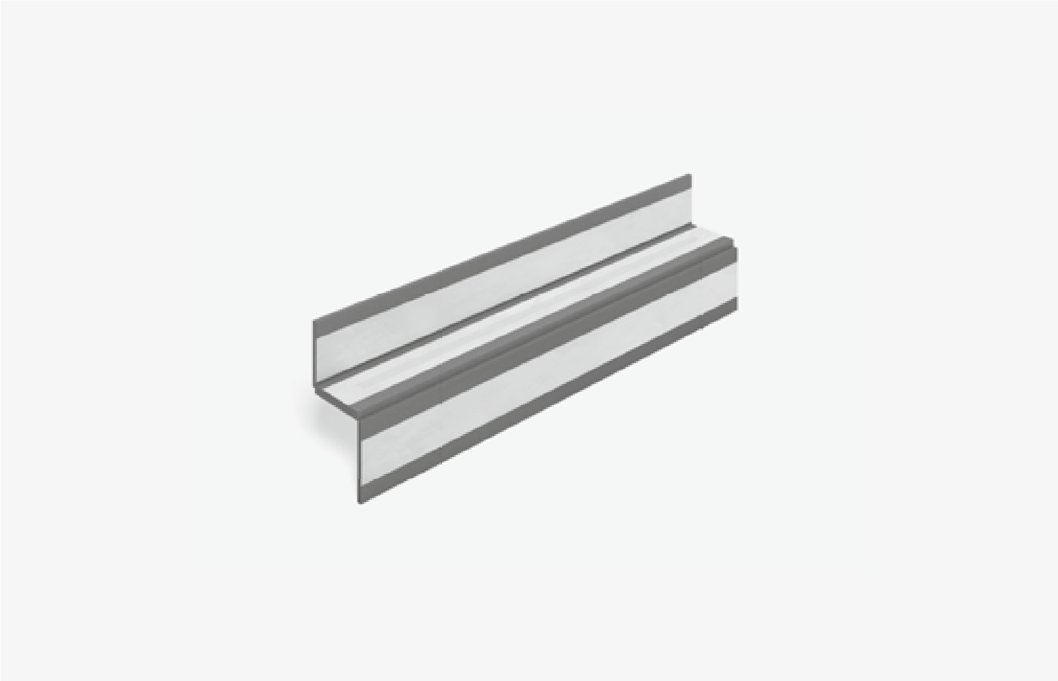
Schöck Tronsole® type F



F

Schöck Tronsole® type F
Serves the sound insulation of precast stair flight and landing with formation of support. The landing can be produced both in in-situ concrete as well as semi- or fully prefabricated.

Product characteristics | Product design

Product characteristics

- Impact sound pressure level difference $\Delta L^*_{n,w} \leq 30$ dB with type F-V2; $\Delta L^*_{n\,w} \geq 32$ dB with type F-V1, tested according to DIN 7396; Test reports Nos. 91386-01 to 91386-03;
- High value and efficient Elodur® elastomer support for linear connection
- Planning certainty through structural component statics
- Fire resistance class of the adjoining structural component (up to R90) in accordance with fire protection inspection report No. 16503/2013 iBMB Braunschweig
- Firm attachment to precast stair flight using adhesive assembly tape
- Length easy to shorten by 100 mm
- Simple and rapid installation through bracing clip joint

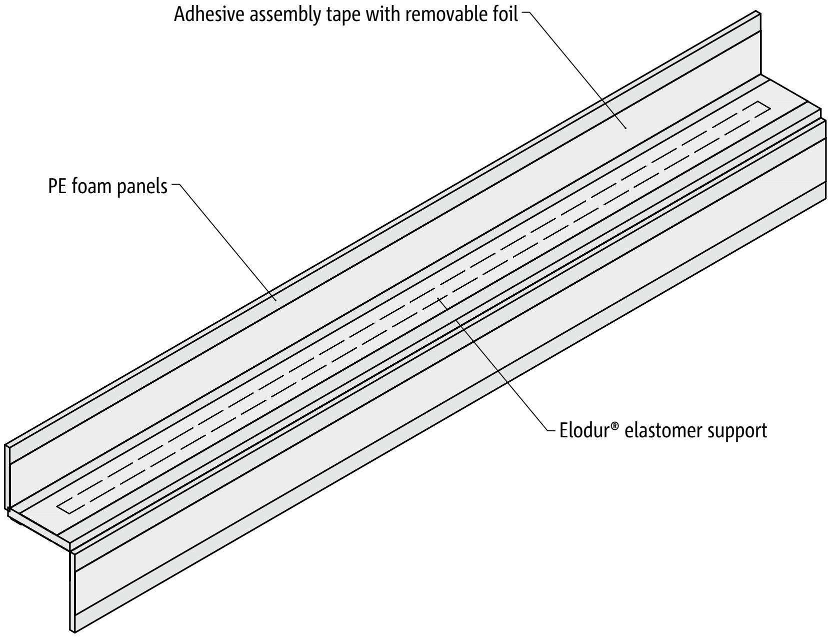


Fig. 53: Schöck Tronsole® type F

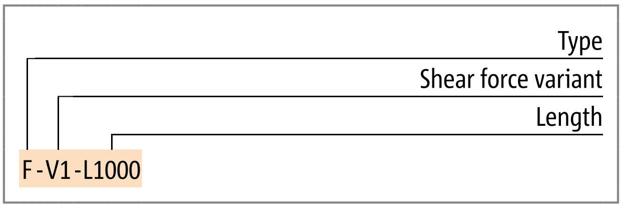
Product selection | Type designations | Special designs | Configuration variants

Schöck Tronsole® type F variants

The design of the Schöck Tronsole® type F can vary as follows:

- Shear force load-bearing level:
  Type F-V1, shear force load-bearing level 1, elastomer support width b = 25 mm or
  Type F-V2, shear force load-bearing level 2, elastomer support width b = 35 mm
  Type FS-V3, shear force load-bearing level 3, elastomer support width b = 2 x 25 mm (special type on request)
- Length:
  L = 1000 mm, 1100 mm, 1200 mm, 1300 mm and 1500 mm
- Corbel depth:
  130 - 160 mm

Type designation in planning documents



Special designs

The Schöck Tronsole® type F can be cut to length on site. Furthermore, the special dimensions of the Tronsole®, which differ from the standard product variants presented in the information, can be requested from Schöck Application Technology.

Configuration of various types of connection

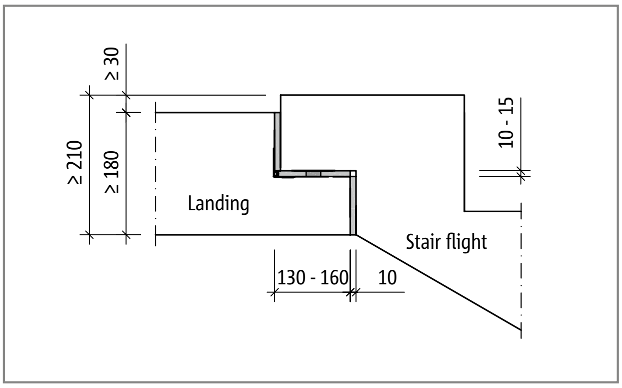


Fig. 54: Schöck Tronsole® type F: Design variant superelevated stair connection

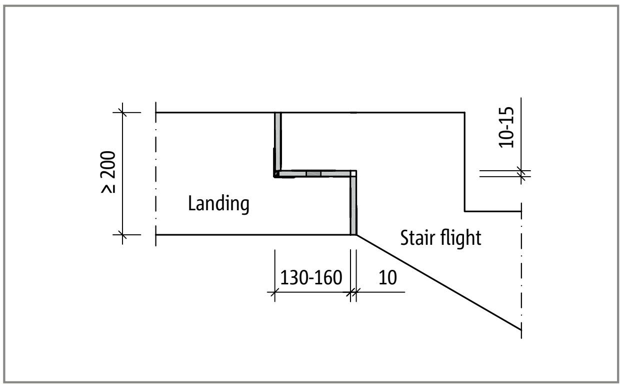


Fig. 55: Schöck Tronsole® type F: Design variant flush stair connection

Configuration variants

- Type of connection:
  The Schöck Tronsole® type F enables the formation of a flush or a superelevated connection on the stair flight side
- Height:
  A connection height of h with flush connection $\text{type}_A \geq 200$ mm possible.
  A height offset of at least 30 mm is assumed with superelevated connection on the stair side. This is found in the assumed minimum height for the impact soundproofing on the landing and leads to a total height of the connection of $h_A \geq 210$ mm with a landing slab thickness of h ≥ 180 mm.
- Corbel depth:
  Corbel depths are possible between $K_T \geq 130$ mm and $K_T = 160$ mm, because for corbel depths in this area the smallest possible anchoring length of the corbel reinforcement according to DIN EN 1992-1-1 can be verified.
- Depending on the static level of usage, a deflection of the Elodur® elastomer support of some 3 mm, but maximum 5 mm, is allowed- see diagram page 64.

Installation cross section

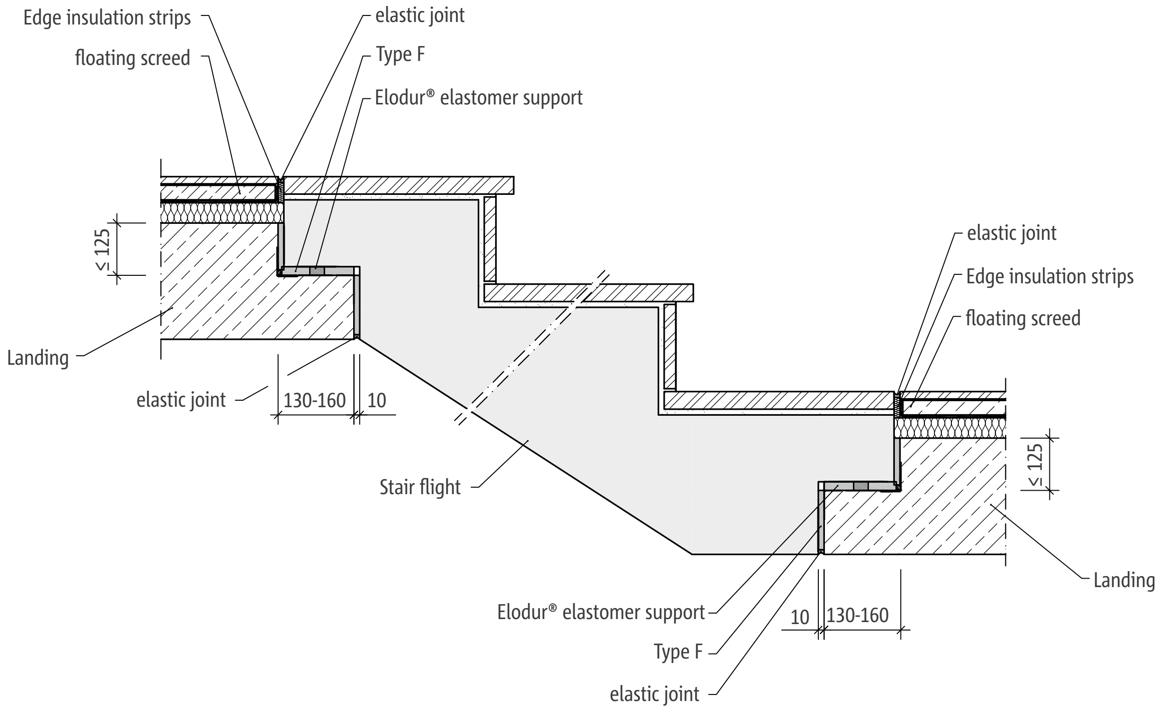


Fig. 56: Schöck Tronsole® type F: Installation cross section

F

Information on installation cross-section

- If the difference between the corbel height of the landing $h_{k,P}$ and the landing slab thickness h is greater than 125 mm, the upper end of the soundproofing joint between landing and stairs is closed using additional elastic joint material.

Element arrangement

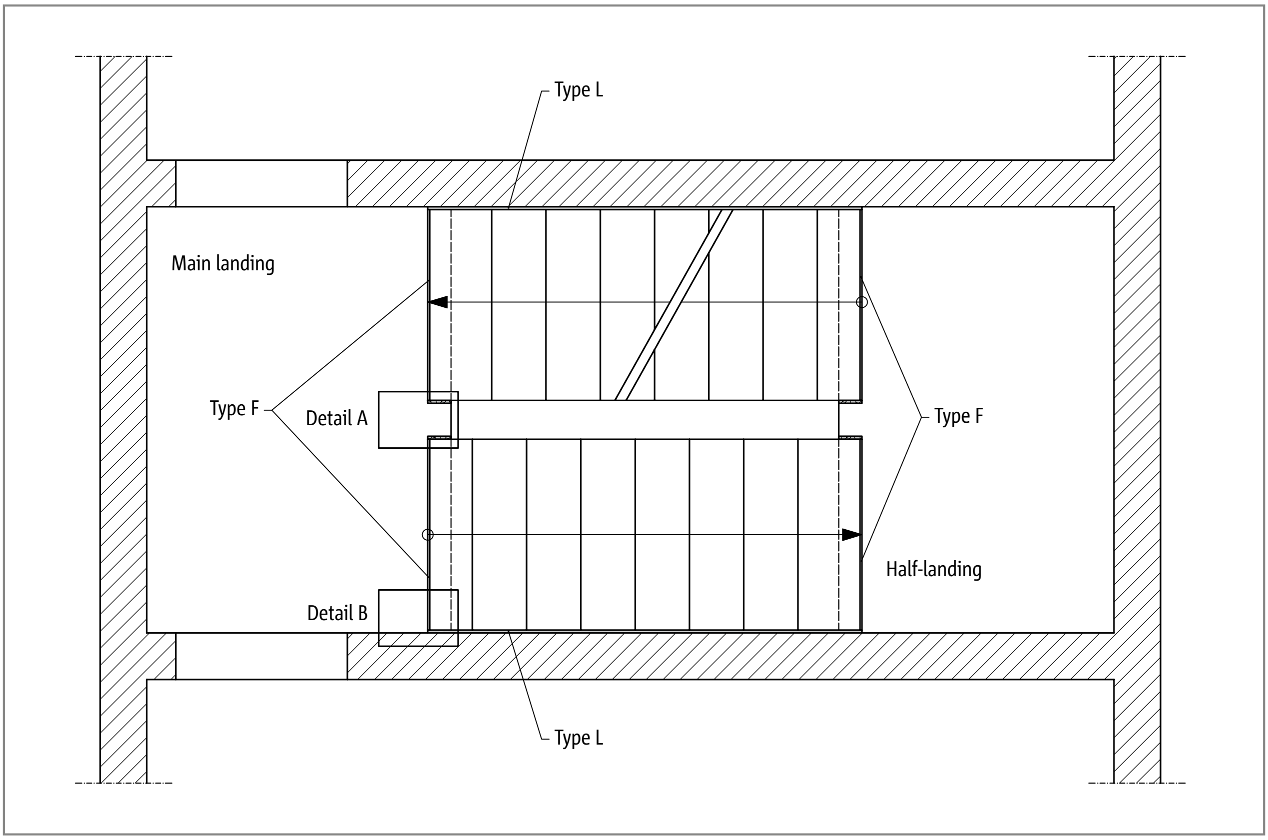


Fig. 57: Schöck Tronsole® type F: Element configuration in plan view

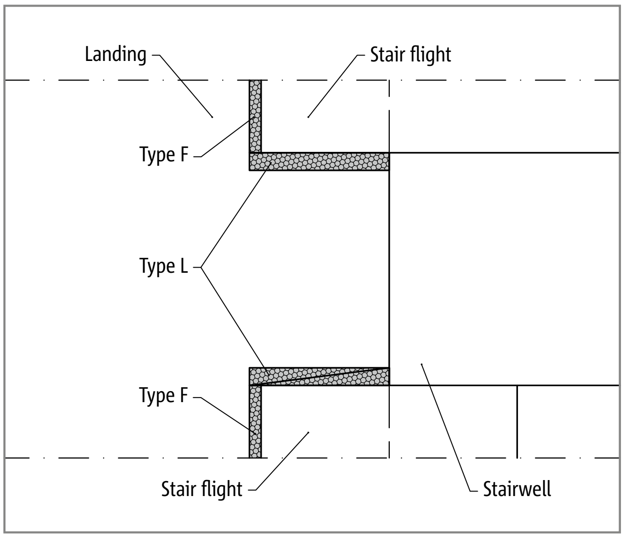


Fig. 58: Schöck Tronsole® type F: Element configuration, Detail A

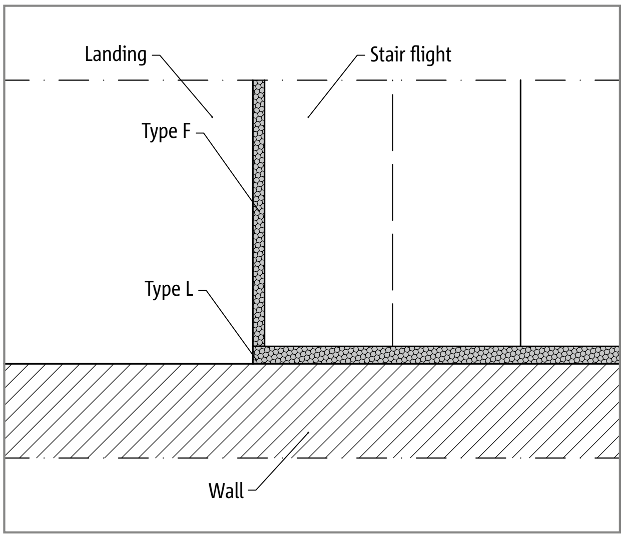


Fig. 59: Schöck Tronsole® type F: Element configuration, Detail B

Notes on element configuration

- For the avoidance of acoustic bridges between staircase wall and stair flight it is recommended that the Schöck Tronsole® type F is combined with type L-420. The Tronsole® type L-420 closes the joint between stair string and wall, maintaining a joint width of 15 mm.
- The use of the Schöck Tronsole® type B is suitable for the sound insulation of stair flight and floor slab. Tronsole® type B. The Tronsole® type F and B can be used combined.

Product description

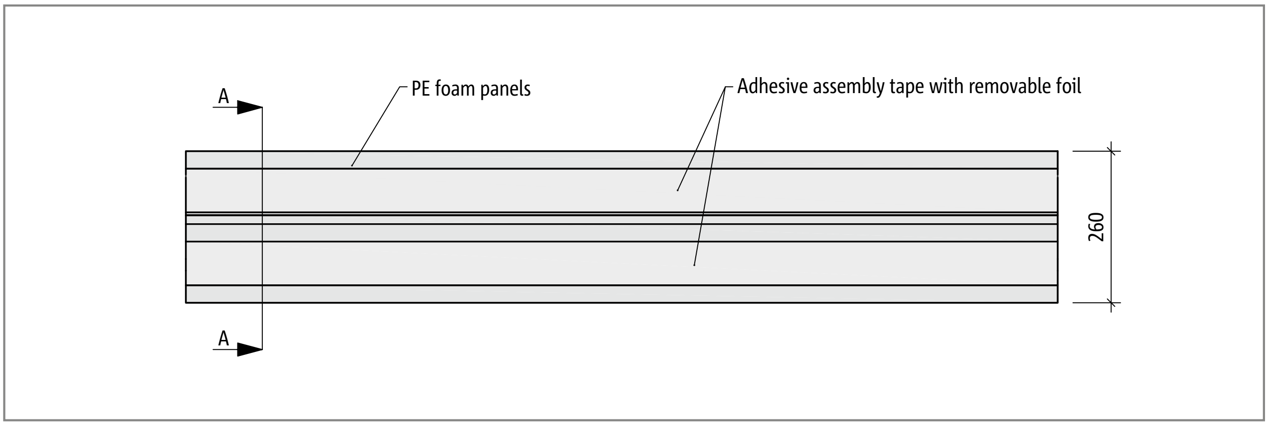


Fig. 60: Schöck Tronsole® type F: Elevation

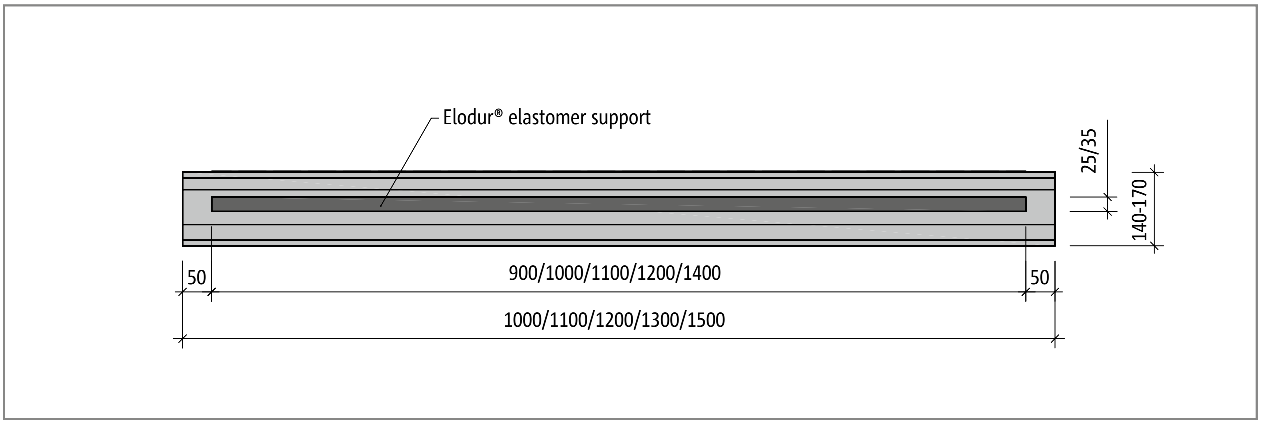


Fig. 61: Schöck Tronsole® type F: Layout

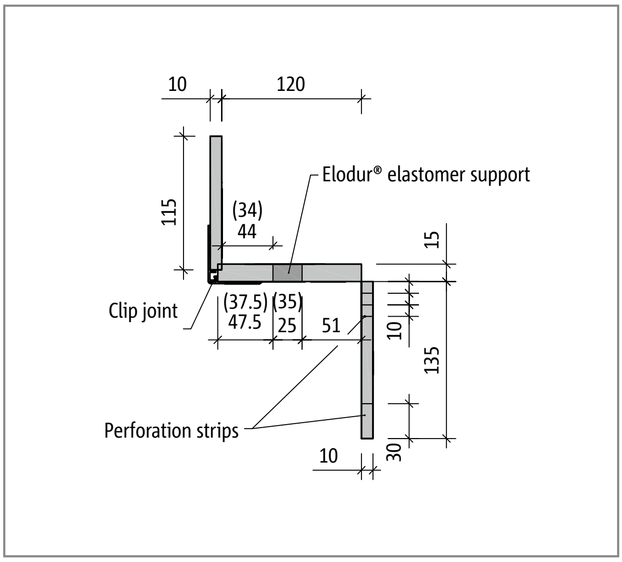


Fig. 62: Schöck Tronsole® type F-V1, (-V2): Product model, cross-section A-A, with adjustment to the minimum corbel depth

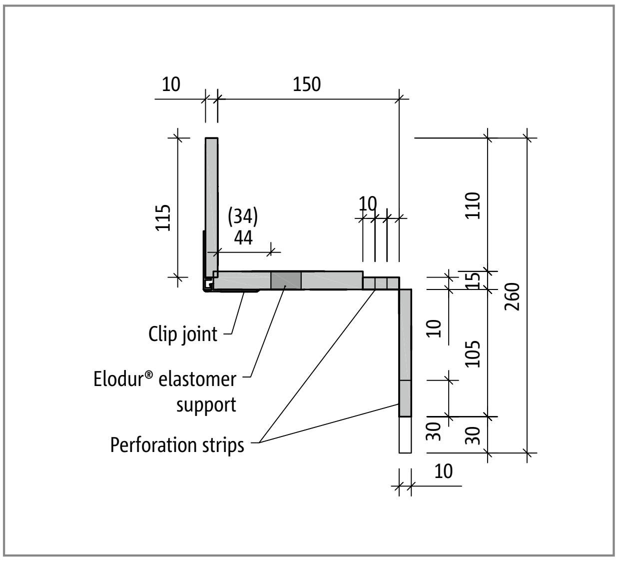


Fig. 63: Schöck Tronsole® type F-V1, (-V2): Product model with adjustment to the maximum corbel depth

F

Design Tronsole®

Schöck Tronsole® type	F-V1	F-V2
$v_{Rd,z}$ [kN/m]	42.4	59.3
$v_{Rd,x}$ [kN/m]	±3.8	±3.8
$v_{Rd,y}$ [kN/m]	±3.8	±3.8

Schöck Tronsole® type	F-V1	F-V2
Tronsole® length L [mm]	1000, 1100, 1200, 1300, 1500	
Tronsole® Thickness [mm]	15	
Elodur® elastomer support, length L_E [mm]	L - 100	
Elodur® elastomer support, thickness [mm]	15	
Elodur® elastomer support, width [mm]	25	35

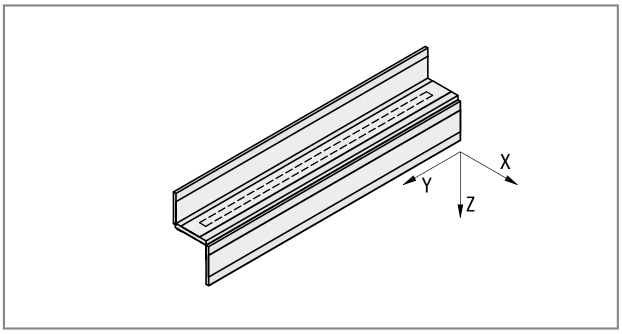


Fig. 64: Schöck Tronsole® type F: Sign rule for the design

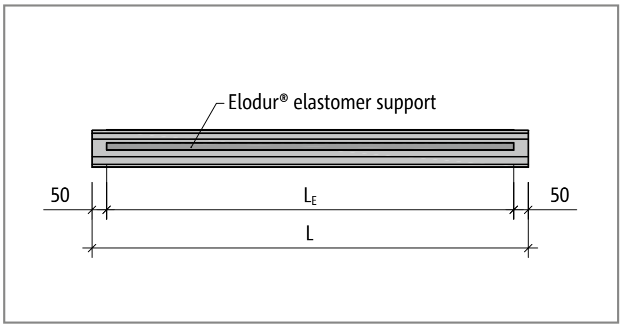


Fig. 65: Schöck Tronsole® type F: Representation of lengths L and L_E; the length of the Elodur® elastomer support is always 10 cm shorter than the length of the Tronsole®.

Notes on design

- The load-bearing capacity of the corbel area of the stair structural components is to be verified by the structural engineer, so far as the dimensioning does not take place according to type statics for the Tronsole® type F.
- The acceptable shear force of the elastomer support is limited by the impact sound reduction.

F

Corbel dimensioning according to type-tested structural standards | Design

Deviating from the corbel dimensioning according to type statics, any corbel dimensions can be selected, so far as for this a valid static verification is carried out by the responsible structural engineer.

Landing

Schöck Tronsole® type	F-V1			F-V2		
Design values Corbel landing with	Fire resistance class R0 Concrete strength landing ≥ C20/25					
Corbel height landing $h_{k,P}$ [mm]	≥ 90	≥ 100	≥ 110	≥ 90	≥ 100	≥ 110
Corbel depth K_T [mm]	$v_{Rd,z}$ [kN/m]					
130	39.8	42.4	42.4	49.5	57.1	59.3
140	42.4	42.4	42.4	57.0	59.3	59.3
150 - 160	42.4	42.4	42.4	59.3	59.3	59.3
Corbel depth K_T [mm]	$v_{Rd,y}$ [kN/m]					
130 - 160	±3.8					
Corbel depth K_T [mm]	$v_{Rd,x}$ [kN/m]					
130 - 160	±3.8					

Stair flight

Schöck Tronsole® type	F-V1			F-V2				
Design values Corbel stair flight with	Fire resistance class R0 Concrete strength class stair flight ≥ C30/37							
Corbel height stair flight h_{Item} [mm]	≥ 90	≥ 100	≥ 110	≥ 90	≥ 100	≥ 110	≥ 120	≥ 130
Corbel depth K_T [mm]	$v_{Rd,z}$ [kN/m]							
130	42.4	42.4	42.4	50.0	57.0	59.3	59.3	59.3
140	28.2	42.4	42.4	28.2	51.7	58.1	59.3	59.3
150	28.2	33.6	42.4	28.2	33.6	53.1	59.0	59.3
160	28.2	33.6	42.4	28.2	33.6	39.0	54.4	59.3
Corbel depth K_T [mm]	$v_{Rd,y}$ [kN/m]							
130 - 160	±3.8							
Corbel depth K_T [mm]	$v_{Rd,x}$ [kN/m]							
130 - 160	±3.8							

Notes on design

- The acceptable shear force of the corbels can only be verified with the on-site reinforcement presented in this section
- According to DIN EN 1992-1-1 (EC2) and DIN EN 1992-1-1/NA with exposure class XC1 the following nominal concrete cover results:
  In-situ concrete landing c_{nom} = 20 mm
  Prefabricated stairway: c_{nom} = 15 mm
- For the fire resistance class R90 a higher concrete cover according to DIN EN 1992-1-2 is necessary. See page 65
- With the predefined concrete strengths one is concerned with minimum requirements which are based on the design.
- The verification of the shear force in the slabs is to take place through the structural engineer, whereby $V_{Rd,max}$ according to DIN EN 1992-1-1 (EC2), Gl. (6.9) for $\theta = 45°$ and $\alpha = 90°$ is to be determined.
- The PE foam panel of the Schöck Tronsole® type specifies the position of the elastomer support. The position of the elastomer support is relevant for the dimensioning of the corbel. Schöck Tronsole® is to be installed fitting exactly to the corbel.

Corbel dimensioning according to type-tested structural standards - Superelevated connection

On the following pages, combinations of corbel and landing height are calculated as examples.

Superelevated connection

Schöck Tronsole® type	F-V1, F-V2			
Connection geometry with	Fire resistance class R 0			
	Stair flight connection height h_A [mm]			
	≥ 210	≥ 230	≥ 250	≥ 270
Corbel height landing $h_{k,P}$ [mm]	≥ 90	≥ 100	≥ 110	≥ 120
Corbel height stair flight h_{Item} [mm]	≥ 110	≥ 120	≥ 130	≥ 140

Schöck Tronsole® type F, table: Flush connection geometry with R0

Schöck Tronsole® type	F-V1, F-V2			
Connection geometry with	Fire resistance class R90			
	Stair flight connection height h_A [mm]			
	≥ 240	≥ 260	≥ 280	≥ 300
Corbel height landing $h_{k,P}$ [mm]	≥ 100	≥ 110	≥ 120	≥ 130
Corbel height stair flight h_{Item} [mm]	≥ 130	≥ 140	≥ 150	≥ 160

Schöck Tronsole® type F, table: Flush connection geometry with R90

Schöck Tronsole® type	F-V1				F-V2			
Design values with	Concrete strength landing ≥ C20/25, stair flight ≥ C30/37							
	Connection height h_A [mm] with superelevated stair head							
Fire resistance class R 0	≥ 210	≥ 230	≥ 250	≥ 270	≥ 210	≥ 230	≥ 250	≥ 270
Fire resistance class R90	≥ 240	≥ 260	≥ 280	≥ 300	≥ 240	≥ 260	≥ 280	≥ 300
Corbel depth K_T [mm]	$v_{Rd,z}$ [kN/m]							
130	39.8	42.4	42.4	42.4	49.5	57.1	59.3	59.3
140	42.4	42.4	42.4	42.4	57.0	59.3	59.3	59.3
150	42.4	42.4	42.4	42.4	53.1	59.0	59.3	59.3
160	39.0	42.4	42.4	42.4	39.0	54.4	59.3	59.3
Corbel depth K_T [mm]	$v_{Rd,y}$ [kN/m]							
130 to 160	±3.8							
Corbel depth K_T [mm]	$v_{Rd,x}$ [kN/m]							
130 to 160	±3.8							

Schöck Tronsole® type F, table: Dimensioning with superelevated connection

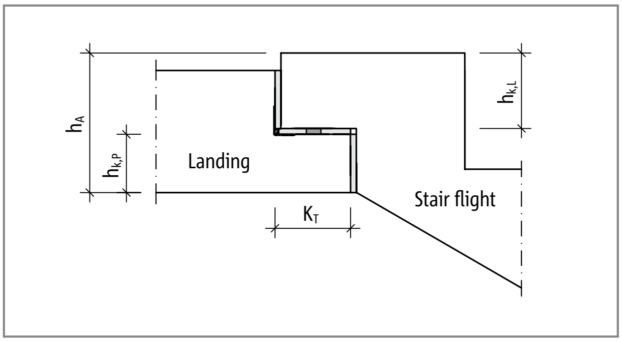


Fig. 66: Schöck Tronsole® type F: Design

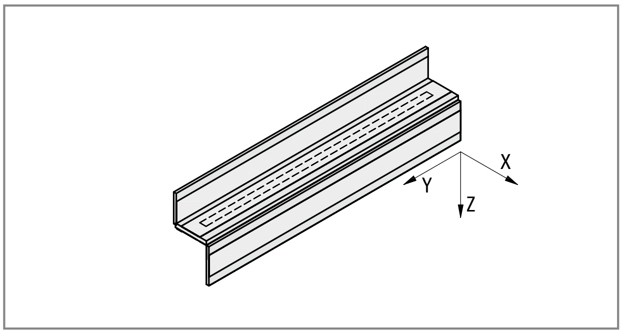


Fig. 67: Schöck Tronsole® type F: Sign rule for the design

F

On-site reinforcement according to type-tested structural standards - Superelevated connection

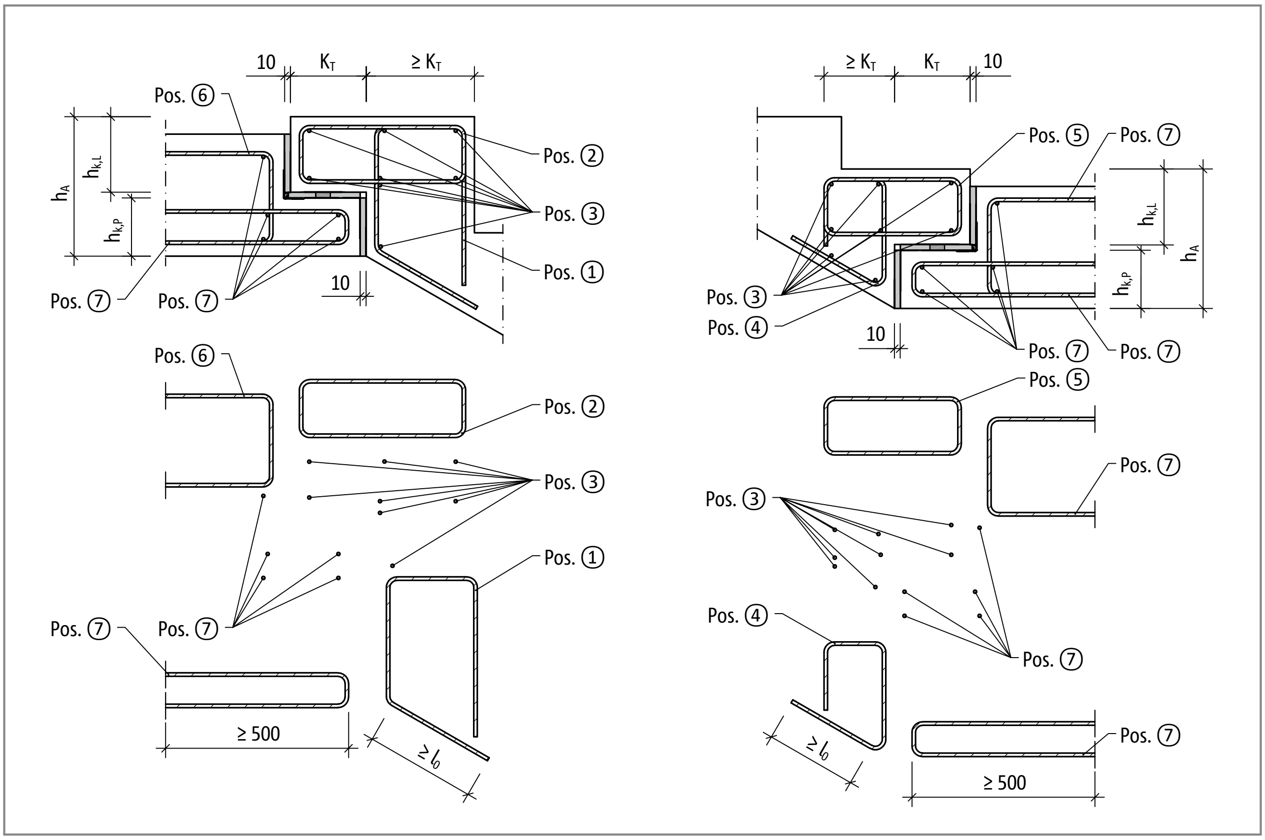


Fig. 68: Schöck Tronsole® type F: On-site reinforcement with superelevated connection

On-site reinforcement according to type-tested structural standards - Superelevated connection

Schöck Tronsole® type		F-V1, F-V2
On-site reinforcement	Location	Landing (XC1) concrete strength class ≥ C20/25 Stair flight (XC1) concrete strength class ≥ C30/37
		210 ≤ h_A [mm] (R0)
		240 ≤ h_A [mm] (R90)
Pos. 1 open stirrup (vertical tensile reinforcement)		
Pos. 1	on the flight side	H8@150 mm
Pos. 2 closed stirrups (horizontal tensile reinforcement)		
Pos. 2	on the flight side	⌀ 8/100 mm
Pos. 3 Steel bars along the support joint		
Pos. 3	on the flight side	2x 8 ⌀ 8
Pos. 4 open stirrups (vertical tensile reinforcement)		
Pos. 4	on the flight side	H8@150 mm
Pos. 5 closed stirrups (horizontal tensile reinforcement)		
Pos. 5	on the flight side	⌀ 8/100 mm
Pos. 6 ties (vertical tensile reinforcement)		
Pos. 6	on the landing side	H8@150 mm
Pos. 7 ties (horizontal tensile reinforcement)		
Pos.7	on the landing side	⌀ 8/100 mm
Pos. 8 Steel bars along the support joint		
Pos. 8	on the landing side	5 • H8
Pos. 9 ties (vertical tensile reinforcement)		
Pos. 9	on the landing side	H8@150 mm
v 10 ties (horizontal tensile reinforcement)		
Pos. 10	on the landing side	⌀ 8/100 mm
Pos. 11 Steel bars along the support joint		
Pos. 11	on the landing side	5 • H8

On-site reinforcement

- The height of the reinforcement stirrup in the corbel varies with the various corbel heights of the Tronsole® type F, in order to achieve the greatest possible internal lever arm for the different load-bearing levels.
- The on-site stirrup reinforcement is to be led as closely as possible to the respective vertical edge of the structural component taking into account the required concrete cover.
- In order to keep the manufacturing tolerances with the laying of the reinforcement and the structural component dimensions as small as possible, attention is to be paid to correct implementation.
- Pos. 1 and Pos. 4 with the slab reinforcement of the stair flight form an overlap connection. With this, a sufficient overlap length l_0 is to be ensured.
- Pos. 1 and Pos. 4 can be implemented as closed stirrup if, with this, a sufficient overlap length l_0 can be realised.
- In order to be able to realise the smallest possible anchoring length $l_{b,min}$ = max (6.7 ϕ_s; 0.3 $l_{b,rqd}$), in the cases presented here for the corbels, more than the 2 to 3 times the statically required tensile reinforcement has been selected.

F

Corbel dimensioning according to type-tested structural standards - Flush connection

On the following pages, combinations of corbel and landing height are calculated as examples.
Deviating from the corbel dimensioning according to type statics, any corbel dimensions can be selected, so far as for this a valid static verification is carried out by the responsible structural engineer.

Flush connection

Schöck Tronsole® type	F-V1, F-V2			
Connection geometry with	Fire resistance class R 0			
	Stair flight connection height h_A [mm]			
	≥ 200	≥ 220	≥ 240	≥ 260
Corbel height landing $h_{k,P}$ [mm]	≥ 100	≥ 110	≥ 120	≥ 130
Corbel height stair flight h_{Item} [mm]	≥ 90	≥ 100	≥ 110	≥ 120

Schöck Tronsole® type F, table: Flush connection geometry with R0

Schöck Tronsole® type	F-V1, F-V2			
Connection geometry with	Fire resistance class R90			
	Stair flight connection height h_A [mm]			
	≥ 230	≥ 250	≥ 270	≥ 290
Corbel height landing $h_{k,P}$ [mm]	≥ 110	≥ 120	≥ 130	≥ 140
Corbel height stair flight h_{Item} [mm]	≥ 110	≥ 120	≥ 130	≥ 140

Schöck Tronsole® type F, table: Flush connection geometry with R90

Schöck Tronsole® type	F-V1				F-V2			
Design values with	Concrete strength landing ≥ C20/25, stair flight ≥ C30/37							
	Stair flight connection height h_A [mm]							
Fire resistance class R 0	≥ 200	≥ 220	≥ 240	≥ 260	≥ 200	≥ 220	≥ 240	≥ 260
Fire resistance class R90	≥ 230	≥ 250	≥ 270	≥ 290	≥ 230	≥ 250	≥ 270	≥ 290
Corbel depth K_T [mm]	$v_{Rd,z}$ [kN/m]							
130	42.4	42.4	42.4	42.4	50.0	57.0	59.3	59.3
140	28.2	42.4	42.4	42.4	28.2	51.7	58.1	59.3
150	28.2	33.6	42.4	42.4	28.2	33.6	53.1	59.0
160	28.2	33.6	39.0	42.4	28.2	33.6	39.0	54.4
Corbel depth K_T [mm]	$v_{Rd,y}$ [kN/m]							
130 to 160	±3.8							
Corbel depth K_T [mm]	$v_{Rd,x}$ [kN/m]							
130 to 160	±3.8							

Schöck Tronsole® type F, table: Dimensioning with flush connection

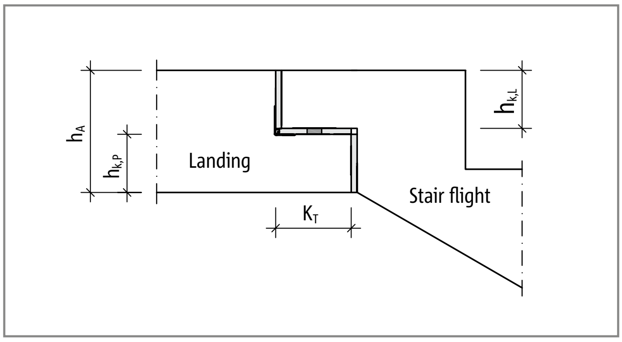


Fig. 69: Schöck Tronsole® type F: Design

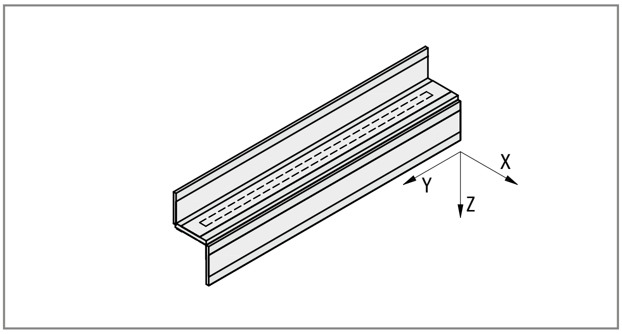


Fig. 70: Schöck Tronsole® type F: Sign rule for the design

Design

Notes on design

- The acceptable shear force of the corbels can only be verified with the on-site reinforcement presented in this section
- According to DIN EN 1992-1-1 (EC2) and DIN EN 1992-1-1/NA with exposure class XC1 the following nominal concrete cover results:
  In-situ concrete landing c_{nom} = 20 mm
  Prefabricated stairway: c_{nom} = 15 mm
- With the predefined concrete strengths one is concerned with minimum requirements which are based on the design.
- The verification of the shear force in the slabs is to take place through the structural engineer, whereby $V_{Rd,max}$ according to DIN EN 1992-1-1 (EC2), Gl. (6.9) for θ = 45 ° and α = 90 ° is to be determined.
- The PE foam panel of the Schöck Tronsole® type specifies the position of the elastomer support. The position of the elastomer support is relevant for the dimensioning of the corbel. Schöck Tronsole® is to be installed fitting exactly to the corbel.

On-site reinforcement according to type-tested structural standards - Flush connection

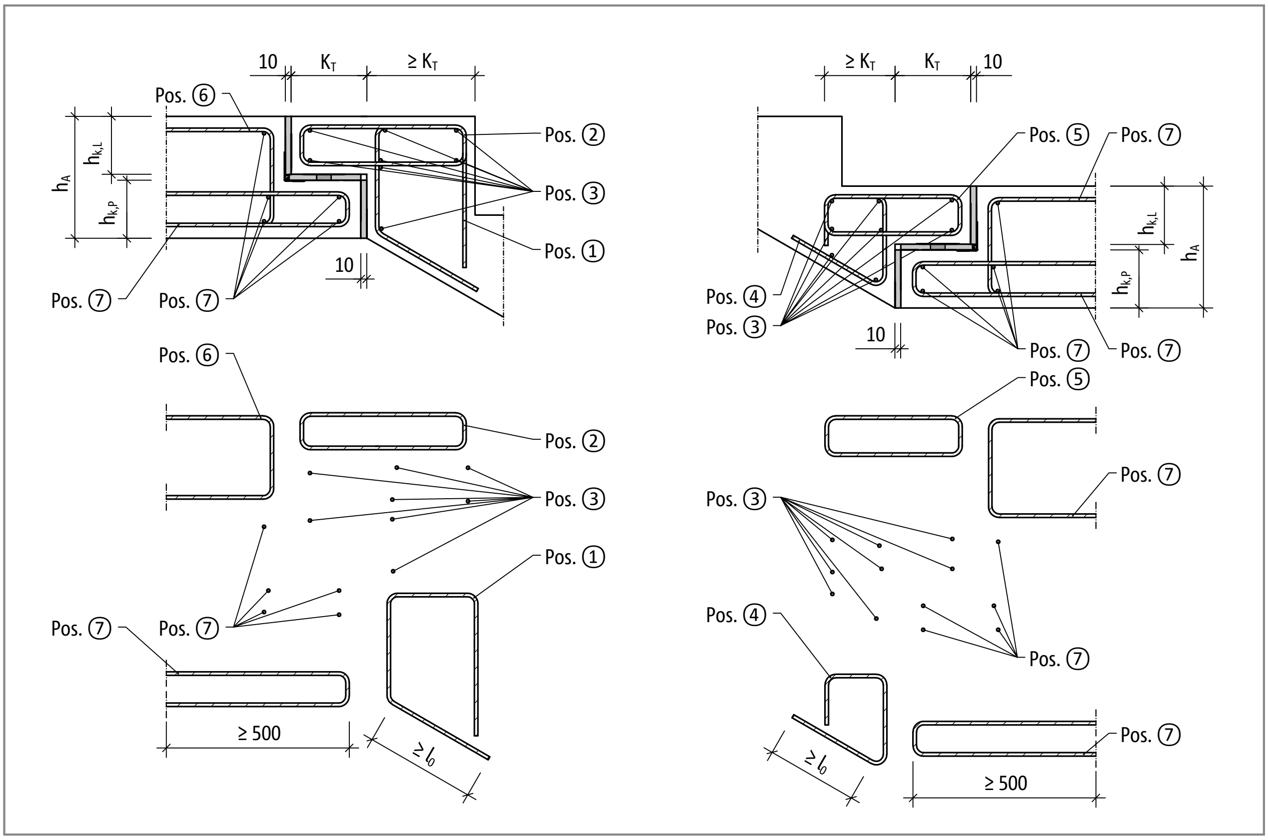


Fig. 71: Schöck Tronsole® type F: On-site reinforcement with flush connection

F

On-site reinforcement according to type-tested structural standards - Flush connection

Schöck Tronsole® type		F-V1, F-V2
On-site reinforcement	Location	Landing (XC1) concrete strength class ≥ C20/25 Stair flight (XC1) concrete strength class ≥ C30/37
		200 ≤ h_A [mm] (R0)
		230 ≤ h_A [mm] (R90)
Pos. 1 open stirrup (vertical tensile reinforcement)		
Pos. 1	on the flight side	H8@150 mm
Pos. 2 closed stirrups (horizontal tensile reinforcement)		
Pos. 2	on the flight side	⌀ 8/100 mm
Pos. 3 Steel bars along the support joint		
Pos. 3	on the flight side	2x 8 ⌀ 8
Pos. 4 open stirrups (vertical tensile reinforcement)		
Pos. 4	on the flight side	H8@150 mm
Pos. 5 closed stirrups (horizontal tensile reinforcement)		
Pos. 5	on the flight side	⌀ 8/100 mm
Pos. 6 ties (vertical tensile reinforcement)		
Pos. 6	on the landing side	H8@150 mm
Pos. 7 ties (horizontal tensile reinforcement)		
Pos.7	on the landing side	⌀ 8/100 mm
Pos. 8 Steel bars along the support joint		
Pos. 8	on the landing side	5 • H8
Pos. 9 ties (vertical tensile reinforcement)		
Pos. 9	on the landing side	H8@150 mm
v 10 ties (horizontal tensile reinforcement)		
Pos. 10	on the landing side	⌀ 8/100 mm
Pos. 11 Steel bars along the support joint		
Pos. 11	on the landing side	5 • H8

Schöck Tronsole® type F, table: On-site reinforcement with flush connection

On-site reinforcement

- The height of the reinforcement stirrup in the corbel varies with the various corbel heights of the Tronsole® type F, in order to achieve the greatest possible internal lever arm for the different load-bearing levels.
- The on-site stirrup reinforcement is to be led as closely as possible to the respective vertical edge of the structural component taking into account the required concrete cover.
- In order to keep the manufacturing tolerances with the laying of the reinforcement and the structural component dimensions as small as possible, attention is to be paid to correct implementation.
- Pos. 1 and Pos. 4 with the slab reinforcement of the stair flight form an overlap connection. With this, a sufficient overlap length l_0 is to be ensured.
- Pos. 1 and Pos. 4 can be implemented as closed stirrup if, with this, a sufficient overlap length l_0 can be realised.
- In order to be able to realise the smallest possible anchoring length $l_{b,min}$ = max (6.7 ϕ_s; 0.3 $l_{b,rqd}$), in the cases presented here for the corbels, more than the 2 to 3 times the statically required tensile reinforcement has been selected.

F

Deflection

Deformation of the Elodur® elastomer support of the Tronsole® type F-V1

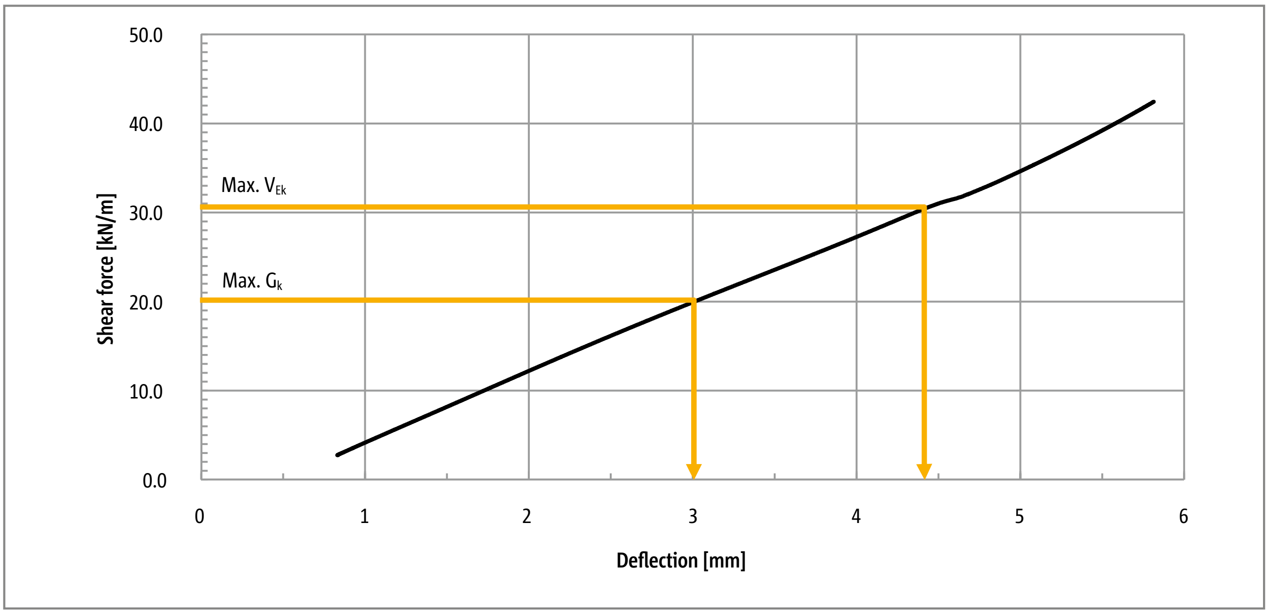


Fig. 72: Schöck Tronsole® type F-V1: Deformation of the Elodur® elastomer support

Deformation of the Elodur® elastomer support of the Tronsole® type F-V2

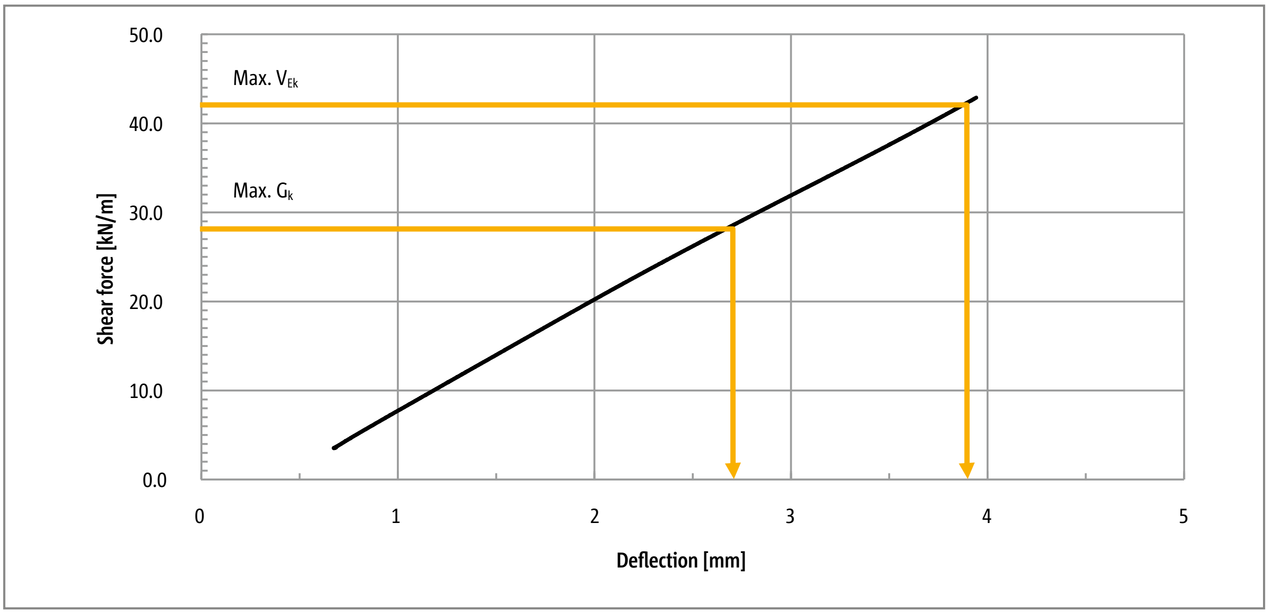


Fig. 73: Schöck Tronsole® type F-V2: Deformation of the Elodur® elastomer support

Notes on deformation

- Deflection is the vertical deformation of the Elodur® elastomer support under vertical shear force load.
- Creep is additionally to be taken into account with 50 % of the deflection from the constant load G_k .
- Max. V_{Ek} = Max. V_{Ed}/γ, whereby $\gamma = 1.4$
- $\gamma = 1.4$ applies under the assumption that Max. V_{Ed} is made up of two thirds from own weight and one third from live load.
- Thus Max. is V_{Ek} the maximum service load and the maximum own weight is Max. $G_k = 2/3 \cdot$ Max. V_{Ek}.
- From the deflection of the Elodur® elastomer support there results the following rule of thumb for the connection height h_A:
  Connection height h_A = Corbel height landing $h_{k,P}$ + Corbel height stair flight $h_{k,L}$ + 10 mm

Fire protection | Materials | Installation

Fire protection

For the use of the Schöck Tronsole® type F the connection range of the notched slab edges in accordance with Fire protection Report No. EBB 150003 TU Kaiserslautern can be classified in the fire resistance class R90 For this, however, the maintaining of the following conditions is prerequisite:
Attention is to be paid to the required nominal concrete cover according to DIN EN 1992-1-2 in combination with DIN EN 1992-1-2/NA. With a joint width a ≤ 30 mm between stairs and landing these reinforced structural components, with regard to fire protection according to DIN 4102-4, are considered as single unit, i.e. as a monolithic connection.
From this, it results that the required concrete cover at the corbel joint itself does not have to be increased due to fire protection requirements. Consequently, the on-site stirrup reinforcement in the area of the corbel connection in the case of a fire protection requirement $c_{nom,L}$ and $c_{nom,P}$ is to be brought up to the impact soundproofing joint just as tight as in the case without fire protection requirement.
Nevertheless, a vertical minimum centre-to-centre distance of the reinforcement from the horizontal structural component edge on the room side of u = 35 mm is necessary. This requirement would naturally also exist with a monolithic connection. The vertical centre-to-centre distance is measured respectively from the lower to the upper edge of the structural component. The neighbouring reinforced concrete structural components must satisfy the same building supervisory requirements on fire resistance capability as the connection area itself.

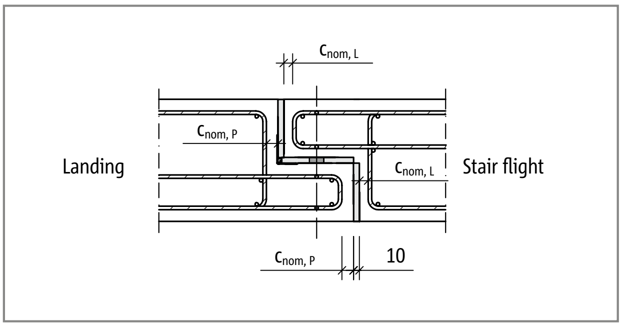


Fig. 74: Schöck Tronsole® type F: Vertical section along the stairs in the area of the corbel support; depiction of the concrete cover $c_{nom,L}$ and $c_{nom,P}$

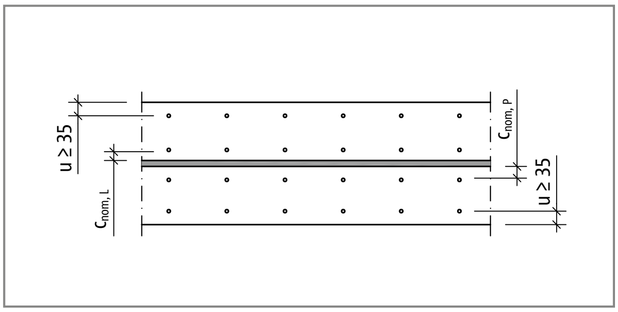


Fig. 75: Schöck Tronsole® type F: Vertical section transverse to the stairs in the area of the corbel support; depiction of the concrete cover $c_{nom,L}$, $c_{nom,P}$ and the minimum centre-to-centre distance u of the reinforcement

Fire protection

- The Tronsole® type F conforms with building materials class B2 according to DIN 4102.

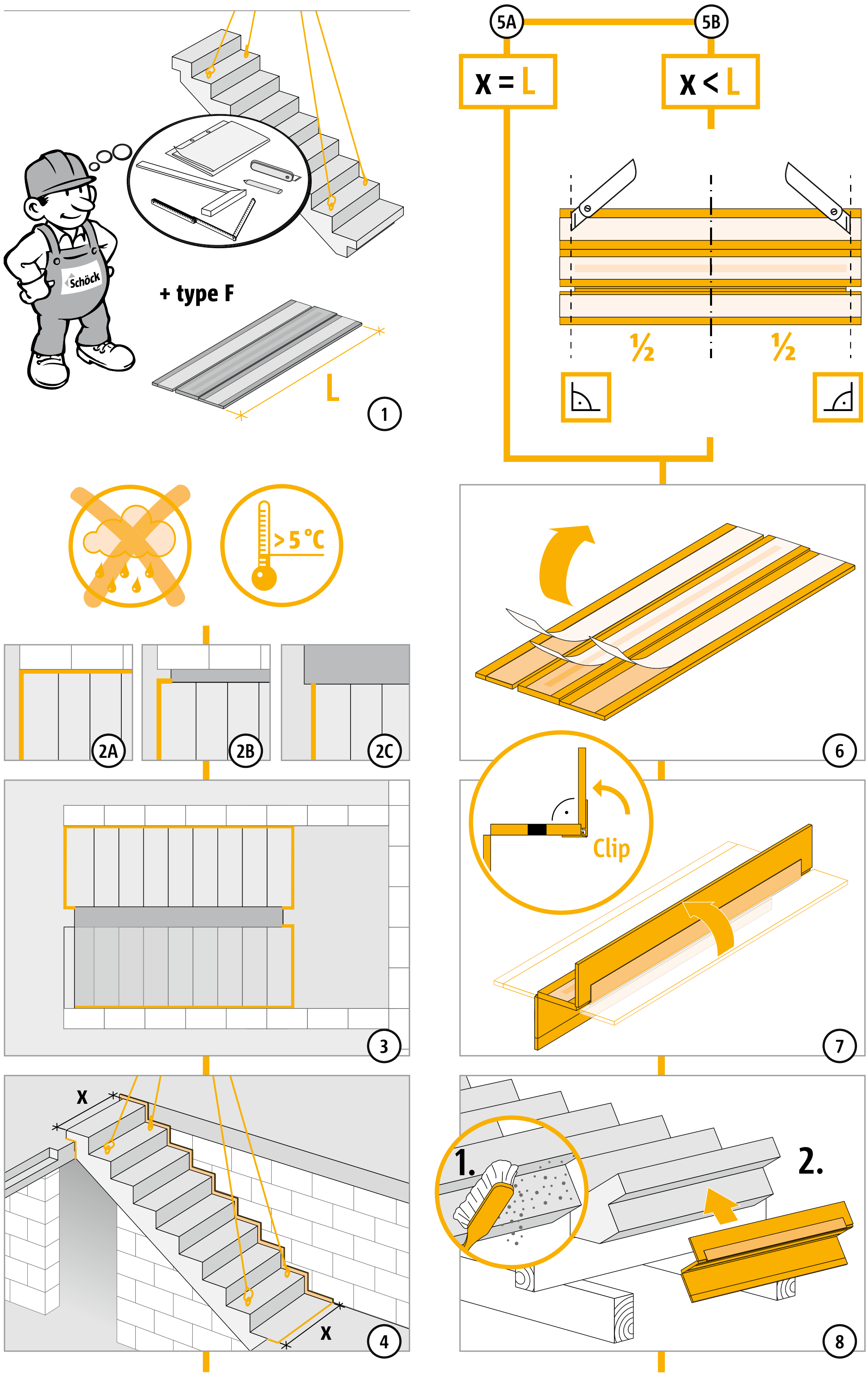
Materials and construction materials

Schöck Tronsole® type F	Material
PE foam panel	PE foam according to DIN EN 14313
Plastic profile	PVC-U according to DIN EN 13245-1
Elastomer support	Polyurethane according to DIN EN 13165

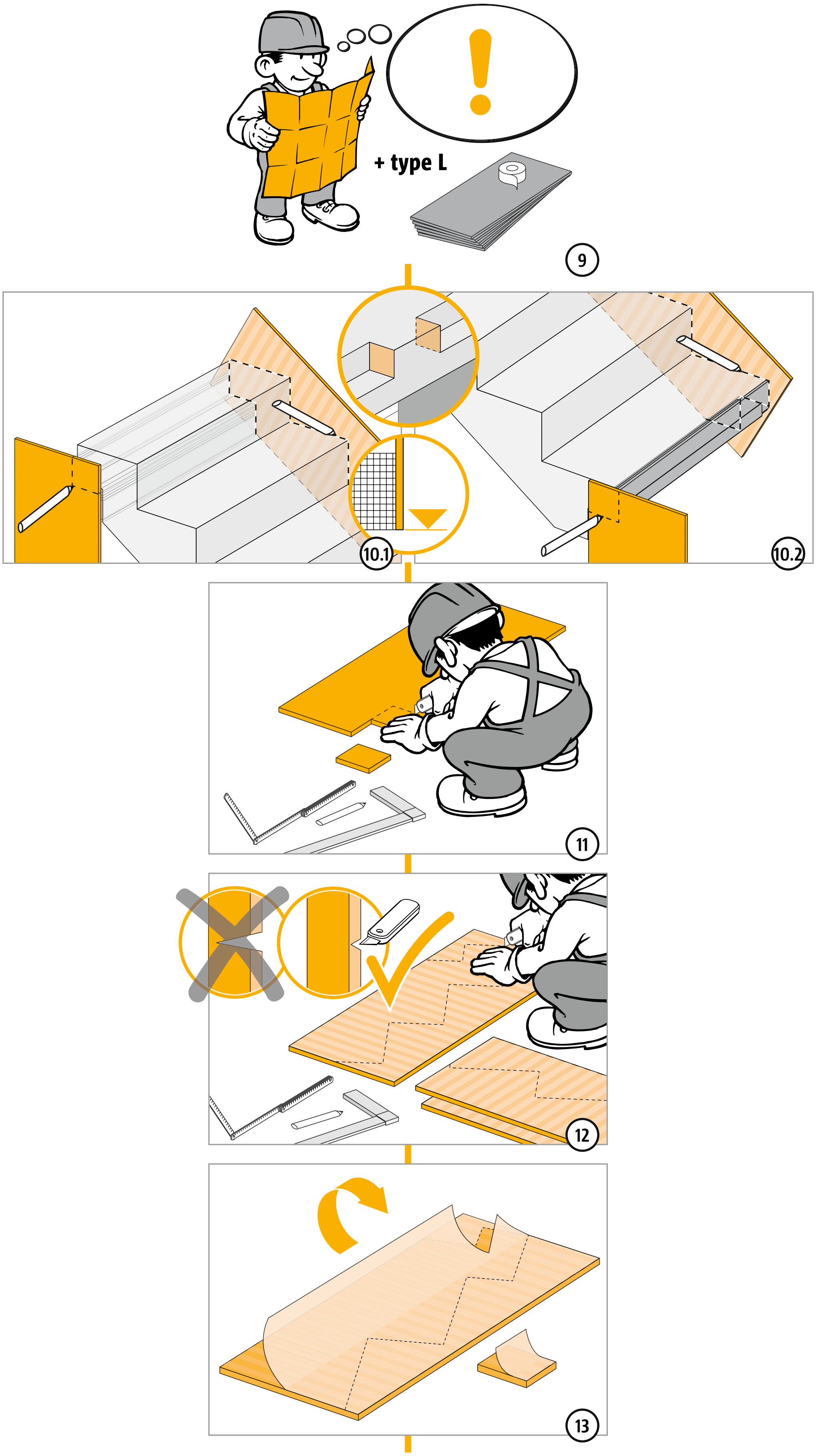
Installation

- The Schöck Tronsole® type F is bonded to the dry precast stair flight with the aid of an own-product assembly adhesive tape. Through the bracing clip hinge it is also suitable as alternative for positioning in the landing corbel.
- The PE foam panels can be cut by hand using a simple cutting tool. As the PE foam panel at both ends of the linear elastomer support projects by 50 mm, the Tronsole® type F can be easily shortened without interfering with the elastomer support.
- With the cutting to length of the Tronsole® type F care is to be taken that the projection of the PE foam panels over the elastomer support is shortened to the same length on both sides, in order to retain the central position of the elastomer support.

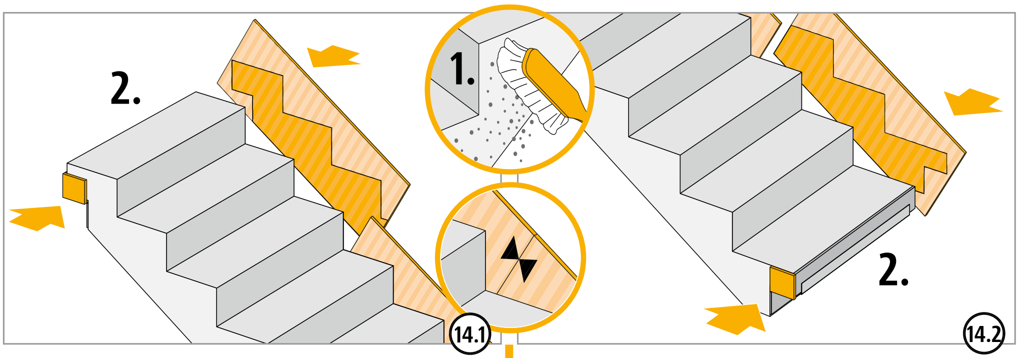
Installation instructions building site precast components

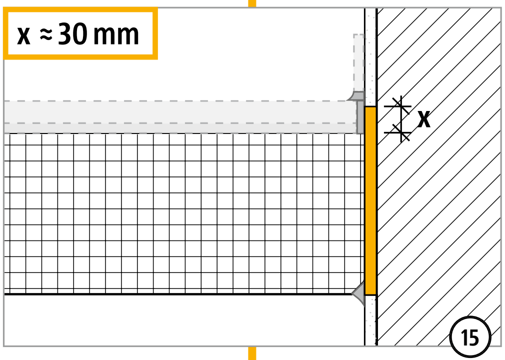


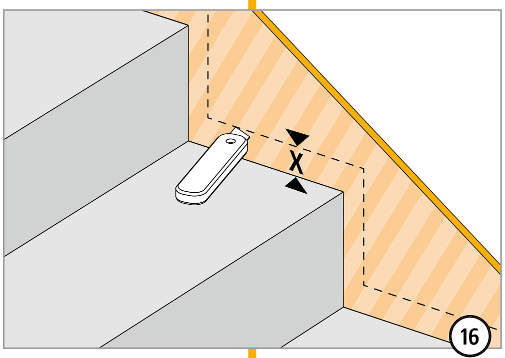
Installation instructions building site precast components

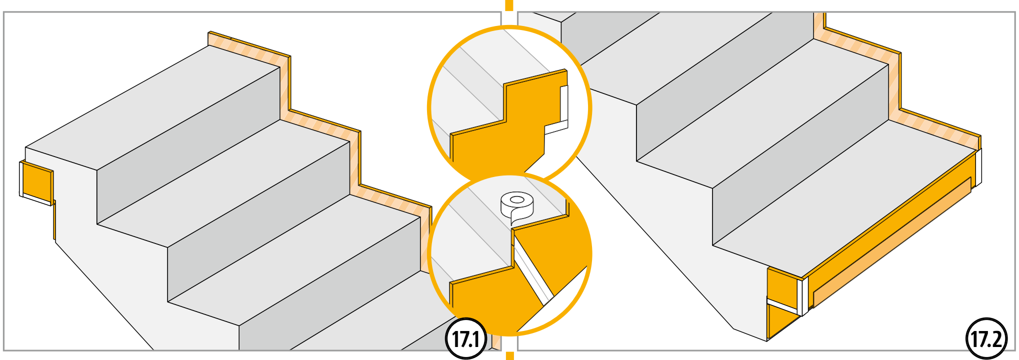


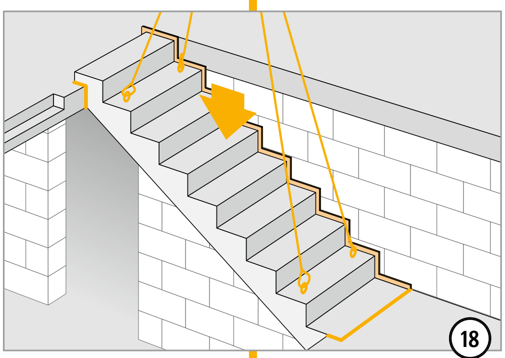
Installation instructions building site precast components





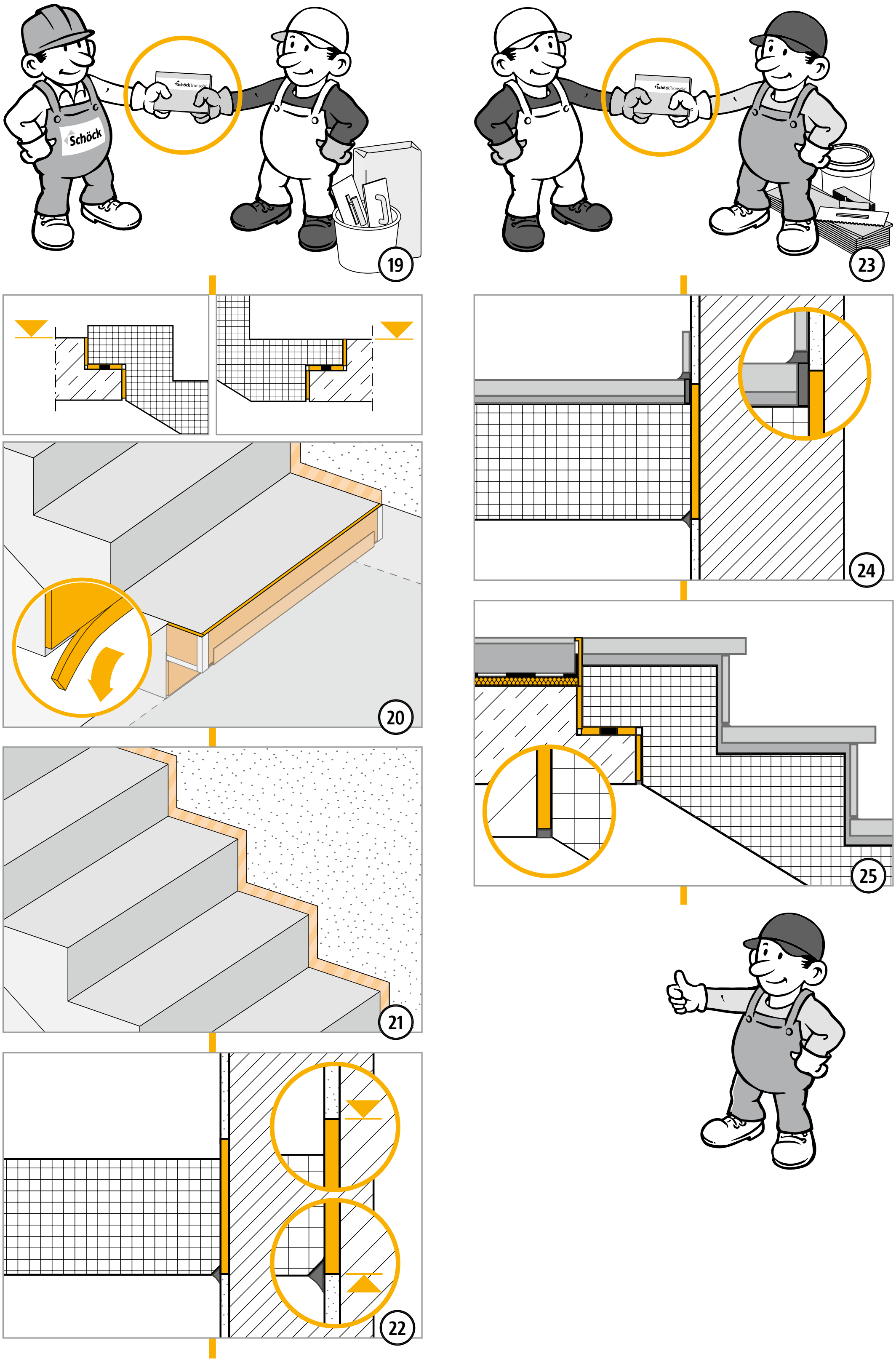






F

Installation instructions building site precast components



☑ Check list

- ☐ Are the dimensions of the Schöck Tronsole® matched to the geometry of the structural components which are to be insulated?
- ☐ Have the effects on the Schöck Isokorb® connection been specified at design level?
- ☐ With type F are the minimum concrete strengths for the landing ≥ C20/25 and the stair flight ≥ C30/37 taken into account?
- ☐ With type F is the stair flight designed as prefabricated element with exposure class XC1, a concrete cove of c_{nom} = 15 mm and fire resistance class R0?
- ☐ With type F is the landing planned as prefabricated element with exposure class XC1, a concrete cover of c_{nom} = 20 mm and fire resistance class R0?
- ☐ Have the requirements with regard to fire protection been cleared and announced?
- ☐ Due to a fire protection requirement are larger concrete covers and larger structural component heights taken into account?
- ☐ Is the corbel depth defined within a range between 130 mm and 160 mm?
- ☐ With V_{Ed} is the respective limiting value of the slab load-bearing capacity checked on the non-notched slab side of the landing or of the stair flight?
- ☐ Are planned existing horizontal loads, which can be conducted away via type T, taken into account?