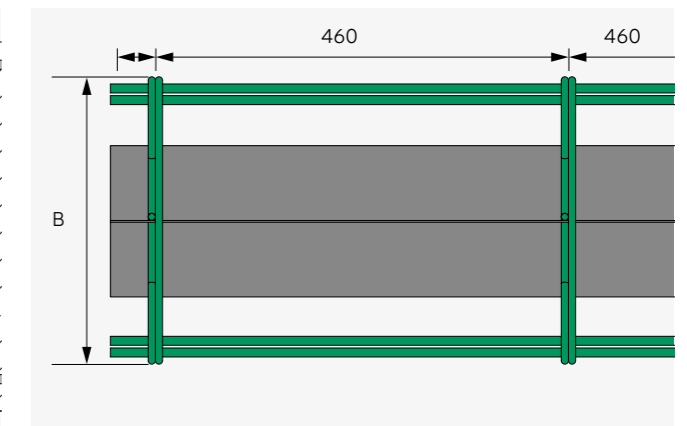
Accessories

- KUNEX® Construction joint tape A240 or A320
- Shuttering strip A-CV/AS-CV for reducing loss of fine particles, see page 34 and 35

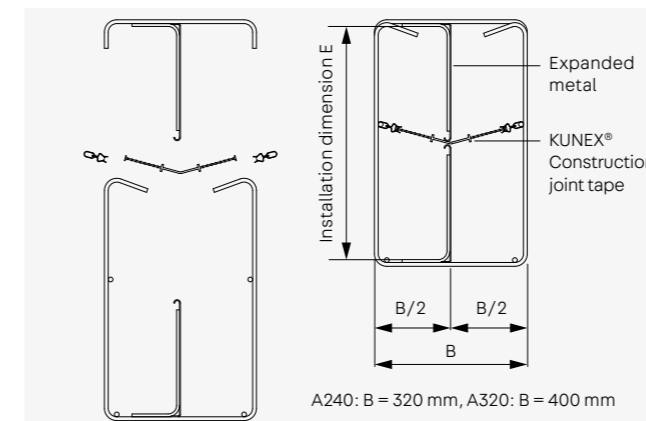
System cross section



Top view

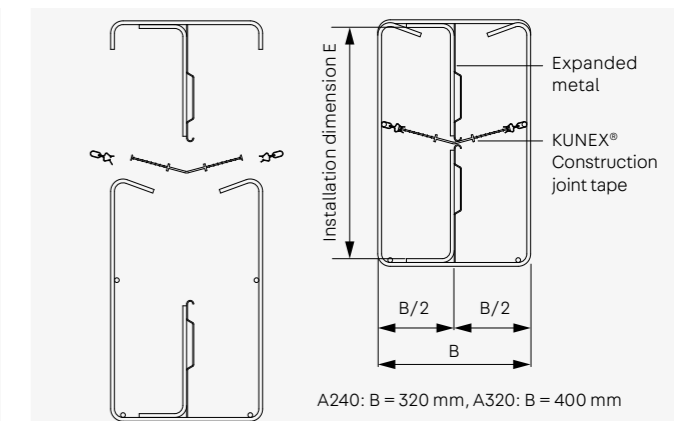


Versions



KUNEX® ABS A-R

Rough joint in line with EC2 | Installation dimension: 150 - 500 mm

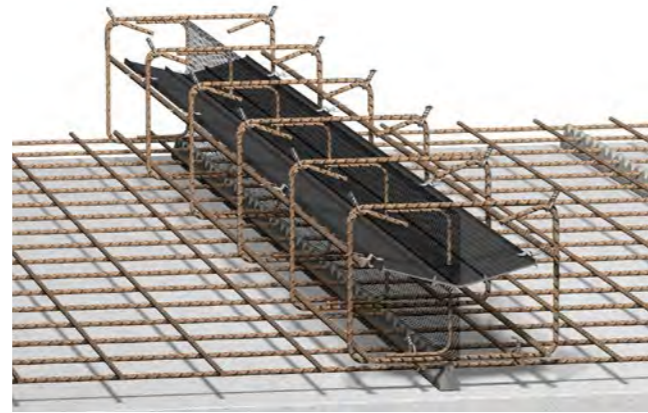
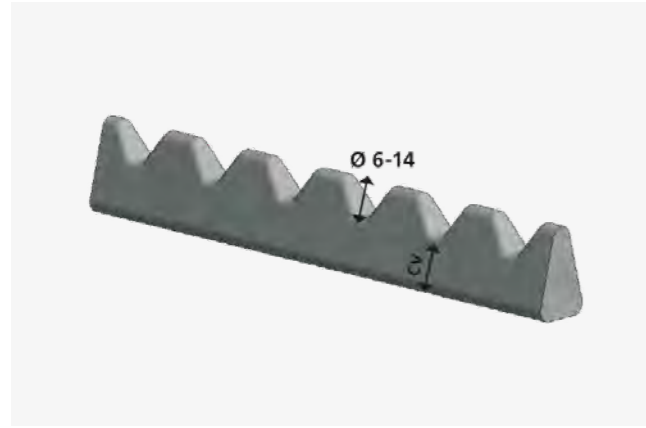


KUNEX® ABS A-V

Interlocking joint in line with EC2 | Installation dimension: 150 - 500 mm

Accessories

A-CV fibre concrete shuttering strip



The product

This spacer is made from fibre-reinforced concrete with a 50 mm reinforcement grid. It is an ideal complement to the KUNEX® ABS shuttering element with either a rough or interlocking design. The A-CV shuttering strip reliably reduces the leakage of concrete and the associated loss of fine particles to a minimum.



It can accommodate bar diameters from 6 to 14 mm and is available for concrete coverages from 20 to 60 mm thick.

Area of application

The A-CV shuttering strip also serves as a gauge when installing steel bars, eliminating the need to measure and mark a grid on the subbase. The A-CV shuttering strip is used for a range of concrete covering thicknesses when laying longitudinal and transverse reinforcements.

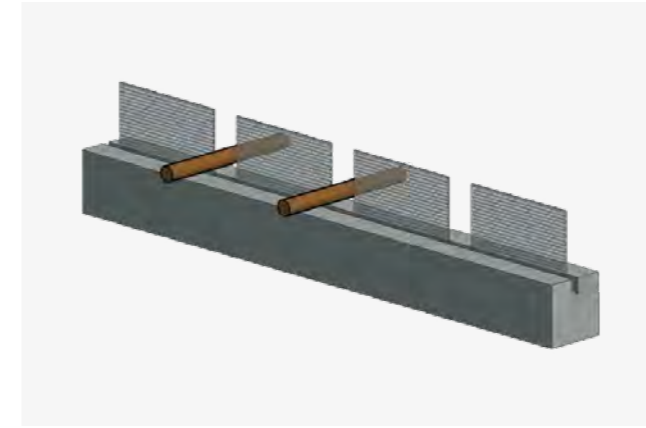


Benefits

- No seepage from construction joints
- Saves time
- Improves quality
- Universal use
- Simplifies on-site monitoring and rebar inspection

| Type | Concrete cover mm | Height/length mm |
|---------|----------------------|---------------------|
| A-CV 20 | 20 | 40/1000 |
| A-CV 25 | 25 | 45/1000 |
| A-CV 30 | 30 | 50/1000 |
| A-CV 35 | 35 | 55/1000 |
| A-CV 40 | 40 | 60/1000 |
| A-CV 45 | 45 | 65/1000 |
| A-CV 50 | 50 | 70/1000 |
| A-CV 60 | 60 | 80/1000 |

AS-CV fibre concrete shuttering strip



The product

Spacers ensure that the reinforcements are covered with concrete and shuttering elements provide a simple and economical way of making construction joints watertight. However, these sections of the construction joint shuttering are not normally closed. This allows concrete to leak out, something which is not conducive to achieving a geometrically perfect joint. These sections of the construction joint shuttering are not normally closed. This allows concrete to leak out, something which is not conducive to achieving a geometrically perfect joint. A huge number of fine particles are washed out. This not only impacts the watertightness of the concrete in the barrier layer, but also affects the quality of the next casting section. The fibre concrete shuttering strip prevents fine particles from leaking out and also ensures a homogeneous watertight concrete quality in the area of the joint.



It can accommodate rebar of any diameter.

This makes it the perfect installation aid for steel-bar reinforcements.

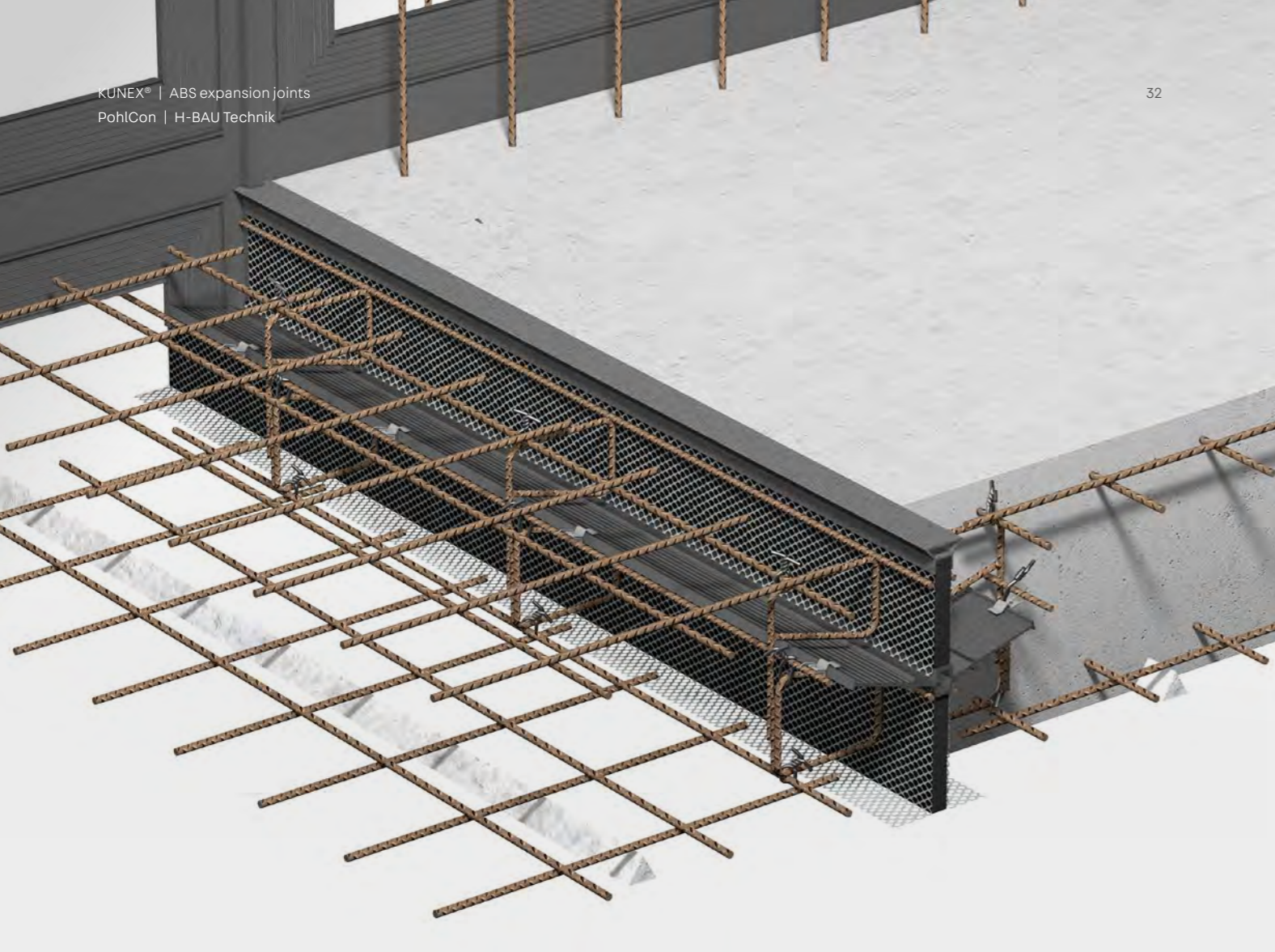


Benefits

- Perfectly geometric formation of construction joints
- Ensures that the watertight concrete is homogeneous
- Unhindered cross-sectional formation in the second casting section over the entire slab thickness
- Perfect rebar spacing without measurement

| Type | Concrete cover mm | Height/length mm |
|--------------|----------------------|---------------------|
| AS-CV 30/100 | 30 | 100 |
| AS-CV 30/150 | 30 | 150 |
| AS-CV 30/200 | 30 | 200 |
| AS-CV 35/100 | 35 | 100 |
| AS-CV 35/150 | 35 | 150 |
| AS-CV 35/200 | 35 | 200 |
| AS-CV 40/100 | 40 | 100 |
| AS-CV 40/150 | 40 | 150 |
| AS-CV 40/200 | 40 | 200 |
| AS-CV 50/100 | 50 | 100 |
| AS-CV 50/150 | 50 | 150 |
| AS-CV 50/200 | 50 | 200 |

Please state the diameter of the rebar being used.



KUNEX® ABS expansion joints

Shuttering element for interior expansion joint tapes

The product

Two-part shuttering element for the easy installation of interior KUNEX® expansion joint tapes in watertight reinforced concrete constructions with a joint width of 20 mm. KUNEX® shuttering elements for expansion joints are available in many different heights and are suitable as standard for floor slabs up to 500 mm thick.

Area of application

KUNEX® ABS D is used in any application where the plans must take expansion joints caused by deformation into consideration, such as floor slabs in terraced houses. KUNEX® ABS D elements are used especially for watertight reinforced concrete components that have high requirements for both impermeability and deformability.



Benefits

- Reliably seals straight expansion joints in floor slabs
- Two-part cage for quick joint tape installation
- Distance to reinforcement in line with DIN

Technical information



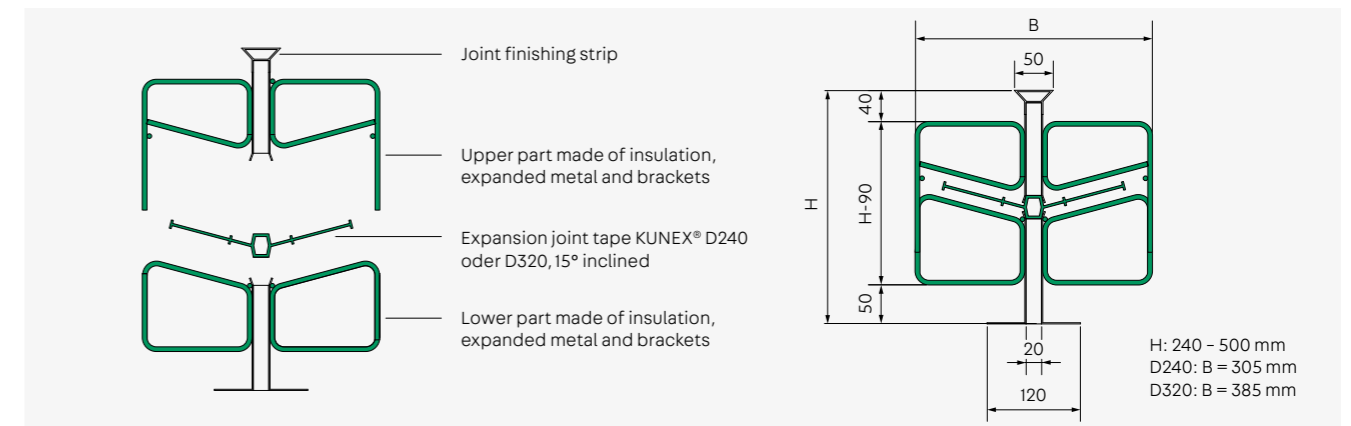
Basic information

- Self-supporting, two-part element for shuttering and sealing straight expansion joints in floor slabs and ceilings
- Top and bottom parts consisting of expanded metal, steel stirrups and insulation (EPP)
- PVC-U joint end strip
- Standard length of shuttering element: L = 2.4 m
- Special lengths available on request
- Possible slab thicknesses H = 240 - 500 mm

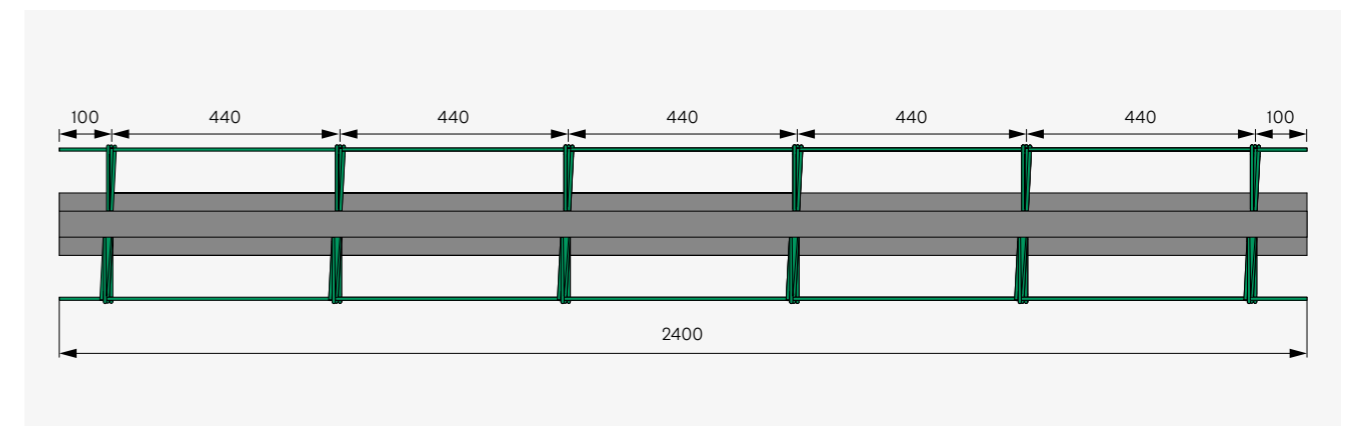
Accessories

- KUNEX® D240 or D320 expansion joint tape

System cross section

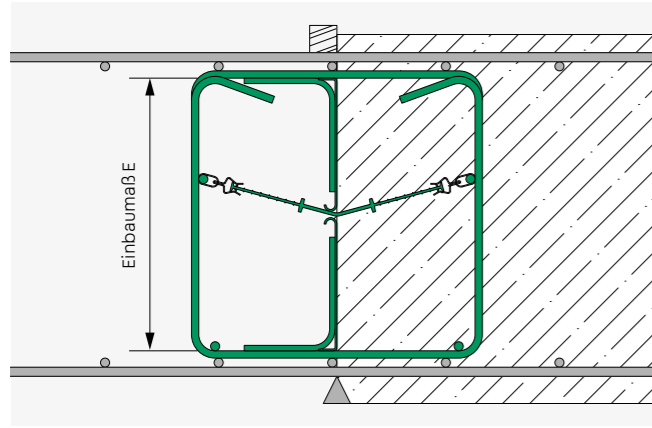


Top view



Example orders

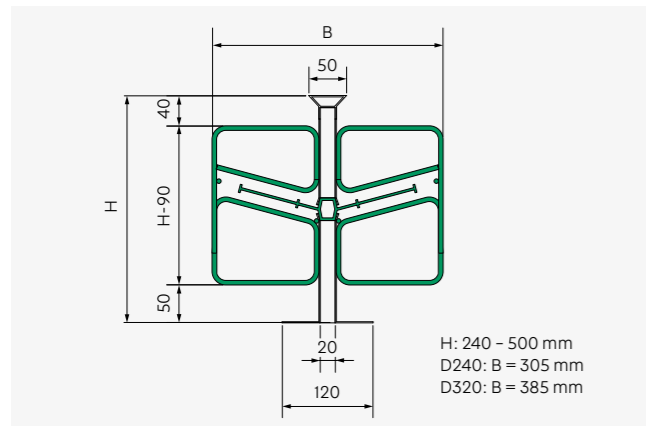
KUNEX® ABS for construction joints



Example order for floor slab thickness 30 cm, interlocking joint in line with EC 2:

| | |
|--|------------------------------|
| KUNEX® ABS A-V with KUNEX® A240 DIN BV | Type ABS Type KUNEX |
| E = 220 mm | E dimension |
| Total joint length L = 12 m | Joint length |
| 12 A-CV 30 shuttering strips | Shuttering strip as required |

KUNEX® ABS for expansion joints



Example order for floor slab thickness 30 cm:

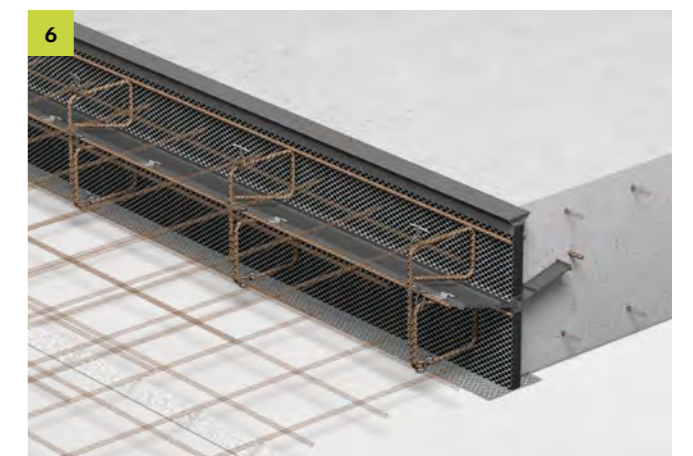
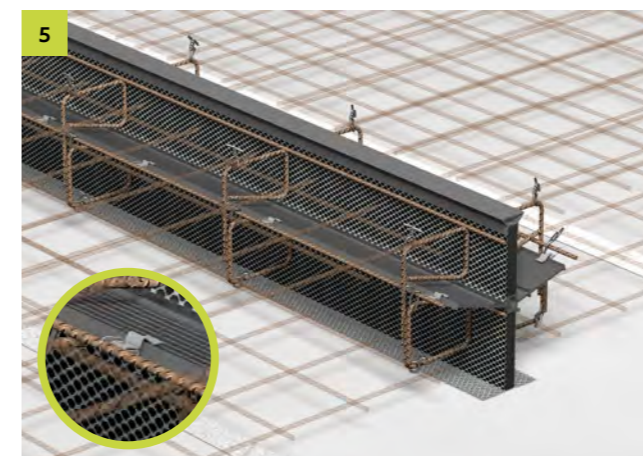
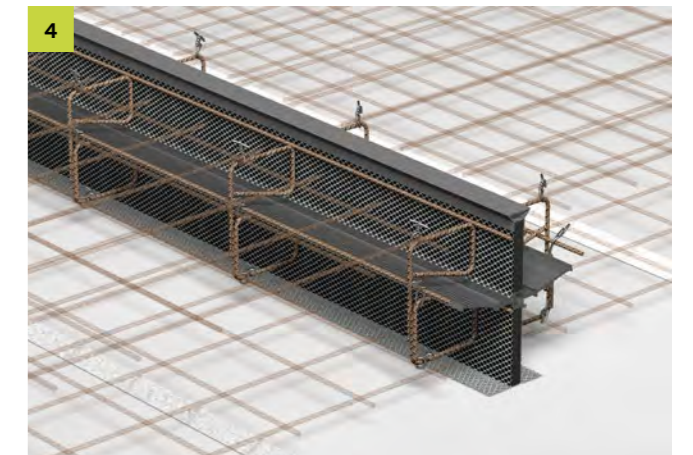
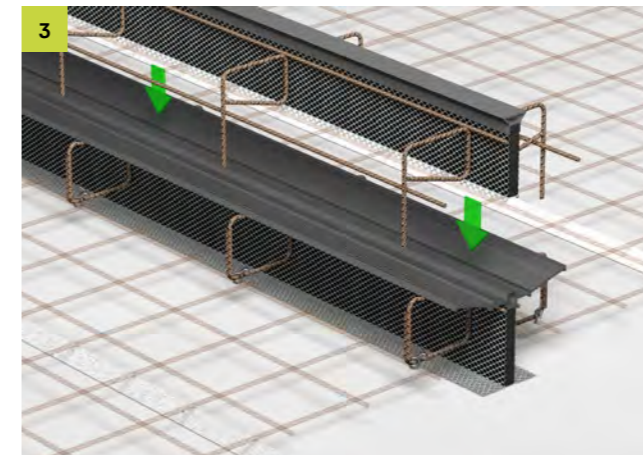
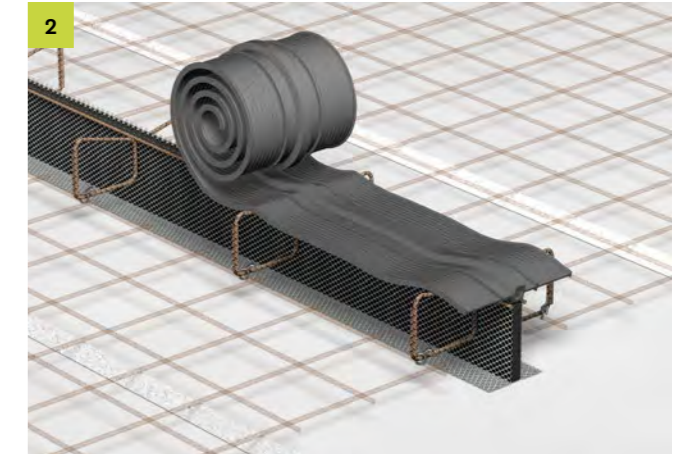
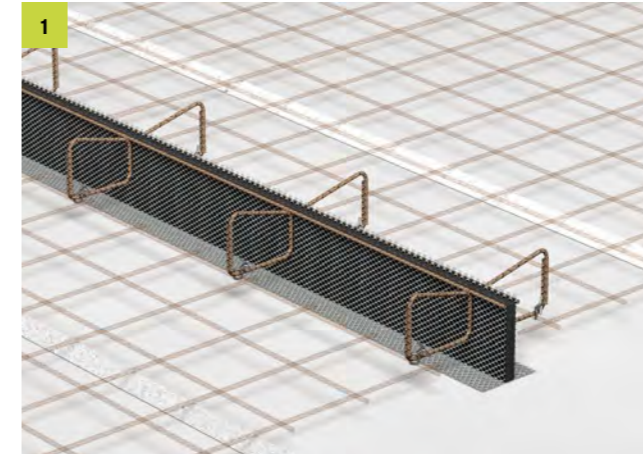
| | |
|--------------------------------------|------------------------|
| KUNEX® ABS D with KUNEX® D240 DIN NB | Type ABS Type KUNEX |
| Order size H = 300 mm | Height=order size |
| Total joint length L = 4.8 m | Joint length |

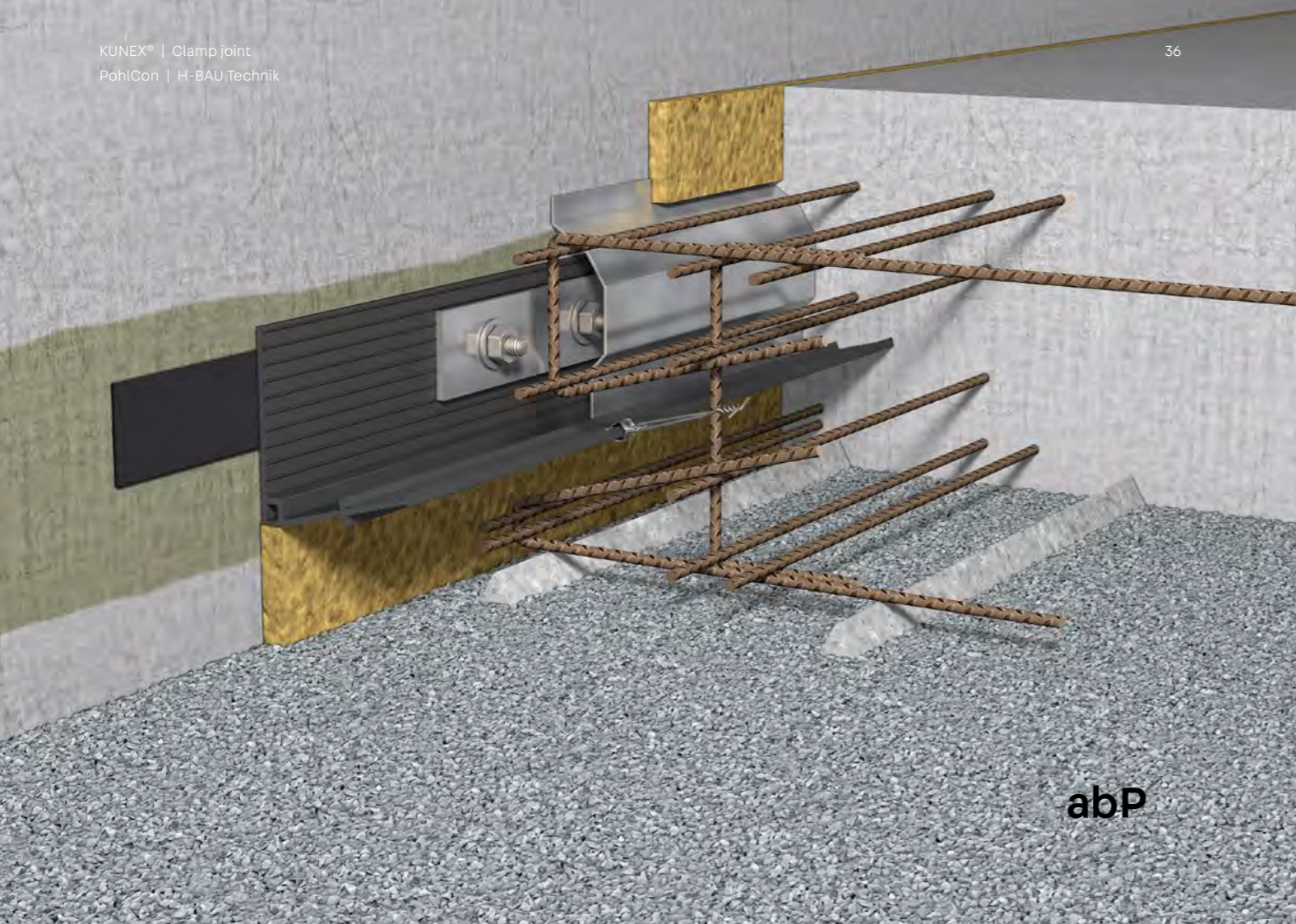
| Order size H | 240 | 250 | 260 | 270 | 280 | 290 | 300 | 310 | 320 | 330 | 340 | 350 | 360 | 370 |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| H-90 | 150 | 160 | 170 | 180 | 190 | 200 | 210 | 220 | 230 | 240 | 250 | 260 | 270 | 280 |
| B (KUNEX D240) | 305 | 305 | 305 | 305 | 305 | 305 | 305 | 305 | 305 | 305 | 305 | 305 | 305 | 305 |
| B (KUNEX D320) | 385 | 385 | 385 | 385 | 385 | 385 | 385 | 385 | 385 | 385 | 385 | 385 | 385 | 385 |

| Order size H | 380 | 390 | 400 | 410 | 420 | 430 | 440 | 450 | 460 | 470 | 480 | 490 | 500 |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| H-90 | 290 | 300 | 310 | 320 | 330 | 340 | 350 | 360 | 370 | 380 | 390 | 400 | 410 |
| B (KUNEX D240) | 305 | 305 | 305 | 305 | 305 | 305 | 305 | 305 | 305 | 305 | 305 | 305 | 305 |
| B (KUNEX D320) | 385 | 385 | 385 | 385 | 385 | 385 | 385 | 385 | 385 | 385 | 385 | 385 | 385 |

Installation instructions

Floor/floor and ceiling/ceiling





KUNEX® Clamp joint

Connections between new and existing components

The product

KUNEX® clamp joints are the ideal solution to the complex problems posed by joining a new building to an old building. The system consists of primer, joint tapes according to DIN 18541-2, steel profiles, anchors and a crepe rubber strip. The clamp joint works by pressing the joint tape onto the existing stock using clamp profiles and integrating the joint tape into the newly cast concrete components.

Application

The KUNEX® clamp joint is used to create watertight movement joints in building connections. The movement joint can be up to 30 mm wide and the resulting deformation (vr) can be up to 20 mm. The system is suitable for zones subject to repeated wet and dry cycles and meets the requirements of usage class **A for stress classes 1 and 2 in accordance with the German watertight concrete guideline.**



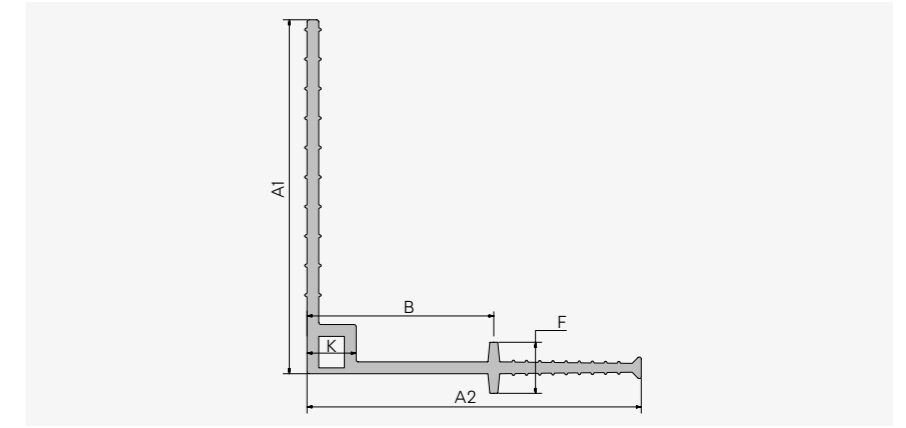
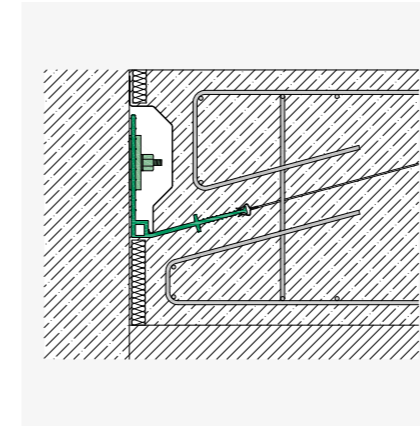
Benefits

- With German building code test certificate (abP)
- Tested system solution with German building code test certificate (abP)*
- Components from a single source
- Joint tapes with excellent welding properties
- Special custom solutions

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

KUNEX® interior clamp joint tape

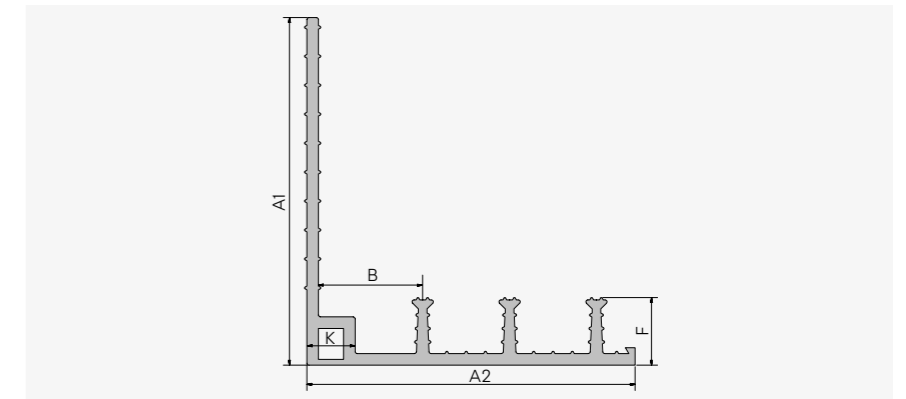
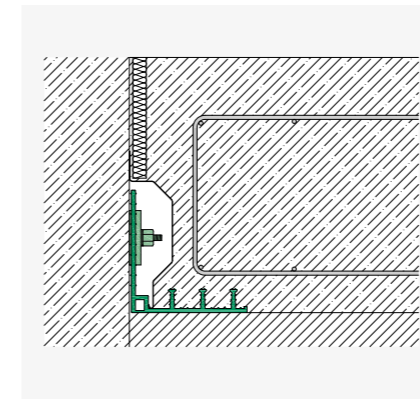
Technical data



| Type DIN 18541-2 | A1/A2 mm | K mm | F mm | B mm |
|---------------------|-------------|---------|---------|---------|
| D 180/170K DIN | 180/170 | 20 | 26 | 95 |

KUNEX® exterior clamp joint tape

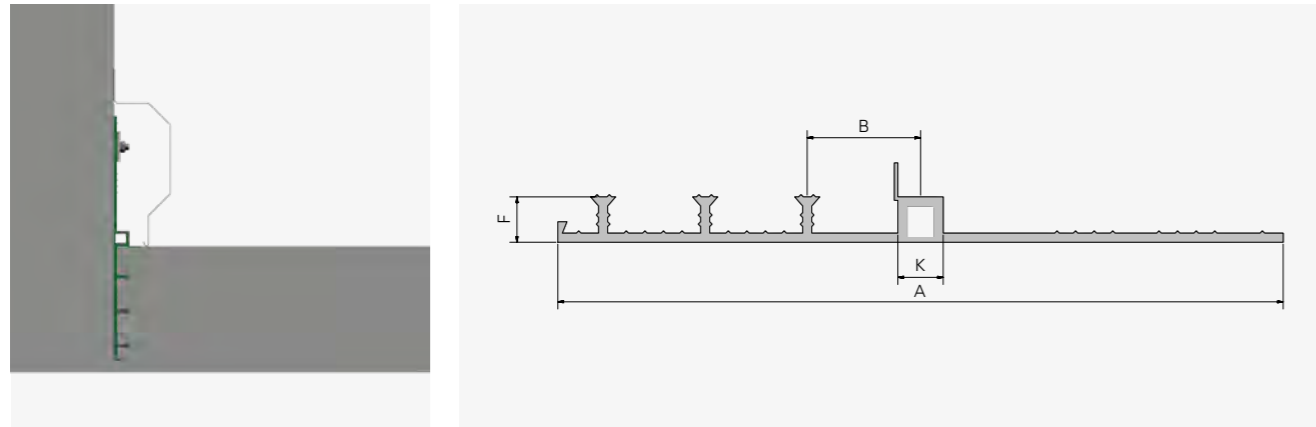
Technical data



| Type DIN 18541-2 | A1/A2 mm | K mm | F mm | B mm | No. of stop anchors |
|---------------------|-------------|---------|---------|---------|------------------------|
| DA 180/170K DIN | 180/170 | 20 | 35 | 60 | 3 |

KUNEX® exterior clamp joint tape

Technical data

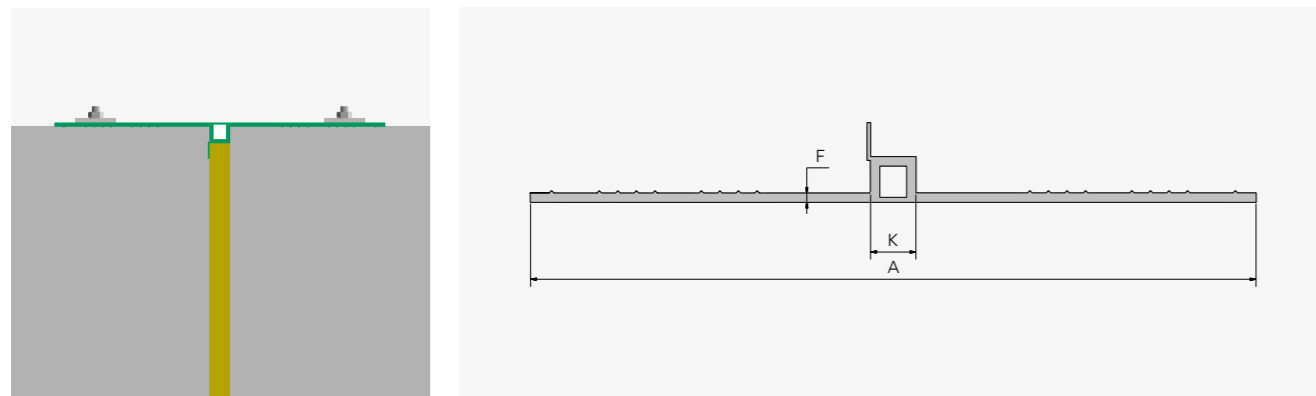


| Type DIN 18541-2 | A mm | K mm | F mm | B mm | Number of stop anchors |
|---------------------|---------|---------|---------|---------|---------------------------|
| DA 320 KE DIN | 320 | 20 | 20 | 50 | 3 |

KUNEX® PVC-P clamp joint tape for sealing joints between new concrete components and existing buildings.

KUNEX® exterior clamp joint tape

Technical data



| Type DIN 18541-2 | A mm | K mm | F mm |
|---------------------|---------|---------|---------|
| DA 320 KB DIN | 320 | 20 | 4 |

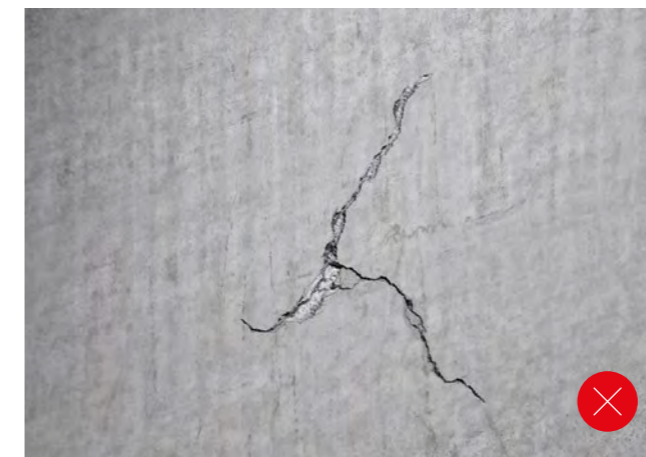
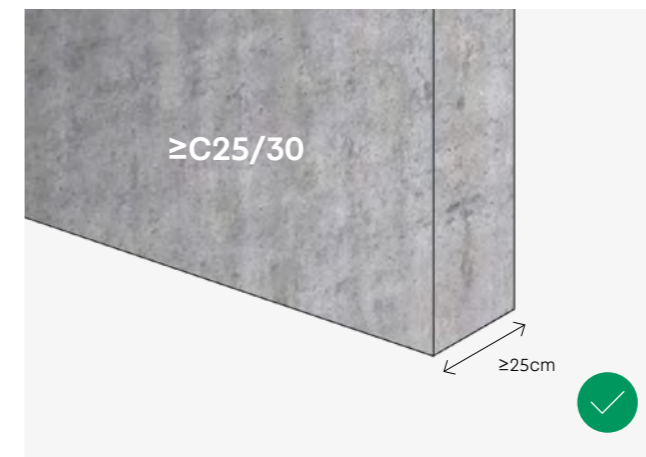
KUNEX® PVC-P clamp joint tape for sealing joints between two existing components.

Installation instructions

Installation notes

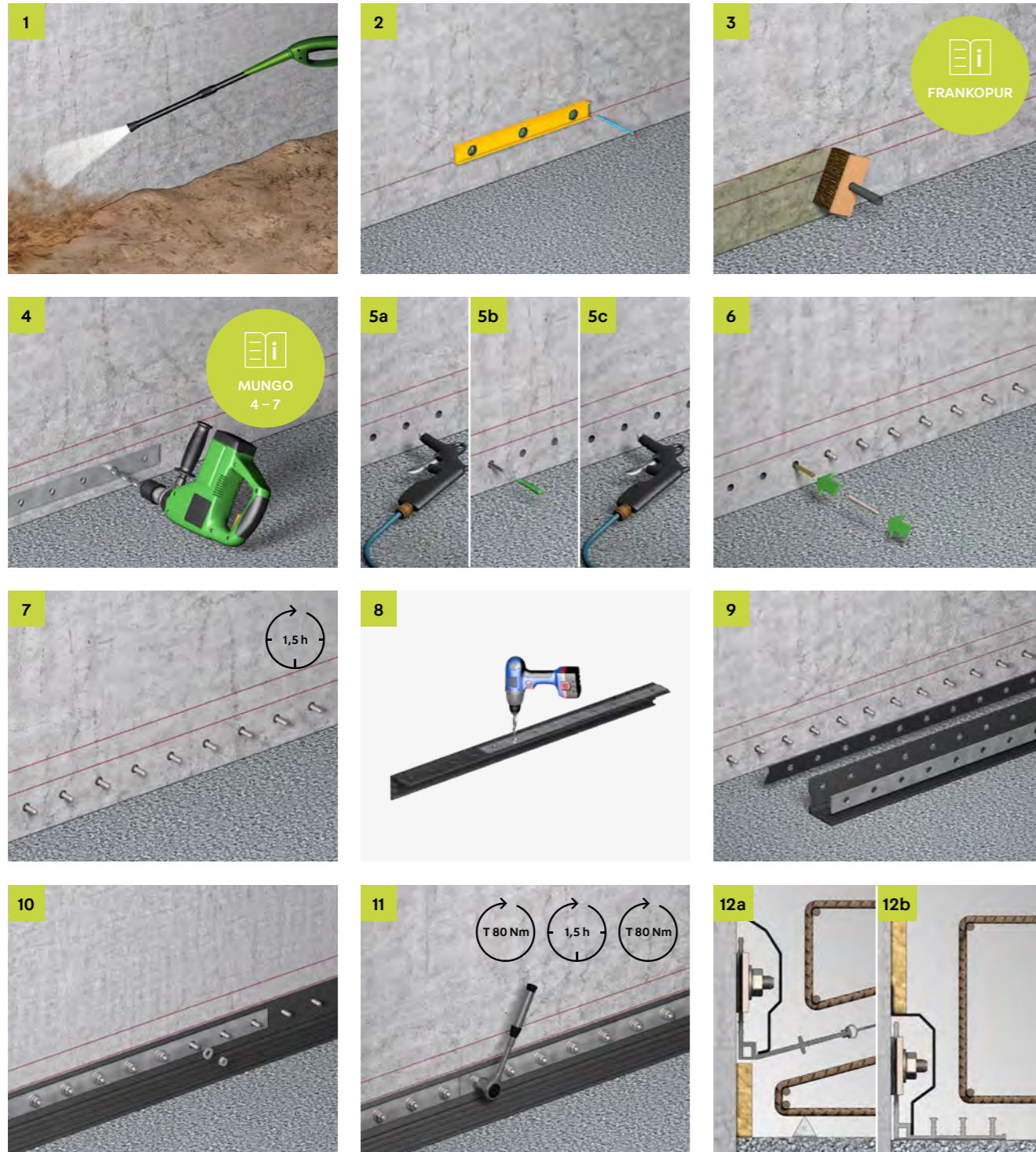
The surface of the existing building must be in the following condition:

- ≥ 25 cm wide
- Clean, smooth, level and free from ripples and recesses
- Free from cavities, cracks and loose parts
- Watertight
- Load-bearing, surface tensile strength min. 1.5 N/mm^2 , concrete quality $\geq \text{C25/30}$ (previously: B25 watertight)



Installation instructions

Installation notes



Accessories

KUNEX® Clamp joint



Primer

For preparing the concrete surface.*



Shear connector

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



Anchor rod

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



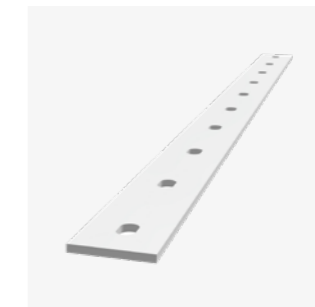
Concrete bolt

Type: TSM 14M16* galvanised or TSM10M12* V4A with nut and U washer. Alternative fastening option to the shear connector system.



Crepe rubber strip

Type: 80×4*, 100×4*.
For sealing the building connection joint.



Clamping rail

Type: 80×8* (16/30, 20/30*), 100×10 (24/38). Slotted every 150 mm, galvanised (L=1450 mm) or V4A (L=1300 mm).



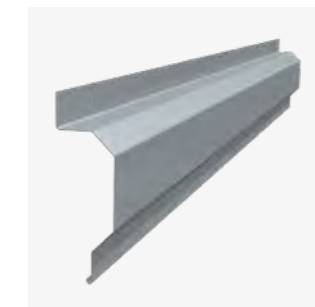
Outer corner

Special profile 80×10×200 mm. Galvanised or V4A.



Inner corner

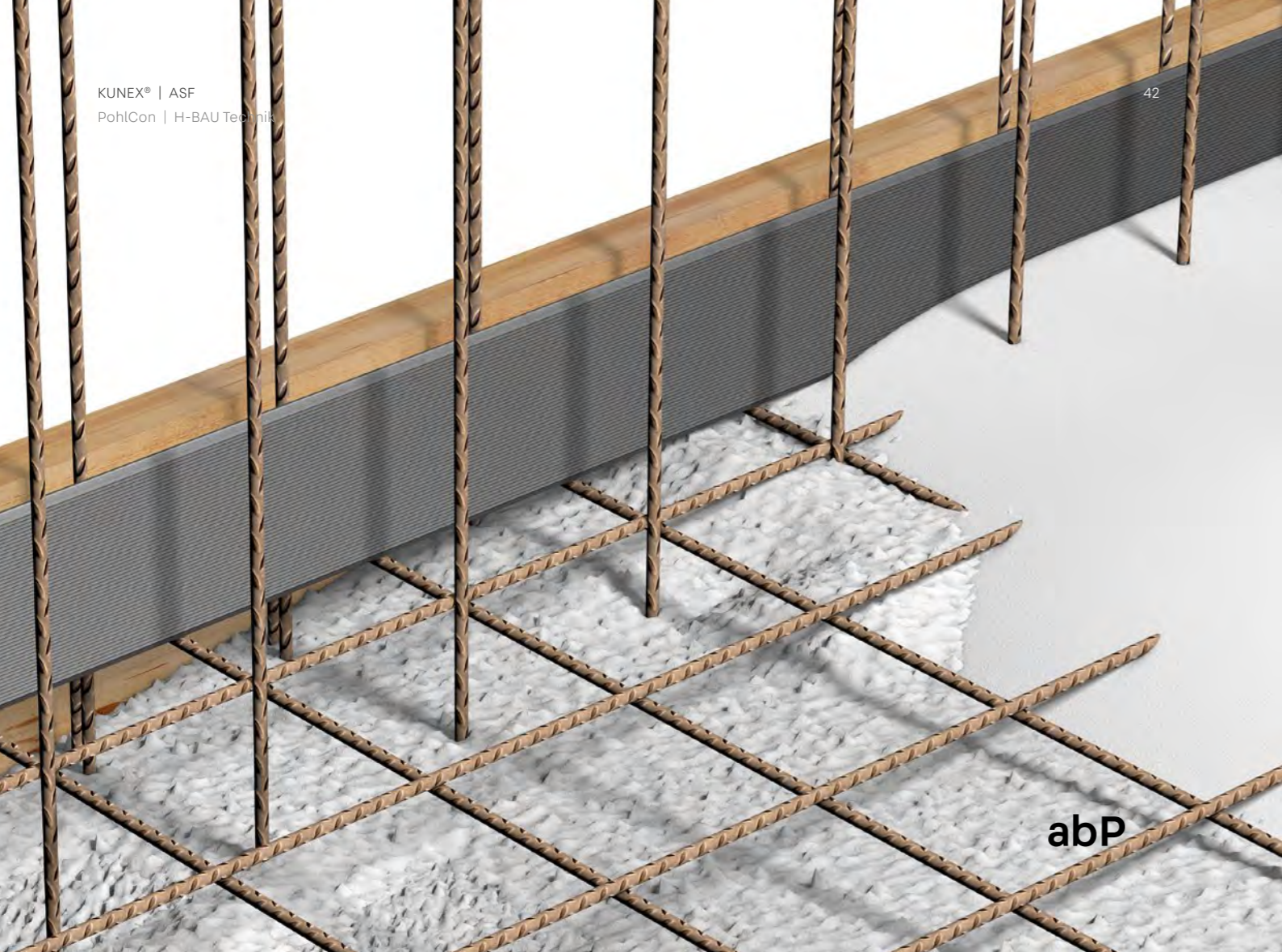
Special profile 80×10×100 mm. Galvanised or V4A.



Clamping protection profile

Made of galvanised sheet metal, comes with knock-in anchors. Ensures the joint can move and protects the structure.

*If you are creating a KUNEX® clamp joint in accordance with the German building code test certificate P-5316/053/14 MPA-BS, the components followed by an asterisk must be used.



KUNEX® ASF

For construction joints subject to minor loads

The product

KUNEX® ASF thermoplastic joint tapes are used to seal construction joints that are subject to minor loads. The special profile design means they achieve an excellent sealing effect with an anchoring depth of just 30 mm.

Application

KUNEX® joint tapes are used as interior joint seals for forming watertight construction joints. The system is suitable for use in zones subject to repeated wet and dry cycles and meets the requirements of usage class A for stress classes 1 and 2 in accordance with the German watertight concrete guideline.

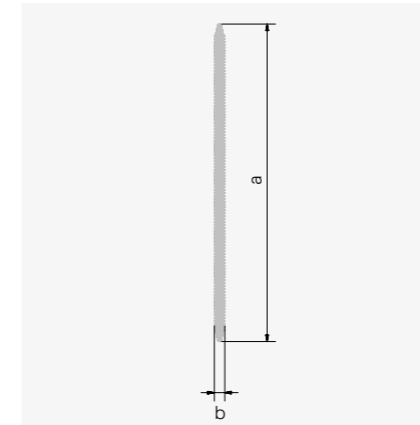


Benefits

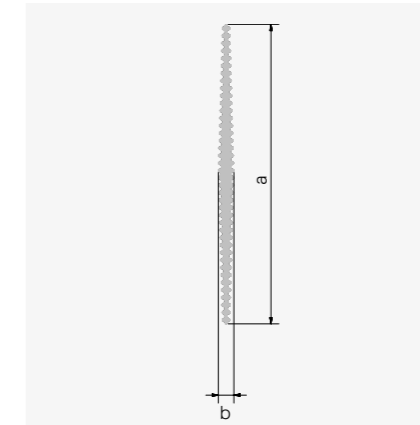
- With German building code test certificate (abP)
- Anchoring depth of only 30 mm
- Joint tapes with excellent welding properties

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

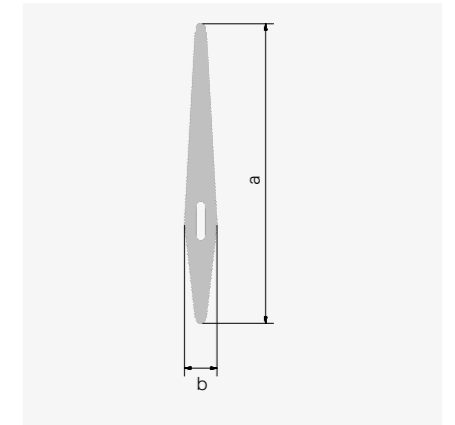
Technical information



- Type ASF 80/5 a = 80 mm, b = 5 mm
- Type ASF 100/5 a = 100 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 150/5* a = 150 mm, b = 5 mm



- Type ASF 120/8 a = 120 mm, b = 8 mm



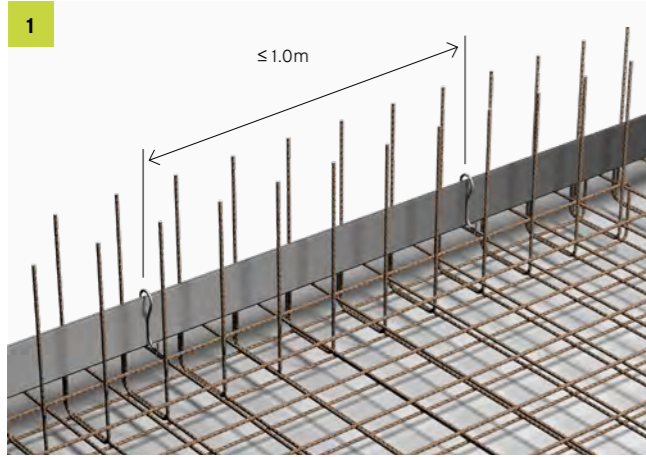
- Type ASF 120/12 a = 120 mm, b = 12 mm

Material parameters

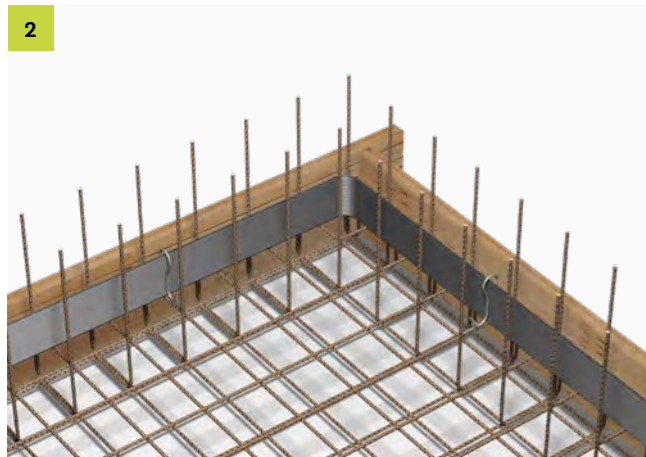
| Properties | PVC-P factory standard |
|---|---|
| Tensile strength in line with DIN EN ISO 527 | ≥ 8 N / mm ² |
| Elongation at break in line with DIN EN ISO 527 | ≥ 150% |
| Hardness according to Shore A DIN 53505 | ≥ 89 ± 7 |
| Reaction to fire in line with DIN EN 13501 | Normal flammability (building material class E) |
| Temperature resistance | -20 to +60°C |

Images are for illustration purposes only

Installation instructions



- Check the joint tapes for damage or deformation before use
- The ASF joint tape must be free from contamination and ice
- Unroll the joint tape and lay it on the top layer of reinforcement without exerting any tension
- The tape is usually installed in the middle of the construction joint
- Butt joints are connected by butt joint welding
- It must be prevented from shifting or floating upwards while pouring the concrete
- The joint tape must be embedded without any voids
- The anchoring depth is ≥ 30 mm

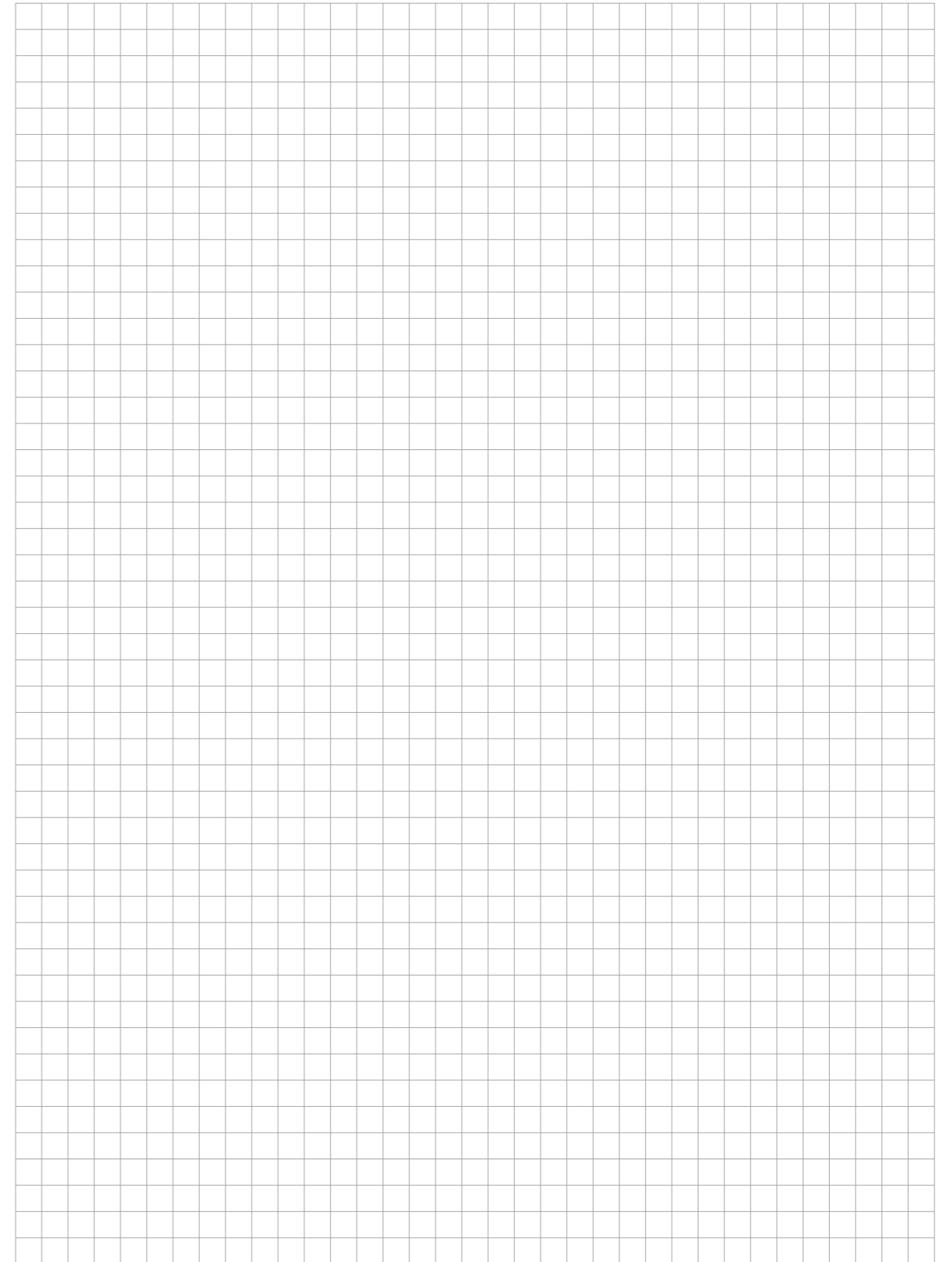


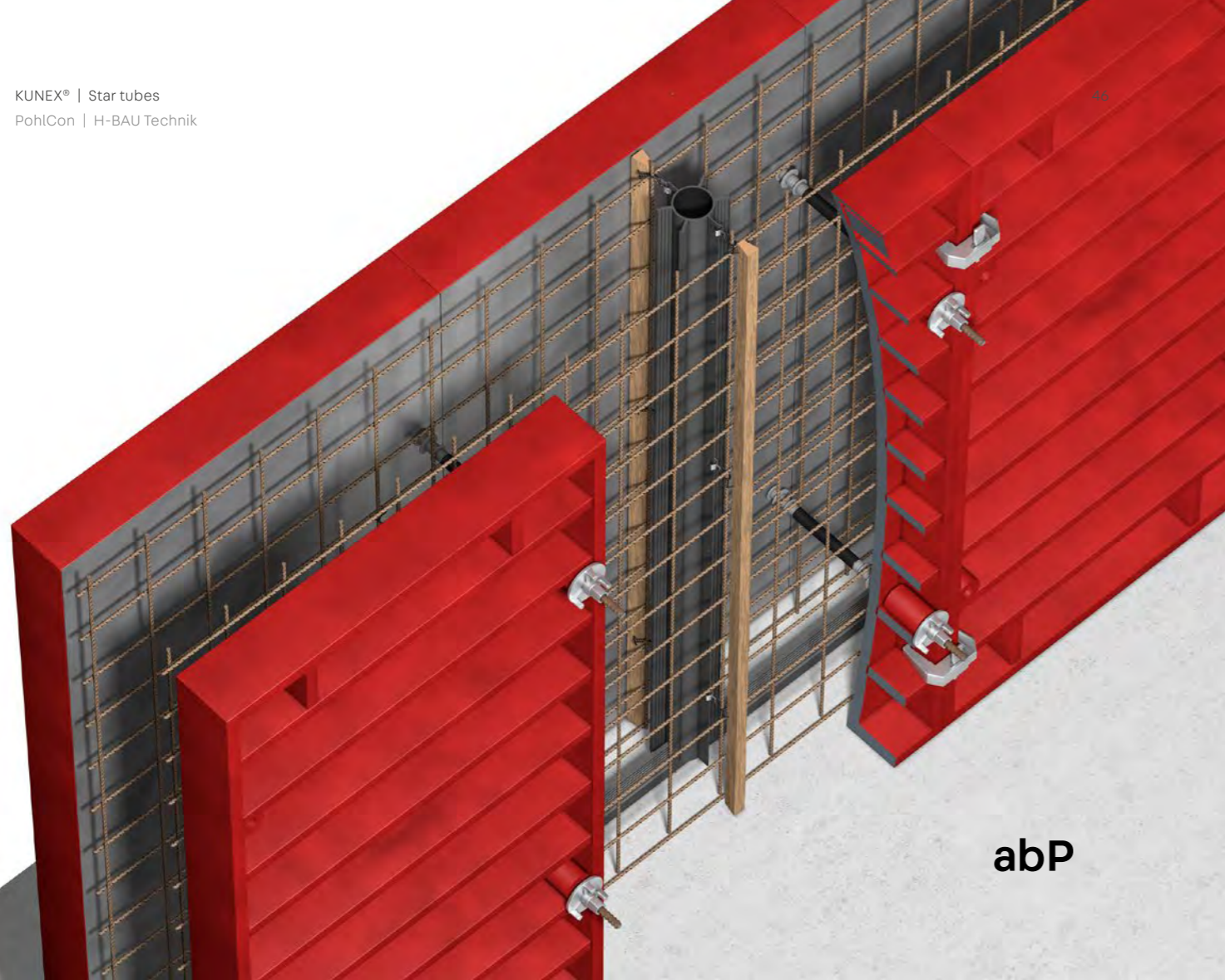
- Corners are formed with a ≥ 150 mm bending radius
- It must be prevented from shifting or floating upwards while pouring the concrete



Our Application Technology department will be happy to assist you with further solutions.

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KUNEX® star tubes

For sealing crack control joints in concrete

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 stop anchors and two crack-formation lips. The casing is stabilised by a hard PVC interior tube. The two crack-formation lips are used to form the crack at a predetermined point. The crack is simultaneously sealed again by the four stop anchors.

Application

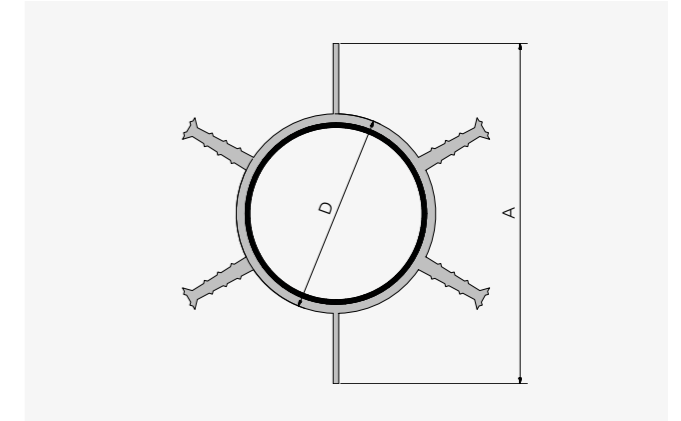
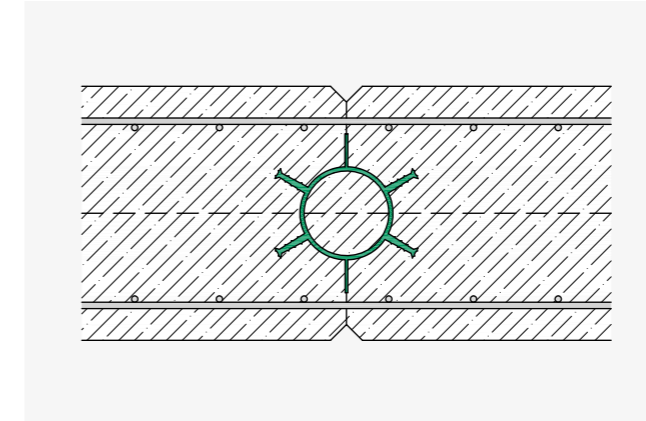
KUNEX® star tubes are used as interior seals for forming dummy joints and crack control joints. The system is suitable for zones subject to repeated wet and dry cycles and meets the requirements of usage class A for stress classes 1 and 2 in accordance with the German watertight concrete guideline.



Benefits

- With German building code test certificate (abP)*
- PVC-P raw material
- PVC-U interior tube for stabilisation
- Star tubes also available with cutouts and eyelets
- For use with KUNEX® joint tapes and PENTAFLEX KB® seam sheets in line with German building code test certificate (abP)

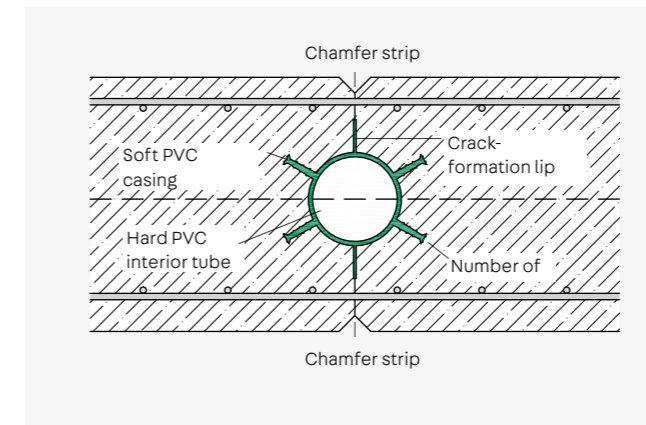
Technical information



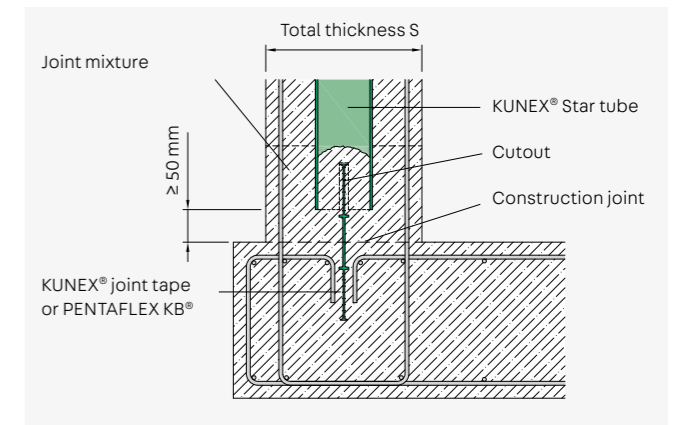
| Type | D mm | A mm | For wall thickness mm | Standard lengths m |
|------|---------|---------|--------------------------|-----------------------|
| Q60 | 60 | 100 | ≤ 240 | 2.50; 3.00; 4.00 |
| Q88 | 88 | 150 | ≤ 350 | 2.50; 3.00; 4.00 |
| Q175 | 175 | 235 | > 350–500 | 2.50; 3.00; 4.00 |

Upon request, star tubes can be delivered with a cutout for attachment to the joint seal and/or with fastening eyelets on both sides (O2). The eyelets are spaced 200 mm apart. The following applies to selecting the appropriate star tube for element walls: In-situ concrete core = wall thickness. Other lengths available on request.

System cross section



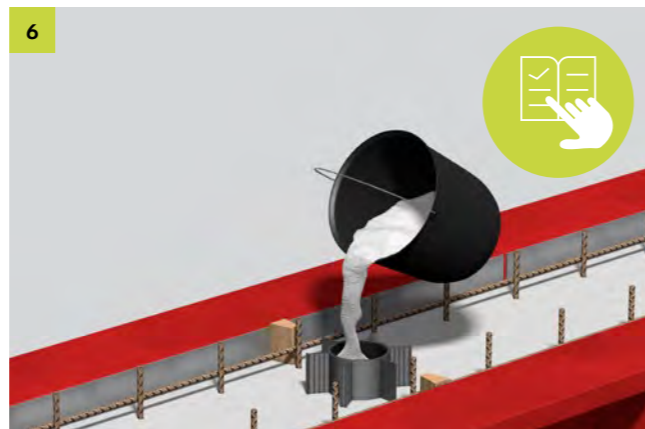
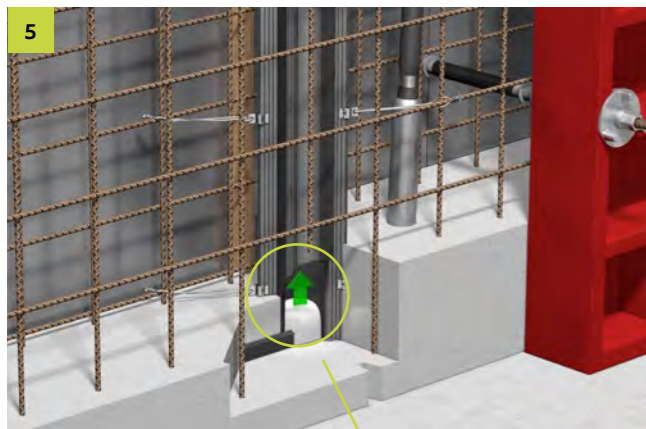
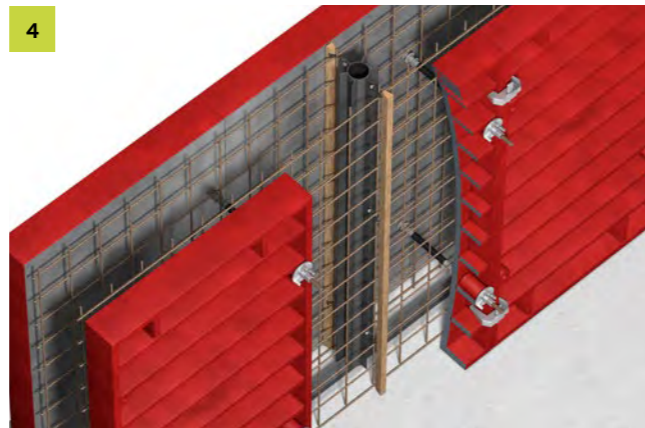
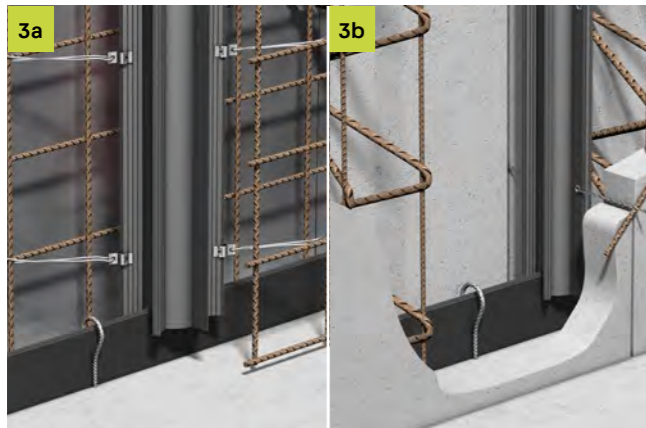
Top view of wall/wall star tube



Connection between star tube and joint seal

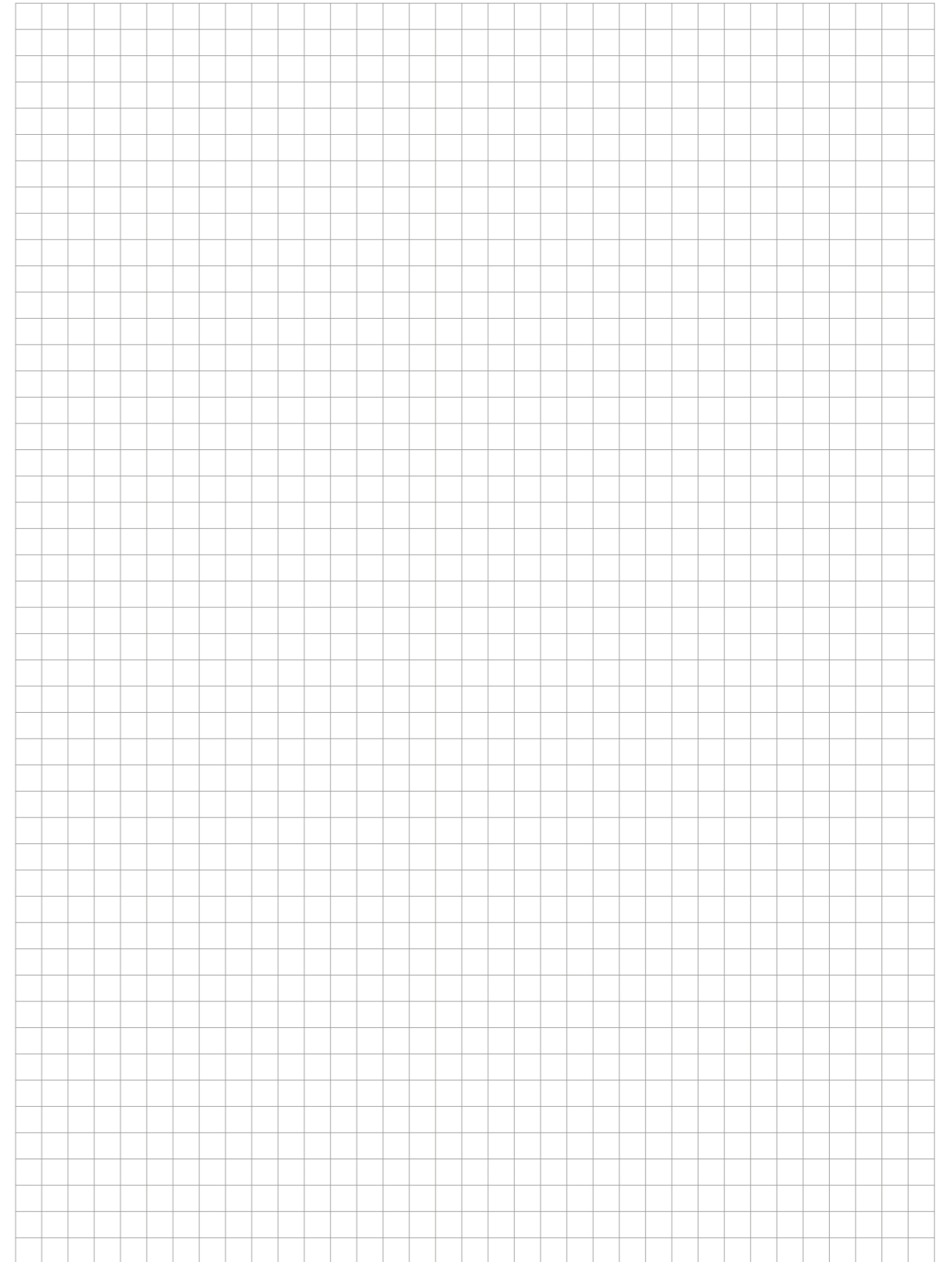
*Tested up to 5.0 bar; 2.0 bar permitted in accordance with the German building code test certificate (abP) (safety factor of 2.5).

Installation instructions



Our Application Technology department will be happy to assist you with further solutions.

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KUNEX® puddle flange

For sealing pipelines and earthing strips

The product

The KUNEX® MK puddle flange is used to seal pipelines that are laid through watertight concrete components. This high-quality puddle flange is made of TPE, is tested to ensure tightness against water pressure up to 5.0 bar (50 m hydrostatic head) and is resistant to a variety of chemical substances. Types EF and ER are used to seal flat and round earthing strips.

Application

The fact that the system is easy to install and use with all common pipe materials and diameters makes it a flexible, safe and cost-effective solution. All that is needed on the construction site is a smooth, clean and damage-free surface for the underground pipe or earthing strip. The system comes ready to install with all the required materials.

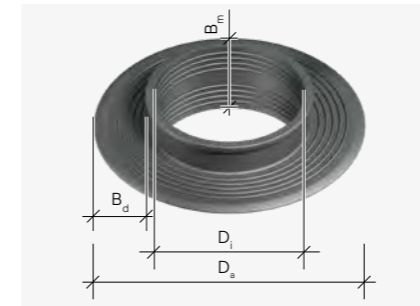


Benefits

- Easy to assemble and use
- Material: Black TPE
- Tested for watertightness up to 5.0 bar water pressure (does not apply to the types EF/ER)

KUNEX® MK

Technical data



| Type | Outer pipe diameter mm | D _i mm | D _a mm | Sleeve width B _m mm | Sealing ring B _d mm |
|---------------|---------------------------|----------------------|----------------------|-----------------------------------|-----------------------------------|
| MK 40 | 38 - 42 | 38.50 | 134.00 | 57 | 40 |
| MK 50 | 48 - 53 | 48.50 | 144.80 | 57 | 40 |
| MK 63 | 60 - 64 | 62.30 | 157.20 | 57 | 40 |
| MK 75 | 71 - 80 | 73.80 | 169.50 | 57 | 40 |
| MK 90 | 84 - 92 | 87.20 | 183.70 | 57 | 40 |
| MK 110 | 105 - 116 | 108.4 | 203.5 | 57 | 40 |
| MK 125 | 120 - 130 | 123.3 | 219.2 | 57 | 40 |
| MK 160 | 154 - 166 | 157.7 | 253.1 | 57 | 40 |
| MK 200 | 195 - 210 | 199.8 | 290.4 | 57 | 40 |

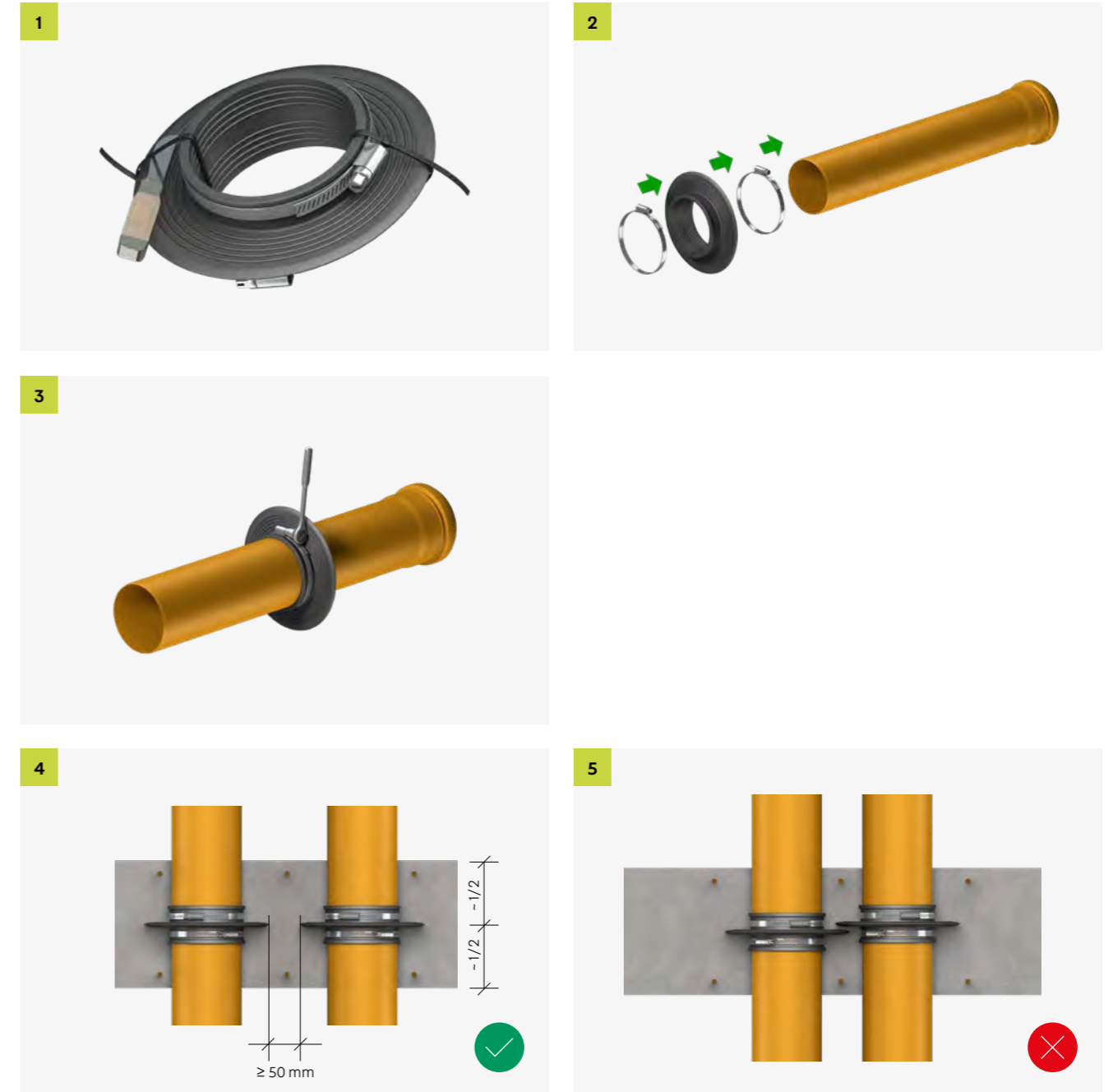
KUNEX® MK EF/ER

Technical data



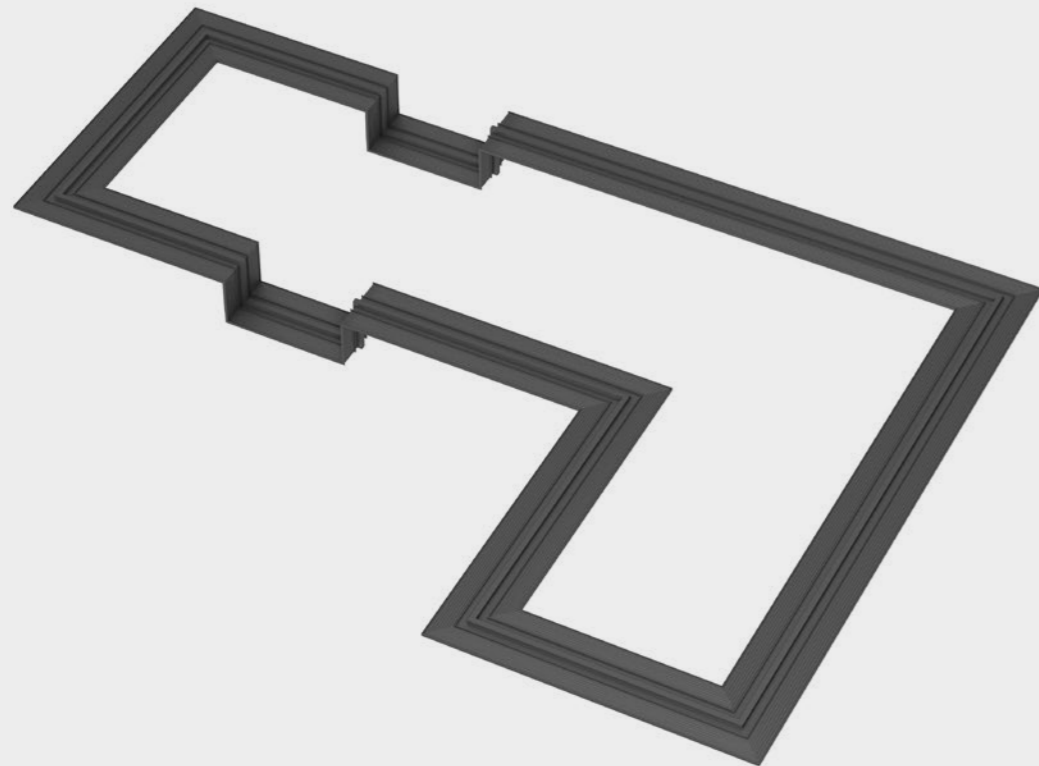
| Type | Outer pipe diameter mm | D _i mm | D _a mm | Sleeve width b _m mm | Sealing ring b _a mm |
|-------|---------------------------|----------------------|----------------------|-----------------------------------|-----------------------------------|
| MK EF | 30 × 3 - 3.5 | 30.5 × 6.0 mm | 120.80 | 39.80 | 40 |
| MK ER | 8 - 10 | 9.50 | 106.20 | 39 | 40 |

Installation instructions



Our Application Technology department will be happy to assist you with further solutions.

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KUNEX® formed parts and accessories

Joint tape systems with corners, crossovers and T shapes

KUNEX® joint tapes and formed parts are used to create closed joint tape systems for sealing watertight concrete structures. These are prefabricated in the factory in sections of up to 25 m so that only a few minor butt joint welds need to be made on the building site.

Application

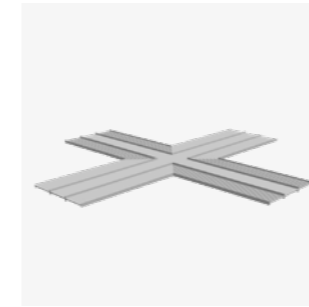
KUNEX® formed parts are used as interior or exterior joint seals for forming watertight construction or movement joints. The systems are suitable for zones subject to repeated wet and dry cycles and meet the requirements of usage class A for stress classes 1 and 2 in accordance with the German watertight concrete guideline. KUNEX® accessories are used when handling joint tapes on construction sites.



Benefits

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

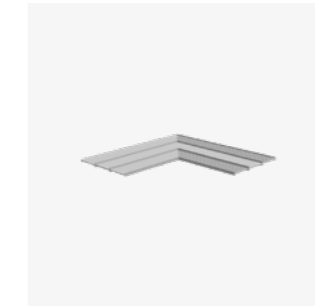
Standard formed parts



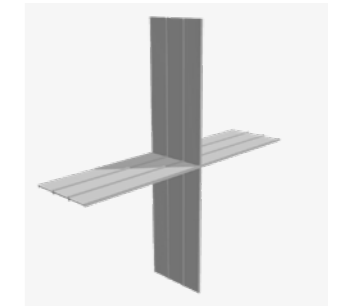
Form 1
Flat crossover



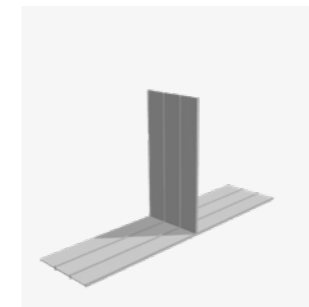
Form 2
Flat T



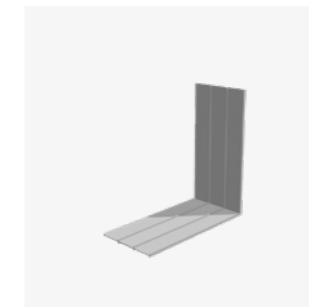
Form 3
Flat corner



Form 4
Vertical crossover



Form 5
Vertical T



Form 6
Vertical corner



Form 7
Vertical crossover



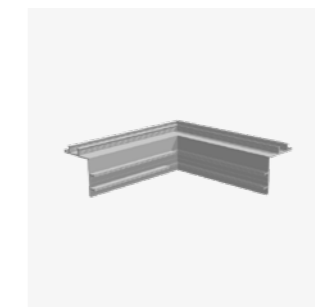
Form 8
Vertical T



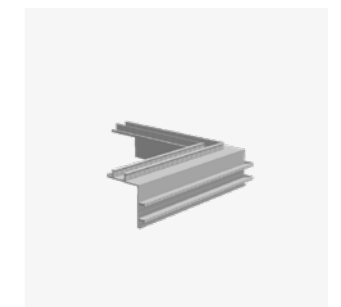
Form 9
Vertical corner



Form 10
Flat corner

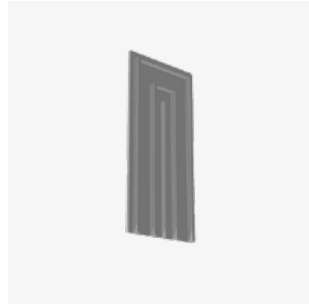


Form 11
Mirrored corner

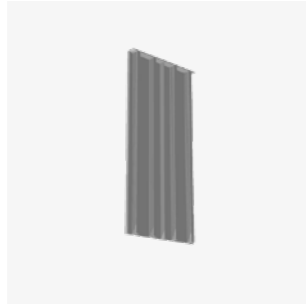


Form 12
Double-angled corner

Standard formed parts



Form 13
Joint tape lock

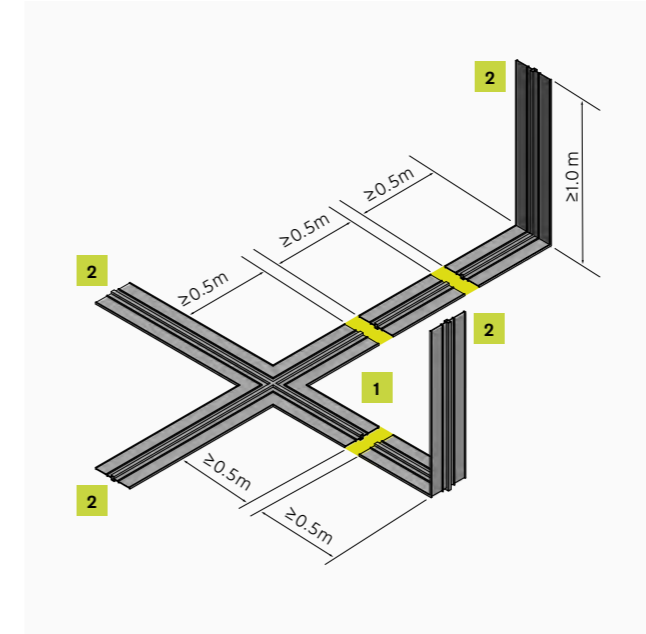


Form 14
Joint tape closure

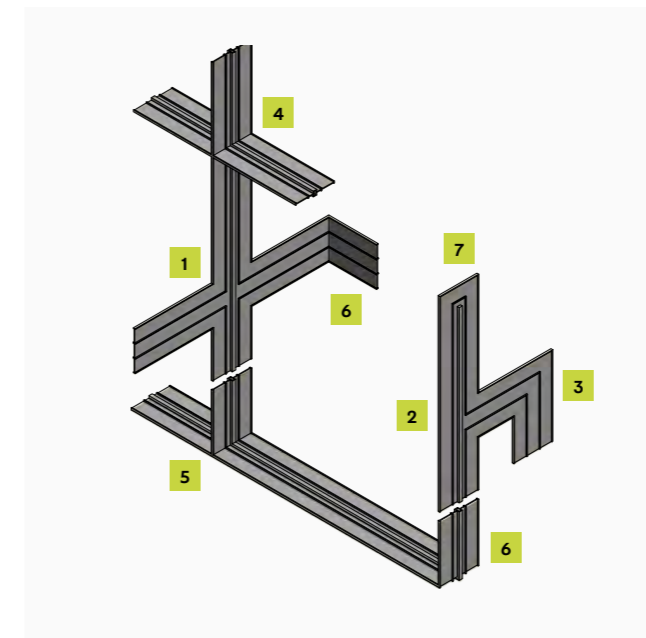


Form 15
Butt joint

Joint tape designs



- 1** First casting section
- 2** Free joint tape end
- Joint on building site



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

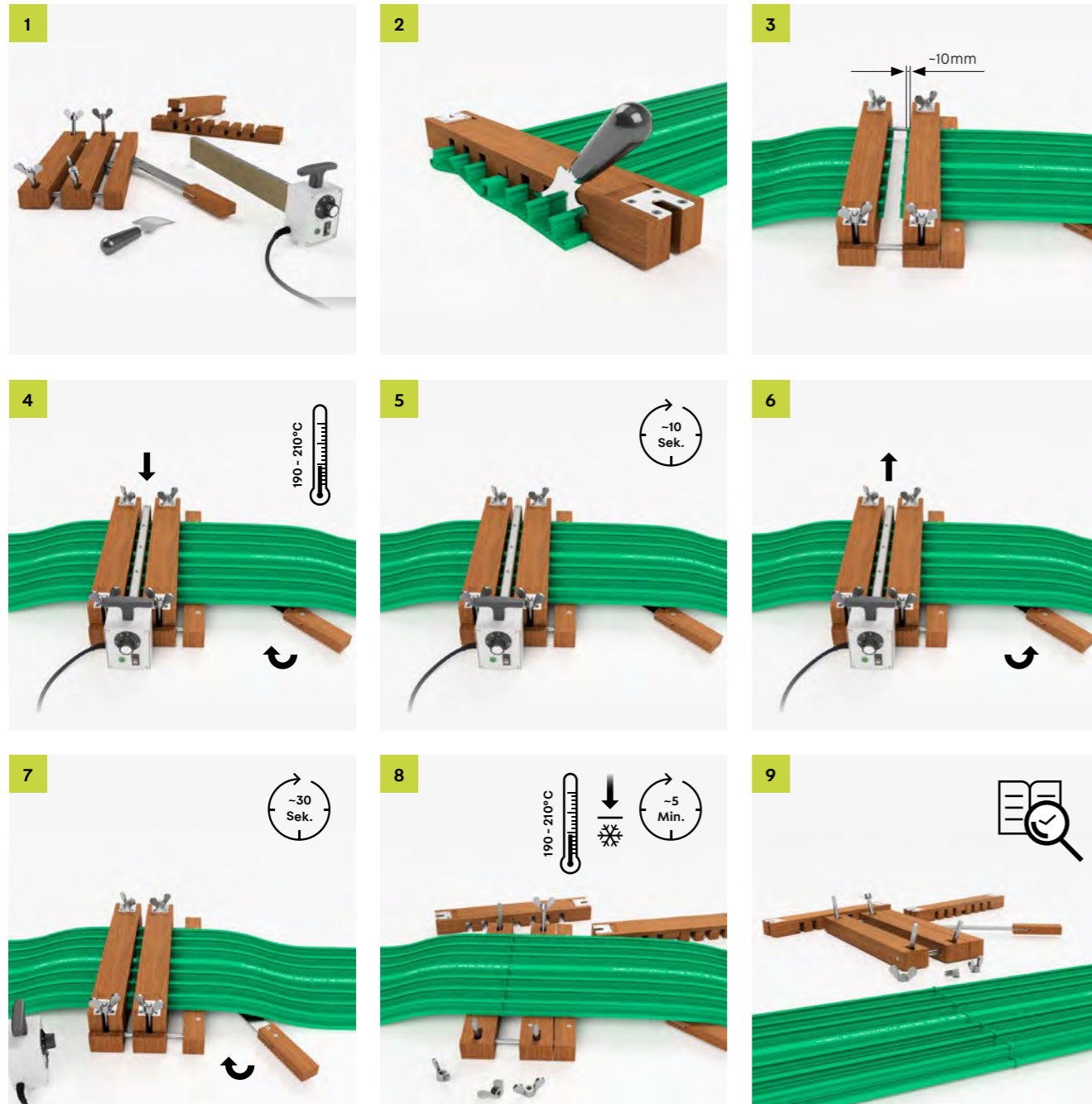
Alongside standard formed parts made of construction joint tapes, expansion joint tapes or joint end tapes, we also produce joint tape designs in accordance with customer requests.



Our Application Technology department will be happy to assist you with further solutions.

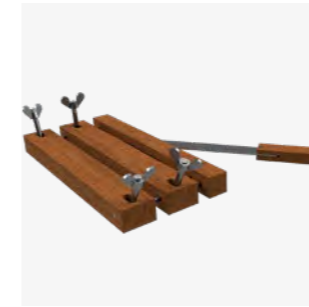
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Butt joint welding on the building site



ⓘ Joints on building sites must only be created by qualified personnel.
Visit www.h-bau.de for more information regarding qualifications

Accessories



Welding gauge
Type: SL320.
This basic element is used to hold 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.



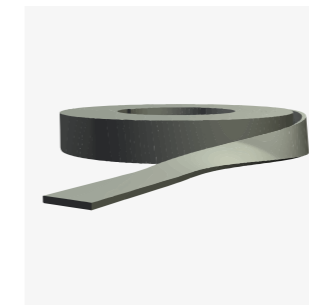
Welding plate
Type: SSP 400.
For joining thermoplastic joint tapes.



Joint tape knife
For cutting joint tapes.



Spark tester
230 V, 50/60Hz.
Test voltage: Adjustable from 10 - 55 kV, flexible rod electrode, 150 mm long.



Welding tape
Type: 25/3 or 30/2 - also available in BV quality class.
For reinforcing joint tape welds.



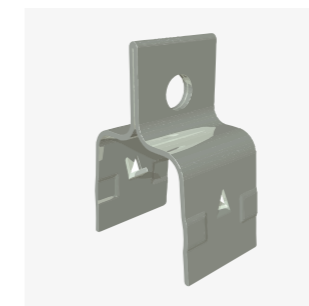
Hot air gun
Hot air welder, 1600 watts / 230 V.



Tubular nozzle
Dia. 5 mm as accessory for hot air gun.



Wide slot nozzle
20 mm wide as accessory for hot air gun.



Joint tape clip
For fastening joint tapes in place.
Consumption: 4 units per running metre and side.



Joint tape connector
The FBV joint tape connector in a clamping device for connecting construction joint tapes.
Type: FBV 100, 150, 190, 240, 320



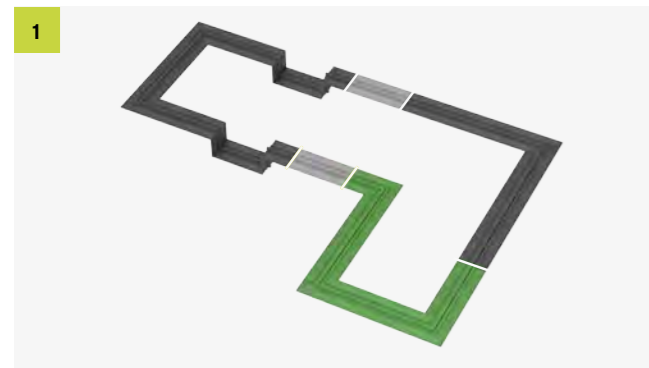
Joint tape connection
The joint tape connection FBA is a clamping device for connecting PENTAFLEX® elements with joint tapes of all kinds.

General information

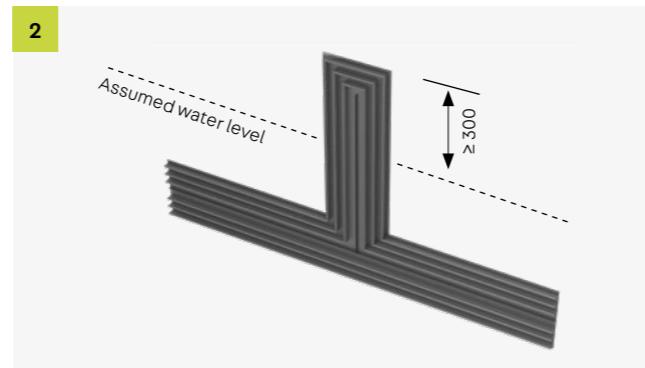
Guidelines

The most suitable joint tape must be determined on the basis of the anticipated loads. Ensure that the tape is properly applied to the structure.

- Joints should be as straight as possible, clearly visible and without any differences in elevation
- Any changes necessary 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 are required



Joint tapes must create a closed sealing system



Joint tapes should be laid at least 300 mm above the assumed water level and sealed at the ends with a joint tape lock

Selecting a joint tape

Joint tapes should be selected depending on the following conditions:

- Type of joint: Construction joint or movement joint
- Interior or exterior sealing level
- Compatible with bitumen (BV) or not compatible with bitumen (NB)
- Joint tape width depending on the assumed water level, thickness of the component and, if applicable, the resulting deformation of the joint
- Joint tape in line with DIN or factory standard (German building code test certificate (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
- German building code test certificate (abP) – Shape, dimensions, markings and material properties of PVC-P joint tapes in accordance with factory standard
- DAfStb guideline on watertight concrete structures (Wasserundurchlässige Bauwerke aus Beton) – general regulations dealing with watertight concrete structures

Determining the correct joint tape

Assumed water level

The highest ground/artesian water level or flood level to be expected during the planned duration of use taking into account many years of observations and expected future conditions: the highest assumed water level.

(Source: German watertight concrete guideline)

Joint type

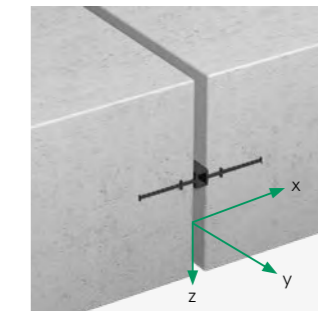
The type of joint tape is determined on the basis of the type of joint:

- Construction joint – Interior or exterior construction joint tape
- Movement joint – Interior or exterior expansion joint tape
- Joint end tape for sealing the surface of the joint at the same time

Deformation stress

The deformation in movement joints affects the maximum water pressure that the joint tapes can withstand.

The resulting deformation can be determined as follows:



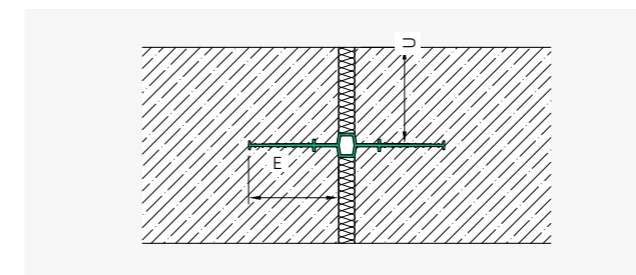
$$v_r = \sqrt{v_x^2 + v_y^2 + v_z^2}$$

v_r = resulting deformation
 v_x = deformation in x axis
 v_y = deformation in y axis
 v_z = deformation in z axis

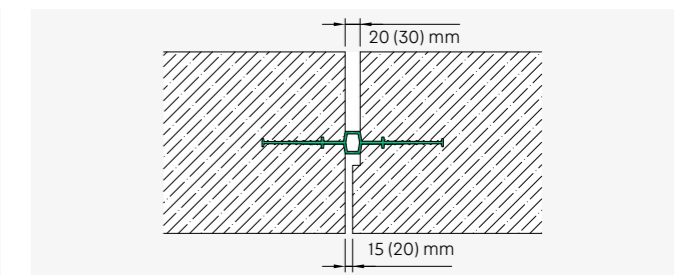
Calculation example on p. 67

| Joint type | Usage | Type |
|---------------------|------------------------|-----------|
| Construction joints | No planned deformation | A, AA |
| | $v_r \leq 30$ mm | D, DA, FA |
| | $v_r \leq 35$ mm | DA, FA |
| Movement joints | $v_r \leq 40$ mm | FA |
| | No shear deformation | D, DA |
| Compression joints | | |

Joint tape width and compression limit



Interior joint tapes should roughly correspond to the component thickness and be positioned centrally in the component. The anchoring depth (E) must not exceed the cover (U).



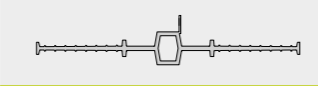
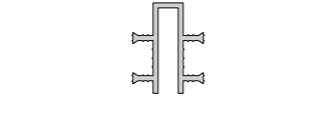
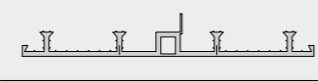
Stepped joints prevent the expansion chamber in joint tapes from being compressed when the joint undergoes extreme deformation.

Construction notes

Nominal joint width

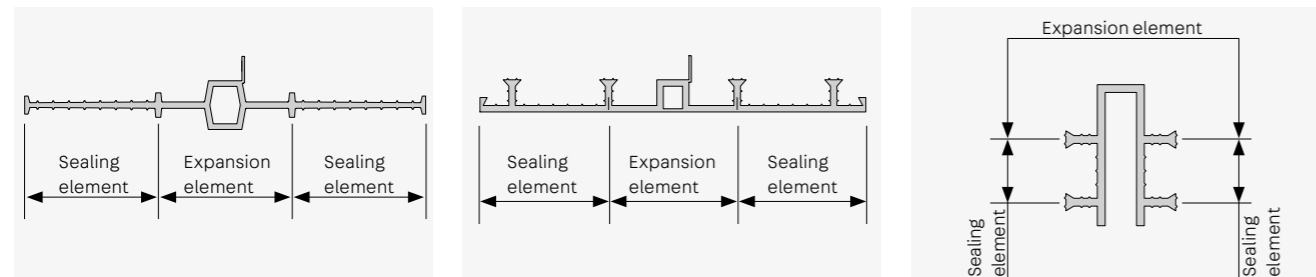
This table shows the following maximum permitted joint widths for standard joint tapes:

Special joint tapes are also available in coordination with our Application Technology department.

| Joint tape | Type | Joint width |
|---|------|-------------|
|  | D | 20 - 30 mm |
|  | FA | 20 - 30 mm |
|  | DA | 20 mm |

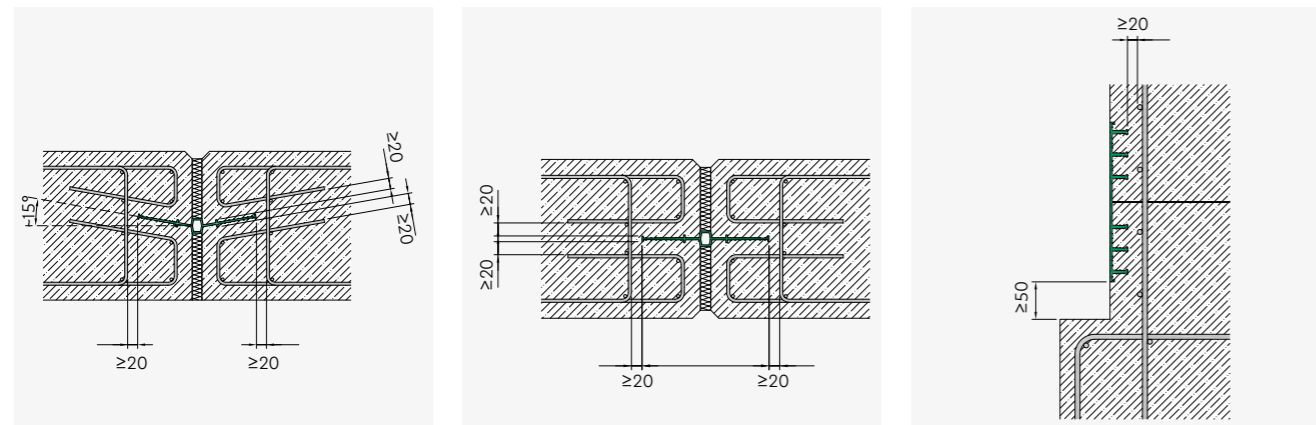
Functional areas

In terms of function, joint tapes are divided 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



Interior expansion joint tape in a floor slab bent at an angle of 15° – distance to static reinforcement.

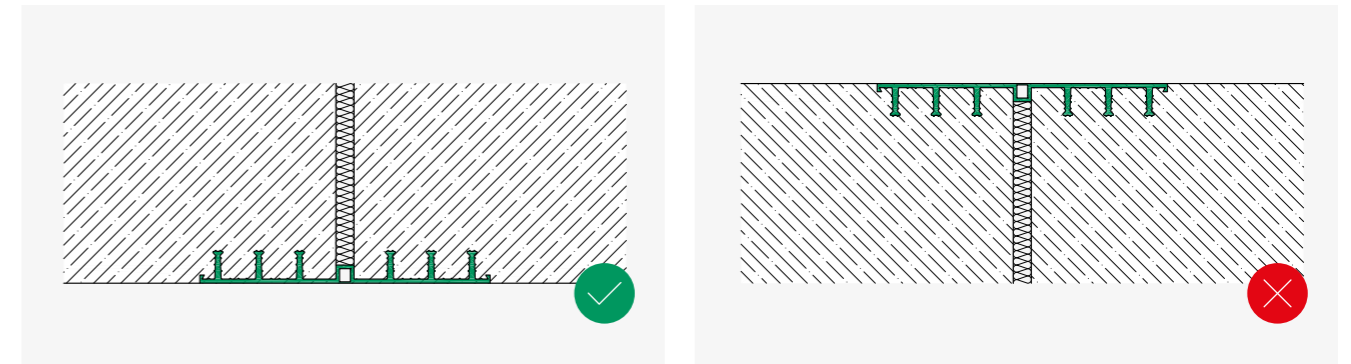
Interior expansion joint tape in a wall – distance to static reinforcement.

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

Construction notes

H2 hier entfernen?

Arrangement of exterior joint tapes




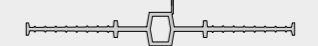



In general, exterior joint tapes should be placed on the positive side of the component (facing the water under pressure). In floor/floor joints, exterior joint tapes must always be positioned on the underside.

Casting concrete below the tape is not permitted.

Changing the direction of the joint

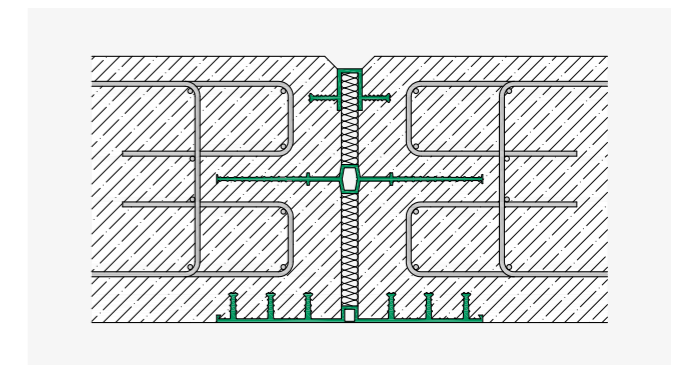
As a rule, corners should be created by using formed parts (see p. 56). Alternatively, they can be formed by

bending the joint tape, but always observing the following bending radii.

| Joint tape type | | Bending radius |
|-----------------|------------------------------------|--|
| Interior | Construction joint tapes (type A) |  ≥ 15 cm |
| Interior | Expansion joint tapes (type D) |  ≥ 25 cm |
| Exterior | Construction joint tapes (type AA) |  $\geq 50 \times$ stop anchor height |
| Exterior | Expansion joint tapes (type DA) |  $\geq 50 \times$ stop anchor height |
| Joint end tapes | Joint closing tapes (type FA) |  $\geq 30 \times$ stop anchor height (bend around the x axis) |
| Joint end tapes | Joint closing tapes (type FA) | $\geq 30 \times$ 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 casting. The joint is protected against contamination by the joint end tape.



Joint tape selection

In line with DIN 18197

Interior expansion joint tapes

| p bar | p m | v _r mm | | | | | | |
|----------|--------|----------------------|----------|----------|----------|----------|----------|----------|
| | | 0 | 5 | 10 | 15 | 20 | 25 | 30 |
| 0.000 | 0.00 | D240 DIN | D240 DIN | D240 DIN | D240 DIN | D240 DIN | D320 DIN | D500 DIN |
| 0.100 | 1.00 | D240 DIN | D240 DIN | D240 DIN | D240 DIN | D320 DIN | D500 DIN | |
| 0.200 | 2.00 | D240 DIN | D240 DIN | D240 DIN | D240 DIN | D320 DIN | D500 DIN | |
| 0.300 | 3.00 | D240 DIN | D240 DIN | D240 DIN | D320 DIN | D320 DIN | D500 DIN | |
| 0.400 | 4.00 | D320 DIN | D320 DIN | D320 DIN | D320 DIN | D320 DIN | D500 DIN | |
| 0.500 | 5.00 | D320 DIN | D320 DIN | D320 DIN | D320 DIN | D320 DIN | | |
| 0.600 | 6.00 | D320 DIN | D320 DIN | D320 DIN | D320 DIN | D500 DIN | | |
| 0.700 | 7.00 | D320 DIN | D320 DIN | D320 DIN | D320 DIN | D500 DIN | | |
| 0.800 | 8.00 | D320 DIN | D320 DIN | D320 DIN | D320 DIN | D500 DIN | | |
| 0.900 | 9.00 | D320 DIN | D320 DIN | D320 DIN | D320 DIN | | | |
| 1.000 | 10.00 | D320 DIN | D320 DIN | D320 DIN | D320 DIN | | | |
| 1.100 | 11.00 | D500 DIN | D500 DIN | D500 DIN | D500 DIN | | | |
| 1.200 | 12.00 | D500 DIN | D500 DIN | D500 DIN | D500 DIN | | | |

v_r = resulting deformation, P = water pressure

Joint tape selection

In line with DIN 18197

H1 und H3 hier entfernen?

Interior construction joint tapes

| p bar | p m | v _r mm |
|----------|--------|----------------------|
| | | 0 |
| 0.540 | 5.40 | A240 DIN |
| 1.800 | 18.00 | A320 DIN |
| 2.160 | 21.60 | A500 DIN |

v_r = resulting deformation, P = water pressure

Example of dimensions D320 DIN

Requirements

- 300 mm component thickness
- 20 mm interior expansion joint
- 4 m standing water
- 8 mm deformation in x direction
- 1 mm deformation in Y direction
- 5 mm deformation in z direction

Calculation

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

$$= \sqrt{8^2 + 1^2 + 5^2}$$

$$= 10 \text{ mm}$$

Calculate for the selection diagrams:

- Interior joint tapes: joint tape width < component thickness (exception: 320 mm joint tape width with 300 mm component thickness)
- v_r = 10 mm boundary condition
- v_r ≤ 30 mm for interior expansion joint tapes

Condition met ✓

Joint tape selection

H1 und H3 hier entfernen?

In line with DIN 18197

Exterior construction and expansion joint tapes

| p bar | p m | v _r mm | | | | | |
|----------|--------|----------------------|--------------|--------------|--------------|--------------|--------------|
| | | 0 | 0 | 5 | 10 | 15 | 20 |
| 0.000 | 0.00 | AA240/20 DIN | DA240/20 DIN | DA240/20 DIN | DA240/20 DIN | DA240/20 DIN | DA240/20 DIN |
| 0.100 | 1.00 | AA240/35 DIN | DA240/35 DIN | DA240/35 DIN | DA240/35 DIN | DA240/35 DIN | DA240/35 DIN |
| 0.200 | 2.00 | AA240/35 DIN | DA240/35 DIN | DA240/35 DIN | DA240/35 DIN | DA240/35 DIN | DA240/35 DIN |
| 0.300 | 3.00 | AA320/25 DIN | DA320/25 DIN | DA320/25 DIN | DA320/25 DIN | DA320/25 DIN | DA320/25 DIN |
| 0.400 | 4.00 | AA320/35 DIN | DA320/35 DIN | DA320/35 DIN | DA320/35 DIN | DA320/35 DIN | DA320/35 DIN |
| 0.500 | 5.00 | AA320/35 DIN | DA320/35 DIN | DA320/35 DIN | DA320/35 DIN | DA320/35 DIN | DA320/35 DIN |
| 0.600 | 6.00 | AA320/35 DIN | DA320/35 DIN | DA320/35 DIN | DA320/35 DIN | DA320/35 DIN | DA320/35 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 |

v_r = resulting deformation, P = water pressure | Continued on next page

Joint tape selection

H1 und H3 hier entfernen?

In line with DIN 18197

Exterior construction and expansion joint tapes

| p bar | p m | v _r mm | | |
|----------|--------|----------------------|--------------|--------------|
| | | 25 | 30 | 35 |
| 0.000 | 0.00 | DA240/35 DIN | DA320/35 DIN | DA500/35 DIN |
| 0.100 | 1.00 | DA320/25 DIN | DA500/35 DIN | |
| 0.200 | 2.00 | DA320/35 DIN | DA500/35 DIN | |
| 0.300 | 3.00 | DA320/35 DIN | DA500/35 DIN | |
| 0.400 | 4.00 | DA500/35 DIN | | |
| 0.500 | 5.00 | DA500/35 DIN | | |
| 0.600 | 6.00 | DA500/35 DIN | | |

v_r = resulting deformation, P = water pressure

Joint tape selection

H1 und H3 hier entfernen?

In line with DIN 18197

Joint end tapes

| 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 |
| 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 | |

v_r = resulting deformation, P = water pressure

Joint tape selection

H1 hier entfernen?

In line with factory standard

Interior expansion joint tapes

| p bar | p m | v _r mm | | | | | | |
|----------|--------|----------------------|------|------|------|------|------|------|
| | | 0 | 5 | 10 | 15 | 20 | 25 | 30 |
| 0.000 | 0.00 | D150 | D150 | D150 | D190 | D240 | D320 | D500 |
| 0.010 | 0.10 | D150 | D150 | D150 | D190 | D320 | D500 | |
| 0.100 | 1.00 | D150 | D150 | D150 | D190 | D320 | D500 | |
| 0.140 | 1.40 | D190 | D190 | D190 | D240 | D320 | D500 | |
| 0.255 | 2.55 | D240 | D240 | D240 | D320 | D320 | D500 | |
| 0.850 | 8.50 | D320 | D320 | D320 | D320 | | | |
| 1.020 | 10.20 | D500 | D500 | D500 | D500 | | | |

v_r = resulting deformation, P = water pressure

Interior construction joint tapes

| p bar | p m | v _r mm |
|----------|--------|----------------------|
| | | 0 |
| 0.010 | 0.10 | A100 |
| 0.100 | 1.00 | A150 |
| 0.140 | 1.40 | A190 |
| 0.459 | 4.59 | A240 |
| 1.530 | 15.30 | A320 |
| 1.836 | 18.36 | A500 |

v_r = resulting deformation, P = water pressure

Joint tape selection

H1 und H3 hier entfernen?

In line with factory standard

Exterior construction and expansion joint tapes

| 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 | | | |

v_r = resulting deformation, P = water pressure

Joint tape selection

H1 und H3 hier entfernen?

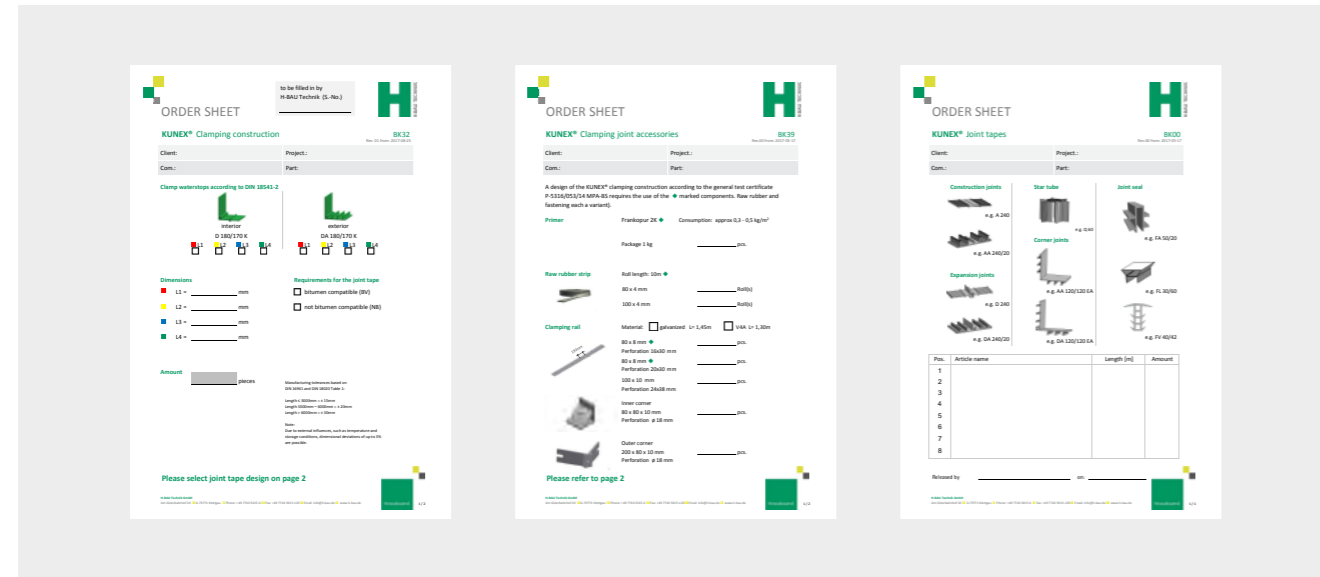
In line with factory standard

Joint end tapes

| 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 | | | | | |

v_r = resulting deformation, P = water pressure

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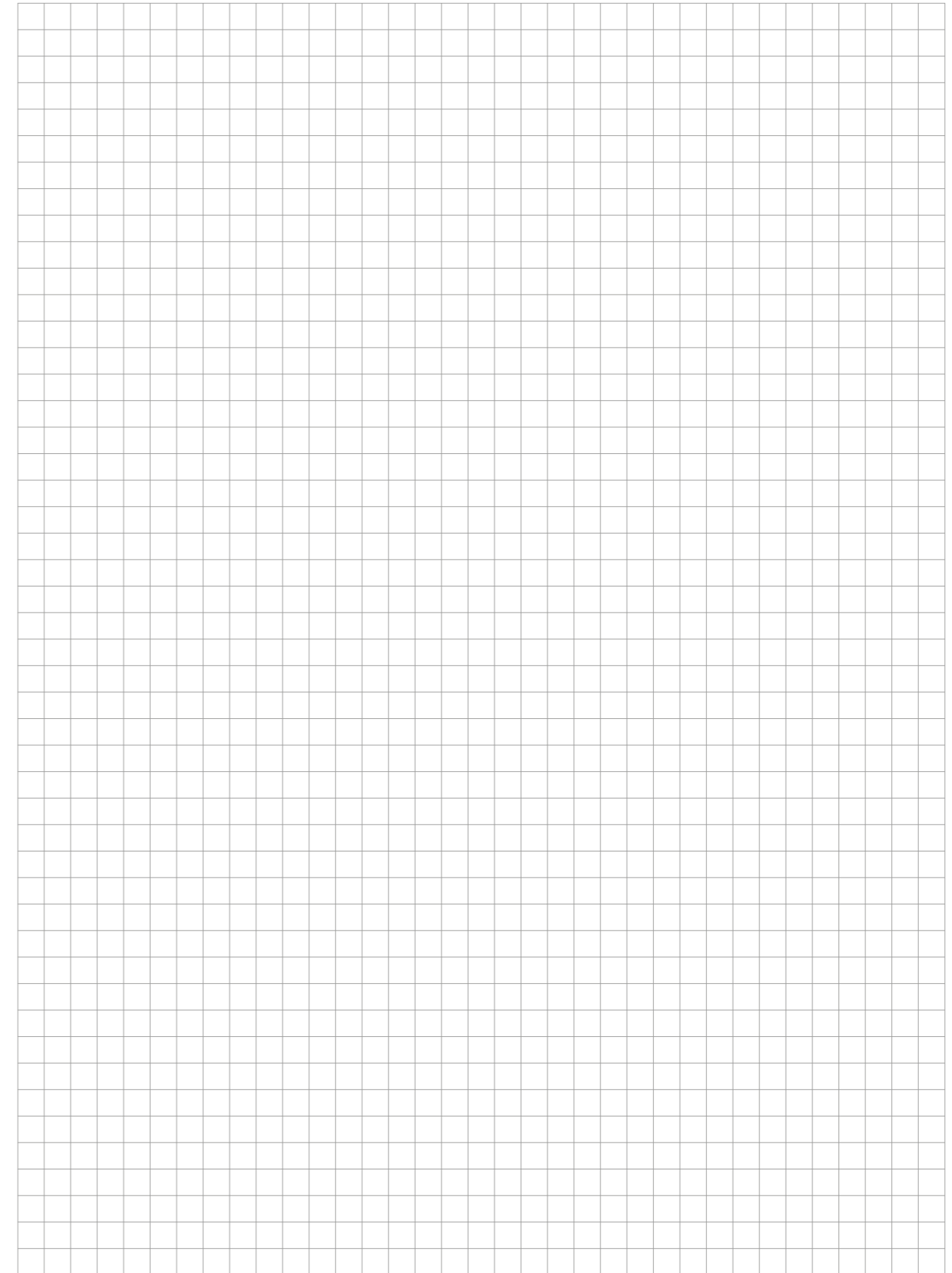
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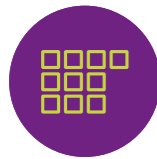
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