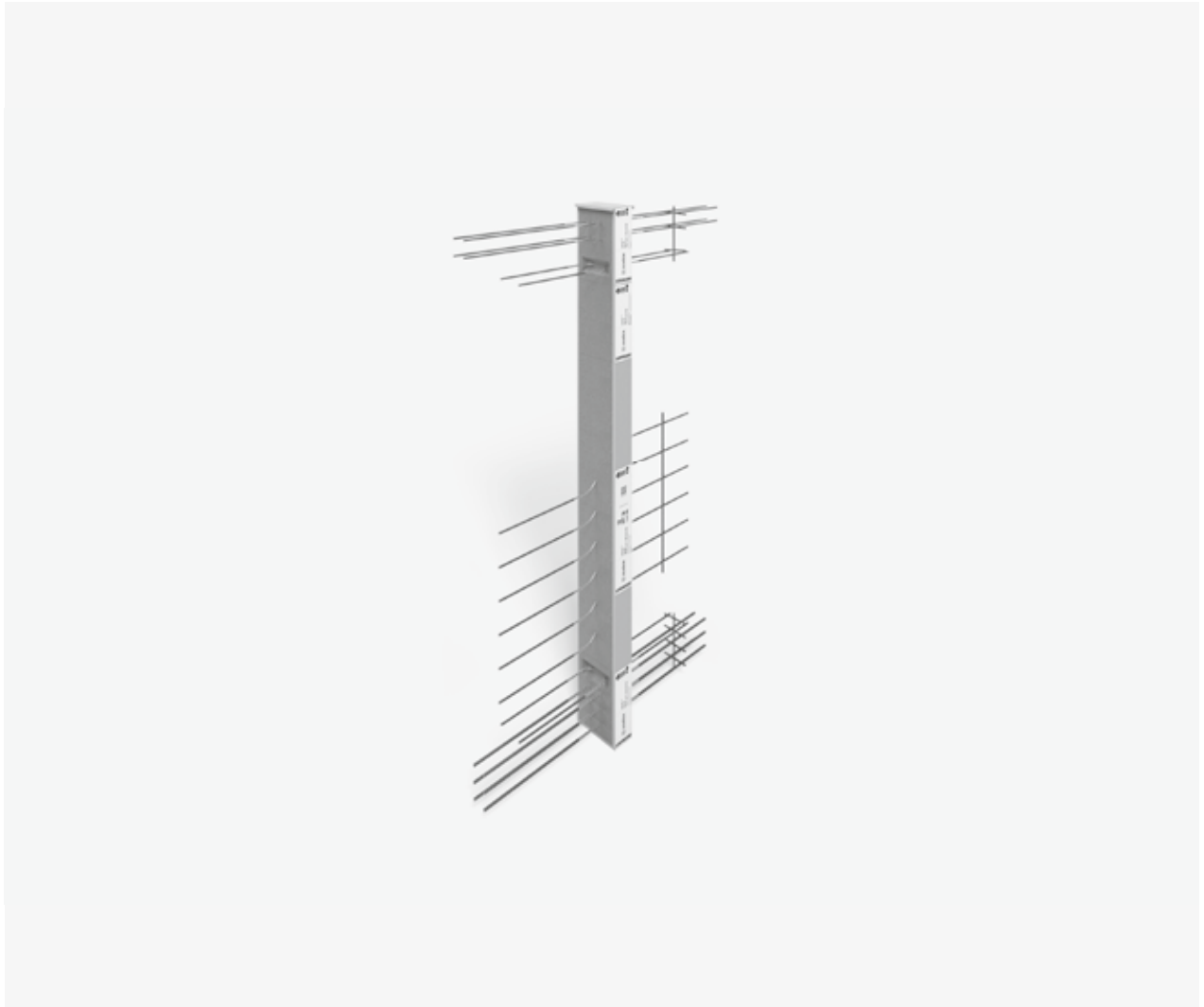


Schöck Isokorb® T type W



Schöck Isokorb® T type W

Load-bearing thermal insulation element for cross walls. The element transfers negative moments and shear forces.

T
type W

Reinforced concrete – reinforced concrete

Element arrangement | Installation cross section

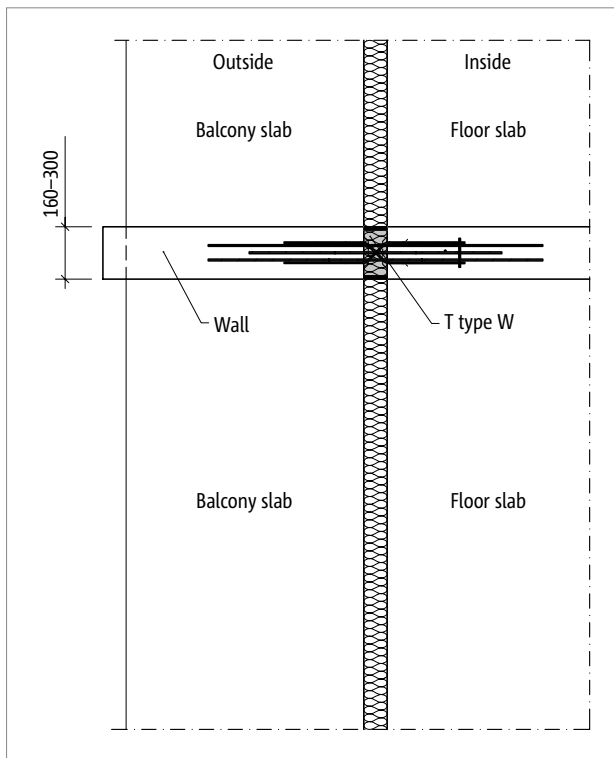


Fig. 173: Schöck Isokorb® T type W: Layout; Balcony structure with thermally insulated load-bearing shear walls

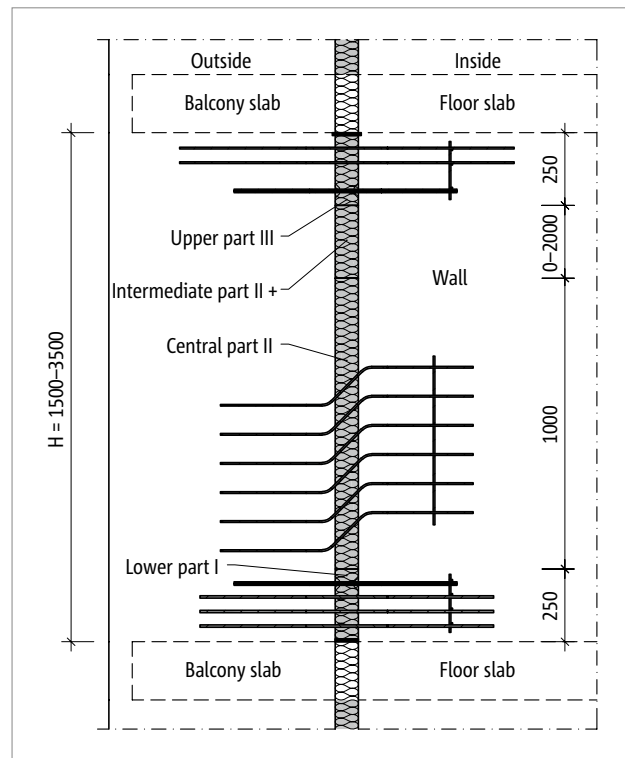


Fig. 174: Schöck Isokorb® T type W: Balcony structure with thermal insulated load-bearing shear walls

i Element arrangement

- The Schöck Isokorb® T type W consists of at least 3 parts: Bottom section I, middle section II, top section III. Depending on height an insulation spacer II+ is additionally required.

Product selection | Type designations | Special designs

Schöck Isokorb® T type W variants

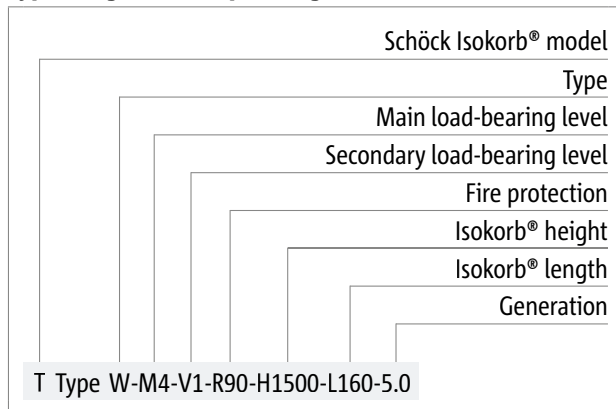
The configuration of the Schöck Isokorb® T type W can be varied as follows:

- Main load-bearing level: M1 to M4
- Secondary load-bearing level: V1
- Fire resistance class:
R90: Top fire protection board, projecting on both sides by both 10 mm
- Isokorb® height:
H = 1500 mm to 3500 mm
- Isokorb® length:
L = 160 mm to 300 mm
- Generation:
5.0

i Variants

- Please specify the required dimensions when ordering.

Type designations in planning documents



i Special designs

Please contact the Technical Design Department if you cannot achieve the connections you require using the standard product variants shown in this technical information (contact details on page 3).

Design C25/30 | Torsional spring stiffness

Schöck Isokorb® T type W 5.0		M1	M2	M3	M4	M5
Design values with		Concrete strength class \geq C25/30				
		$M_{Rd,y}$ [kNm/element]				
Isokorb® height H [mm]	1500-1990	89.0	149.2	221.3	307.3	394.6
	2000-2490	114.4	186.5	274.8	379.4	483.1
	2500-3500	138.1	223.7	328.2	451.5	571.5
	$V_{Rd,z}$ [kN/element]					
	1500-3500	52.2	92.7	144.9	208.6	284.0
	$V_{Rd,y}$ [kN/element]					
	1500-3500	± 17.4	± 17.4	± 17.4	± 17.4	± 30.9

Schöck Isokorb® T type W 5.0		M1	M2	M3	M4	M5
Placement with		Isokorb® length [mm]				
		150-300	150-300	150-300	150-300	150-300
Tension bars		4 \emptyset 6	4 \emptyset 8	4 \emptyset 10	4 \emptyset 12	4 \emptyset 14
Compression bars		6 \emptyset 8	6 \emptyset 10	6 \emptyset 12	6 \emptyset 14	6 \emptyset 16
Shear force bars vertical		6 \emptyset 6	6 \emptyset 8	6 \emptyset 10	6 \emptyset 12	6 \emptyset 14
Shear force bars horizontal		2 \times 2 \emptyset 6	2 \times 2 \emptyset 6	2 \times 2 \emptyset 6	2 \times 2 \emptyset 6	2 \times 2 \emptyset 8
L_{min} for R90 [mm]		160	160	160	160	160

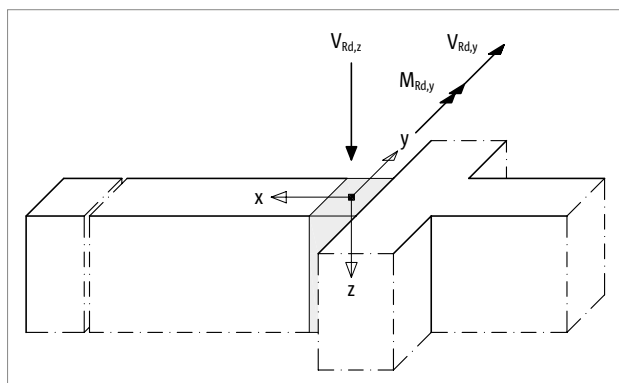


Fig. 175: Schöck Isokorb® T type W: Sign rule for the design

Notes on design

- Moments from wind loading are to be absorbed by the stiffening effect of the balcony slabs. If this is not possible, then $M_{Ed,z}$ can be transferred by the additional layout of a Schöck Isokorb® T type D. The T type D in this case is installed in a vertical position in place of the insulating spacer.
- Poor bonding conditions (bonding range II) are the basis for the determination of the tension bar anchoring lengths.

Schöck Isokorb® T type W 5.0		M1	M2	M3	M4	M5
Torsion spring stiffness for		Concrete strength class \geq C25/30				
		$M_{Rd,y}$ [kNm/element]				
Isokorb® height H [mm]	1500-1990	158845	238506	323733	412913	505007
	2000-2490	301348	452474	614160	783345	958056
	2500-3500	489089	734369	996786	1271373	1554932

Expansion joint spacing

Maximum expansion joint spacing

If the structural component length exceeds the maximum expansion joint spacing e , expansion joints must be installed in the exterior concrete structural components at right angles to the insulation plane, in order to limit the effect as a result of temperature changes.

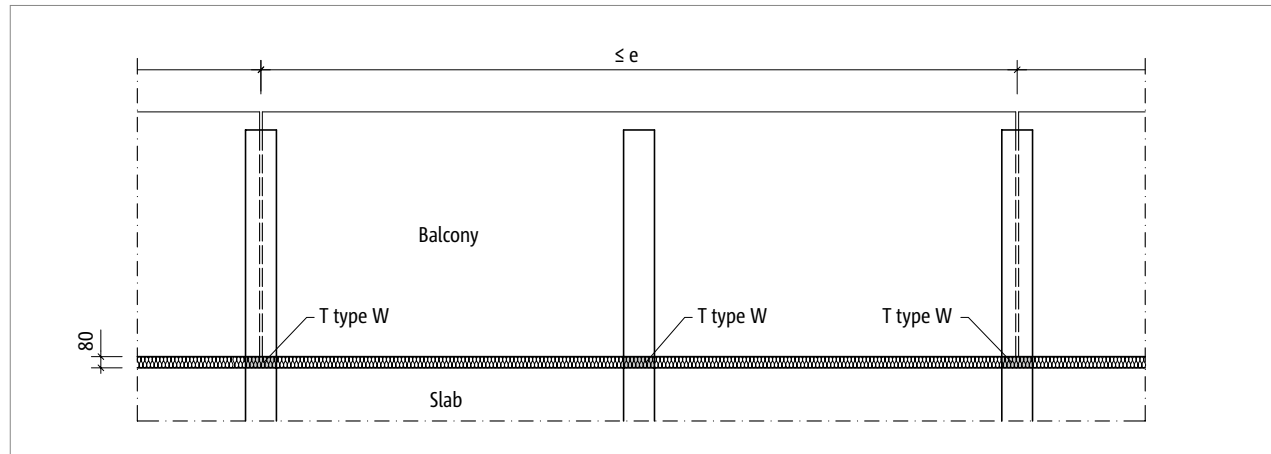


Fig. 176: Schöck Isokorb® T type W: Expansion joint spacing

Schöck Isokorb® T type W 5.0		M1	M2	M3	M4
Maximum expansion joint spacing when		e [m]			
Insulating element thickness [mm]	80	13.5	13.0	11.7	10.1

i Expansion joints

- The expansion joint spacings can be enlarged, if there is no fixed connection between balcony slabs and shear walls, e. g. through laying of a sliding foil.

Product description

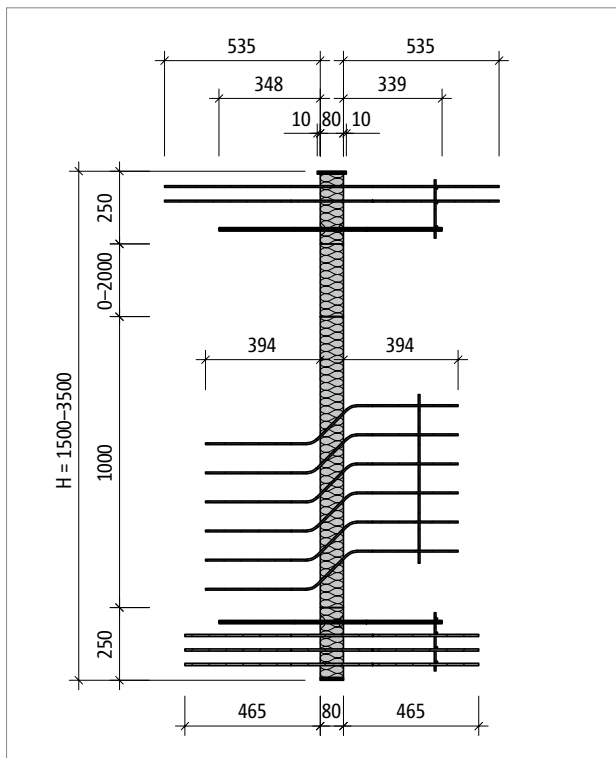


Fig. 177: Schöck Isokorb® T type W-M1-R90: Product layout; Fire protection board top and bottom

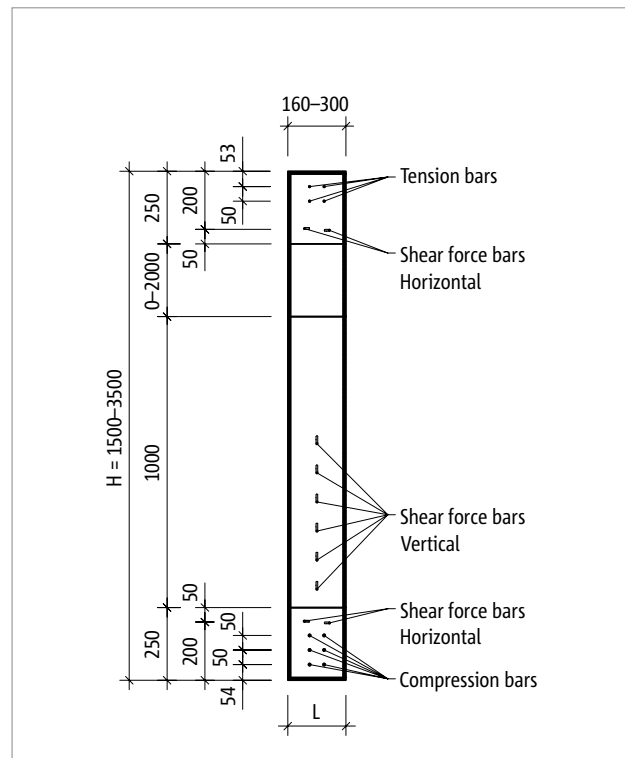


Fig. 178: Schöck Isokorb® T type W-M1-R90: Product layout; perimeter fire protection boards

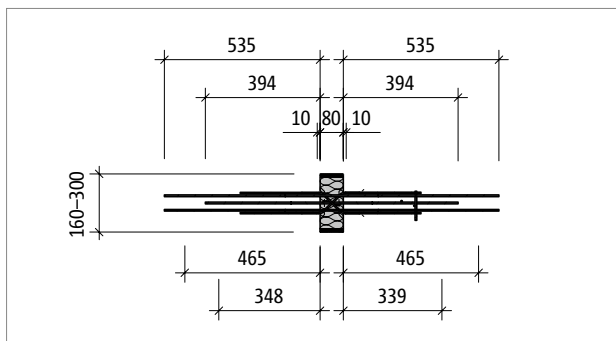


Fig. 179: Schöck Isokorb® T type W-M1: Product layout

Product information

- For additional 2D and 3D product drawings contact our Design Support department.

T
type W

Product description

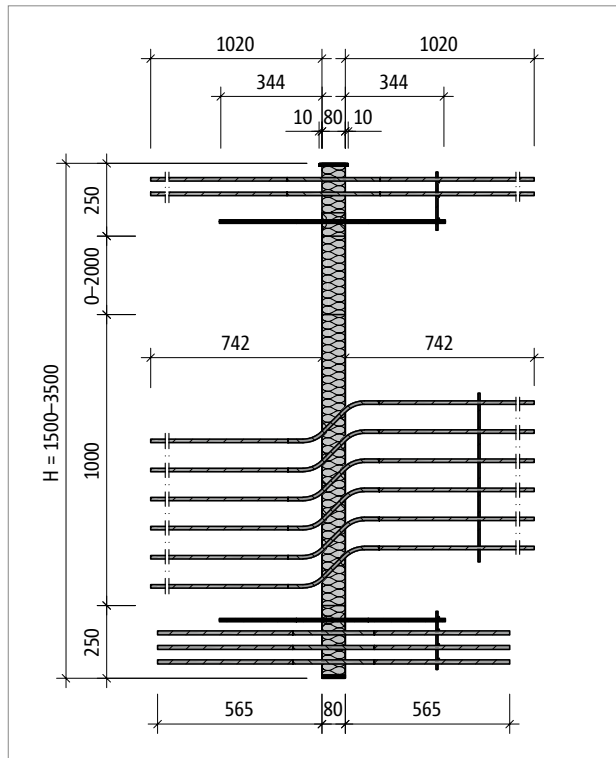


Fig. 180: Schöck Isokorb® T type W-M4-R90: Product layout; fire protection board top and bottom

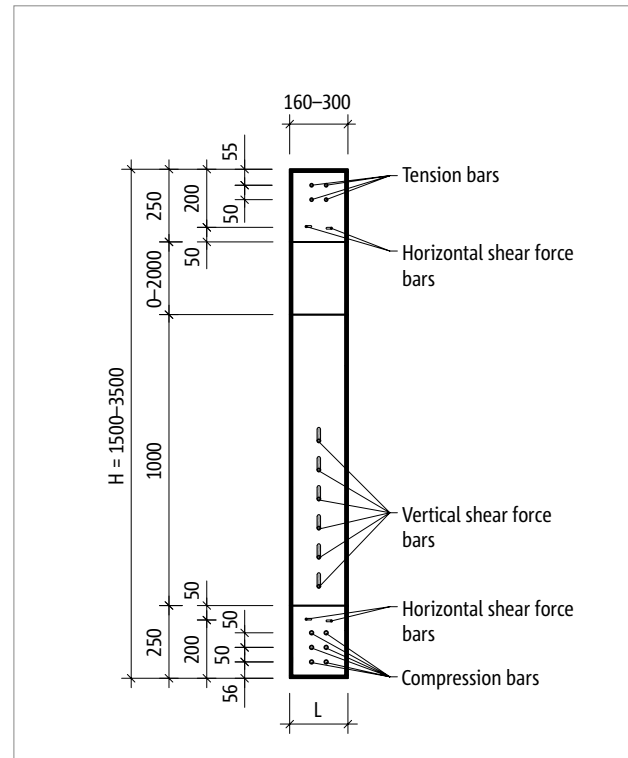


Fig. 181: Schöck Isokorb® T type W-M4-R90: Product layout; perimeter fire protection boards

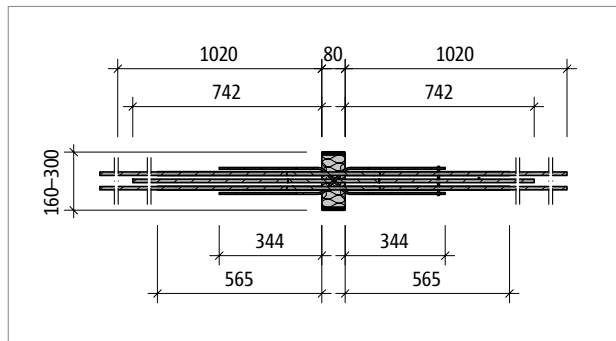


Fig. 182: Schöck Isokorb® T type W-M4: Product layout

Product information

- For additional 2D and 3D product drawings contact our Design Support department.

T
type W

Reinforced concrete – reinforced concrete

On-site reinforcement

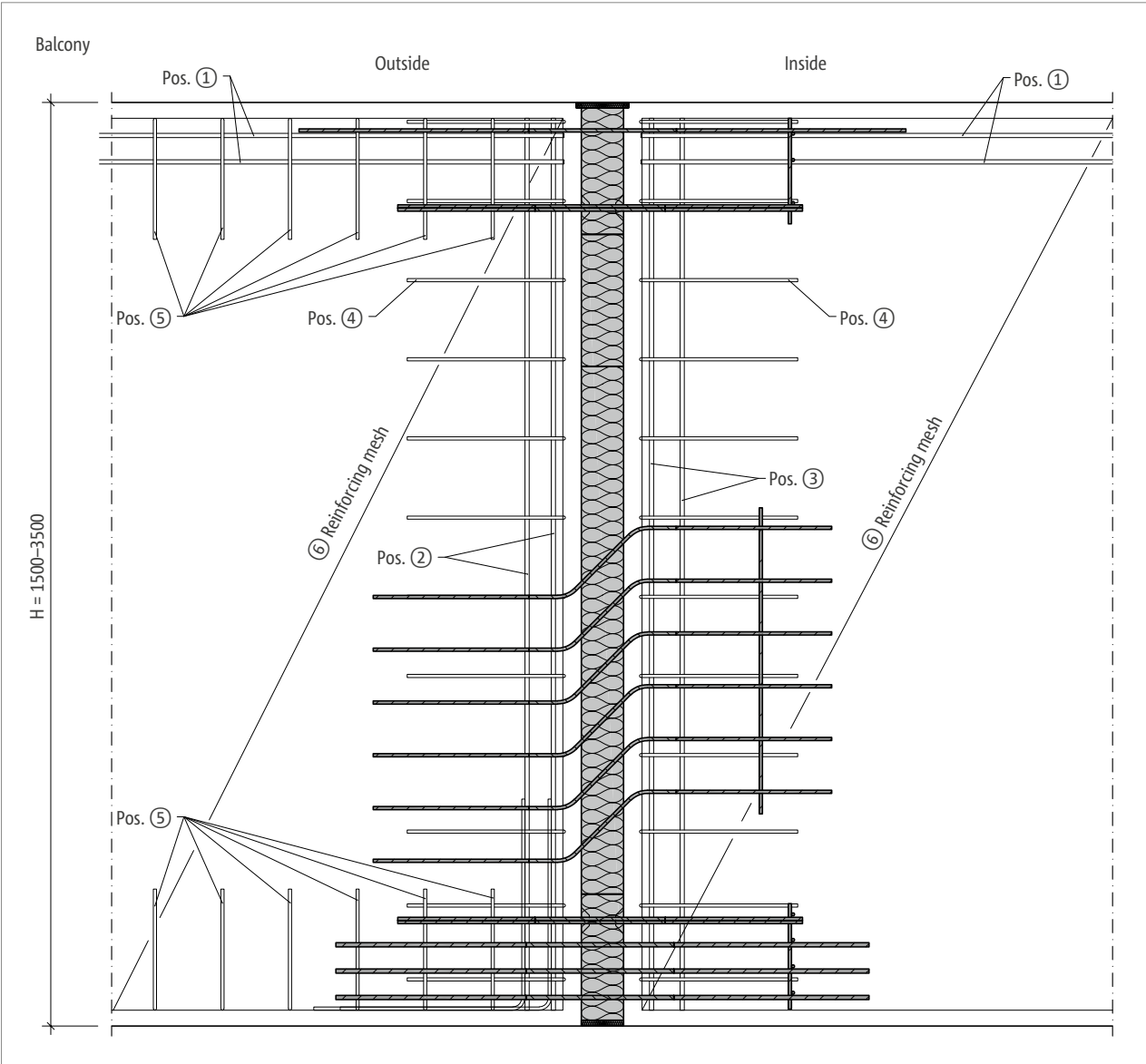


Fig. 183: Schöck Isokorb® T type W: On site reinforcement; cross-section

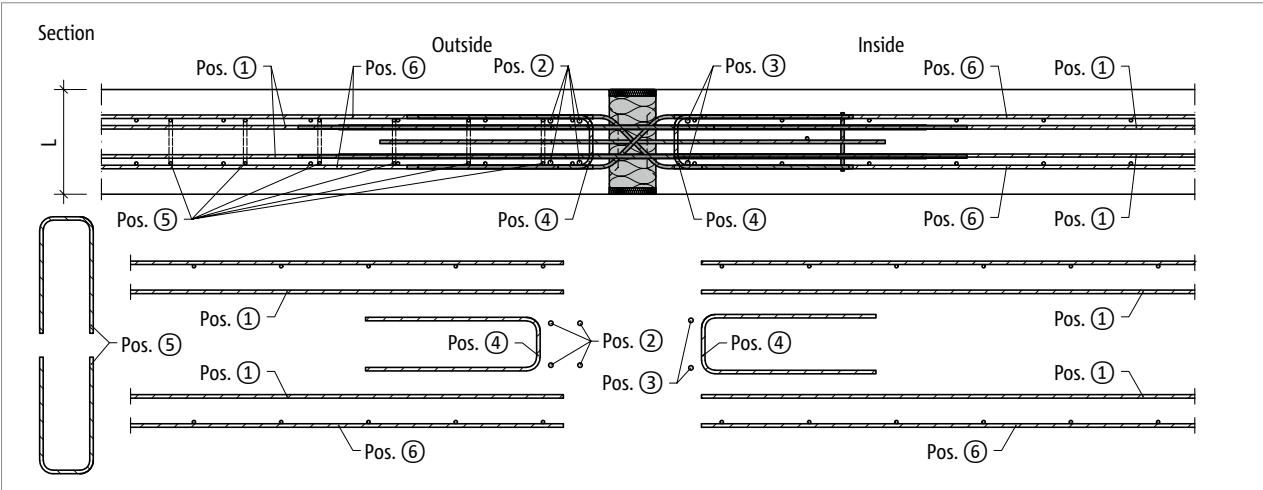


Fig. 184: Schöck Isokorb® T type W: On site reinforcement; layout

On-site reinforcement | Installation

Recommendation for the on-site connection reinforcement

Details on the lapping reinforcement for Schöck Isokorb® with a loading of 100% of the maximum design moment with C25/30; structurally selected: a_s lapping reinforcement $\geq a_s$ Isokorb® compression/tension bars.

Schöck Isokorb® T type W 5.0	M1	M2	M3	M4
On-site reinforcement	Concrete strength class $\geq C25/30$			
Pos. 1 lap reinforcement				
Pos. 1	4 \varnothing 6	4 \varnothing 8	4 \varnothing 10	4 \varnothing 12
Lap length l0 [mm]	481	641	801	961
Pos. 2 and Pos. 3 edge reinforcement				
Pos. 2 and Pos. 3	2 \times 2 \varnothing 10	2 \times 2 \varnothing 10	2 \times 2 \varnothing 12	2 \times 2 \varnothing 14
Pos. 4 and Pos. 5 edging				
Pos. 4 and Pos. 5	acc. to the specifications of the structural engineer			
Pos. 6 wall reinforcement and lapping reinforcement of shear force bars				
Pos. 6	acc. to the specifications of the structural engineer			

i Information about on-site reinforcement

- Alternative connection reinforcements are possible. The rules as per SS-EN 1992-1-1 (EC2) and SS-EN 1992-1-1/NA apply for calculating the lap length. A reduction of the required lap length using m_{Ed}/m_{Rd} is permitted.

i Installation

The Schöck Isokorb® T type W is delivered in various components (bottom section, middle section, intermediate section, upper section).

- Depending on the quantity ordered, similar components will be on one pallet for purposes of transport safety.
- The assignment of components takes place on the building site in accordance with installation instructions.

✓ Check list

- ☐ Have the loads on the Schöck Isokorb® connection been specified at design level?
- ☐ Has the cantilevered system length or the system support width been taken as a basis?
- ☐ Is the relevant concrete strength class taken into account when selecting the design and calculation table?
- ☐ With the selection of the design table is the relevant concrete cover taken into account?
- ☐ Are the maximum allowable expansion joint spacings taken into account?
- ☐ Have the fire protection requirements been clarified?
- ☐ Have the requirements for on-site reinforcement of connections been defined in each case?
- ☐ Does an impact load or another extraordinary load need to be taken into account for the design of the Schöck Isokorb®?
- ☐ Is a sliding felt with the dynamic friction coefficient $\mu_G \leq 0.03$ specified for between the balcony slabs and the cantilevered walls?
- ☐ Is the balcony supported on the cantilevered wall secured against horizontal displacement?
- ☐ Is the type designation of the Schöck Isokorb® explicit in the plans? - Example: Schöck Isokorb® T type W-M4-V1-R90-H2500-L200