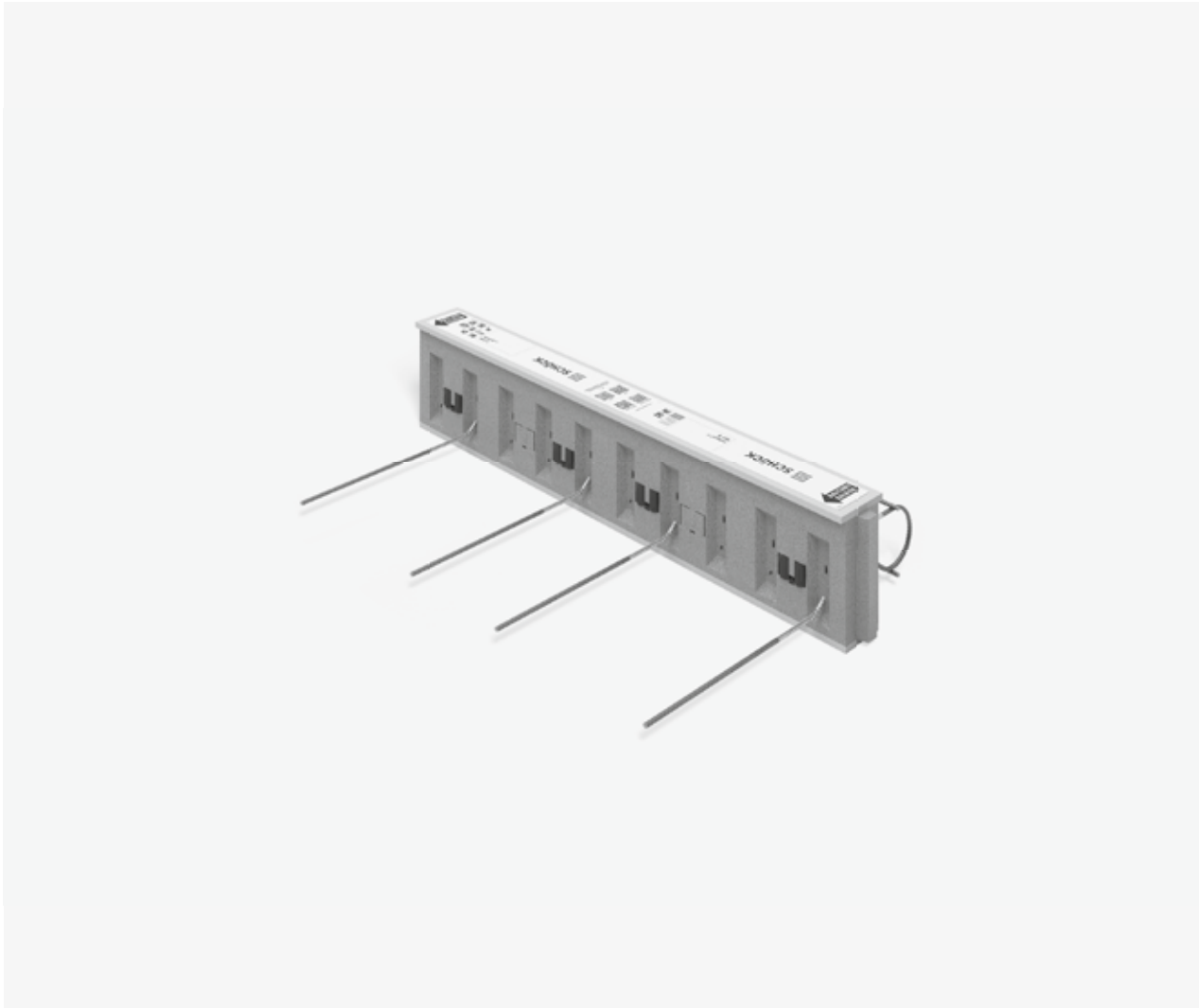


Schöck Isokorb® T Type CQ



Schöck Isokorb® T Type CQ

Load-bearing thermal insulation element for supported balconies. The element transfers positive shear forces. The element with the load-bearing level VV additionally transfers negative shear forces.

Schöck Isokorb® T Type CQ-Z

Load-bearing thermal insulation element for supported balconies in constraint-free connection. The element transfers positive shear forces.

CQ

Products

Assembly Section Details

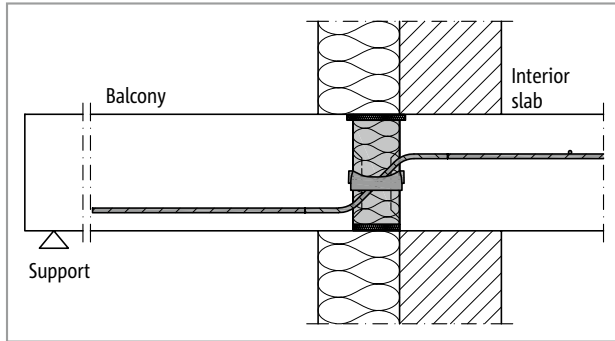


Fig. 1: Schöck Isokorb® T Type CQ: Connection with external insulation finishing system (EIFS) (e.g. T Type CQ-V6 to T Type CQ-V12)

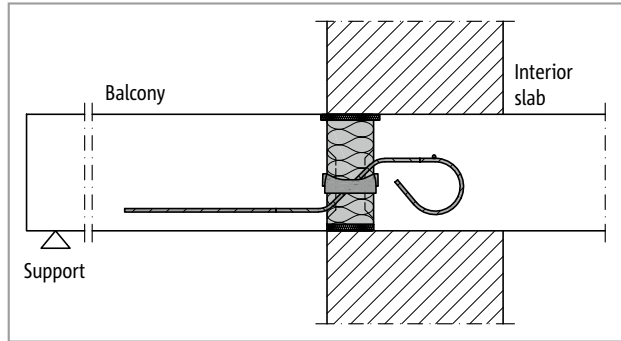


Fig. 2: Schöck Isokorb® T Type CQ: Connection with thermal insulating cavity masonry (e.g. T Type CQ-V1 to T Type CQ-V5)

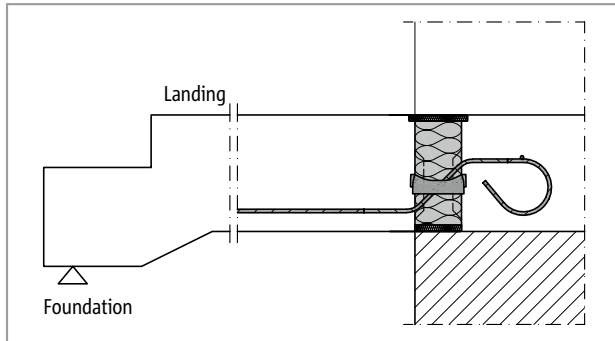


Fig. 3: Schöck Isokorb® T Type CQ: Connection stair flight with thermal insulating cavity masonry (e.g. T Type CQ-V1 to T Type CQ-V5)

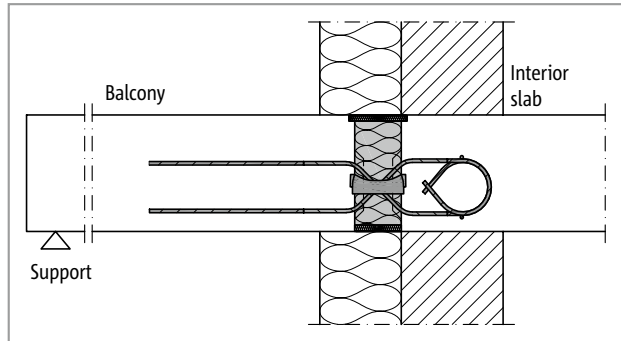


Fig. 4: Schöck Isokorb® T Type CQ-VV: Connection with external insulation finishing system (EIFS) (e.g. T Type CQ-VV1 to T Type CQ-VV5)

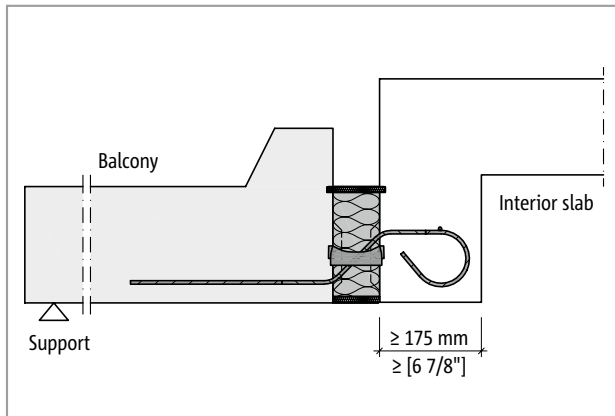


Fig. 5: Schöck Isokorb® T Type CQ: Connection for pre-cast balcony slab (e.g. T Type CQ-V1 to CQ-V5)

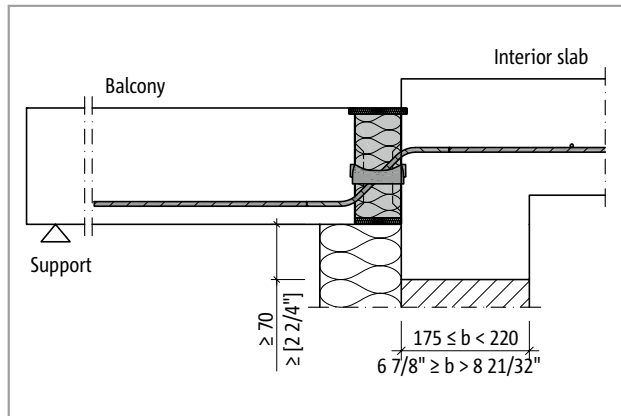


Fig. 6: Schöck Isokorb® T Type CQ: Connection for pre-cast balcony slab (e.g. T Type CQ-V1 to CQ-V5)

CQ

Products

Assembly Section Details | Element Arrangement

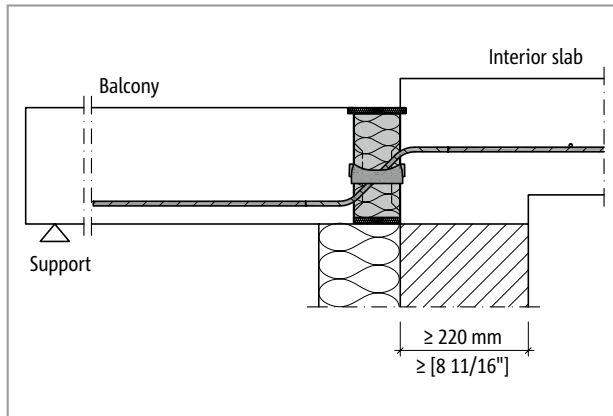


Fig. 7: Schöck Isokorb® T Type CQ: Connection with a small interior slab step (e.g. T Type CQ-V6 to CQ-V12)

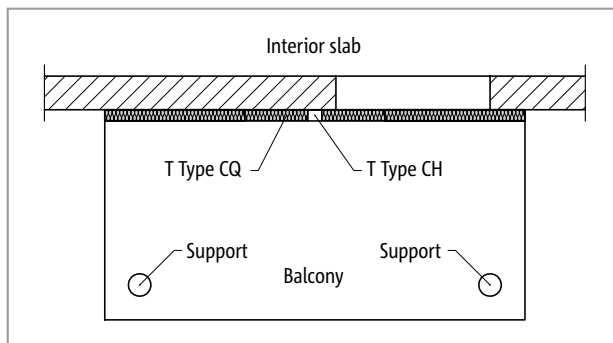


Fig. 8: Schöck Isokorb® T Type CQ: Balcony with column support

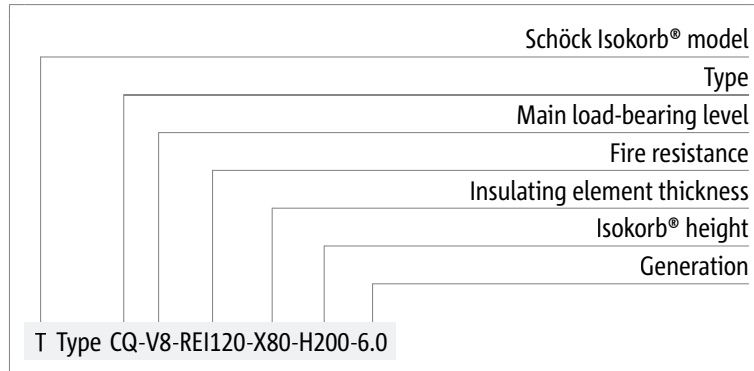
i Notes

- In the presence of horizontal loads, e.g. from earthquakes, Schöck Isokorb® Type CH must be added.
- If the Schöck Isokorb® is used in precast concrete construction, a cast-in-place strip of concrete (width = bar length from insulating element) must be allowed for sufficient connection bar anchorage.

Type Designation

Type designation

The following product naming system is used to specify the attributes of the Schöck Isokorb® product as required in the structural design. This naming system ensures that the product is manufactured in accordance with the required specification. There is also a short-form of each product name to facilitate recognition of the product on the construction site during installation. Every Schöck Isokorb® product comes with both its full production designation and short-form name printed on the label on each unit to ensure the product type is clearly represented.



CQ

Products

Product Description

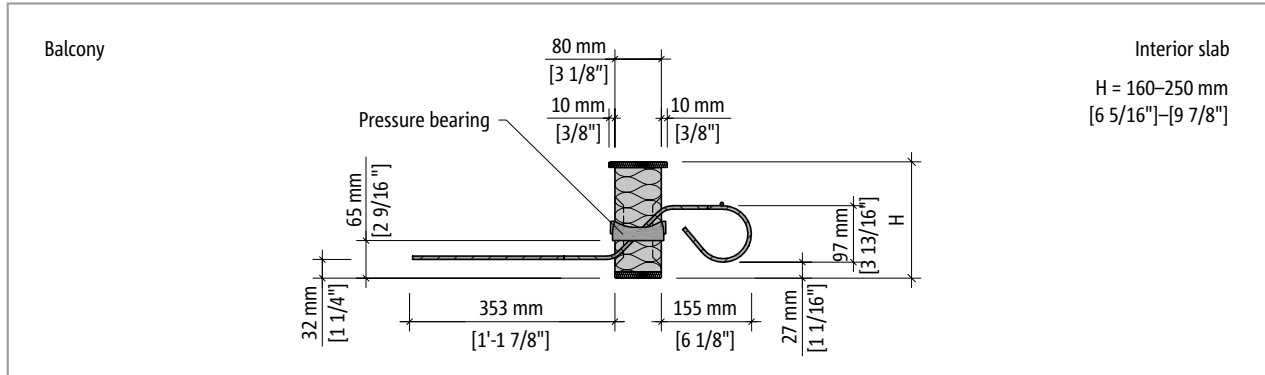


Fig. 9: Schöck Isokorb® T Type CQ-V1 to CQ-V5: Product cross-section

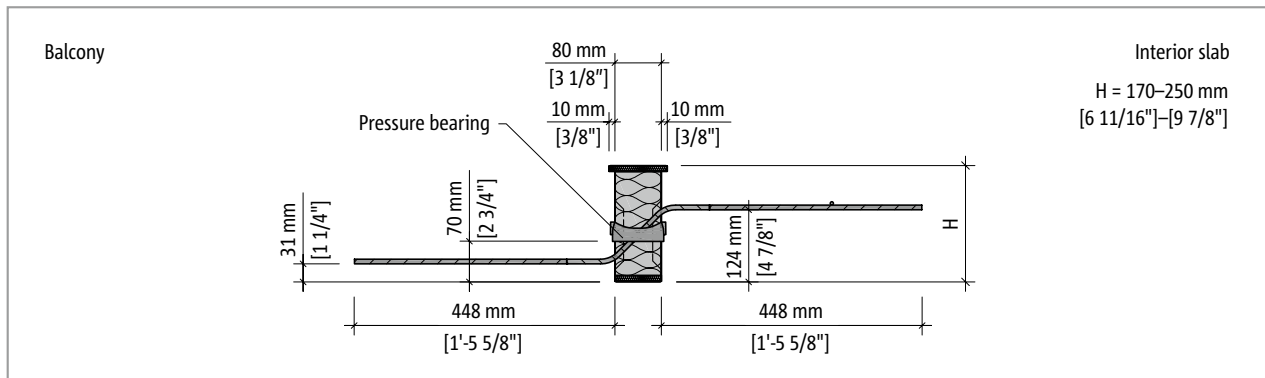


Fig. 10: Schöck Isokorb® T Type CQ-V6: Product cross-section

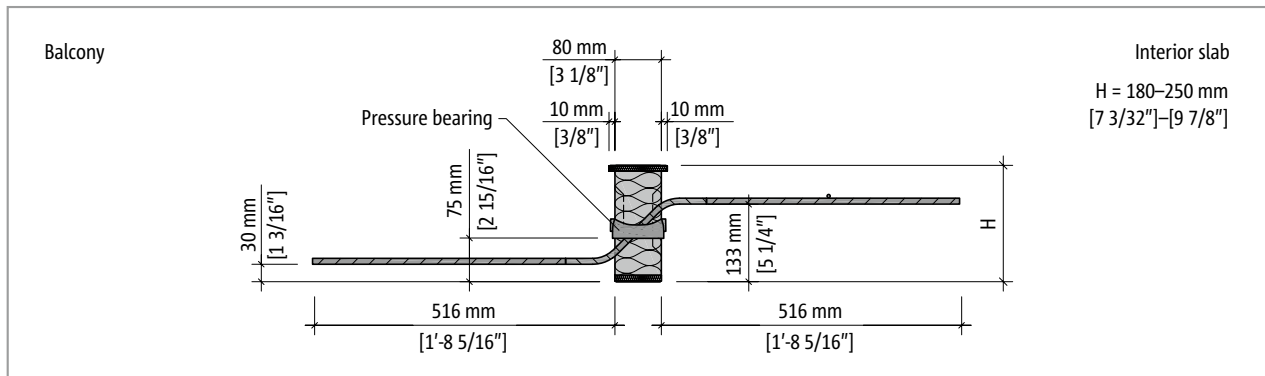


Fig. 11: Schöck Isokorb® T Type CQ-V7 to CQ-V8: Product cross-section

Product Description

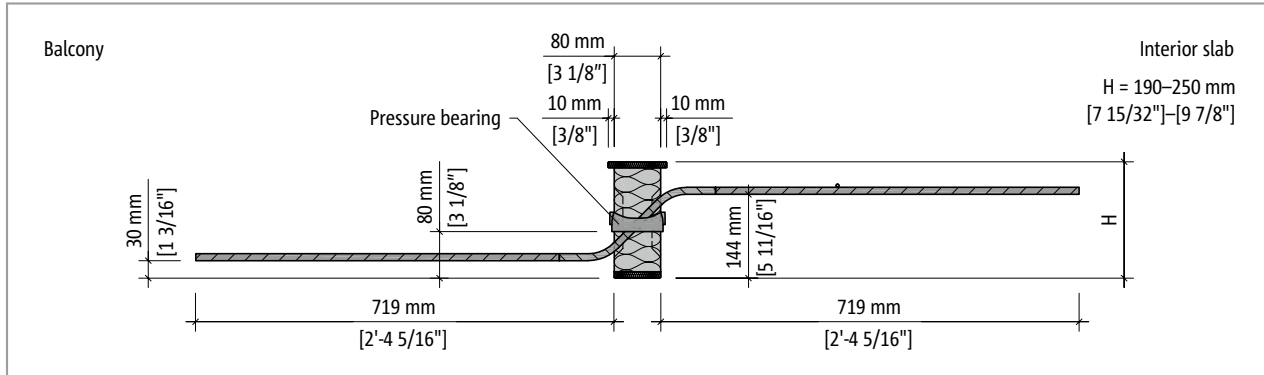


Fig. 12: Schöck Isokorb® T Type CQ-V9 to CQ-V11: Product cross-section

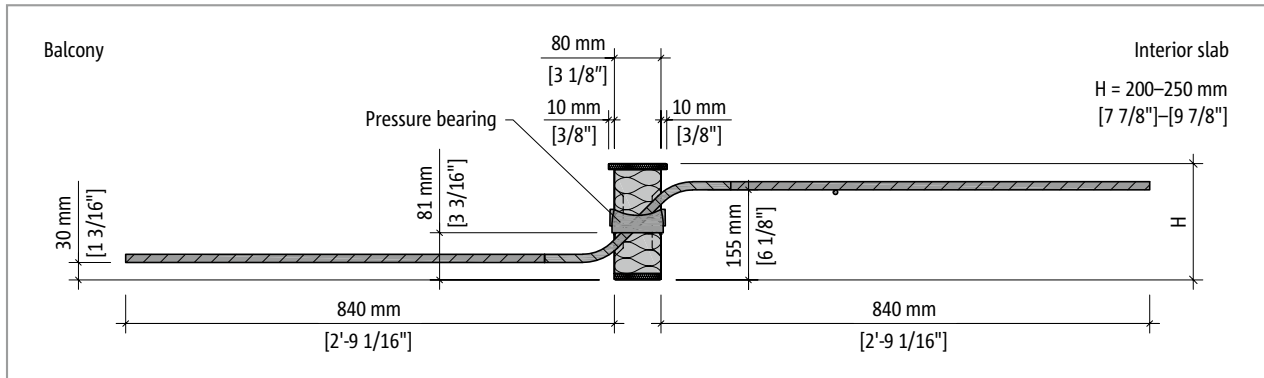


Fig. 13: Schöck Isokorb® T Type CQ-V12: Product cross-section

Product Description

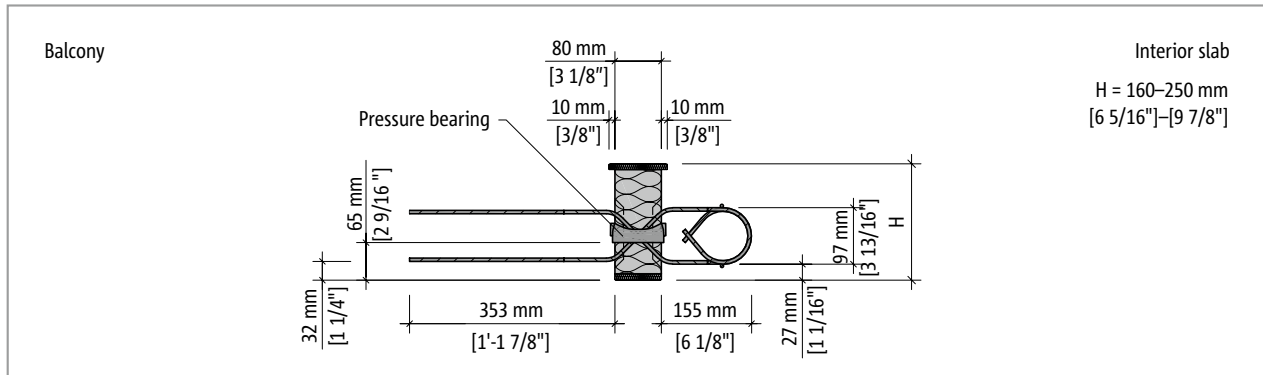


Fig. 14: Schöck Isokorb® T Type CQ-VV1 up to CQ-VV5: Product cross-section

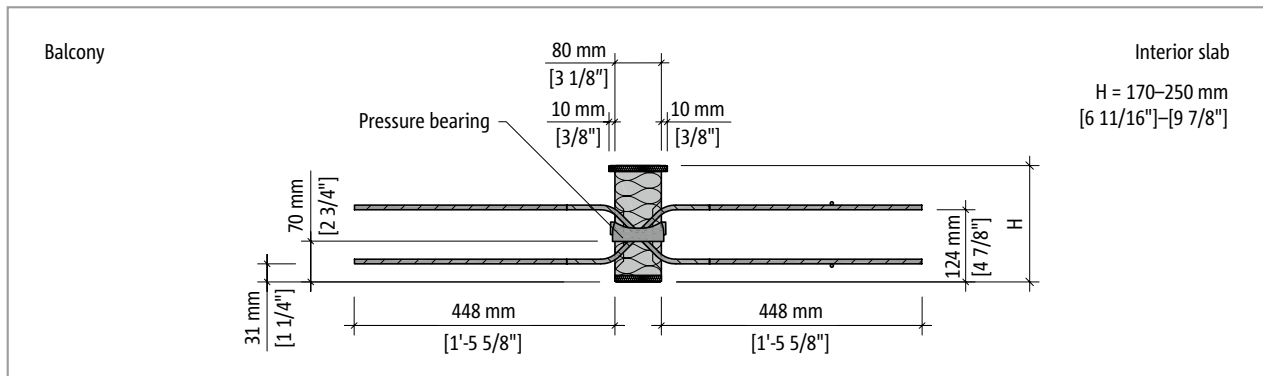


Fig. 15: Schöck Isokorb® T Type CQ-VV6: Product cross-section

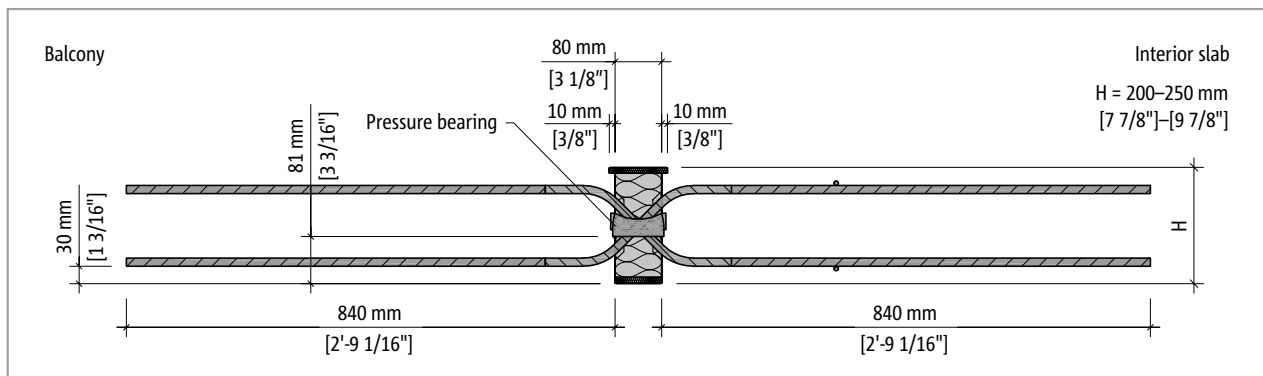


Fig. 16: Schöck Isokorb® T Type CQ-VV12: Product cross-section

Product Description

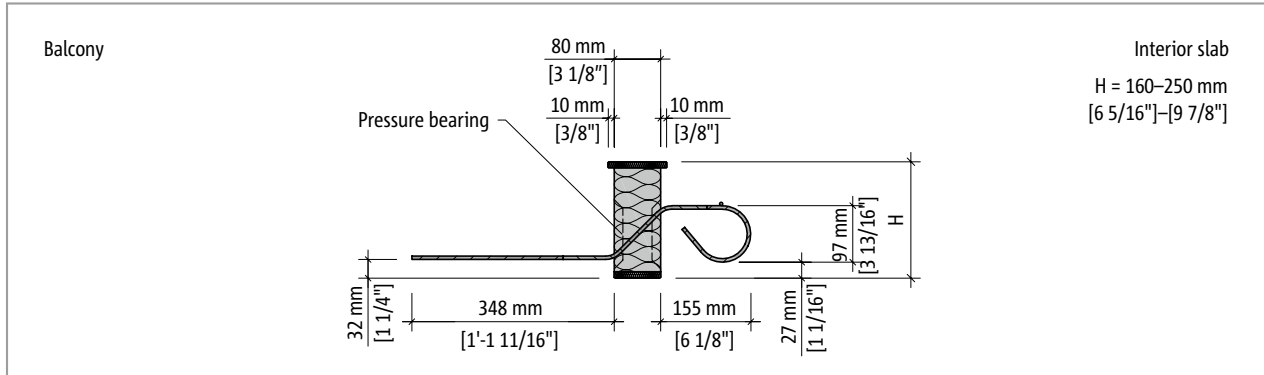


Fig. 17: Schöck Isokorb® T Type CQ-Z-V1 to CQ-Z-V5: Product cross-section

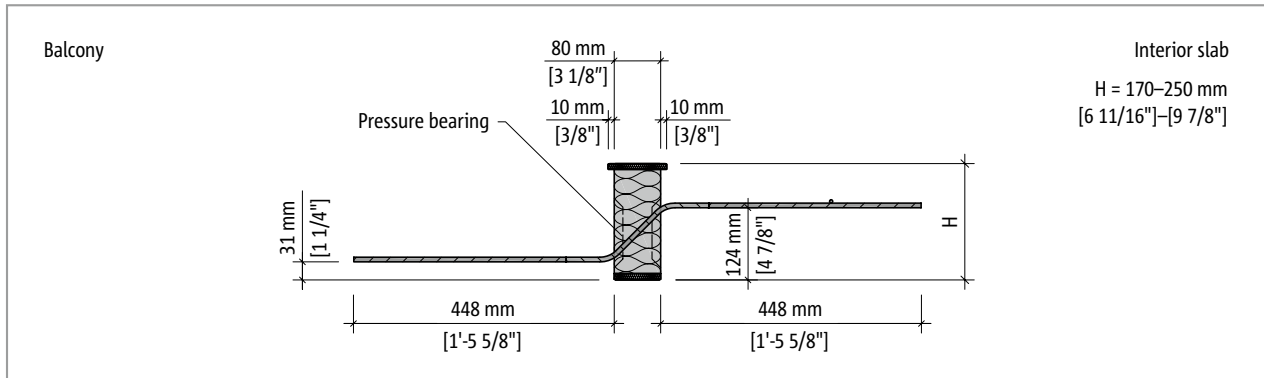


Fig. 18: Schöck Isokorb® T Type CQ-Z-V6: Product cross-section

Product Description

Schöck Isokorb® length and configuration

Schöck Isokorb® T Type CQ 6.0	V1	V2	V3	V4	V5	V6
Placement with	Isokorb® length [mm]					
	1000	1000	1000	1000	1000	1000
Length [ft in]	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"
Shear Resistance Bars	4 ∅ 6	5 ∅ 6	6 ∅ 6	8 ∅ 6	10 ∅ 6	6 ∅ 8
Pressure bearing [piece]	4	4	4	4	4	4
H _{min} [mm]	160	160	160	160	160	170
H _{min} [in]	6 5/16"	6 5/16"	6 5/16"	6 5/16"	6 5/16"	6 11/16"

Schöck Isokorb® T Type CQ 6.0	V7	V8	V9	V10	V11	V12
Placement with	Isokorb® length [mm]					
	1000	1000	1000	1000	1000	1000
Length [ft in]	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"
Shear Resistance Bars	5 ∅ 10	6 ∅ 10	5 ∅ 12	6 ∅ 12	8 ∅ 12	8 ∅ 14
Pressure bearing [piece]	4	4	6	6	8	8
H _{min} [mm]	180	180	190	190	190	200
H _{min} [in]	7"	7"	7 1/2"	7 1/2"	7 1/2"	7 7/8"

Schöck Isokorb® T Type CQ-Z 6.0	V1	V2	V3	V4	V5	V6
Placement with	Isokorb® length [mm]					
	1000	1000	1000	1000	1000	1000
Length [ft in]	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"
Shear Resistance Bars	4 ∅ 6	5 ∅ 6	6 ∅ 6	8 ∅ 6	10 ∅ 6	6 ∅ 8
Pressure bearing [piece]	-	-	-	-	-	-
H _{min} [mm]	160	160	160	160	160	170
H _{min} [in]	6 5/16"	6 5/16"	6 5/16"	6 5/16"	6 5/16"	6 11/16"

Schöck Isokorb® T Type CQ-Z 6.0	V7	V8	V9	V10	V11	V12
Placement with	Isokorb® length [mm]					
	1000	1000	1000	1000	1000	1000
Length [ft in]	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"
Shear Resistance Bars	5 ∅ 10	6 ∅ 10	5 ∅ 12	6 ∅ 12	8 ∅ 12	8 ∅ 14
Pressure bearing [piece]	-	-	-	-	-	-
H _{min} [mm]	180	180	190	190	190	200
H _{min} [in]	7"	7"	7 1/2"	7 1/2"	7 1/2"	7 7/8"

Notes

- For notes on product dimensioning see page 10.

Product Description

Schöck Isokorb® length and configuration

Schöck Isokorb® T Type CQ 6.0	VV1	VV2	VV3	VV4	VV5	VV6
Placement with	Isokorb® length [mm]					
	1000	1000	1000	1000	1000	1000
Length [ft in]	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"
Shear Resistance Bars	2 × 4 Ø 6	2 × 5 Ø 6	2 × 6 Ø 6	2 × 8 Ø 6	2 × 10 Ø 6	2 × 6 Ø 8
Pressure bearing [piece]	4	4	4	4	4	4
H _{min} [mm]	160	160	160	160	160	170
H _{min} [in]	6 5/16"	6 5/16"	6 5/16"	6 5/16"	6 5/16"	6 11/16"

Isokorb® T Type CQ 6.0	VV7	VV8	VV9	VV10	VV11	VV12
Placement with	Isokorb® length [mm]					
	1000	1000	1000	1000	1000	1000
Length [ft in]	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"	3'-3 3/8"
Shear Resistance Bars	2 × 5 Ø 10	2 × 6 Ø 10	2 × 5 Ø 12	2 × 6 Ø 12	2 × 8 Ø 12	2 × 8 Ø 14
Pressure bearing [piece]	4	4	6	6	8	8
H _{min} [mm]	180	180	200	200	200	200
H _{min} [in]	7"	7"	7 7/8"	7 7/8"	7 7/8"	7 7/8"

i Notes

- The Schöck Isokorb® may be cut at locations of free insulation where no structural components conflict with the line of cut. The pressure bearing modules require at least 50 mm [2"] of concrete cover to ensure adequate spacing from the edge of the concrete slab. The edge spacing of the shear force bars shall be at least 100 mm [4"] and no more than 150 mm [6"].
- The shear force bar lengths vary as shown in the following plan details.
- The Schöck Isokorb® consists of metric components.
- Reinforcement bars Ø6 correspond to 1/4" diameter, approximately
- Reinforcement bars Ø8 correspond to 5/16" diameter, approximately
- Reinforcement bars Ø10 correspond to 3/8" diameter
- Reinforcement bars Ø12 correspond to 1/2" diameter, approximately
- Reinforcement bars Ø14 correspond to 9/16" diameter

Product Description

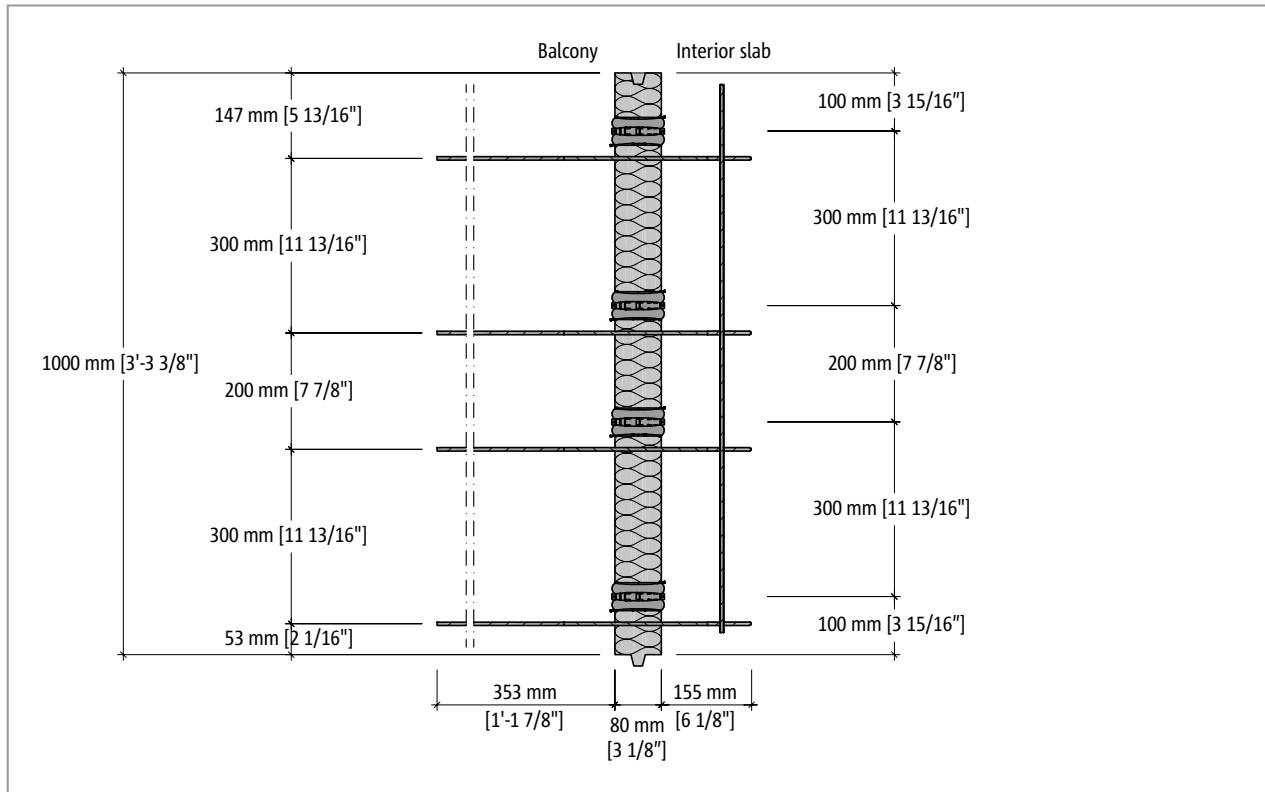


Fig. 19: Schöck Isokorb® T Type CQ-V1: Top view of the product

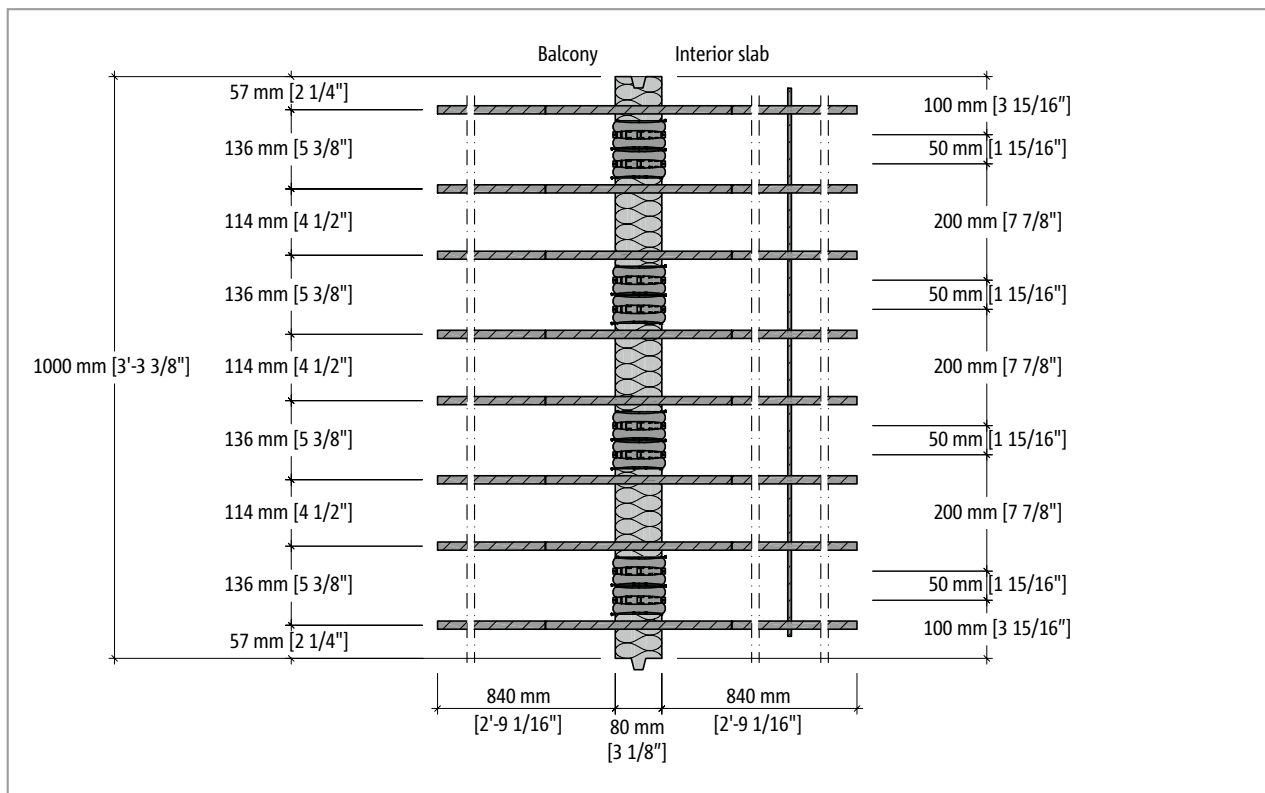


Fig. 20: Schöck Isokorb® T Type CQ-V12: Top view of the product

Strength Capacity

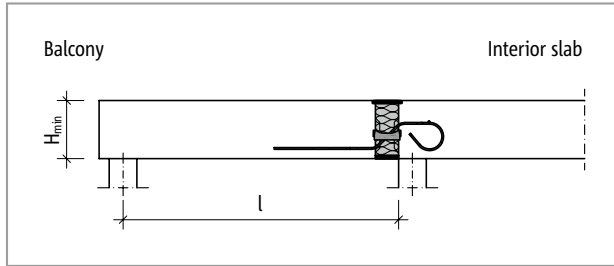


Fig. 21: Schöck Isokorb® T Type CQ: Static system (T Type CQ-V1 to CQ-V5)

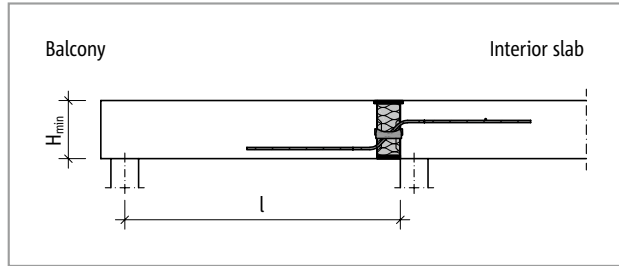


Fig. 22: Schöck Isokorb® T Type CQ: Static system (T Type CQ-V6 to CQ-V12)

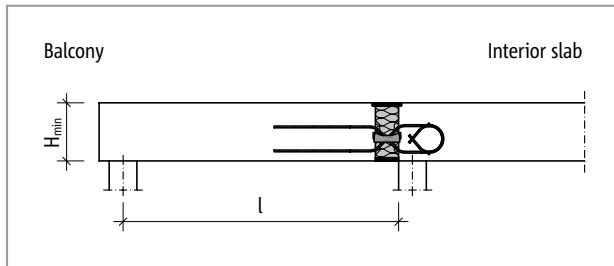


Fig. 23: Schöck Isokorb® T Type CQ-VV: Static system (T Type CQ-VV1 to CQ-VV5)

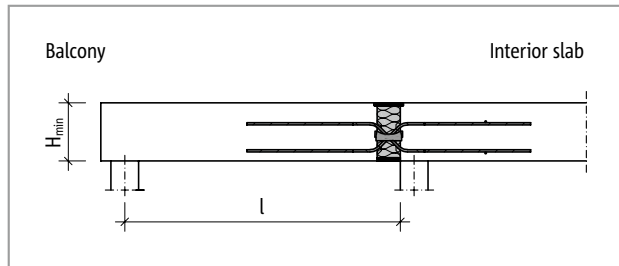


Fig. 24: Schöck Isokorb® T Type CQ-VV: Static system (T Type CQ-VV6 to CQ-VV12)

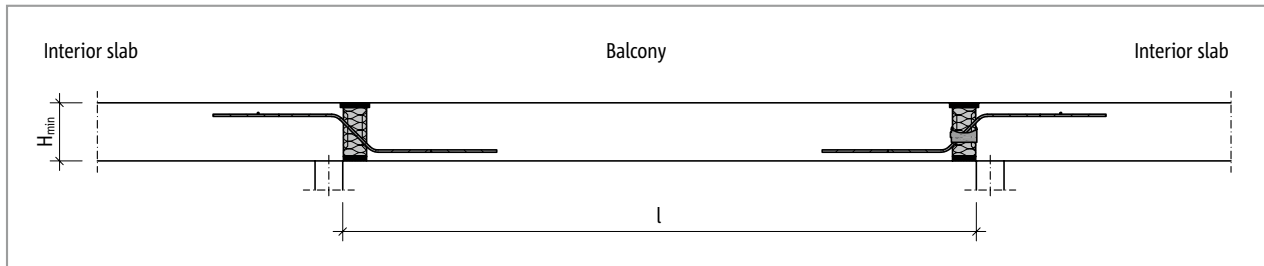


Fig. 25: Schöck Isokorb® T Type CQ-Z, CQ: Static system (T Type CQ-Z-V6 to CQ-Z-V12, CQ-V6 to CQ-V12)

Notes

- If any concrete on the interior or exterior of the Schöck Isokorb® is less than 27.5 MPa [4,000 psi], contact the Schöck Design Department.
- The shear capacity of the slabs must be verified by the Engineer of Record (EOR).
- Because of the eccentric connection, a moment occurs at the slab edges at both sides of the Schöck Isokorb® as shown on the following page. The transmission of this moment in the two connecting slabs must be verified in each individual case.
- Verification for the slabs attached at both sides of the Schöck Isokorb® must be submitted by the Engineer of Record (EOR). When the reinforcement of the floor slab and the balcony slab which connect to the Schöck Isokorb® Type CQ is being determined, it must be assumed that there is a hinge, since the Schöck Isokorb® Type CQ can only transmit shear force.
- The Schöck Isokorb® capacities consider a maximum permitted bar separation according to ACI 318-14, based on the same height of the slab and Isokorb® and a concrete cover of the interior slab of 20 mm [3/4"]. For differing boundary conditions the capacities have to be checked.
- The values shown in the design capacity tables are ultimate (factored) values.
- The support is assumed to be 100 mm [4"] from the Schöck Isokorb® insulation body on the interior slab side.
- For SI: 1 inch = 25.4 mm, 1 lbf = 4.448 N, 1 psi = 0.006897 MPa.
US customary units: 1 mm = 0.03937 inches, 1 N = 0.2248 lbf, 1 MPa = 145.0 psi.

Strength Capacity

Strength Capacity (Imperial)

Schöck Isokorb® T Type CQ 6.0		V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12
Design Values with		ϕV_n [kips/ft]											
Concrete Strength	≥ 4000 psi	2.4	3.0	3.6	4.8	6.0	6.4	7.8	9.3	11.9	14.3	19.1	24.7

Schöck Isokorb® T Type CQ-Z 6.0		V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12
Design Values with		ϕV_n [kips/ft]											
Concrete Strength	≥ 4000 psi	2.4	3.0	3.6	4.8	6.0	6.4	7.8	9.3	11.9	14.3	19.1	24.7

Schöck Isokorb® T Type CQ 6.0		VV1	VV2	VV3	VV4	VV5	VV6
Design Values with		ϕV_n [kips/ft]					
Concrete Strength	≥ 4000 psi	± 2.4	± 3.0	± 3.6	± 4.8	± 6.0	± 6.4

Schöck Isokorb® T Type CQ 6.0		VV7	VV8	VV9	VV10	VV11	VV12
Design Values with		ϕV_n [kips/ft]					
Concrete Strength	≥ 4000 psi	± 7.8	± 9.3	± 11.9	± 14.3	± 19.1	± 24.7

Strength Capacity (SI)

Schöck Isokorb® T Type CQ 6.0		V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12
Design Values with		ϕV_n [kN/m]											
Concrete Strength	≥ 27.5 MPa	34.8	43.5	52.2	69.6	87.0	92.8	113.4	136.0	173.9	208.7	278.2	360.0

Schöck Isokorb® T Type CQ-Z 6.0		V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12
Design Values with		ϕV_n [kN/m]											
Concrete Strength	≥ 27.5 MPa	34.8	43.5	52.2	69.6	87.0	92.8	113.4	136.0	173.9	208.7	278.2	360.0

Schöck Isokorb® T Type CQ 6.0		VV1	VV2	VV3	VV4	VV5	VV6
Design Values with		ϕV_n [kN/m]					
Concrete Strength	≥ 27.5 MPa	± 34.8	± 43.5	± 52.2	± 69.6	± 87.0	± 92.8

Schöck Isokorb® T Type CQ 6.0		VV7	VV8	VV9	VV10	VV11	VV12
Design Values with		ϕV_n [kN/m]					
Concrete Strength	≥ 27.5 MPa	± 113.4	± 136.0	± 173.9	± 208.7	± 278.2	± 360.0

CQ

Products

Moments from eccentric connection

Moments from eccentric connection

To determine the connecting reinforcement at both sides of the Schöck Isokorb®, moments from an eccentric connection must also be taken into consideration. Each of these moments must be overlaid with the moments from the planned load, providing that they act in the same direction.

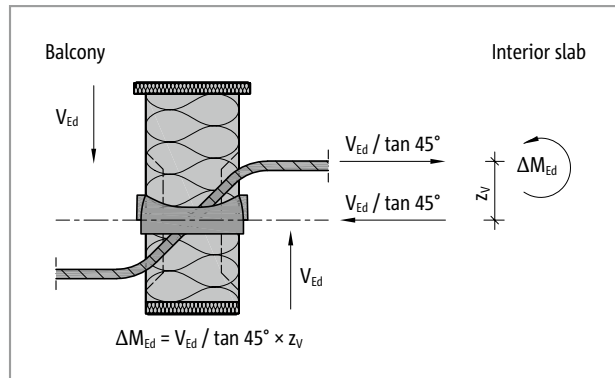


Fig. 26: Schöck Isokorb® T Type CQ: Moments resulting from eccentric connection

Schöck Isokorb® T Type CQ 6.0		V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12
Design Values with		$\Delta M_{ecc,f}$ [kip-ft/ft]											
Concrete Strength	≥ 4000 psi	0.4	0.4	0.5	0.7	0.9	1.0	1.3	1.6	2.3	2.7	3.9	5.2

Schöck Isokorb® T Type CQ 6.0		VV1	VV2	VV3	VV4	VV5	VV6	VV7	VV8	VV9	VV10	VV11	VV12
Design Values with		$\Delta M_{ecc,f}$ [kip-ft/ft]											
Concrete Strength	≥ 4000 psi	0.4	0.4	0.5	0.7	0.9	1.0	1.3	1.6	2.3	2.7	3.9	5.2

Schöck Isokorb® T Type CQ 6.0		V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12
Design Values with		$\Delta M_{ecc,f}$ [kNm/m]											
Concrete Strength	≥ 27.5 MPa	1.6	2.0	2.4	3.1	3.9	4.3	5.8	6.9	10.1	12.1	17.3	23.0

Schöck Isokorb® T Type CQ 6.0		VV1	VV2	VV3	VV4	VV5	VV6	VV7	VV8	VV9	VV10	VV11	VV12
Design Values with		$\Delta M_{ecc,f}$ [kNm/m]											
Concrete Strength	≥ 27.5 MPa	1.6	2.0	2.4	3.2	4.0	4.4	5.9	7.1	10.1	12.1	17.3	23.0

Note

- These recommendations should be checked by the Engineer of Record (EOR) and modified if necessary.

On Site Reinforcement

Direct support

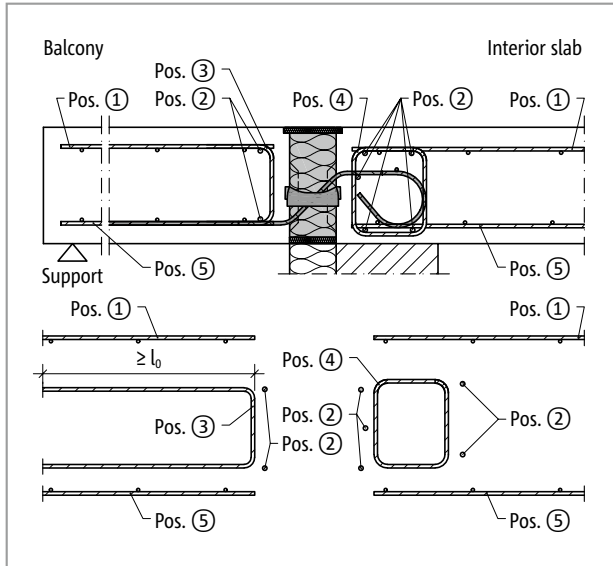


Fig. 27: Schöck Isokorb® T Type CQ-V1 up to CQ-V5: On-site reinforcement

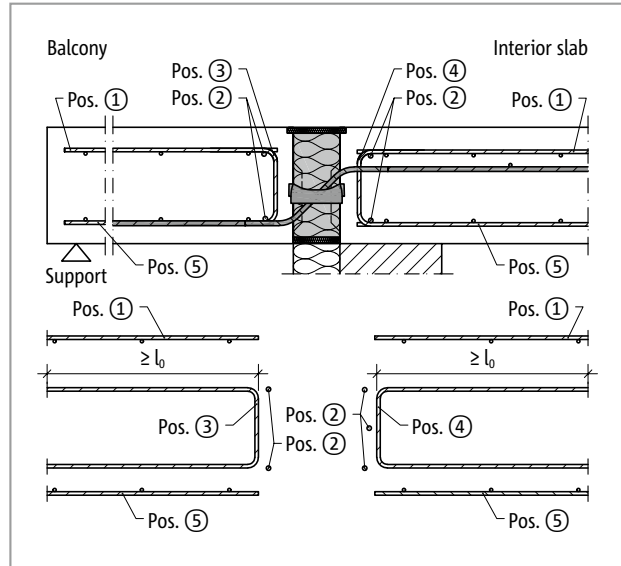


Fig. 28: Schöck Isokorb® T Type CQ-V6 up to CQ-V10: On-site reinforcement

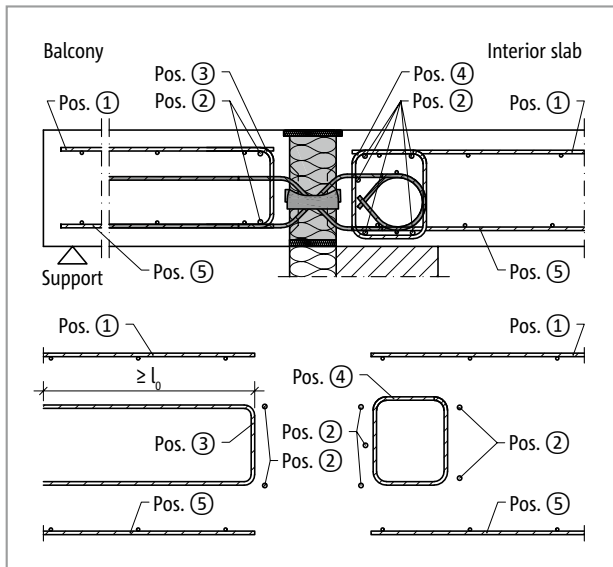


Fig. 29: Schöck Isokorb® T Type CQ-VV1 up to CQ-VV5: On-site reinforcement

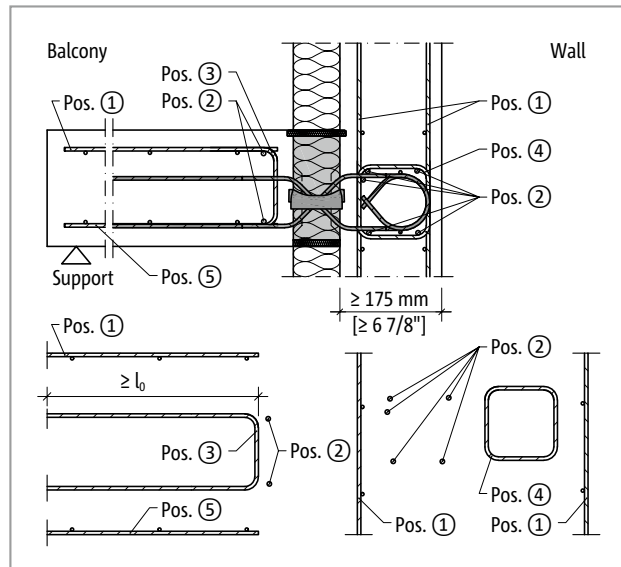


Fig. 30: Schöck Isokorb® T Type CQ-VV1 to CQ-VV5: On-site reinforcement in wall

CQ

Products

On Site Reinforcement

Direct support

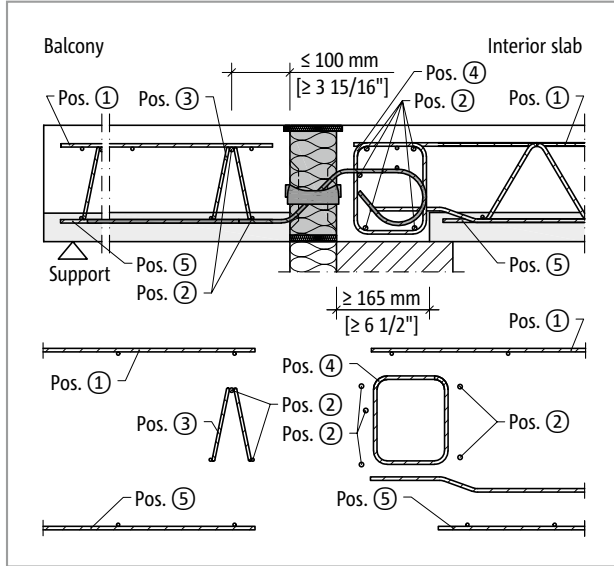


Fig. 31: Schöck Isokorb® T Type CQ-V1 to CQ-V5: On-site reinforcement with lattice beam

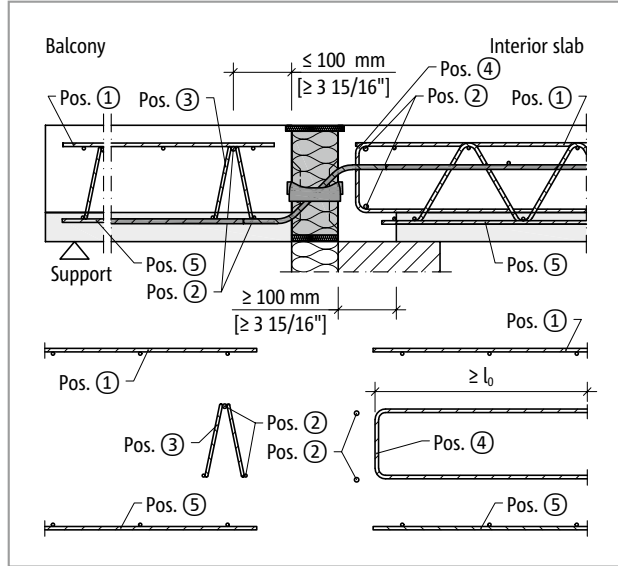


Fig. 32: Schöck Isokorb® T Type CQ-V6 to CQ-V10: On-site reinforcement with lattice beam

CQ

Products

On Site Reinforcement

Indirect support

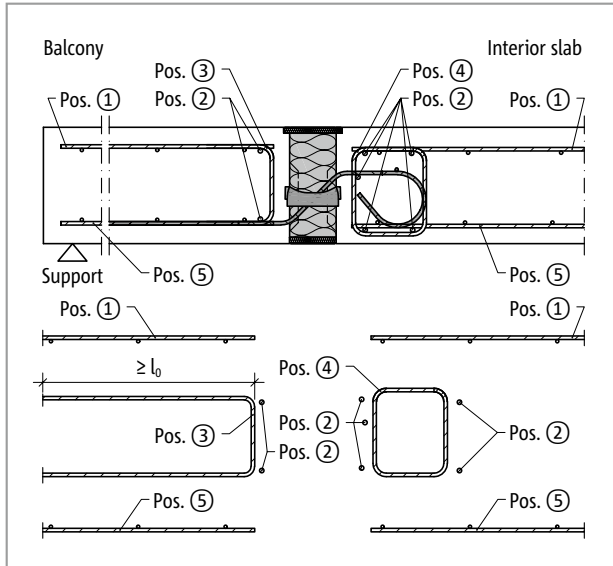


Fig. 33: Schöck Isokorb® T Type CQ-V1 up to CQ-V5: On-site reinforcement

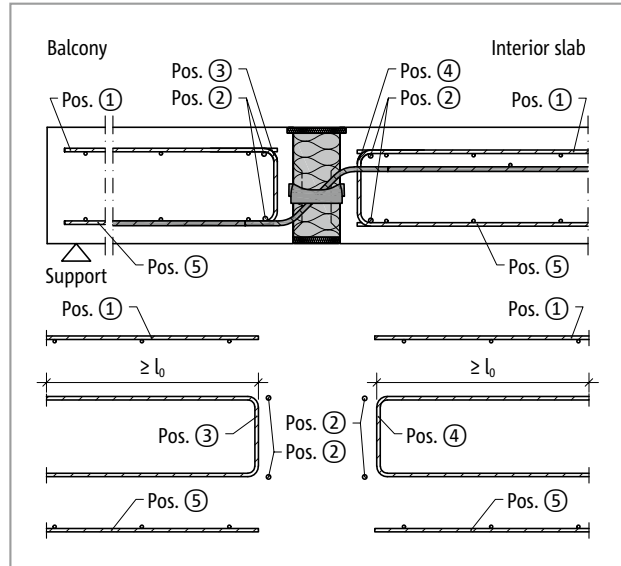


Fig. 34: Schöck Isokorb® T Type CQ-V6 up to CQ-V10: On-site reinforcement

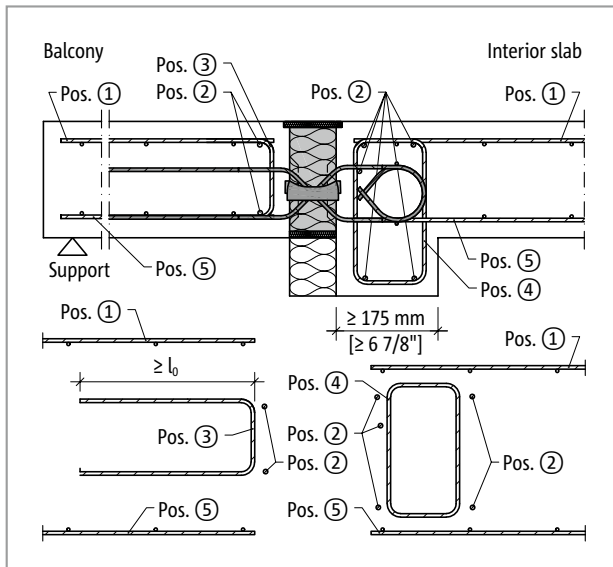


Fig. 35: Schöck Isokorb® T Type CQ-VV1 to CQ-VV5: On-site reinforcement in downstand beam

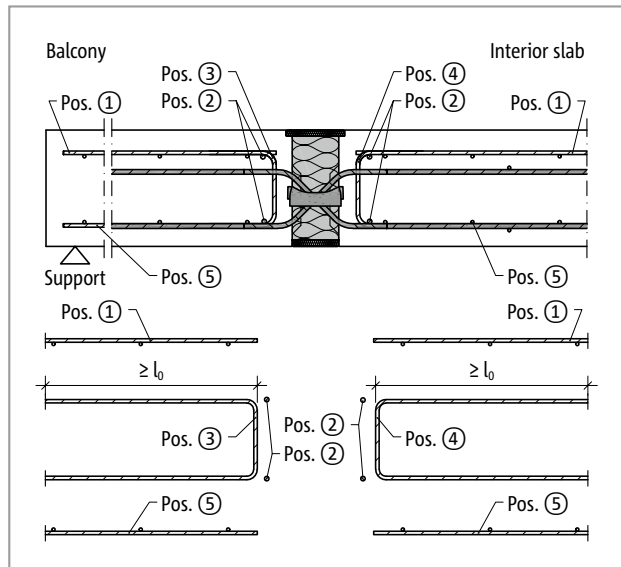


Fig. 36: Schöck Isokorb® T Type CQ-VV6 to CQ-VV10: On-site reinforcement

On Site Reinforcement

Indirect support

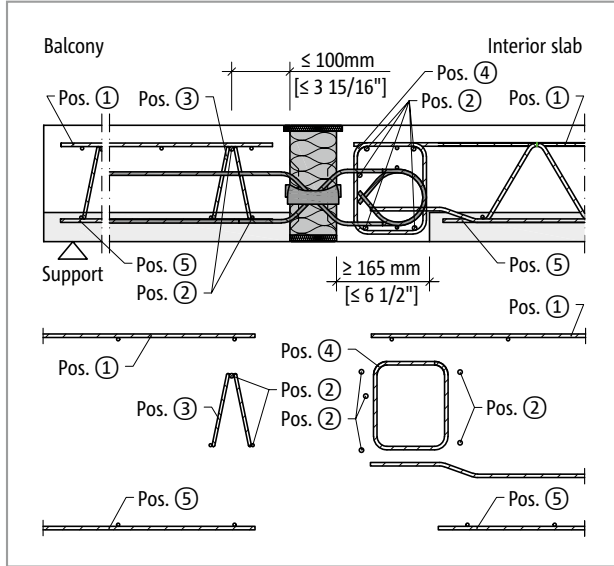


Fig. 37: Schöck Isokorb® T Type CQ-VV1 to CQ-VV5: On-site reinforcement with lattice beam

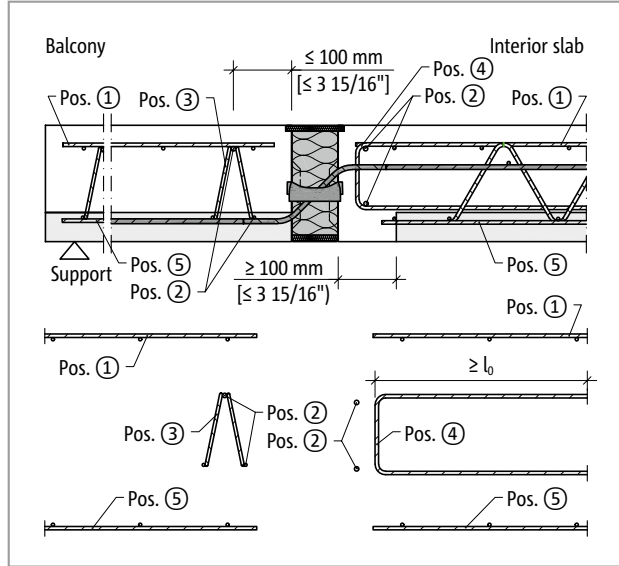


Fig. 38: Schöck Isokorb® T Type CQ-V6 to CQ-V10: On-site reinforcement with lattice beam

CQ

Products

On Site Reinforcement

At the table below are suggestions for cast-in-place connective reinforcement for 100 % section strength with minimum concrete strength of 27.5 MPa [4,000 psi]. The existing slab reinforcement can be taken into account for the required reinforcement of connections with Schöck Isokorb®.

Schöck Isokorb® T Type CQ 6.0, CQ-Z		V1	V2	V3	V4	V5	V6
On-site reinforcement for	Type of bearing	Concrete Strength \geq 27.5 MPa (4,000 psi)					
Overlapping reinforcement							
Pos. 1		In accordance with EOR specifications					
Longitudinal Bars Parallel to Insulation							
Pos. 2 - balcony side		2 \times #3					
Pos. 2 - slab side		2 \times #3 / 5 \times #3					
Vertical reinforcement							
Pos. 3 Variant	direct/indirect	#3 @ 250 mm					
Pos. 3 Variant	direct/indirect	[#3 @ 10"]					
Pos. 4 Variant	direct/indirect	#3 @ 250 mm					
		#3 @ 10"					
Parapet Reinforcement							
Pos. 5		necessary in the tension zone, as specified by the structural engineer					
Side reinforcement at the free edge							
Pos. 6		Edging as per ACI 318-14					

Schöck Isokorb® T Type CQ 6.0, CQ-Z		V7	V8	V9	V10	V11	V12
On-site reinforcement for	Type of bearing	Concrete Strength \geq 27.5 MPa (4,000 psi)					
Overlapping reinforcement							
Pos. 1		In accordance with EOR specifications					
Longitudinal Bars Parallel to Insulation							
Pos. 2 - balcony side		2 \times #3					
Pos. 2 - slab side		2 \times #3 / 5 \times #3					
Vertical reinforcement							
Pos. 3 Variant	direct/indirect	#4 @ 250 mm	#4 @ 250 mm	#4 @ 250 mm	#4 @ 200 mm	#4 @ 125 mm	#4 @ 125 mm
		#4 @ 10"	#4 @ 10"	#4 @ 10"	#4 @ 8"	#4 @ 5"	#4 @ 5"
Pos. 4 Variant	direct	–	–	–	–	–	–
	indirect	#4 @ 250 mm	#4 @ 250 mm	#4 @ 250 mm	#4 @ 200 mm	#4 @ 125 mm	#4 @ 125 mm
		#4 @ 10"	#4 @ 10"	#4 @ 10"	#4 @ 8"	#4 @ 5"	#4 @ 5"
Parapet Reinforcement							
Pos. 5		necessary in the tension zone, as specified by the structural engineer					
Side reinforcement at the free edge							
Pos. 6		Edging as per ACI 318-14					

CQ

Products

On Site Reinforcement

Schöck Isokorb® T Type CQ 6.0, CQ-Z		VV1	VV2	VV3	VV4	VV5	VV6
On-site reinforcement for	Type of bearing	Concrete Strength ≥ 27.5 MPa (4,000 psi)					
Overlapping reinforcement							
Pos. 1		In accordance with EOR specifications					
Longitudinal Bars Parallel to Insulation							
Pos. 2 - balcony side		2 \times #3					
Pos. 2 - slab side		2 \times #3 / 5 \times #3					
Vertical reinforcement							
Pos. 3 Variant	direct/indirect	#3 @ 250 mm					
Pos. 3 Variant	direct/indirect	#3 @ 10"					
Pos. 4 Variant	direct/indirect	#3 @ 250 mm					
		#3 @ 10"					
Parapet Reinforcement							
Pos. 5		necessary in the tension zone, as specified by the structural engineer					
Side reinforcement at the free edge							
Pos. 6		Edging as per ACI 318-14					

Schöck Isokorb® T Type CQ 6.0, CQ-Z		VV7	VV8	VV9	VV10	VV11	VV12
On-site reinforcement for	Type of bearing	Concrete Strength ≥ 27.5 MPa (4,000 psi)					
Overlapping reinforcement							
Pos. 1		In accordance with EOR specifications					
Longitudinal Bars Parallel to Insulation							
Pos. 2 - balcony side		2 \times #3					
Pos. 2 - slab side		2 \times #3 / 5 \times #3					
Vertical reinforcement							
Pos. 3 Variant	direct/indirect	#4 @ 250 mm	#4 @ 250 mm	#4 @ 250 mm	#4 @ 200 mm	#4 @ 125 mm	#4 @ 125 mm
		#4 @ 10"	#4 @ 10"	#4 @ 10"	#4 @ 8"	#4 @ 5"	#4 @ 5"
Pos. 4 Variant	direct	#3 @ 250 mm	#3 @ 250 mm	#3 @ 250 mm	#3 @ 250 mm	#3 @ 250 mm	#3 @ 250 mm
		#3 @ 10"	#3 @ 10"	#3 @ 10"	#3 @ 10"	#3 @ 10"	#3 @ 10"
	indirect	#4 @ 250 mm	#4 @ 250 mm	#4 @ 250 mm	#4 @ 200 mm	#4 @ 125 mm	#4 @ 125 mm
		#4 @ 10"	#4 @ 10"	#4 @ 10"	#4 @ 8"	#4 @ 5"	#4 @ 5"
Parapet Reinforcement							
Pos. 5		necessary in the tension zone, as specified by the structural engineer					
Side reinforcement at the free edge							
Pos. 6		Edging as per ACI 318-14					

On Site Reinforcement

i Notes

- Lapping of the reinforcement in the connecting reinforced concrete components must be applied as close as possible to the insulating element of the Schöck Isokorb®, the required concrete cover must be observed.
- All free edges must be stiffened using structural U-bars as per Engineer of Record (EOR) specifications.
- The upper and lower reinforcement of the connecting slabs must run as close as possible to the thermal insulation layer at both sides of the Schöck Isokorb®, taking the required concrete cover into consideration.
- The centerline distance of any pressure element from any free concrete edge, including expansion joints, must be at least 50 mm [2"].
- The centerline distance of any tension or shear bar from any free concrete edge, including expansion joints, must be at least 50 mm [2"].
- The shear force reinforcement must be spliced to the tensile reinforcement in the slab to be connected. In cases in which shear force bars and pressure elements are not laid in the same layer, the anchoring length of the shear force bars must also be determined in the compression zone, as it does for the tension bars.
- The lap splice length provided by Schöck Isokorb® = the length of the tension bar from the face of Schöck Isokorb® to the free end - concrete cover (CV).
- The usage of Schöck Isokorb® in balconies assumes stiff slab edges to ensure only shear forces affecting the connection and no field moment. The formation of stiff slab edges must be specified by EOR.

CQ

Products

Expansion Joint Spacing

Expansion joints (recommended spacing)

Expansion joints are recommended to protect balcony slabs from temperature cracking when they are continuous for more than a critical length. The expansion joint spacing shown below corresponds to a temperature difference of $\Delta T = 70\text{ °C}$ [126 °F].

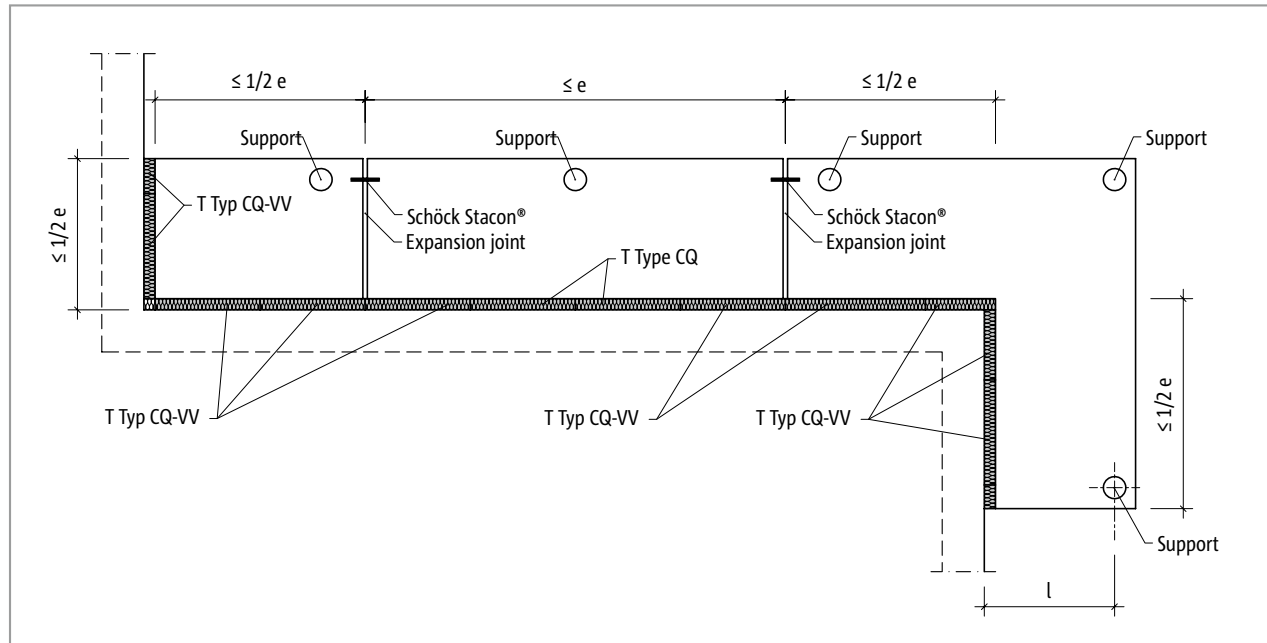


Fig. 39: Schöck Isokorb® T Type CQ, CQ-VV: Expansion joint layout

Schöck Isokorb® T Type CQ 6.0, Q-Z		V1–V6 VV1–VV6	V7–V8 VV7–VV8	V9–V11 VV9–VV11	V12 VV12
Maximum expansion joint spacing when		e [ft in]			
Insulation Thickness [in]	3 1/8"	36'-1 1/16"	34'-9 5/16"	31'-2 1/32"	27'-2 25/32"

Schöck Isokorb® T Type CQ 6.0, Q-Z		V1–V6 VV1–VV6	V7–V8 VV7–VV8	V9–V11 VV9–VV11	V12 VV12
Maximum expansion joint spacing when		e [m]			
Insulation Thickness [mm]	80	11.0	10.6	9.5	8.3

Notes

- The maximum expansion joint spacing must be verified by the Engineer of Record (EOR).

Type of bearing: supported | Installation Instructions

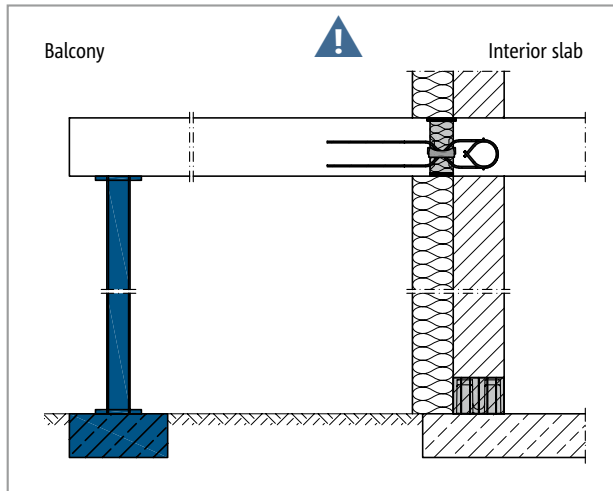


Fig. 40: Schöck Isokorb® T Type CQ: Support required at all times

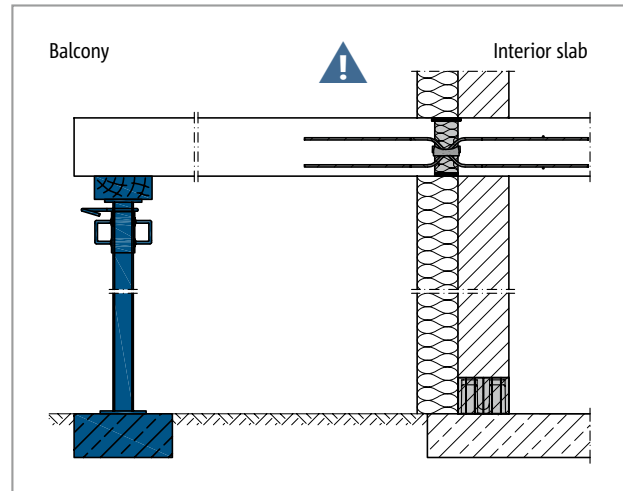


Fig. 41: Schöck Isokorb® T Type CQ: Support required at all times

i Supported balcony

The Schöck Isokorb T Type CQ, CQ-W and CQ-Z is developed for supported balconies. It transfers exclusively shear forces, no bending moments.

⚠ Warning – omitting the columns

- The balcony will collapse if not supported.
- At all stages of construction, the balcony must be supported with statically suitable columns or supports.
- Even when completed, the balcony must be supported with statically suitable columns or supports.
- A removal of temporary support is permitted only after installation of the final support.

i Installation instructions

The current installation instruction can be found online under:
www.schoeck.com/view/5182

✓ Check List

- Has the right type of Schöck Isokorb® been selected for the static system? T Type CQ is a connection purely for shear force (moment joint).
- Is the balcony so planned that a continuous support is ensured in all stages of construction and in the final status?
- Is the danger notice for missing support entered in the implementation plans?
- Have the factored member forces on the Schöck Isokorb® connection been determined at design level?
- Has the cantilevered system length or the system support width been taken as a basis?
- Are the Schöck FEM guidelines taken into account with the calculation using FEM?
- Is the minimum slab thickness taken into consideration with Schöck Isokorb® types in fire protection configuration?
- Have the requirements for on-site reinforcement of connections been defined in each case?
- Are the maximum allowable expansion joint spacings taken into account?
- Is the required component geometry present with the connection to a floor or a wall? Is a special design required?
- Are the requirements with regard to fire protection confirmed?
- Have existing horizontal loads e.g. from wind pressure been taken into account as planned? Are additional Schöck Isokorb® T Type CH required for this?
- With 2- or 3-sided support has a Schöck Isokorb® (possibly T Type CQ-Z, T Type CQ-PZ) been selected for a connection free of constraint forces?