



for better solutions...



Sound insulation

for sound absorption of reinforced concrete stairs and landings



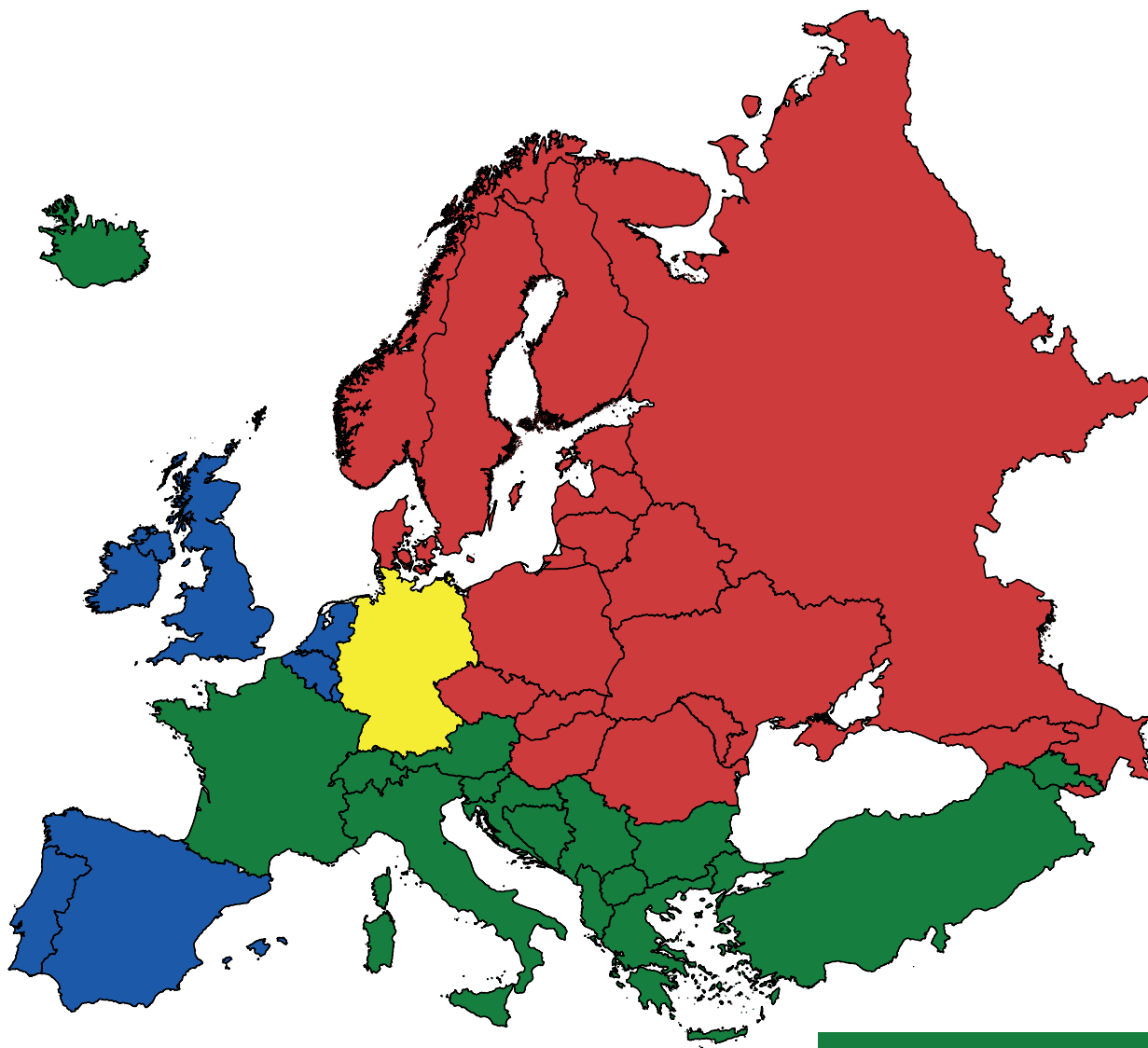
Sound insulation of
the highest quality



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Sound insulation

Type overview

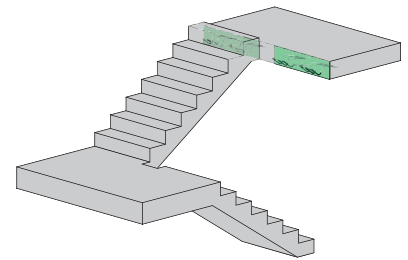


SCHALL-ISOSTEP Type HT-V

Impact sound insulation element for sound insulation of staircases.

Staircase - stair landing

- Page 19 -

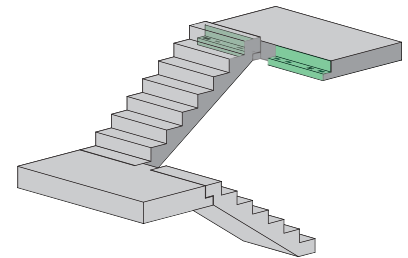


SCHALL-ISOTRITT Type Z

Impact sound insulation element for sound insulation of staircases.

Staircase - stair landing

- Page 25 -

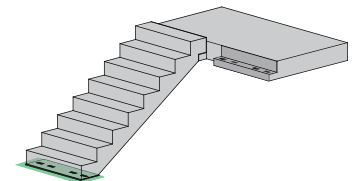


SCHALL-ISOTRITT Type ZB

Impact sound insulation element for sound insulation of staircases.

Staircase - floor panel

- Page 25 -

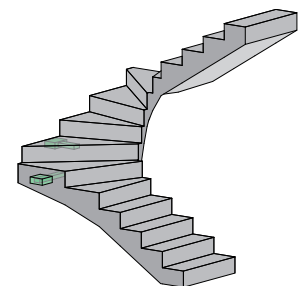


SCHALL-ISODORN Type HQW

Impact sound insulation element for sound insulation of staircases.

Staircase - wall

- Page 11 -



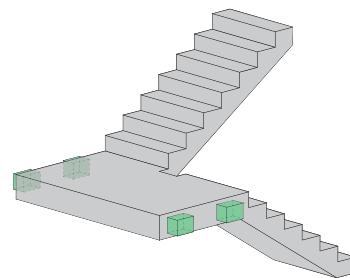


SCHALL-ISOBEX Type TSB-F

Impact sound insulation element for prefabricated stair landings.

Stair landing - wall

- Page 5 -

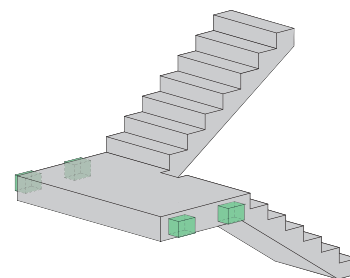


SCHALL-ISOBEX Type TSB-MB

Impact sound insulation element for stair landing. Installation in masonry work and in-situ concrete.

Stair landing - wall

- Page 5 -



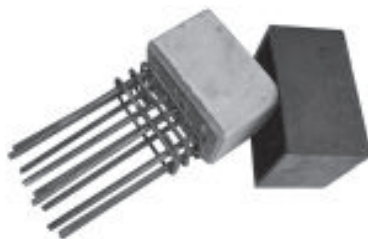
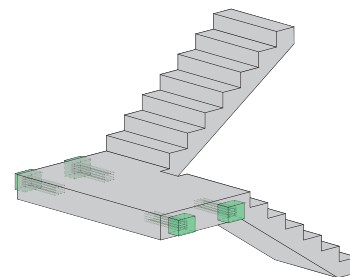
SCHALL-ISOBEX Type TSB-T

Impact sound insulation element with reinforcing cage for stair landings.

Insulation of staircases.

Stair landing - wall

- Page 5 -

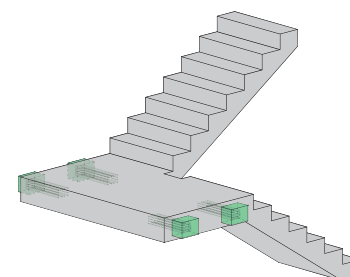


SCHALL-ISOBEX Type TSB-BT

Impact sound insulation element for sound insulation of staircases.

Stair landing - wall

- Page 5 -

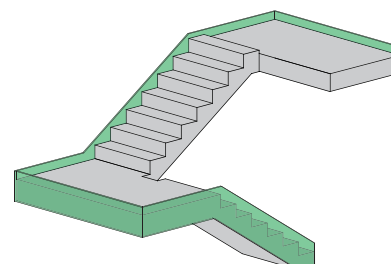


Impact sound panel Type TSP

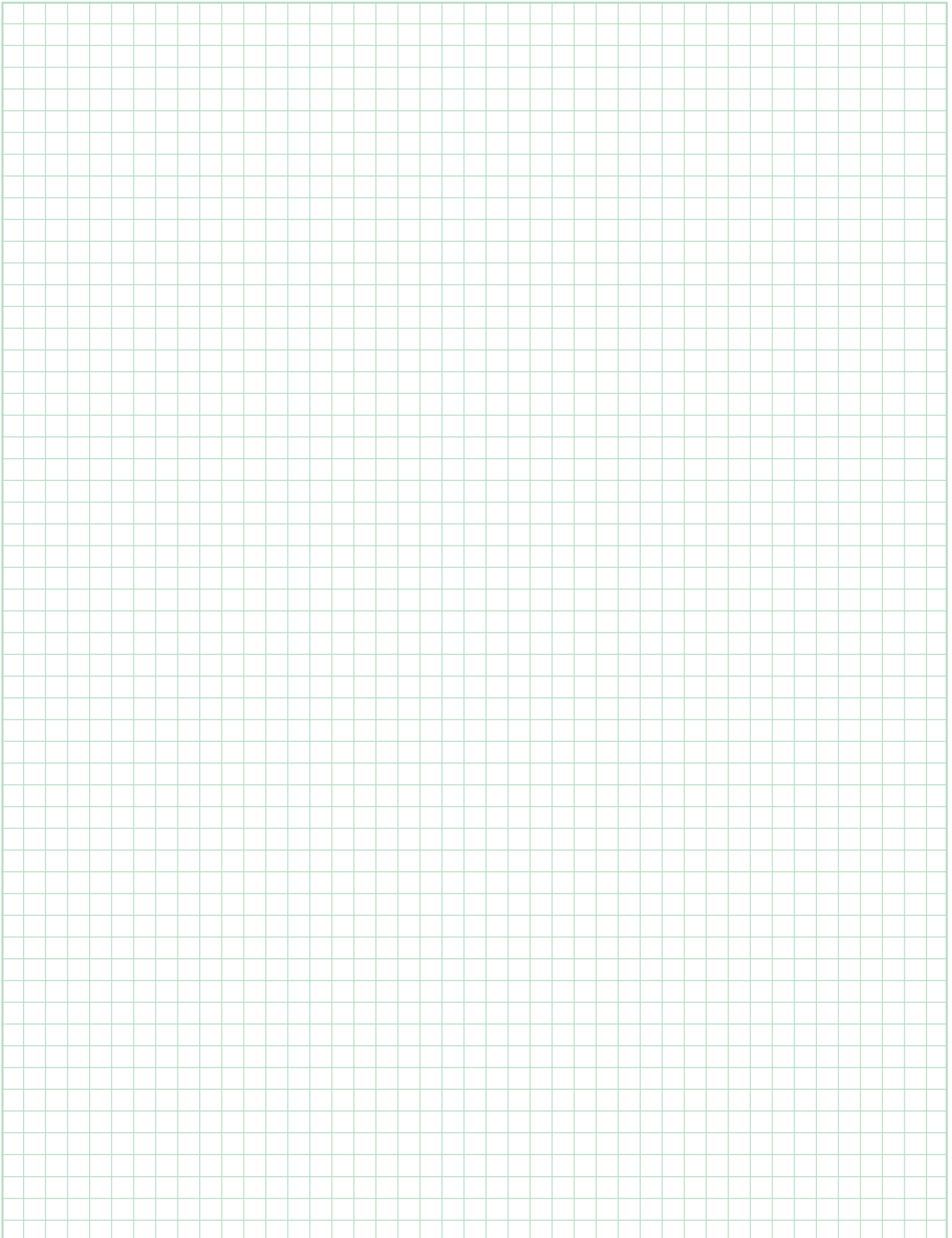
Impact sound insulation panel for stair stringers and stair landings

Stair construction - wall

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NOTES



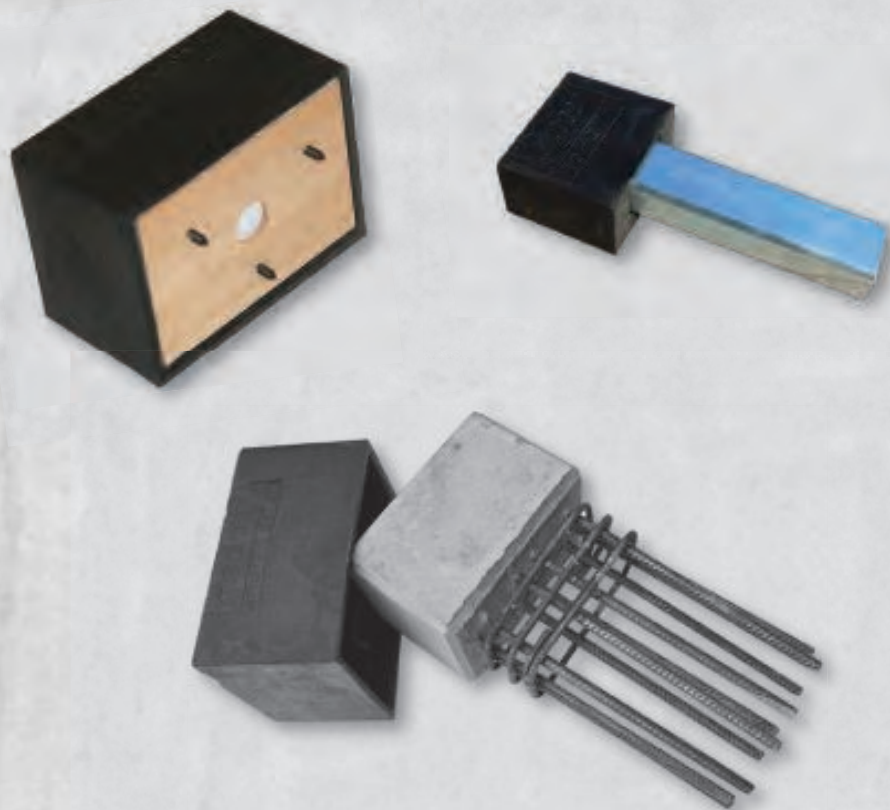


for better solutions...



Schall-Isobox®

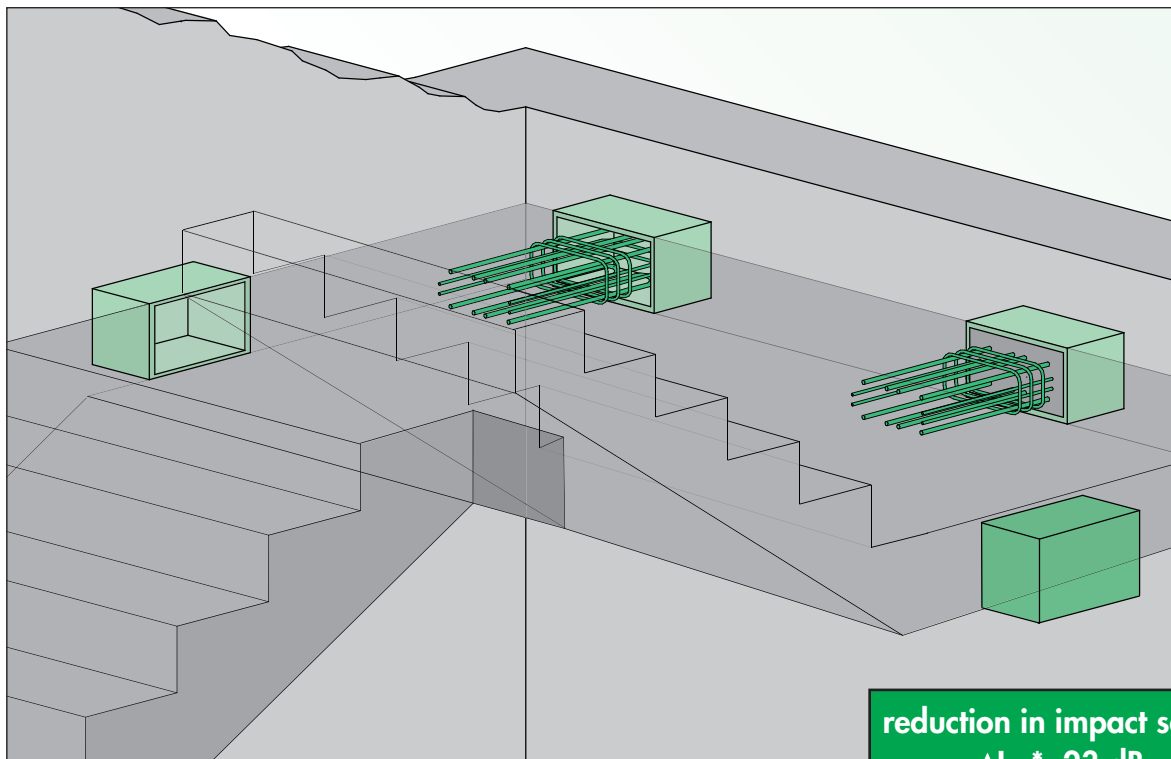
Impact sound insulation box for stairways



Sound absorption
of the highest
quality for
concrete stairs

Sound insulation of the highest quality

Schall-Isobox TSB - sound insulation element for stair landings



reduction in impact sound
 $\Delta L_w^* = 23 \text{ dB}$

The product

The *Schall-Isobox TSB* is used to provide impact sound transmission insulation in staircases in residential and work areas.

The *impact sound insulation box TSB* can be installed in masonry as well as in concrete walls.

Prefabricated stair landings with integral *impact sound insulation boxes TSB* as an overlay are simple to install and reliably prevent acoustic bridges. Depending on the design of the elements, positive, negative and horizontal shear forces are absorbed.

The sound insulation elements satisfy the requirements of the augmented sound insulation standards.

Features

- Type tested
- major reduction of impact sound
- F90 fire prevention conformance
- Simple routing of reinforcement
- For in-situ concrete and prefabricated landings

Application area

The impact sound insulation elements of type TSB can be attached without problem to the formwork on the construction site. Building the elements into the wall of the stairwell is facilitated by the associated reinforcement units.

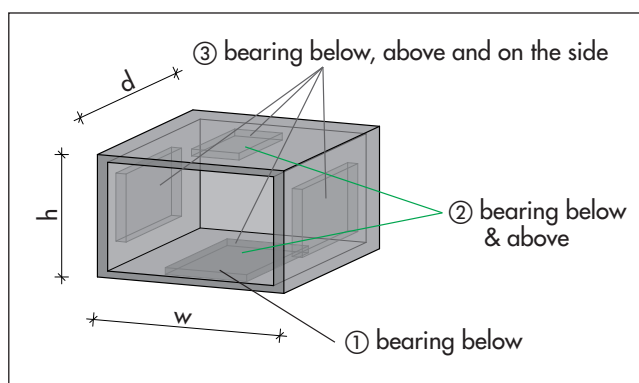
For installation in prefabrications the *Schall-Isobox* is simply inserted into the console.

Type designation for Schall-Isobox

TSB MB 12

- ① = bearing below / ② = bearing below and above / ③ = bearing below, above and on the side
- 1 = landing strength 160 to 180 mm / 2 = landing strength ≥ 200 mm
- MB = masonry + concrete / F = prefabrication / BT = concrete bearing element / T = reinforcing cage
- TSB = impact sound box

Schall-Isobox dimensions



Type TSB	internal h x w x d [mm]	external h x w x d [mm]
11	180 x 245 x 150	200 x 275 x 155
12		
13		
21	200 x 245 x 150	220 x 275 x 155
22		
23		

Dimensional values for concrete $\geq C20/25$

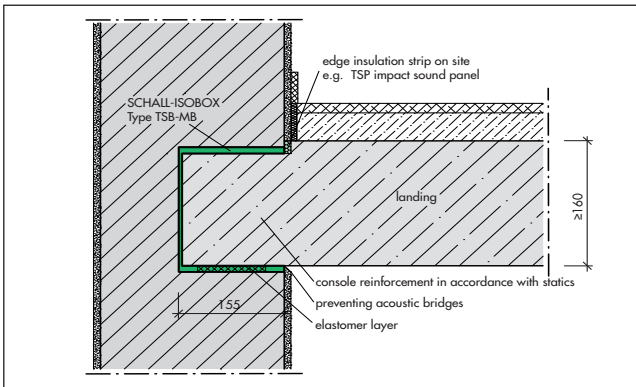
Type TSB*	Landing thickness [mm]	max. + V_{Rd} [kN]	max. - V_{Rd} [kN]	max. $\pm H_{Rd}$ [kN]
11	≥ 160	61	—	—
12			14**	—
13			14**	35
11	≥ 180	76	—	—
12			14	—
13			14	35
21	≥ 200	76	—	—
22			14	—
23			14	35

* Applies to all Schall-Isobox designs types TSB, MB, F, BT and T

** For landing thickness < 180 mm the prefabricated console in the Schall-Isobox is to be filled up with mortar (MG IIa)

Schall-Isobox

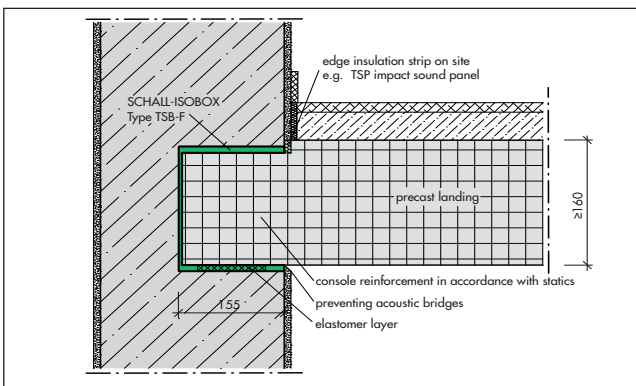
Variants



Schall-Isobox Type TSB-MB

With mounting plate and filling material

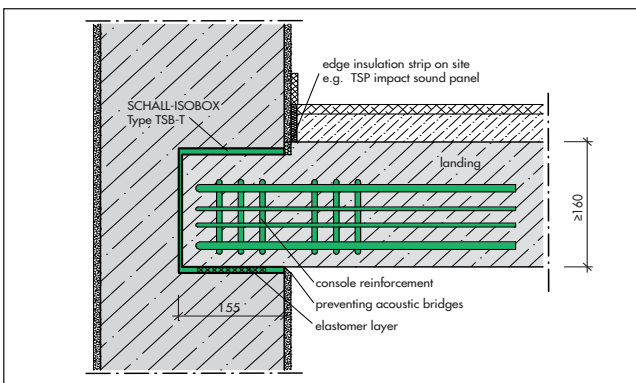
For impact sound isolation from in-situ concrete landing and stairwell wall. Installation in masonry or concrete.



Schall-Isobox Type TSB-F

For prefabrications

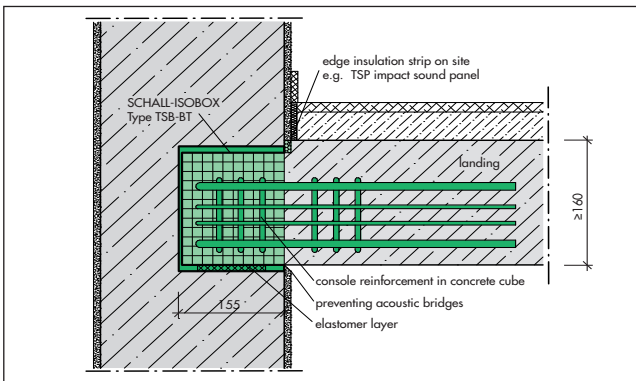
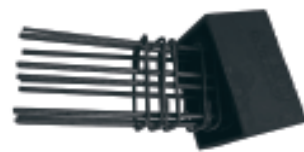
For impact sound isolation from prefabricated landing and stairwell wall. Installation is made in the prefabrication.



Schall-Isobox Type TSB-T

With reinforcing cage

For impact sound isolation from the stair landing and stairwell wall. Installation in masonry or concrete.



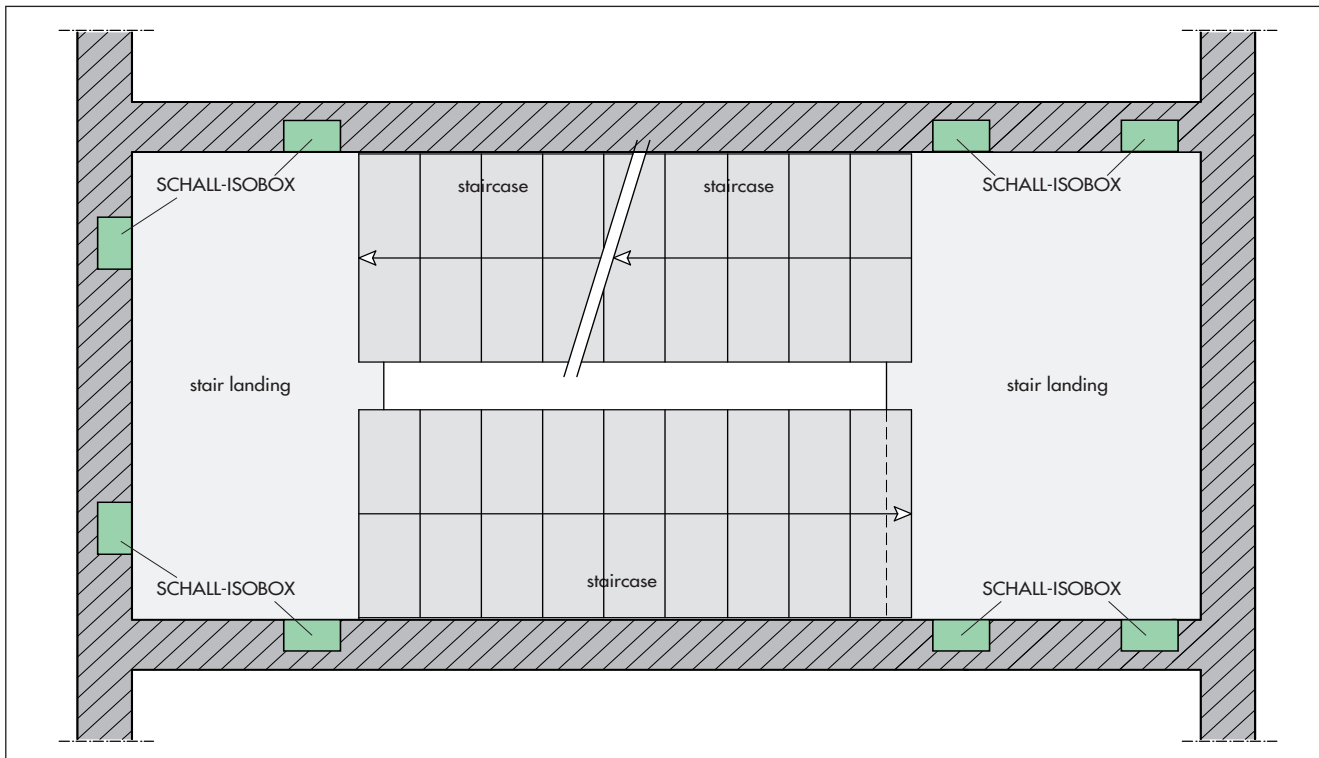
Schall-Isobox Type TSB-BT

with bearing element

For impact sound isolation from the stair landing and stairwell wall. Installation in masonry or concrete

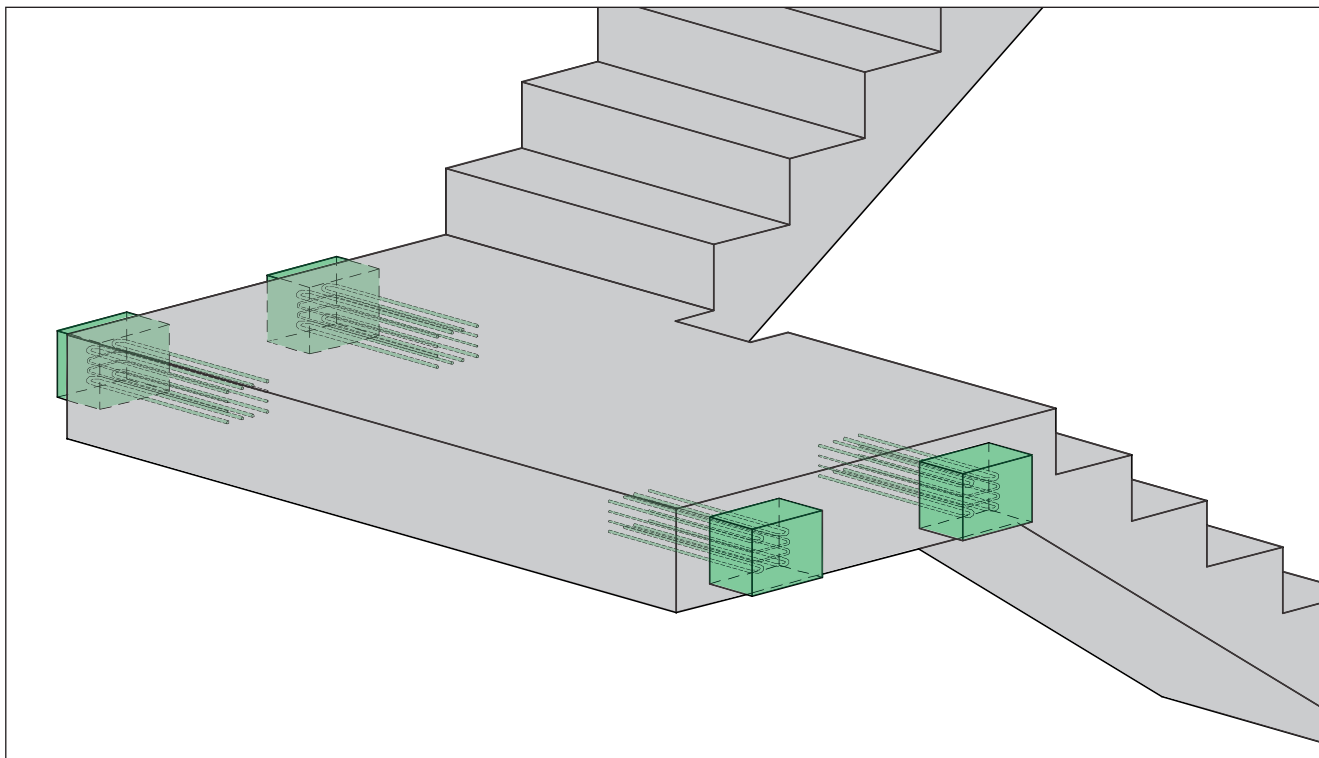


Recommended arrangement Schall-Isobox Type TSB - plan view



SCHALL-ISOBEX TSB

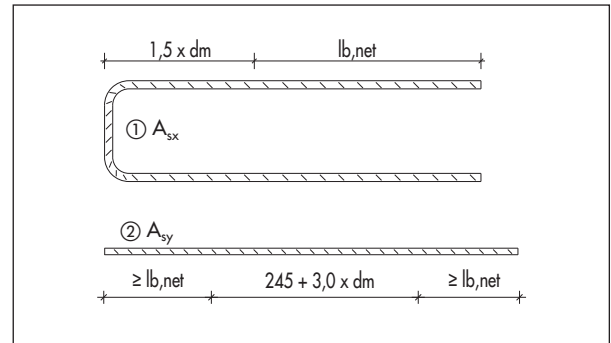
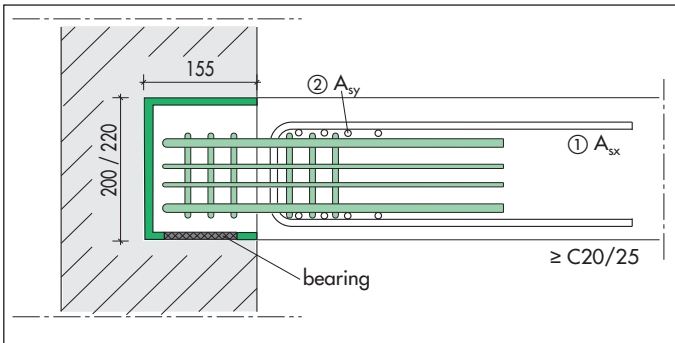
Recommended arrangement Schall-Isobox Type TSB-T - 3D



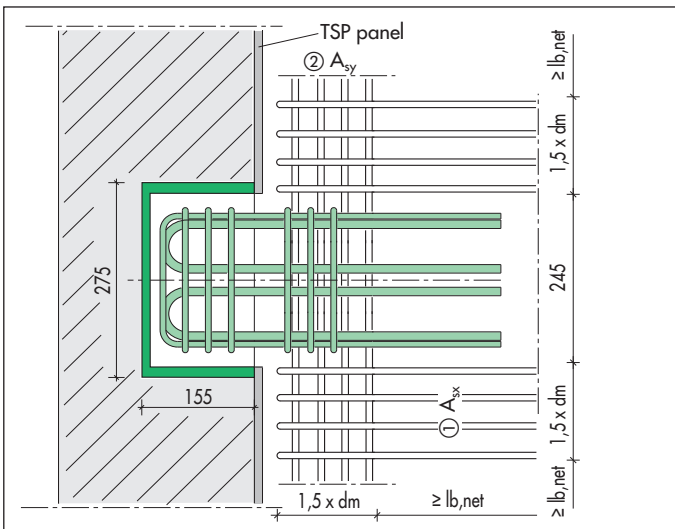
Schall-Isobox

Supplied reinforcement

Side view of Schall-Isobox Type TSB



Plan view of Schall-Isobox Type TSB



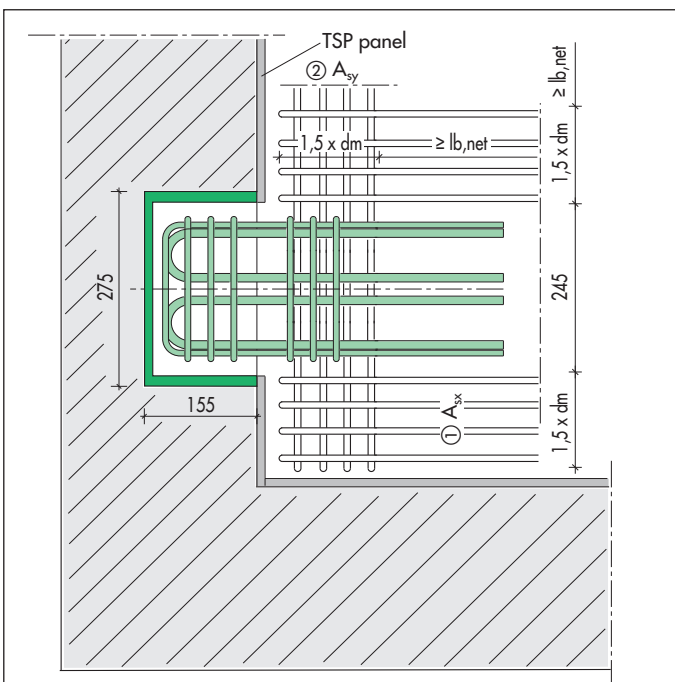
Supplied starter bars $A_{s,erf}$

Landing strength [mm]	V_{Rd} [kN]	total $A_{s,erf}$ [cm ²]	Recommended	
			A_{sx}	A_{sy}
≥ 160	61	10.30	3 $\emptyset 14$	4 $\emptyset 14$
≥ 180	76	12.48	4 $\emptyset 14$	4 $\emptyset 14$
≥ 200	76	7.90	3 $\emptyset 12$	4 $\emptyset 12$

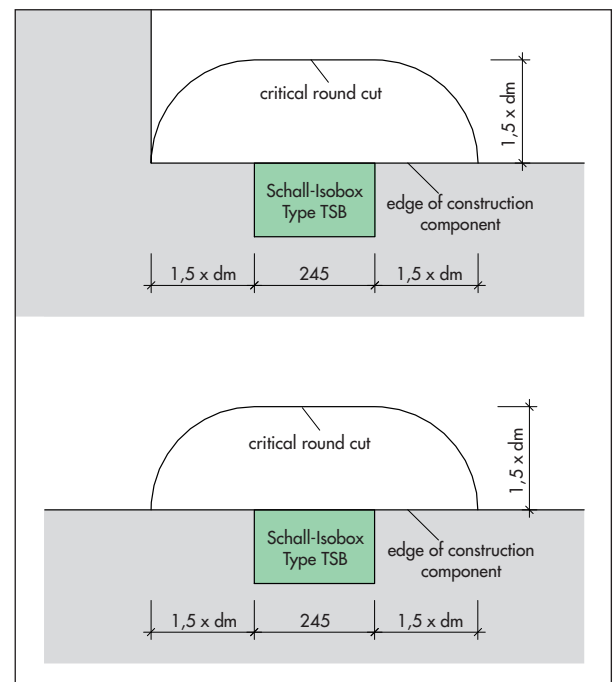
The reinforcement A_{sx} and A_{sy} must be anchored outside of the punching shear cone with $l_{b,net}$ or underpinned with the supplied shear stress reinforcement.

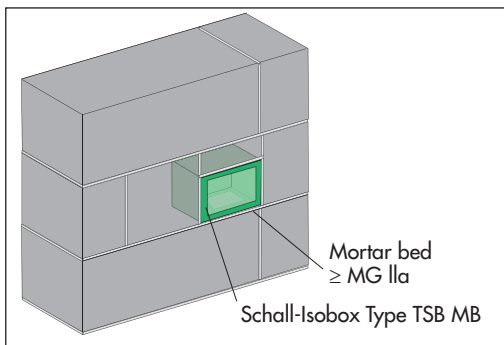
For the elements F and MB the console reinforcement must be fabricated on-site.

Plan view of corner of Schall-Isobox Type TSB



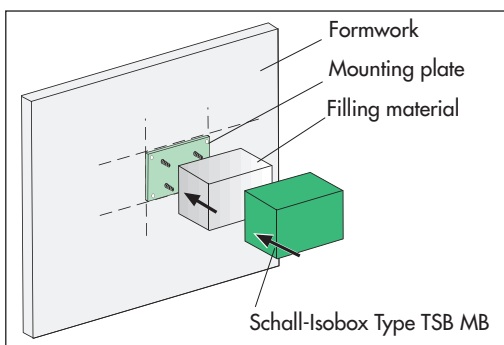
Critical round cut





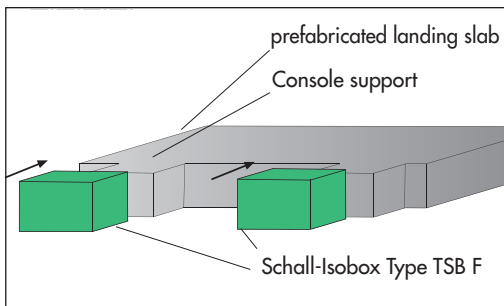
TSB-MB masonry installation

- Wall in the impact sound box type TSB in its exact position. Ensure that there is a full-surface mortar bed (\geq MG IIa) under the impact sound box. The impact sound box must be flush with the front edge of the wall. Observe the marking "TOP".
- Fabricate the formwork for the landing and the flight of stairs.
- Fix the impact sound panel TSP around the staircase wall.
- Insert the supplied reinforcement.
- Concrete.



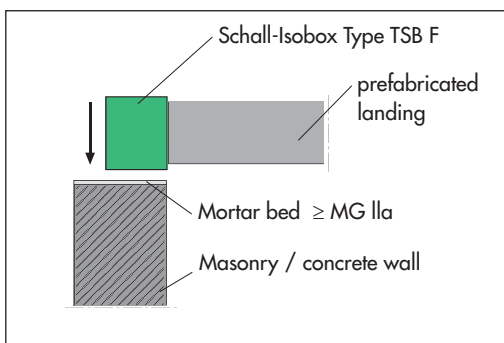
TSB-MB concrete wall installation (in-situ concrete)

- Mark the position of the impact sound box TSB on the formwork.
- Nail on the mounting plate.
- Attach the impact sound box with filling material to the mounting element. Observe the marking "TOP".
- Fix the impact sound panel TSP around the staircase wall.
- After stripping the forms, remove the filling material.
- Form the landing, reinforce and concrete.
- Concrete.



TSB-F prefabrication installation

- Fabricate the landing slab with console supports. For console dimensions see internal dimensions of Schall-Isobox (p. 7). The surrounding impact sound plate must be taken into account in the size of the landing.
- After stripping the impact sound box attach it to the console. Observe the marking "TOP".



Installation of prefabricated elements on site

- Glue the full surface of the impact sound panel Type TSP to the side surfaces.
- Using the impact sound boxes lay the prefabricated landing in its exact position on a bed of mort (\geq MG IIa).

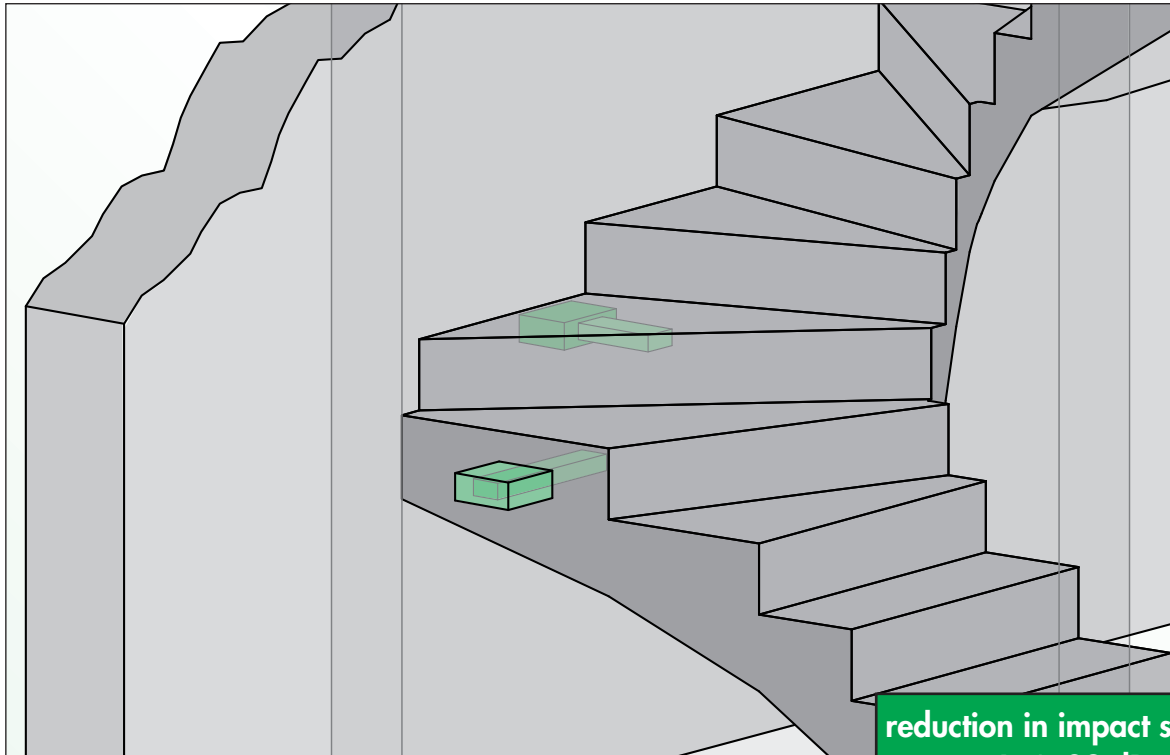
T and BT Schall-Isobox installation

Construction sequence as for Schall-Isobox MB. Before laying the supplied reinforcement insert the bearing element into the impact sound box. This removes the need for on-site reinforcement of the console. Supplied reinforcements see page 10.

Schall-Isodorn Type HQW

General

Schall-Isodorn Type HQW - Sound insulation element for staircases



reduction in impact sound
 $\Delta L_w^* = 29 \text{ dB}$

The product

The *Schall-Isodorn Type HQW* is used to provide impact sound transmission insulation in staircases in residential and work areas.

The *Schall-Isodorn Type HQW* can be installed in masonry as well as in concrete walls.

Straight and spiral staircases with integral *Schall-Isodorn Type HQW* are easy to relocate and reliably prevent impact sound transmission.

The sound insulation elements satisfy the requirements of the augmented sound insulation standards.

Features

- Type tested in accordance with DIN 1045-1
- Quicker and more economic installation
- High absorption of shear forces
- High impact sound protection
- F90 with fire protection sleeve
- Galvanised or stainless steel design for corrosion protection
- Re-usable mounting elements for simple installation

Application area

The *Schall-Isodorn Type HQW* is an impact sound insulating element, which is used preferably with spiral staircases. The impact sound insulation is thus effected over the staircase. The basic element comprises an impact sound box and a support element. The *Schall-Isodorn Type HQW* is available with various installation aids such as sleeves, re-usable mounting sleeves. The configuration of the product is freely selectable and allows for optimum customisation.

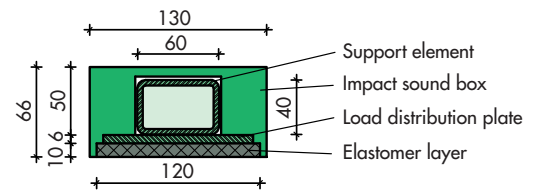
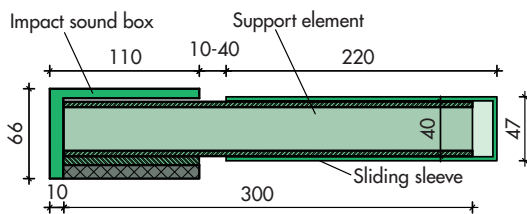
Type designation Type HQW	External dimensions of impact sound box h x w x d [mm]	Joint width F [mm]	Maximum load +V _{Rd} [kN]	Dimensions of support element l x w x h [mm]
F galvanised F V2A	66 x 130 x 110	10	33.6	300 x 60 x 40
FM galvanised FM V2A		20	30.9	
M galvanised M V2A		25	29.7	
M galvanised M V2A		30	28.6	
B galvanised B V2A		40	25.5	

Type designation for Schall-Isodorn

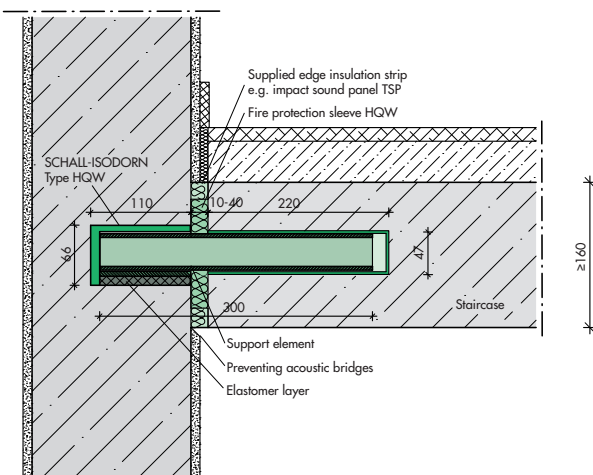
HQW B V2A

Material support element = stainless steel V2A or galvanised
 Installation location: F = prefabrications, FM = prefabrications with mounting elements,
 M = masonry, B = concrete wall
 HQW = type designation

Dimensions



Section of system



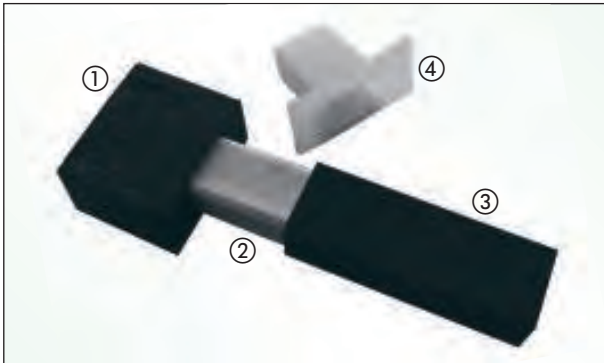
Materials

- Support element in stainless steel V2A, optionally S 355 (hot-dipped galvanised)
- Impact sound box in polyethylene
- Elastomer layer EPDM in accordance with DIN 4141
- Load distribution plate S 355
- Sliding sleeve made from plastic

Schall-Isodorn Type HQW

Variants

HQW for prefabrications



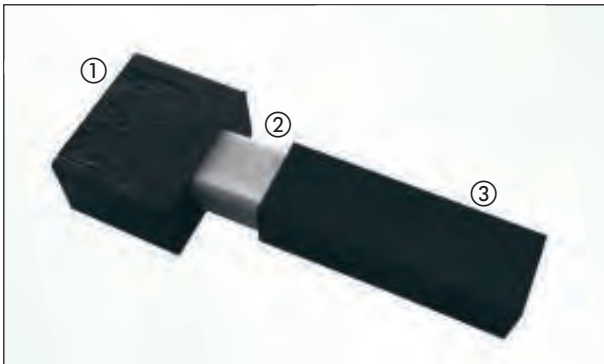
Schall-Isodorn Type HQW-FM

comprising:

- ① impact sound box
- ② support element
- ③ sliding sleeve
- ④ mounting element

Application:

For prefabricated staircase with masonry or concrete stair wall. Mounting elements re-usable for sliding sleeves and impact sound box.



Schall-Isodorn Type HQW-F

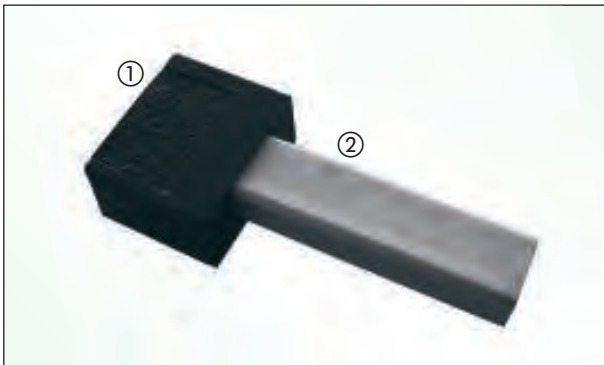
comprising:

- ① impact sound box
- ② support element
- ③ sliding sleeve

Application:

For prefabricated staircase with masonry or concrete stair wall.

HQW for in-situ concrete



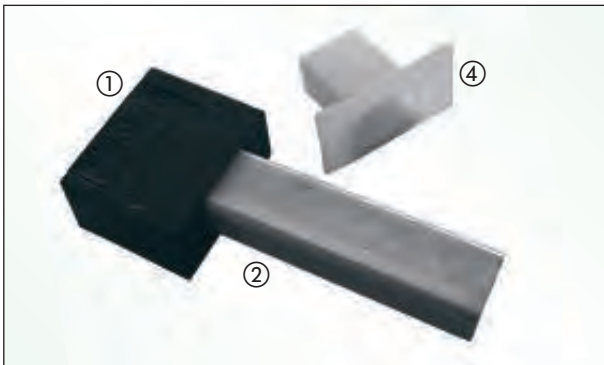
Schall-Isodorn Type HQW-M

comprising:

- ① impact sound box
- ② support element

Application:

For cast in-situ concrete staircase with masonry stair wall.



Schall-Isodorn Type HQW-B

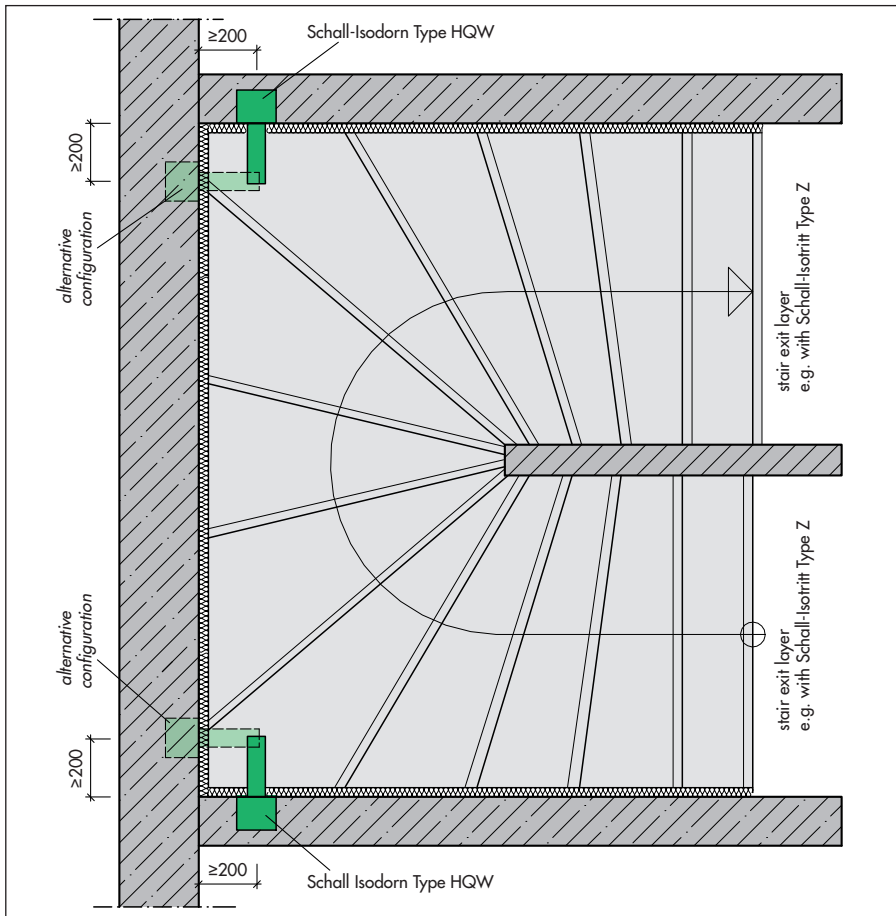
comprising:

- ① impact sound box
- ② support element
- ④ mounting element

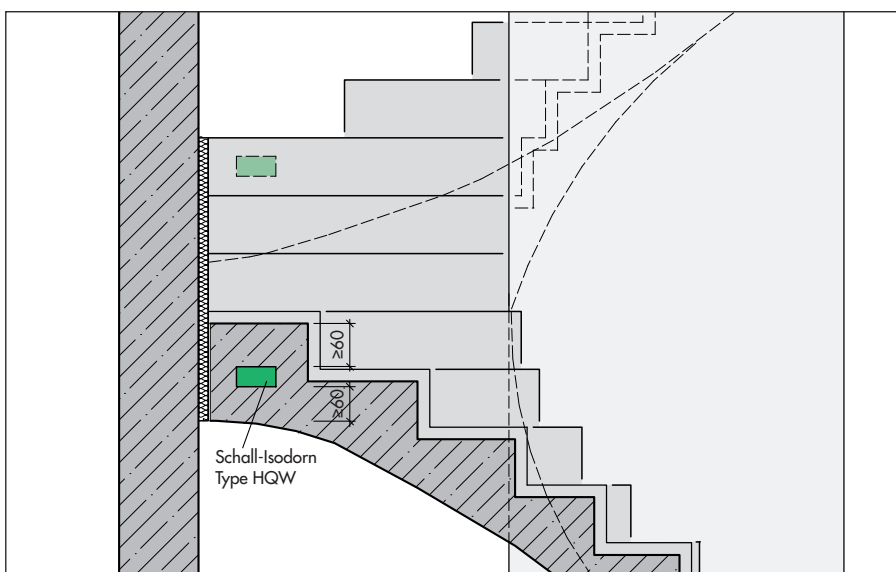
Application:

For cast in-situ staircase with concrete stair wall. Mounting elements re-usable for impact sound box.

Recommended arrangement Schall-Isodorn Type HQW - plan view



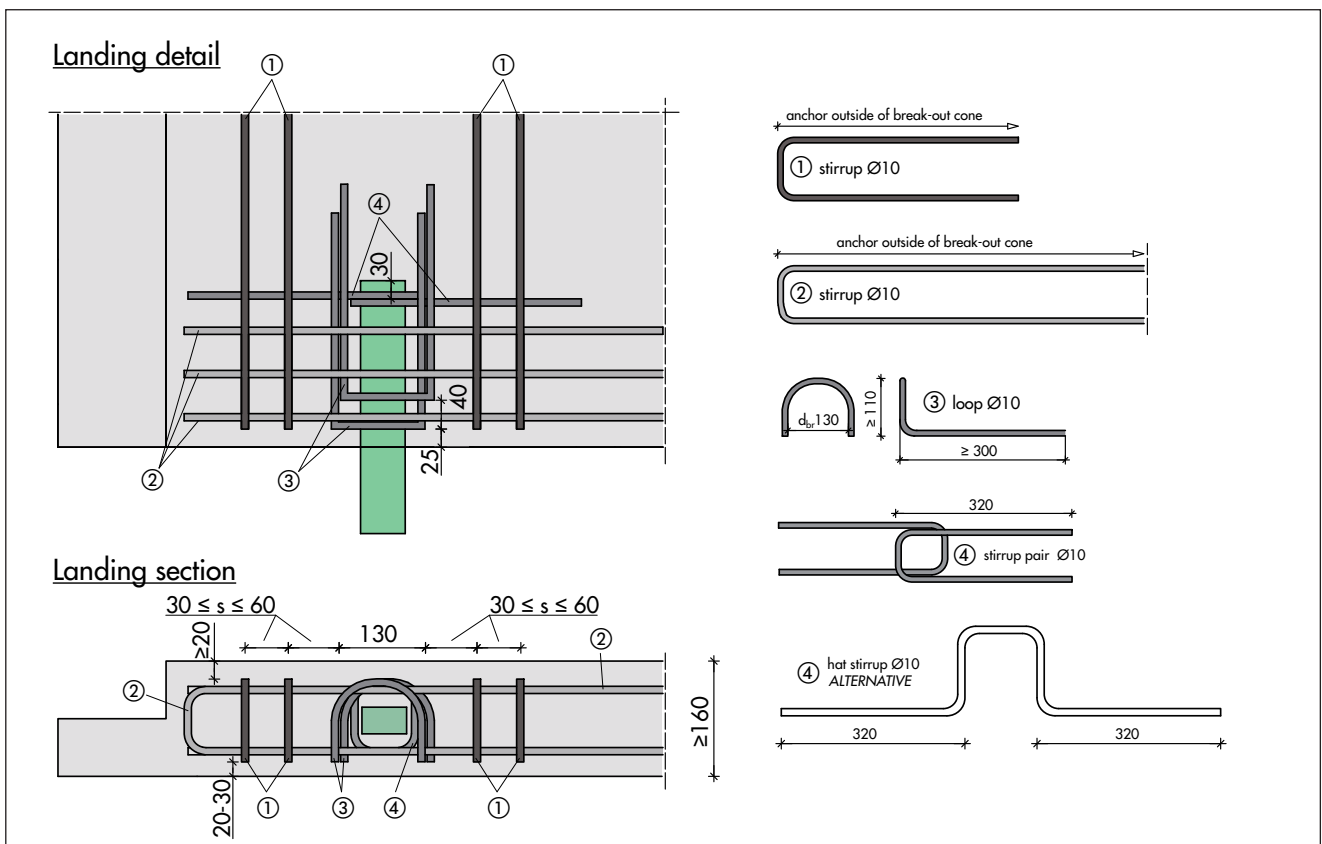
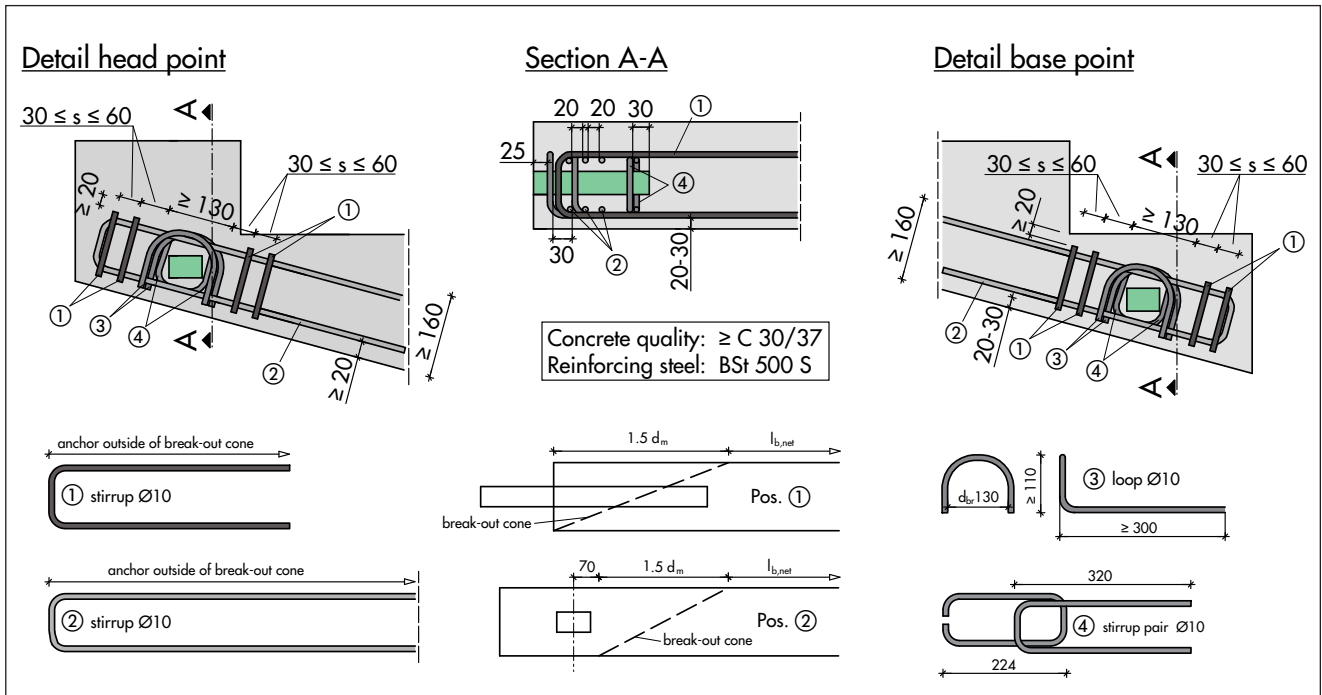
Recommended arrangement Schall-Isodorn Type HQW - section view

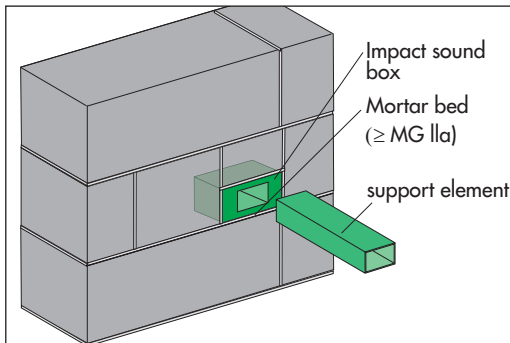


Schall-Isodorn Type HQW

Supplied reinforcement

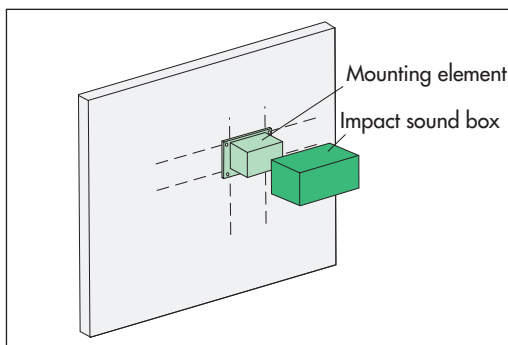
Schall-Isodorn Type HQW between slab reinforcement





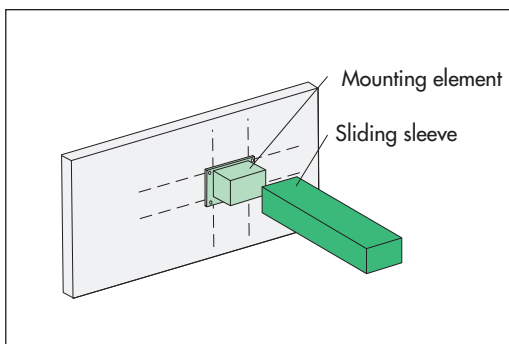
Installation in masonry/cast in-situ concrete stairs

- Wall in the impact sound box type HQW in its exact position.
- Ensure that there is a full-surface mortar bed (\geq MG IIa) under the impact sound box.
- The impact sound box must be flush with the front edge of the wall.
- Observe the marking "TOP".
- Fabricate the formwork for the stairs.
- Insert the support element in the impact sound box.
- Fix the impact sound panel TSP around the staircase wall.
- Concrete.



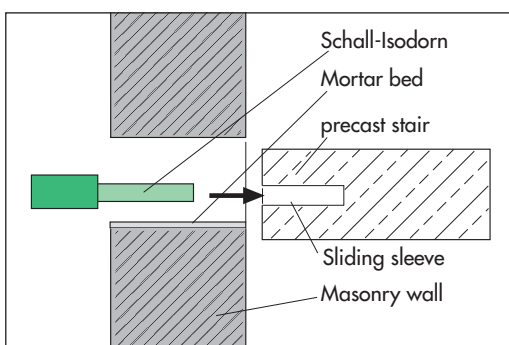
Installation in concrete wall/cast in-situ concrete stairs

- Mark the position of the impact sound box HQW on the formwork.
- Nail on the mounting element in its exact position.
- Attach the impact sound box to the mounting element. Observe the marking "TOP".
- Continue with normal construction sequence.
- After stripping the forms, remove the mounting element (re-usable).
- Fabricate the stair formwork.
- Insert the support element in the impact sound box.
- Fix the impact sound panel TSP around the staircase wall.
- Insert the supplied reinforcement
- Concrete.



Installation in prefabricated stairs

- Fix the mounting element onto the formwork.
- Push the sliding sleeve over the mounting element.
- Insert the supplied reinforcement.
- Concrete.

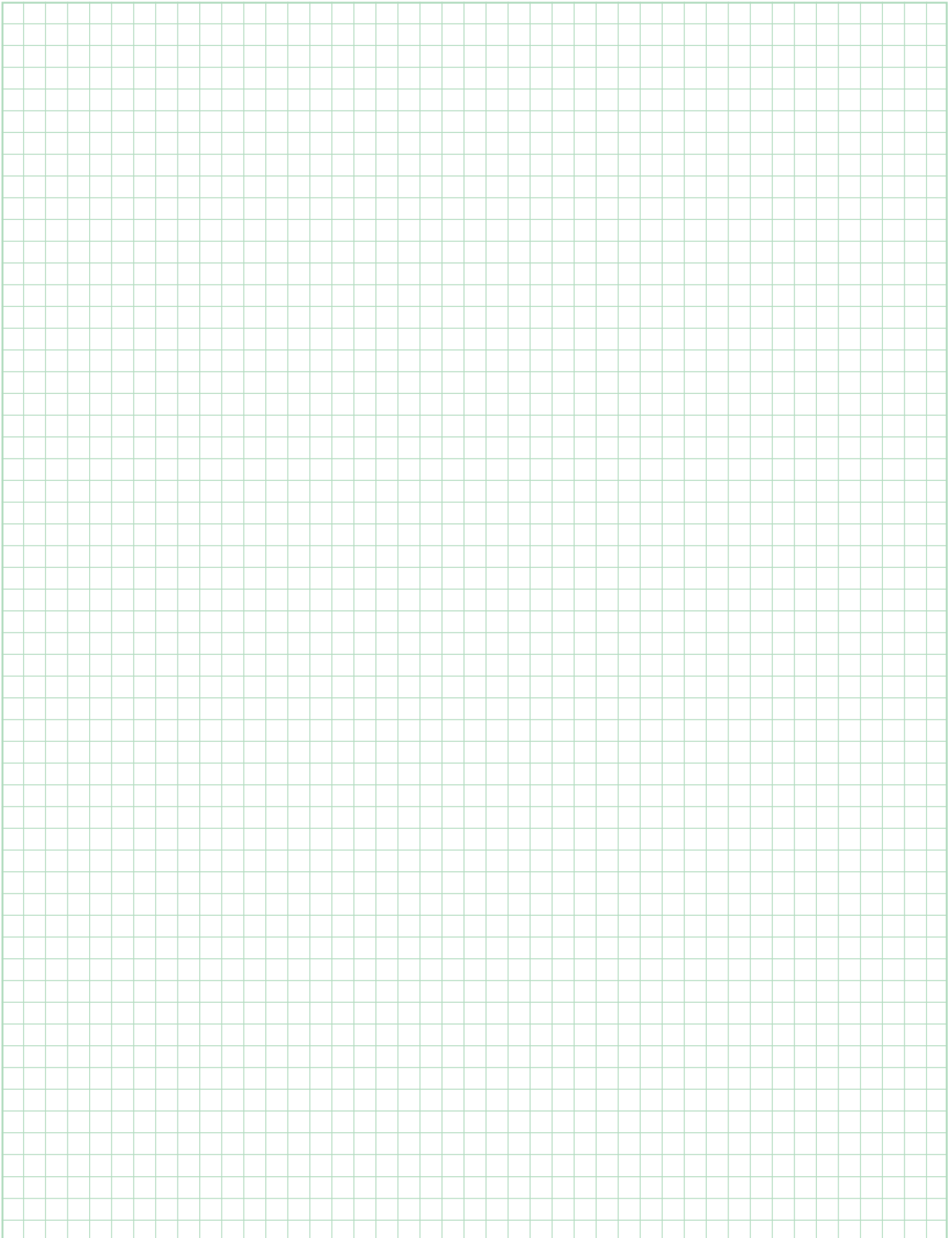


Installation of prefabricated stairs on site

- In order to insert the Schall-Isodorn Type HQW there must be an opening of approx. 20 x 20 cm in the wall.
- Fabricate a full-surface bed of mortar (\geq MG IIa) up to the level of the impact sound box.
- Glue the prefabricated stairs with the TSP and engage with the staircase.
- Insert the Schall-Isodorn through the wall opening into the prefabrication.
- Carefully displace the prefabrication. The impact sound box must be flush with the front edge of the wall.
- Close the opening in the wall.

F90 requirements

For an F90 construction element requirement, an F90 fire protection plate must be fitted on to the support element..





for better solutions...



Schall-Isostep HT-V

Impact sound insulation for staircases



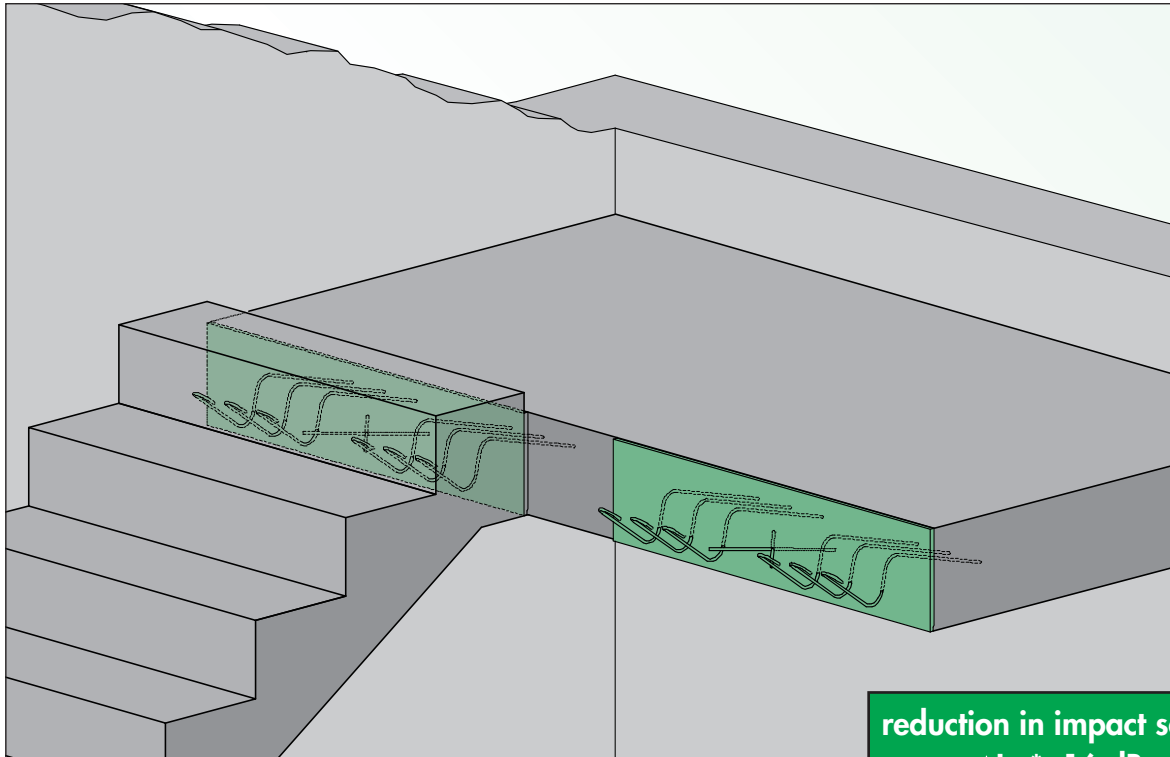
**The reliable
sound insulation
of staircases**

Sound insulation of the highest quality

Schall-Isostep HT-V

General

Schall-Isodorn Type HQW – sound insulation element for staircases



reduction in impact sound
 $\Delta L_w^* = 16 \text{ dB}$

The product

The impact sound insulation element Schall-Isostep HTV is suitable for the provision of sound absorption in staircases. The sound absorption of the stair landings is facilitated in this case by the construction of the stair landing. The sound insulation element Schall-Isostep HTV comprises a 12 mm thick absorption element that fulfils the requirements of fire protection class F90.

The load bearing capacity of the staircase is provided by shear force rods routed through the absorption material.

The Schall-Isostep HTV element can be used either on the construction site with cast in-situ concrete or also in prefabrications.

Features

- Type tested
- Standard fire protection class F90
- High load capacity
- For in-situ installation or in prefabrications
- Simple and quick installation
- Acoustically tested

Application area

On the construction site the sound insulation element Schall-Isostep HTV is fixed to the landing formwork. In this way the element is concreted in during concreting of the landing. The staircase can be concreted at the same time as the stair landing or at a later time.

With prefabricated staircases the sound insulation element is concreted into the staircase in the prefabrication.

The staircase is displaced onto the landing formwork and concreted into the stair landing.

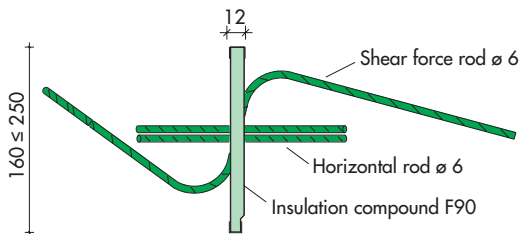
Sizing table

Schall-Isostep	V_{Rd} [kN]	H_{Rd} * [kN]	Number of rods	$l_{b,net, straight}$	$l_{b,net, hook}$
HTV 4	34.7	9.2	4 Ø 6	280	145
HTV 6	52.1	9.2	6 Ø 6	280	145
HTV 8	69.5	9.2	8 Ø 6	280	145

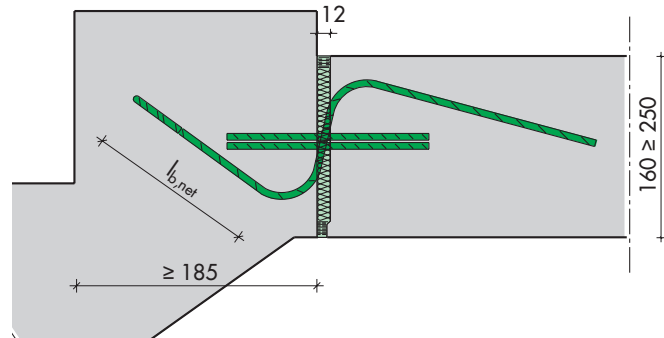
* H_{Rd} parallel to joint

Dimensions Schall-Isostep Type HTV

Side view

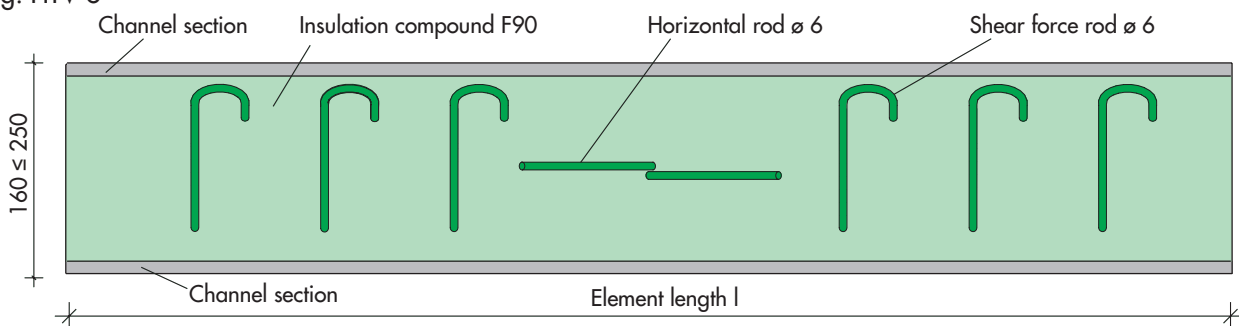


Section staircase/landing



Staircase side view

e.g. HTV 6



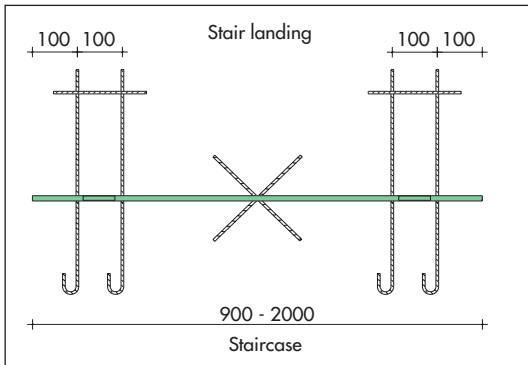
Other dimensions on request

SCHALL-ISOSTEP HTV

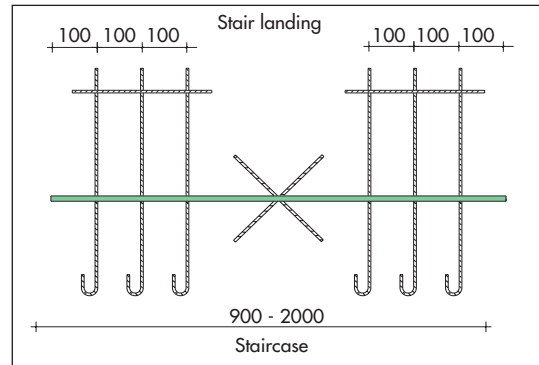
Schall-Isostep HT-V

Type and arrangement of the elements

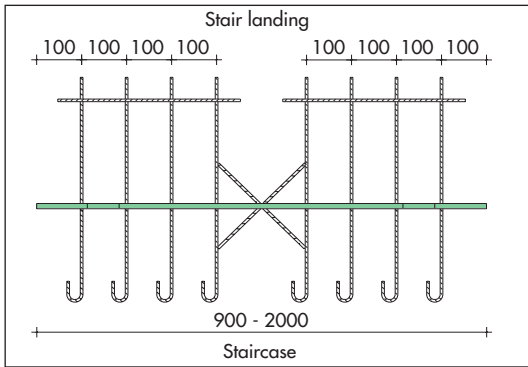
Overview of types



Schall-Isostep HT-V 4

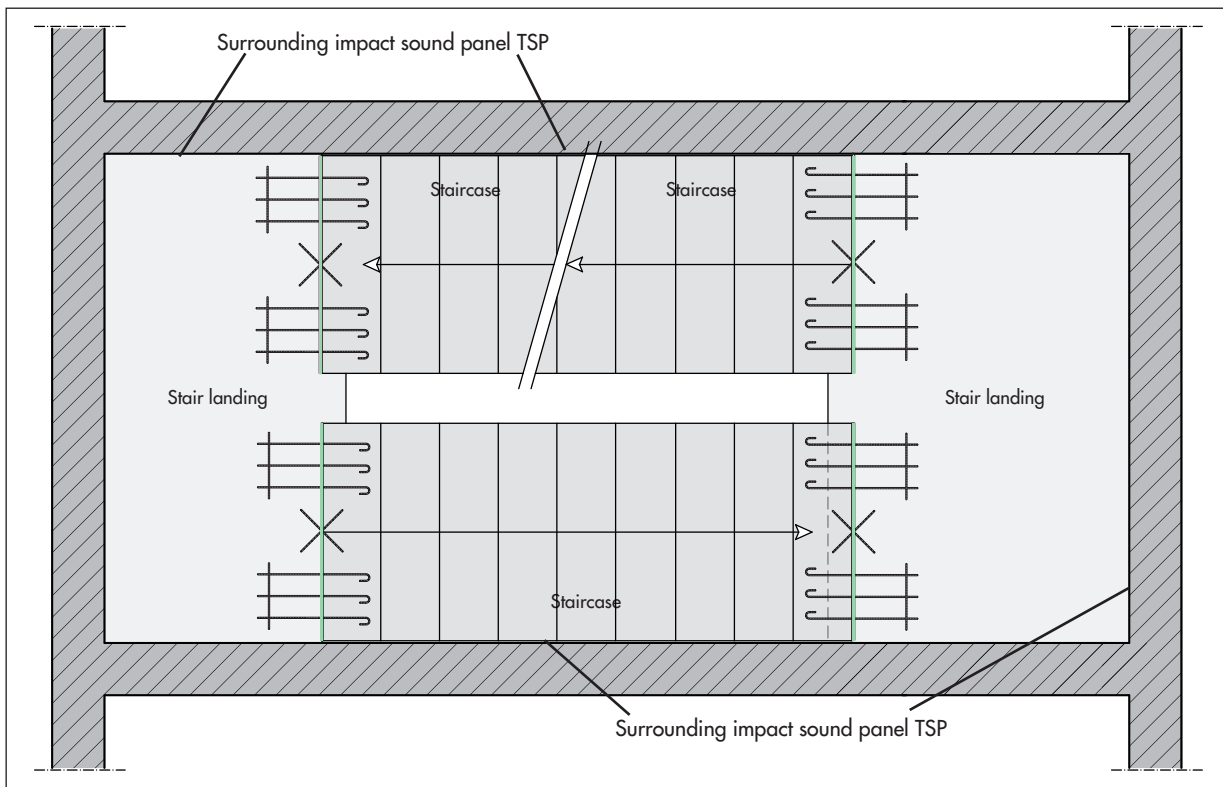


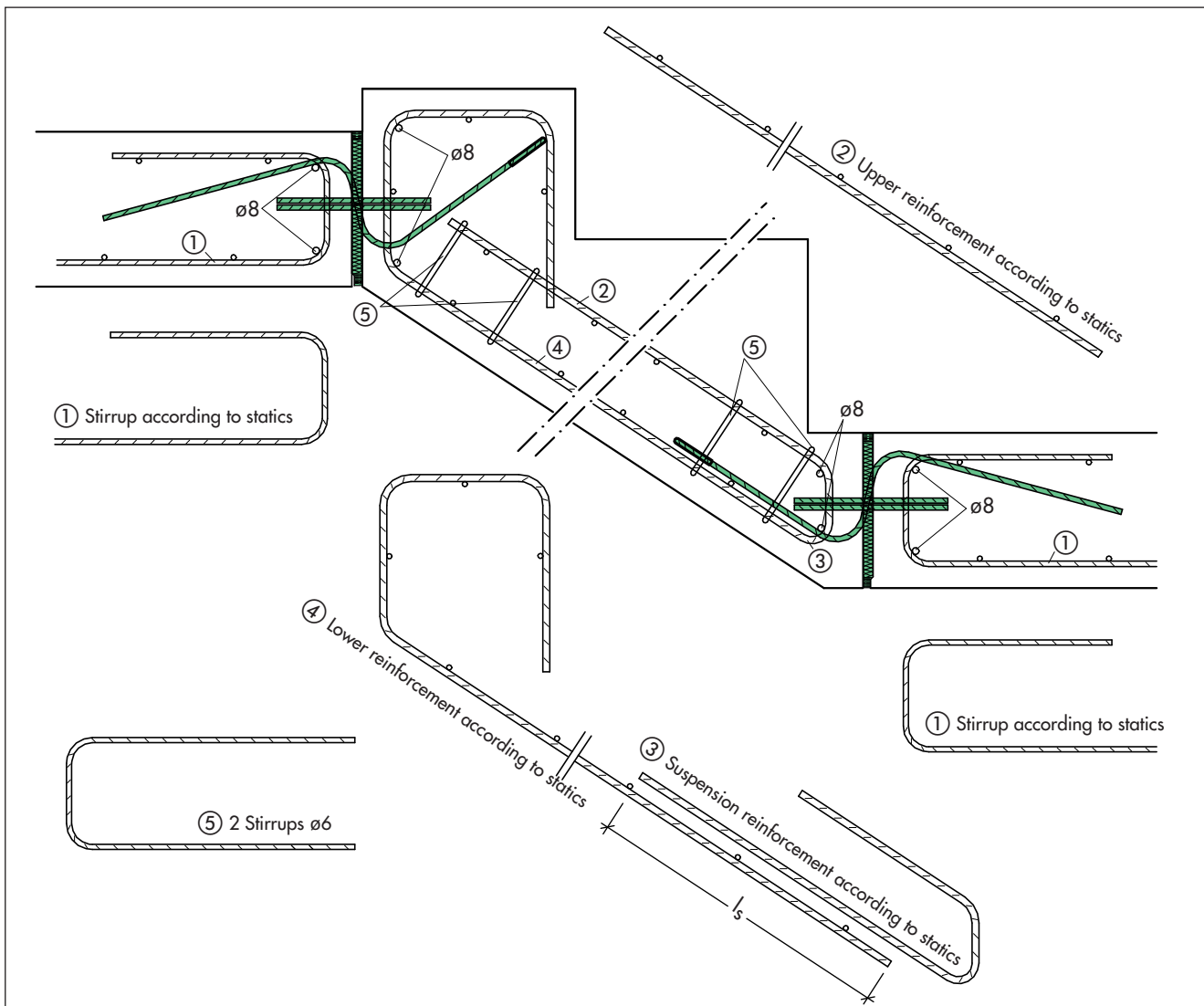
Schall-Isostep HT-V 6



Schall-Isostep HT-V 8

Arrangement of the elements





Instruction

The sound insulation element type Schall-Isostep is designed to be used exclusively with primarily static loads with a uniformly distributed traffic load.

In connecting the incipient load component to the Schall-Iso element type HTV, a suspension reinforcement ③ dimensioned for the maximum shear stress must be located at the end of the component.

The face surfaces of the elements to be bound must have an edging ① in accordance with DIN 1045-1.

In the force bearing area the shear stress in the elements must be limited in accordance with DIN 1045-1.

In the area of the anchoring of the shear force rods it is necessary to insert a transverse reinforcement ⑤ in accordance with DIN 1045-1.

The lower longitudinal reinforcement ④ of the incipient load element to be run on the support is to be guided up to the Schall-Iso element (allowing for the concrete cover), to be bent upwards and then sufficiently anchored.

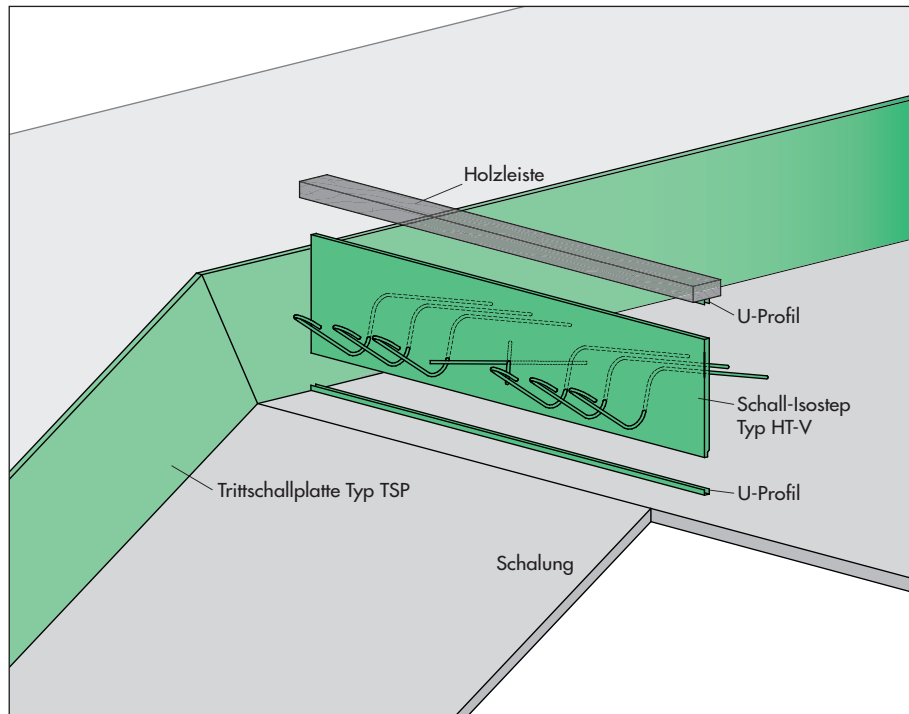
A proof of stability of the elements to be connected on both sides is to be kept.

The staircase is to be dimensioned for pinning on both sides. When sizing the starter bars on both sides of the Schall-Iso element, the moments from the eccentric connection must be taken into account. These moments are to be superimposed with the same sign on the moments from the scheduled stress.

Schall-Isostep HT-V

Installation instructions

Installation instructions for Schall-Isostep Type HT-V



Installation

- Form the staircase and stair landing.
- Glue the staircase stringer to the staircase wall with the self-adhesive impact sound panel type TSP.
- Mark the position of the impact sound element on the formwork.
- Nail the lower channel section of the element onto the landing formwork.
- Insert the Schall-Iso element into the channel section and push it up against the impact sound panel.
- Nail the upper channel section onto a wood strip.
- Mount the wood strip with the channel section onto the Schall-Iso element.
- Align the Schall-Iso element vertically and fix over the wood strip onto the stringer form or onto the stair wall.
- Insert the supplied reinforcement.
- Attach the bulkhead formwork to the stairs.
- Concrete.

Our applications department would be pleased to help with further solutions.

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Schall-Isotritt Type Z & ZB

Impact sound insulation for prefabricated stairs



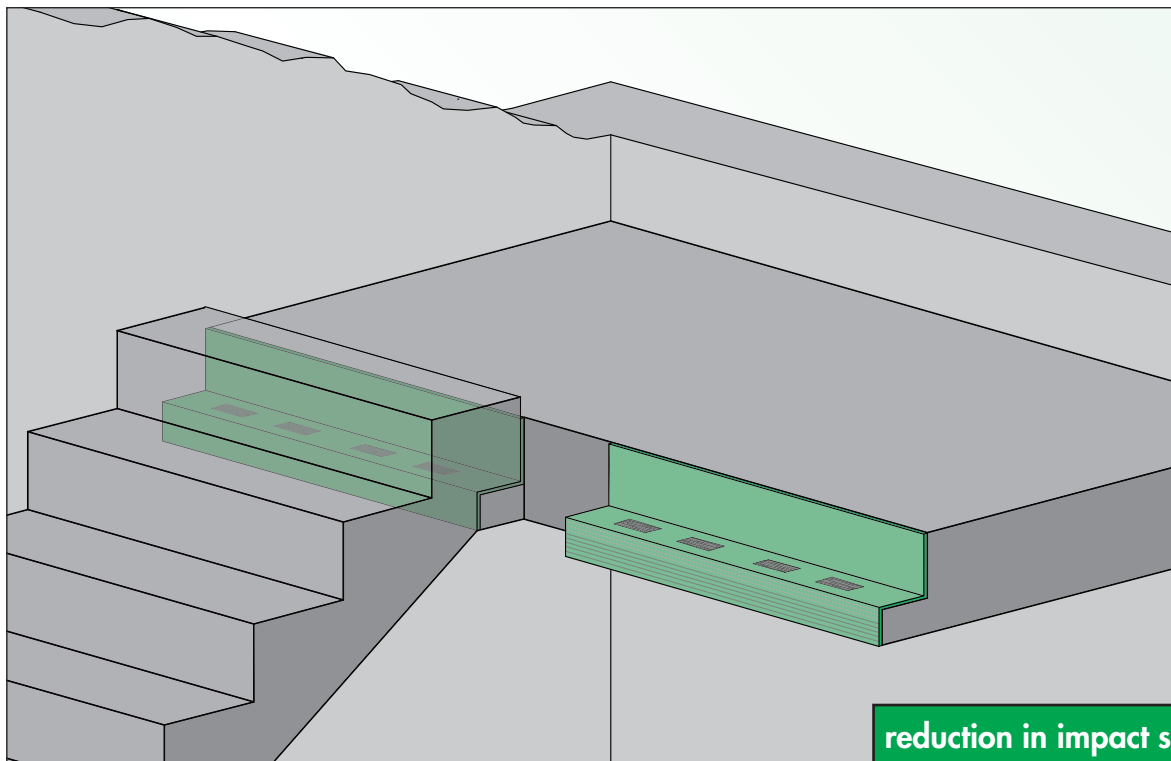
**The reliable
sound insulation for
prefabricated stairs**

Sound insulation of the highest quality

Schall-Isotritt Type Z & ZB

Allgemeines

Schall-Isotritt Type Z & ZB - impact sound insulation for prefabricated staircases



reduction in impact sound
 $\Delta L_w^* = 28 \text{ dB}$

The product

The impact sound insulation element Schall-Isostep is suitable for the provision of sound absorption in prefabricated staircases. The impact sound insulation of the stair landings is facilitated in this case by the construction of the stair landing. The sound insulation element Schall-Isotritt comprises a 10 mm thick absorption element. Integral compression bearings serve to reliably transmit the loads. The length of the element can be simply and quickly adjusted on-site.

Features

- Simple and quick installation
- Simple adjustment to the component dimensions
- High load capacity

Application area

After concreting the stair landing, the sound insulation element type Z is fixed to the support console of the stair landing.

Subsequently the staircase is placed on the consoles.

The Schall-Isotritt Type ZB serves as a stair support at the entry and in the areas in which the staircase lies flat on the floor slab or concrete floor.

Care is required to ensure that during the displacement of the staircases the sound insulation elements do not become contaminated and that no acoustic bridges are generated.

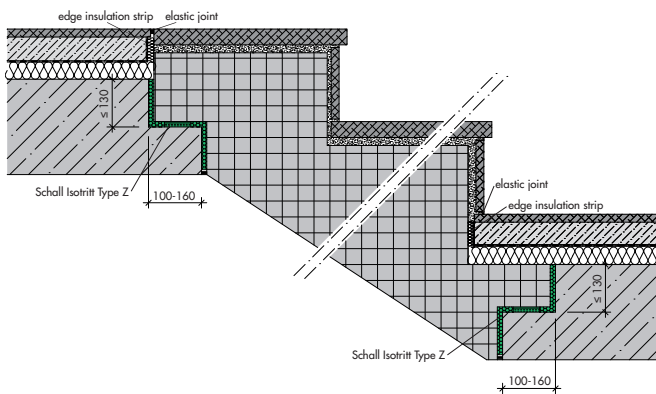
Sizing and dimensions

Schall-Isotritt Type	Staircase width [mm]	V_{Rd} [kN]	Dimensions b x h x d [mm]	Number of bearings
Z 100/4	800 - 1000	35.0	1000 x 10 x Z	4
Z 120/6	1000* - 1200	52.5*	1200 x 10 x Z	6
Z 150/6	1200 - 1500	52.5	1500 x 10 x Z	6
ZB 100x36/4	800 - 1000	35.0	1000 x 10 x 360	4
ZB 100x60/4	800 - 1000	35.0	1000 x 10 x 600	4
ZB 120x36/6	1000* - 1200	52.5	1200 x 10 x 360	6
ZB 120x60/6	1000 - 1200	52.5	1200 x 10 x 600	6
ZB 150x36/6	1200 - 1500	52.5	1500 x 10 x 360	6
ZB 150x60/6	1200 - 1500	52.5	1500 x 10 x 600	6

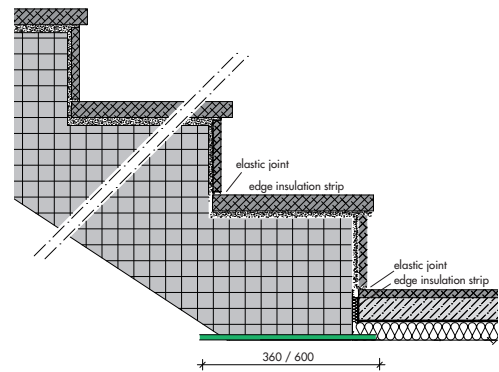
* V_{Rd} 43.8 kN for L = 1000 - 1150 mm

The maximum loading of the Schall-Isotritt elements increases for each additional bearing by 8.75 kN.

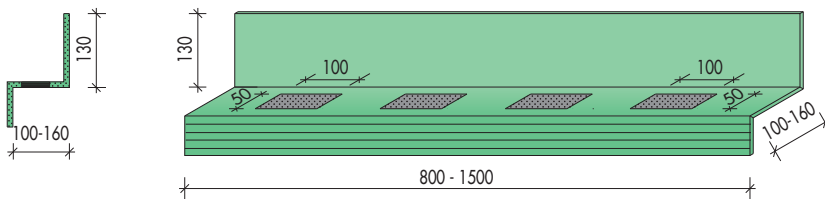
Section of system Type Z



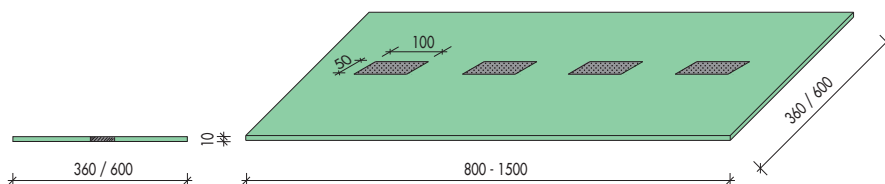
Section of system Type ZB



Dimensions Type Z



Dimensions Type ZB

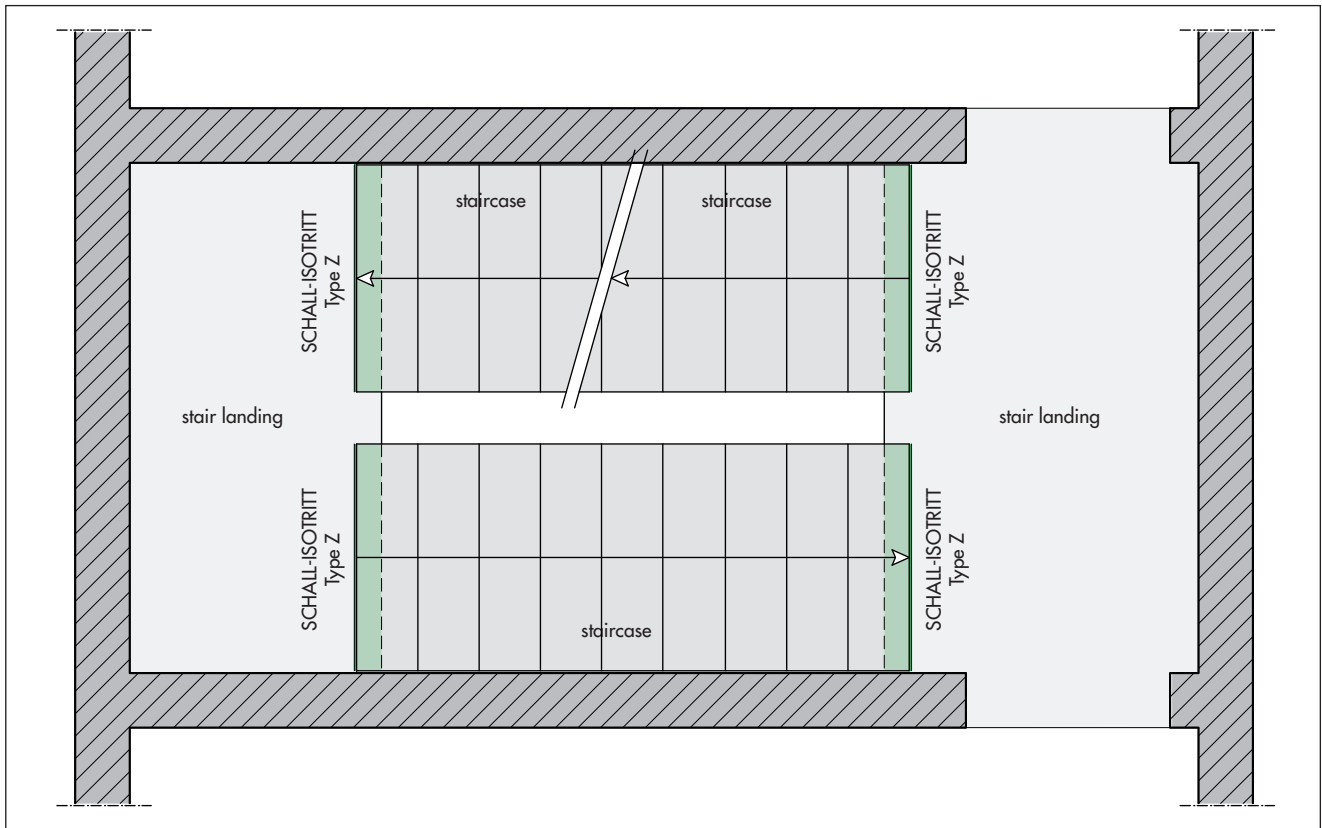


SCHALL-ISOTRITT Z&ZB

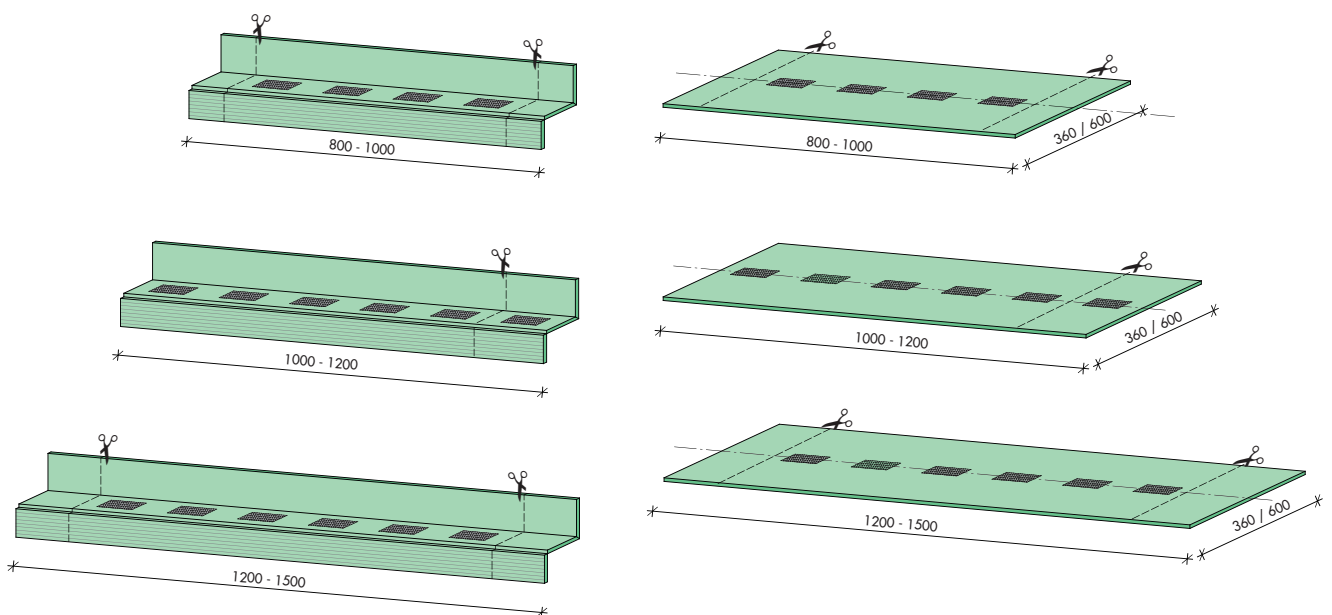
Schall-Isotritt Type Z & ZB

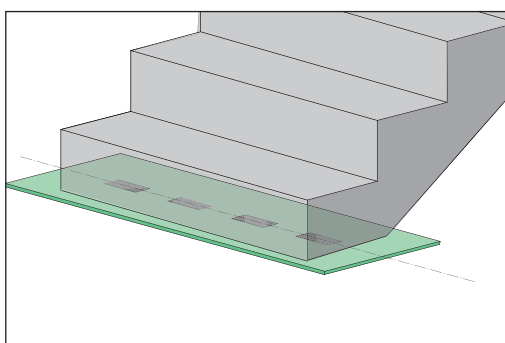
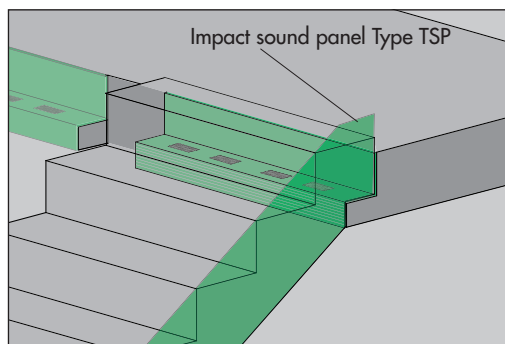
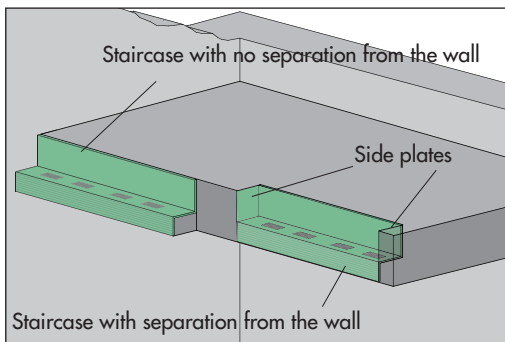
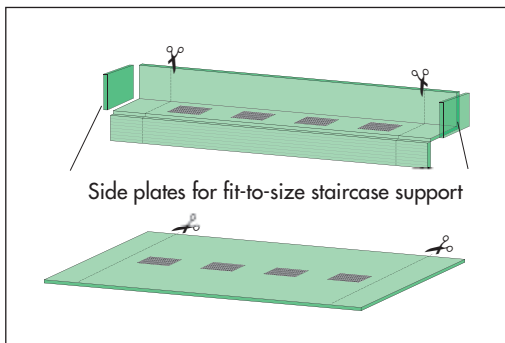
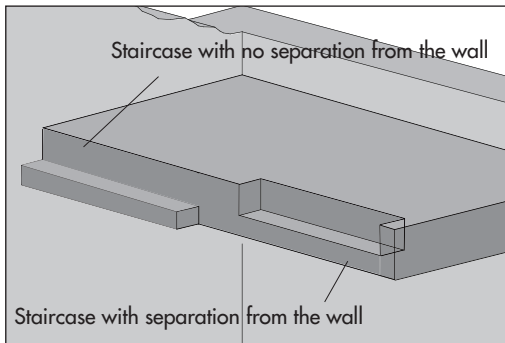
Dimensions of the elements

Recommended arrangement Schall-Isodorn Type Z - plan view



Form of delivery of Schall-Isotritt Type Z and ZB





Stair landing

- Fabricate the support on the stair landing

Impact sound insulation elements

- Schall-Isotritt impact sound insulation elements have an adhesive surface on the reverse side.
- If required the elements can be adjusted to fit the staircase width by cutting to size with a knife.

Installation of Schall-Isotritt Type Z

- Remove the protective film from the adhesive surface on the reverse side.
- Position the Schall-Isotritt on the staircase support and press down.
- Attach the side plates for the fit-to-size staircase support.

Moving the staircase

- For staircases with no separation from the wall an impact sound panel type TSP must be attached to the stair stringer..

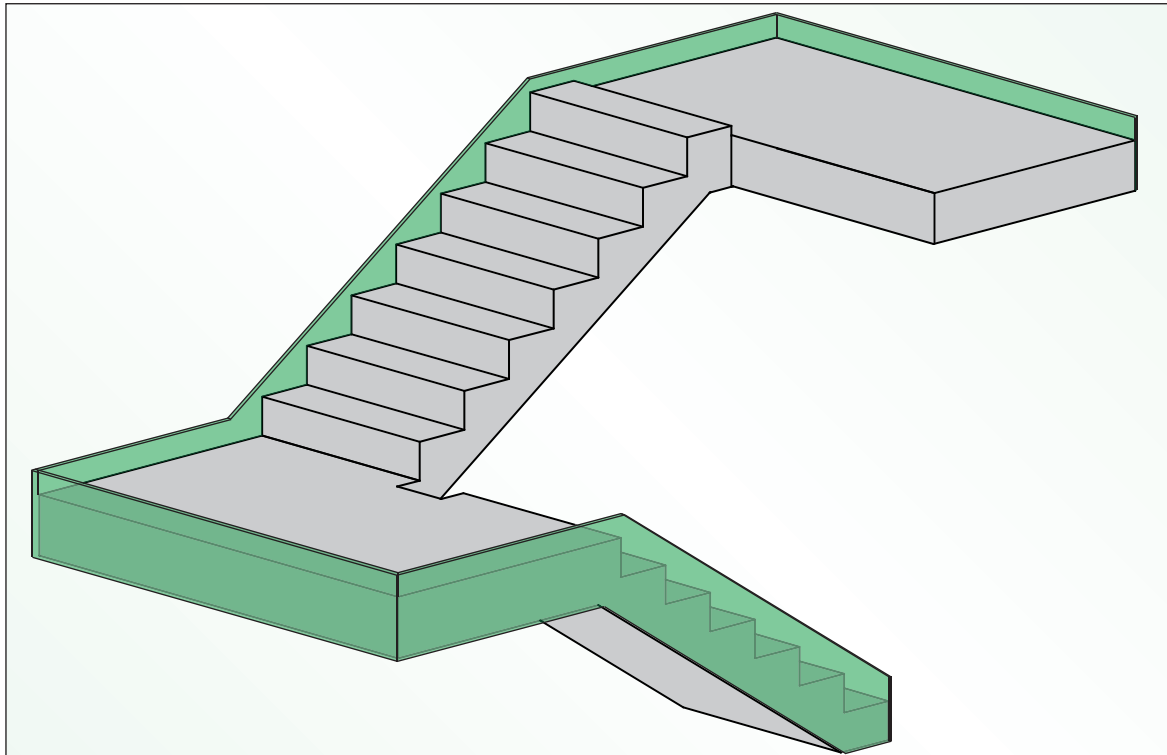
Installation of Schall-Isotritt Type ZB

- Position the sound insulation element type ZB centrally on the support surface of the staircase and then lower the staircase.
- For staircases with no separation from the wall an impact sound panel type TSP must be attached to the stair stringer.

Impact sound panel Type TSP

Basic principles and dimensions

Impact sound panel type TSP for sound absorption from adjacent concrete components



The product

The sound insulation panel type TSP is a self-adhesive, flexible, insulating panel providing acoustic separation from concrete components attached flush with the staircase wall.


Features

- Quick assembly using the self-adhesive reverse side
- In 15 m rolls, no unnecessary cutting off or adding to, minimisation of joints
- Reliable sound insulation

Installation

For prefabrications the joining panel TSP is glued to the front face of the structural element. The panel is fixed to the staircase wall using in-situ concrete. Butt joints must be masked.

Dimensions

	Type	Width [mm]	Thickness [mm]	Roll length [m]
	TSP 24	240	15	15.00
	TSP 36	360	15	15.00
	TSP 48	480	15	7.50

Please note:

The impact sound panels must be connected to one another with no seams.

It is recommended to glue over the joints with adhesive tape in order to ensure that no debris gets between the stairs and the staircase wall.

Scope:	Application area: DIN 276
012 Masonry	■ Stair construction
013 Concrete and reinforced concrete	■ Landings, staircases

Impact sound panel TSP

- 01 Self-adhesive insulation element between landing, staircase and staircase wall preventing acoustic bridges (in-situ concrete and prefabrications)
- 02 Required for installation
- 03 pcs Type TSP 24
Dimensions w x h x l 24 x 1.5 x 1500 cm
- 04 pcs Type TSP 36
Dimensions w x h x l 36 x 1.5 x 1500 cm
- 05 pcs Type TSP 48
Dimensions w x h x l 48 x 1.5 x 1500 cm
Construction material class B2 in accordance with DIN 4102

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Material
Labour costs
Unit Price
	Total Price

Scope:	Application area: DIN 276
012 Masonry	■ Stair construction
013 Concrete and reinforced concrete	■ Landings, staircases

Schall-Isobox® TSB F

01	Impact sound insulation element between prefabricated landing and stair wall		
02	Required for installation		
03	..... pcs Type TSB F 11	max. Load	+V _{Rd} 76 kN
04	..... pcs Type TSB F 12	max. Load	+V _{Rd} 76 kN - V _{Rd} 14 kN
05	..... pcs Type TSB F 13	max. Load	+V _{Rd} 76 kN - V _{Rd} 14 kN ± H _{Rd} 35 kN
	Dimensions h x w x d 200 x 275 x 155 mm		
06	..... pcs Type TSB F 21	max. Load	+V _{Rd} 76 kN
07	..... pcs Type TSB F 22	max. Load	+V _{Rd} 76 kN - V _{Rd} 14 kN
08	..... pcs Type TSB F 23	max. Load	+V _{Rd} 76 kN - V _{Rd} 14 kN ± H _{Rd} 35 kN
	Dimensions h x w x d 220 x 275 x 155 mm		
	Improvement in impact sound 23 dB		
	F90 in accordance with fire protection certificate for appropriate installation		

Schall-Isobox® TSB MB

01	Impact sound insulation element between landing and stair wall		
02	Required for installation		
03	..... pcs Type TSB MB 11	max. Load	+V _{Rd} 76 kN
04	..... pcs Type TSB MB 12	max. Load	+V _{Rd} 76 kN - V _{Rd} 14 kN
05	..... pcs Type TSB MB 13	max. Load	+V _{Rd} 76 kN - V _{Rd} 14 kN ± H _{Rd} 35 kN
	Dimensions h x w x d 200 x 275 x 155 mm		
06	..... pcs Type TSB MB 21	max. Load	+V _{Rd} 76 kN
07	..... pcs Type TSB MB 22	max. Load	+V _{Rd} 76 kN - V _{Rd} 14 kN
08	..... pcs Type TSB MB 23	max. Load	+V _{Rd} 76 kN - V _{Rd} 14 kN ± H _{Rd} 35 kN
	Dimensions h x w x d 220 x 275 x 155 mm		
	Improvement in impact sound 23 dB		
	F90 in accordance with fire protection certificate for appropriate installation		

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Material
Labour costs
Unit Price
Total Price

Scope:	Application area: DIN 276
012 Masonry	■ Stair construction
013 Concrete and reinforced concrete	■ Landings, staircases

Schall-Isobox® TSB T

- 01 Impact sound insulation element between prefabricated landing and stair wall including type-tested reinforcing cage
- 02 Required for installation
- 03 pcs Type TSB T 11 max. Load $+V_{Rd}$ 76 kN
- 04 pcs Type TSB T 12 max. Load $+V_{Rd}$ 76 kN - V_{Rd} 14 kN
- 05 pcs Type TSB T 13 max. Load $+V_{Rd}$ 76 kN - V_{Rd} 14 kN $\pm H_{Rd}$ 35 kN
Dimensions h x w x d 200 x 275 x 155 mm
- 06 pcs Type TSB T 21 max. Load $+V_{Rd}$ 76 kN
- 07 pcs Type TSB T 22 max. Load $+V_{Rd}$ 76 kN - V_{Rd} 14 kN
- 08 pcs Type TSB T 23 max. Load $+V_{Rd}$ 76 kN - V_{Rd} 14 kN $\pm H_{Rd}$ 35 kN
Dimensions h x w x d 220 x 275 x 155 mm
Improvement in impact sound 29 dB
F90 in accordance with fire protection certificate for appropriate installation

Schall-Isobox® TSB BT

- 01 Impact sound insulation element between landing and stair wall, including type-tested support element
- 02 Required for installation
- 03 pcs Type TSB BT 11 max. Load $+V_{Rd}$ 76 kN
- 04 pcs Type TSB BT 12 max. Load $+V_{Rd}$ 76 kN - V_{Rd} 14 kN
- 05 pcs Type TSB BT 13 max. Load $+V_{Rd}$ 76 kN - V_{Rd} 14 kN $\pm H_{Rd}$ 35 kN
Dimensions h x w x d 200 x 275 x 155 mm
- 06 pcs Type TSB BT 21 max. Load $+V_{Rd}$ 76 kN
- 07 pcs Type TSB BT 22 max. Load $+V_{Rd}$ 76 kN - V_{Rd} 14 kN
- 08 pcs Type TSB BT 23 max. Load $+V_{Rd}$ 76 kN - V_{Rd} 14 kN $\pm H_{Rd}$ 35 kN
Dimensions h x w x d 220 x 275 x 155 mm
Improvement in impact sound 23 dB
F90 in accordance with fire protection certificate for appropriate installation

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Unit Price
Total Price

Scope:	Application area: DIN 276
012 Masonry	■ Stair construction
013 Concrete and reinforced concrete	■ Landings, staircases

Schall-Isodorn® HQW

01	Supporting impact sound insulation element between spiral stairs and staircase wall type tested	
02	Required for installation	
03	..... pcs Type HQW F galvanised	max. +V _{Rd} 33.6 kN
04	..... pcs Type HQW F V2A	max. +V _{Rd} 33.6 kN
05	..... pcs Type HQW FM galvanised	max. +V _{Rd} 33.6 kN
06	..... pcs Type HQW FM V2A	max. +V _{Rd} 33.6 kN
03	..... pcs Type HQW M galvanised	max. +V _{Rd} 33.6 kN
04	..... pcs Type HQW M V2A	max. +V _{Rd} 33.6 kN
05	..... pcs Type HQW B galvanised	max. +V _{Rd} 33.6 kN
06	..... pcs Type HQW B V2A	max. +V _{Rd} 33.6 kN
07	..... pcs F90 fire protection sleeve	for joint openings up to 10 mm
08	..... pcs F90 fire protection sleeve	for joint openings up to 30 mm
	Dimensions of support element l x w x h 300 x 60 x 40 mm	
	Improvement in impact sound 29 dB	

Schall-Isostep® HTV

01	Supporting impact sound insulation element between landing and staircase, type tested	
02	Required for installation	
03	..... pcs Type HTV 4	max. V _{Rd} 34.7 kN
03	..... pcs Type HTV 6	max. V _{Rd} 52.1 kN
03	..... pcs Type HTV 8	max. V _{Rd} 69.5 kN
	Length of element 90 – 200 cm Height of element 160 – 250 mm	
	F90 in accordance with fire protection certificate	

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Material
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Scope:	Application area: DIN 276
012 Masonry	■ Stair construction
013 Concrete and reinforced concrete	■ Landings, staircases

Schall-Isotritt® Z

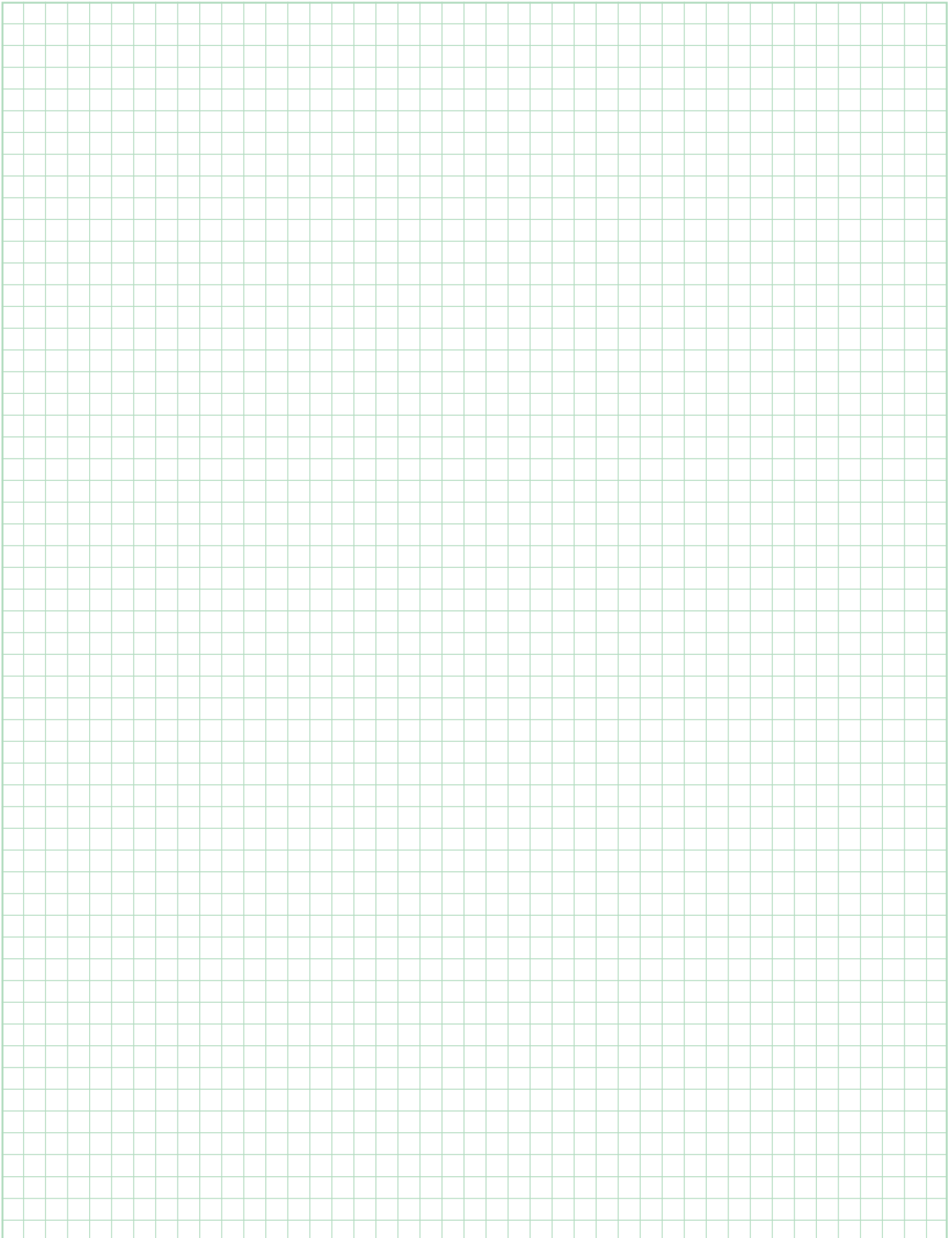
- 01 Impact sound insulation element between landing and prefabricated staircase in order to safeguard the vertical joint and the support joint
- 02 Required for installation
- 03 pcs Type Z 100/4 max. Load +V_{Rd} 35.0 kN
Dimensions w x h x d 1000 x 10 x Z mm
- 04 pcs Type Z 120/6 max. Load +V_{Rd} 52.5 kN
Dimensions w x h x d 1200 x 10 x Z mm
- 05 pcs Type Z 150/6 max. Load +V_{Rd} 52.5 kN
Dimensions w x h x d 1500 x 10 x Z mm
- 06 pcs Type Z special number of bearings
Dimensions w x h x d x 10 x Z mm
Improvement in impact sound 28 dB

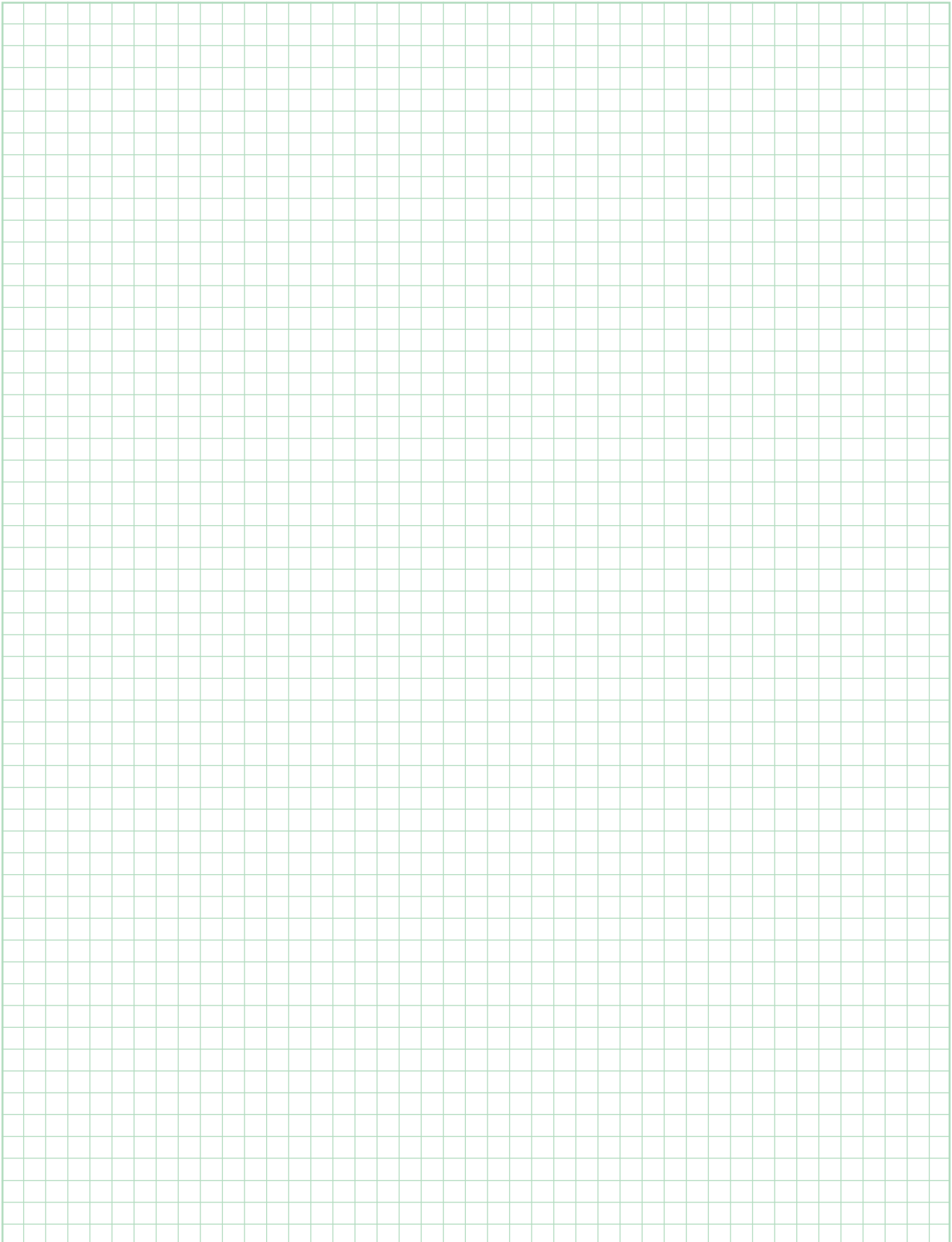
Schall-Isotritt® ZB

- 01 Impact sound insulation element between floor slab and prefabricated staircase in order to safeguard the support joint
- 02 Required for installation
- 03 pcs Type ZB 100x36/4 max. Load +V_{Rd} 35.0 kN
Dimensions w x h x d 1000 x 10 x 360 mm
- 04 pcs Type ZB 100x60/4 max. Load +V_{Rd} 35.0 kN
Dimensions w x h x d 1000 x 10 x 600 mm
- 05 pcs Type ZB 120x36/6 max. Load +V_{Rd} 52.5 kN
Dimensions w x h x d 1200 x 10 x 360 mm
- 06 pcs Type ZB 120x60/6 max. Load +V_{Rd} 52.5 kN
Dimensions w x h x d 1200 x 10 x 600 mm
- 07 pcs Type ZB 150x36/6 max. Load +V_{Rd} 52.5 kN
Dimensions w x h x d 1500 x 10 x 360 mm
- 08 pcs Type ZB 150x60/6 max. Load +V_{Rd} 52.5 kN
Dimensions w x h x d 1500 x 10 x 600 mm
- 09 pcs Type ZB special number of bearings
Dimensions w x h x d x 10 x mm
Improvement in impact sound 28 dB

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Material
Labour costs
Unit Price
Total Price





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