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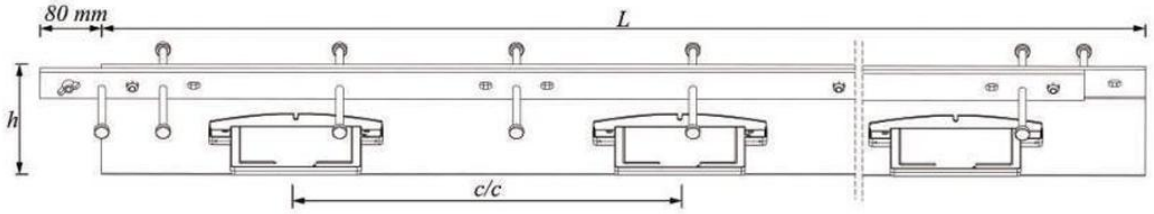
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Data Sheet

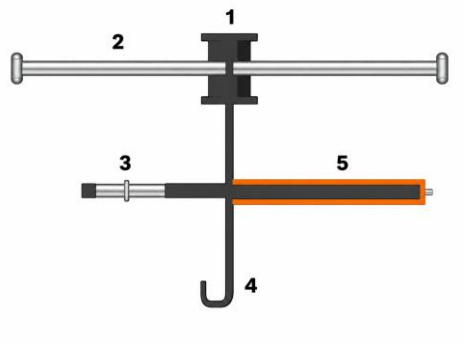
CIADJ

CIDADJ armour joint for heavy duty concrete floors is a prefabricated leave-in-place joint system designed to build formed free-movement joints, consisting of heavy-duty arris armouring, permanent formwork and a load transfer system. It is suitable for all large-area construction methods for ground-bearing and pile-supported concrete floors.

Armour joint provides heavy duty protection and armouring to slab panel edges by way of two solid, high specification, cold drawn steel sections each 40mm deep x 10mm thick. The steel armouring is anchored to the concrete with shear studs. Each and every shear stud is factory inspected and tested to ensure the integrity of its weld to the steel armouring.



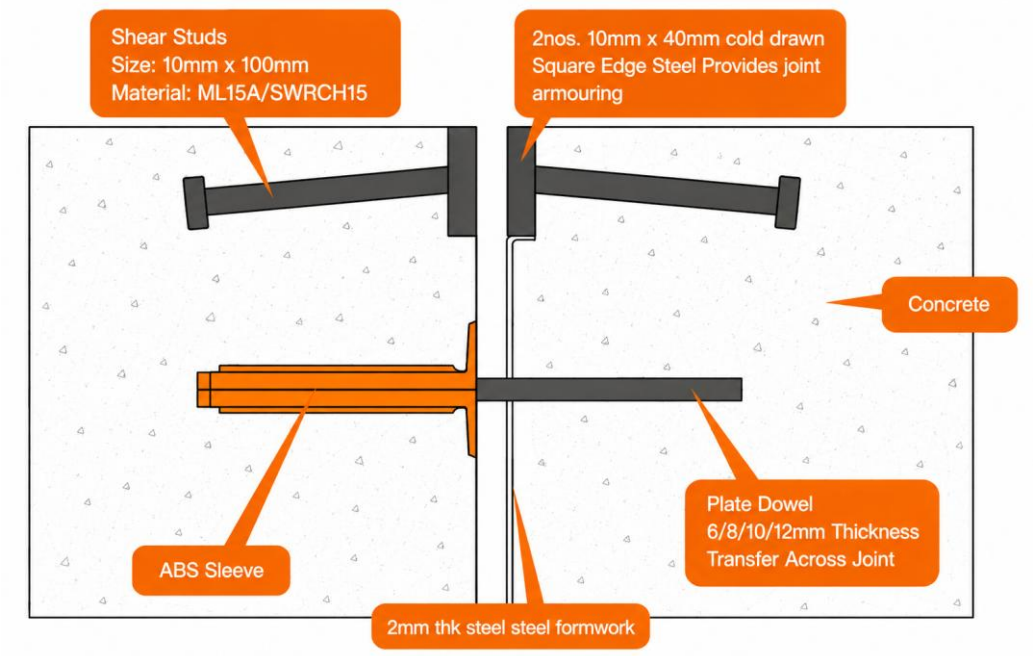




1. Two high specification solid, cold drawn 40mm deep x 10mm thick steel armour edge strips with sharp corners for clean finish to concrete.
2. Diameter 10mm x 100mm long, shear studs for anchorage into concrete.
3. Unique asymmetric dowel, high grade 355N/mm2 steel for superior load transfer and maximum 30mmjoint openings.
4. Cold rolled steel plate.
5. High density plastic sleeve for release of dowel in concrete, with ± 20mm parallel movement along joint and 30mm perpendicular to joint.

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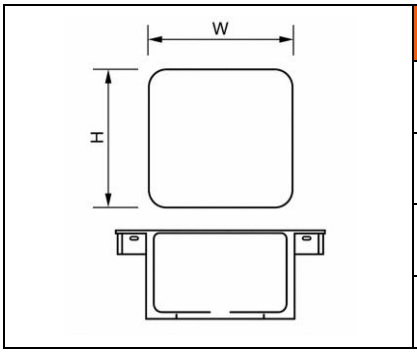
Material

Version	Joint Arris Armouring	Steel Divider	Dowel Plate	Shear Stud	Sleeve	Environmental Condition
Plain Steel	Q235B S235JRC+C	DCOR1 HDG	Q355B S355J2+N	ML15A/SWRCH15 AS275JR	ABS	Dry Internal
HDG	Q235B HDG S235JRC+C HDG	DCO1 HDG	Q355B S355J2+N	ML15A/SWRCH15 AS275JR	ABS	Occasionally Wet
Stainless	SS304 1.4301	DCO1 HDG	Q355B S355J2+N	ML15A/SWRCH15 AS275JR	ABS	Water + Aesthetically demanding
Acid Proof	SS316 1.4401	SS316 1.4401	SS316 1.4401	SS304 1.4301	ABS	Salt/Water/Acid + Aesthetically demanding

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Dowel Introduction

CIDADJ is a rectangular dowel system for construction of ground bearing expansion free movement joints with 20mm initial joint opening.



Dowel Type	MS Rectangular 6MM
Thickness T	6/8/10/12mm
Dimension W*L	150*142mm
Sleeve Colour	Orange
Advisable Joint Opening	0-20mm

Dimension

Description	Dimension & Tolerance
Joint Length	3000mm, +/-2.0mm
Straightness	=/-1mm in 1000mm
General Dimensional Tolerance	Dimensions < 12mm +/-0.5mm; Dimensions >12mm +/- 2.0mm

Load Transfer Capacity

The CIDADJ armour joint ensures that shear loads are safely transferred across the joint through dowels. Please kindly refer to TR34-Fourth Edition-Concrete Industrial Ground Floors to determine the dowel capacity.

Dowel Shear Capacity

The shear capacities for the plate dowels provided in the table below have been calculated using equation 18 of TR34.

Dowel Type	Concrete Grade	Joint Opening (mm)	Shear Psh (kN)	Bearing/Ending (kN) Pmaxplate
CIDADJ 6	C35	15	141.9	40.7
CIDADJ 10	C35	20	236.5	77.4

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Design punching shear resistance (KN) of CIDADJ according TR34.4 for 15mm Joint Opening

Slab Thickness (mm)	Punching P C30	Punching P C35	Punching P C40	Punching P C45	Punching P C50
100	12.7	13.5	14.4	15.1	16.1
150	20.2	21.4	22.9	23.9	25.6
200	29	30.7	32.9	34.4	36.7
250	39.2	41.5	44.4	46.4	49.6
300	50.7	53.7	57.4	60	64.1

Design Shear capacity of CIDADJ Armour Joint Adjustable in C32/40 Concrete

Joint Size 100 – 150 Slab Depth (mm)							
Dowel Size	Joint Opening (mm)	100	110	120-130	130	140	150
142 x 150 x 6	10	12.5	17.3	19.1	20	25.7	27.9
	20	12.5	17.3	19.1	20	25.7	27.9
	30	12.4	17.2	19	19.9	26.6	27.8
142 x 150 x 8	10	12.5	17.3	19.1	19.9	25.8	27.9
	20	12.5	17.3	19.1	19.9	25.8	27.9
	30	12.4	17.2	19.1	19.9	256	27.7

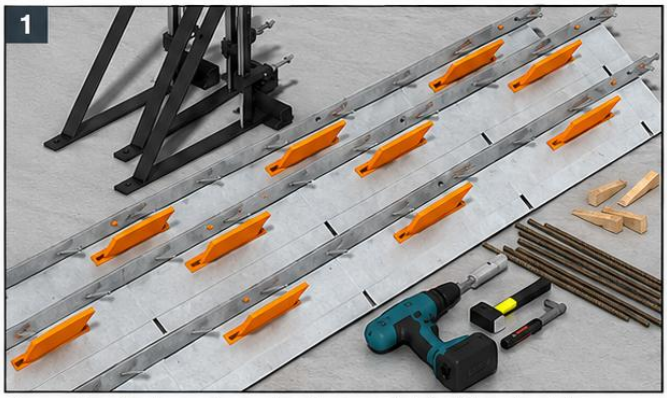
Joint Size 150 – 200 Slab Depth (mm)				
Dowel Size	Joint Opening (mm)	150	160	170-200
142 x 150 x 6	10	25.7	32.1	34.5
	20	25.7	32.1	34.5
	30	25.6	32	30.1
142 x 150 x 8	10	25.8	32.2	34.6
	20	25.8	32.2	34.6
	30	25.6	32	34.4

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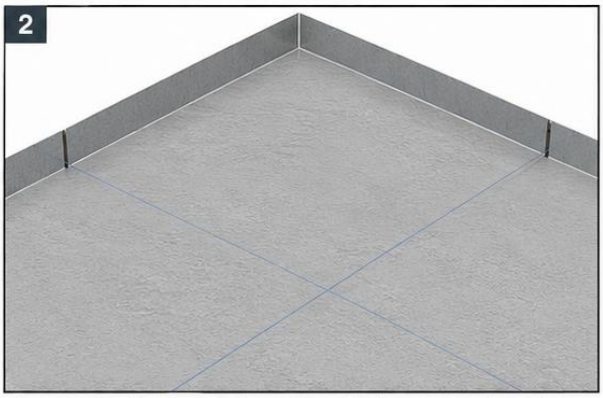
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Installation

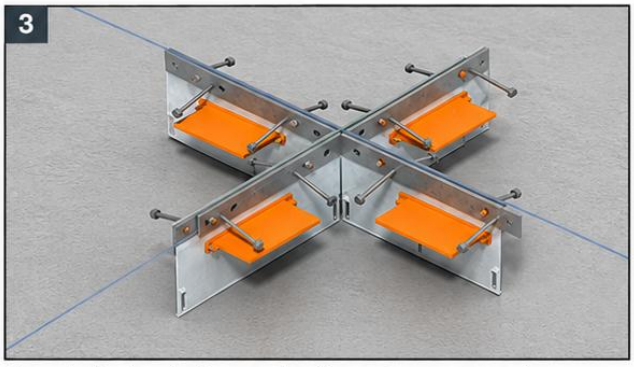
Joints should be installed as precisely vertical as possible and checked with a spirit level to ensure proper function of the dowels during slab movement. The levelness and straightness of the joint installation should be according to the relevant requirements of the floor slab design and again checked using a standard laser level device or optical sight level.



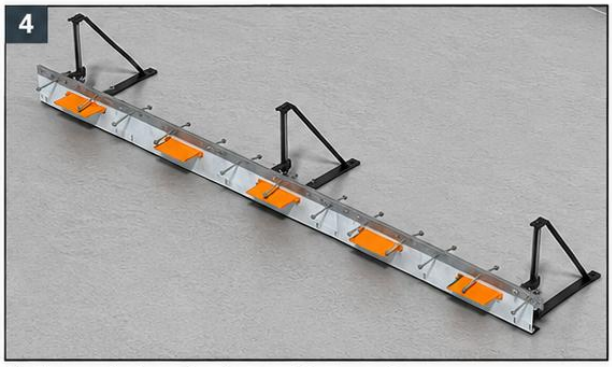
Set up the site. Laser dumpy level set up, finished floor level datum taken, membrane laid, hand tools available



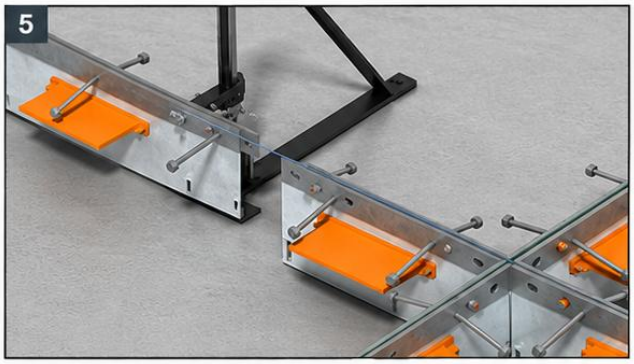
Measure the distances to the walls and edges. Set up the string line following the joint location.



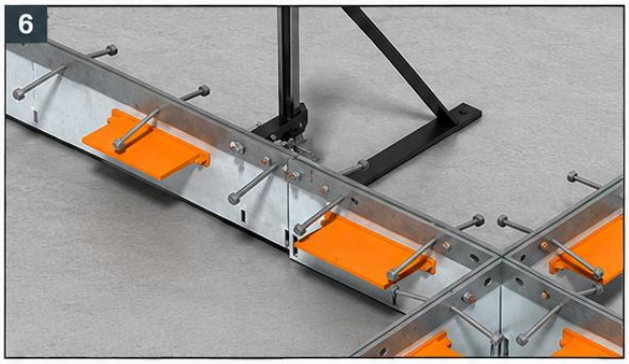
If required, place the intersection (4-way, 3-way or corner).



Fit ArmourJacks to the ArmourJoint top strips.



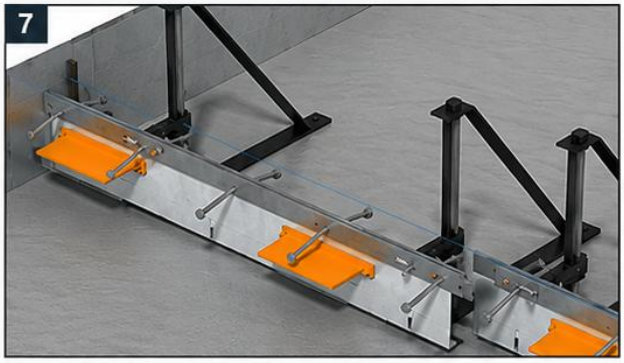
Position the ArmourJoints (with the jacks fitted) and attach them to the intersection.



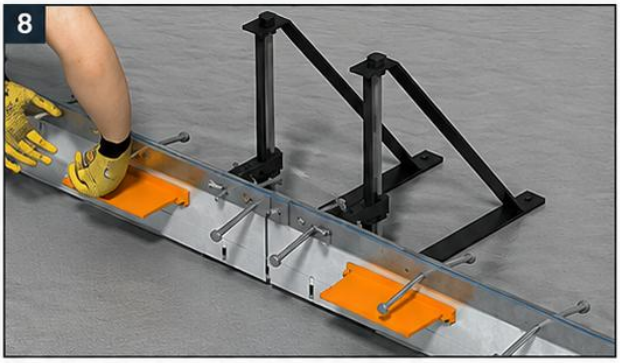
Continue to fit the ArmourJoints. Ensure the lapped joints are butted end to end tightly. Fit the plastic bolt and wing nut at the lapped joint.

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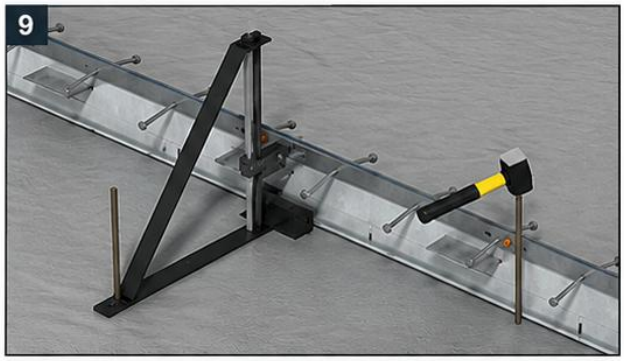
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Measure final distance and cut ArmourJoint to suit, allow space for mohsive between end joint and wall.

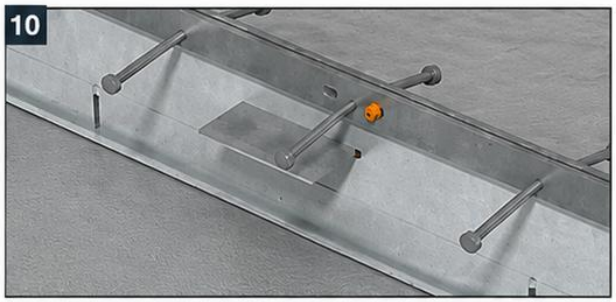


Manually position ArmourJoints in line with string lines.

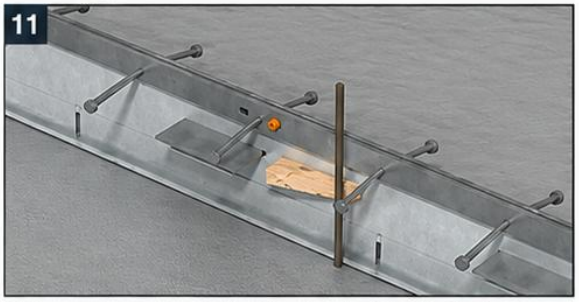


Pin the ArmourJacks into place and drive the pins behind the ArmourJoint in between the jacks.

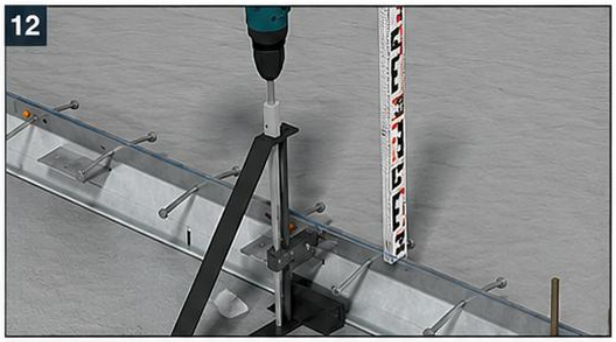




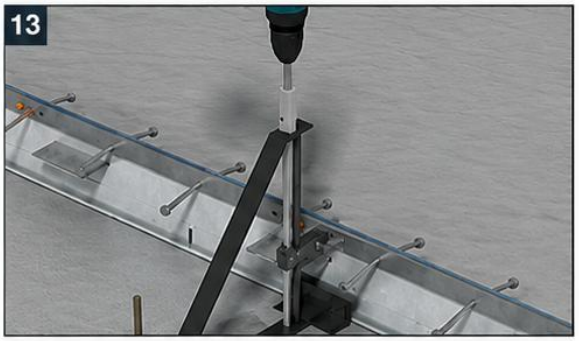
Ensure the lower divider plate is pushed fully down to sub-base.



Fit the wooden wedges behind the pin to lock the joint in place.



Check the height and adjust where necessary using the nut on top jack.



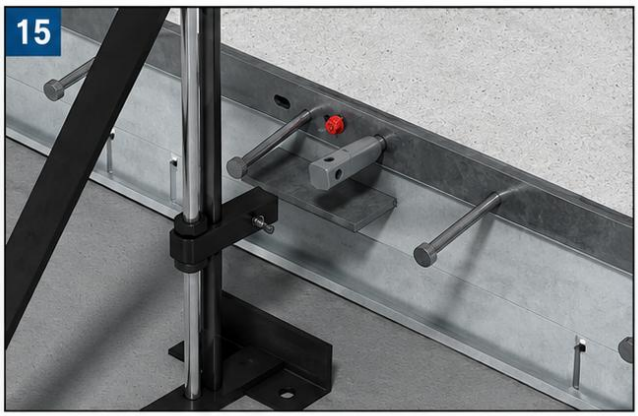
Final visual inspection, adjust the position and height of the joint if required.

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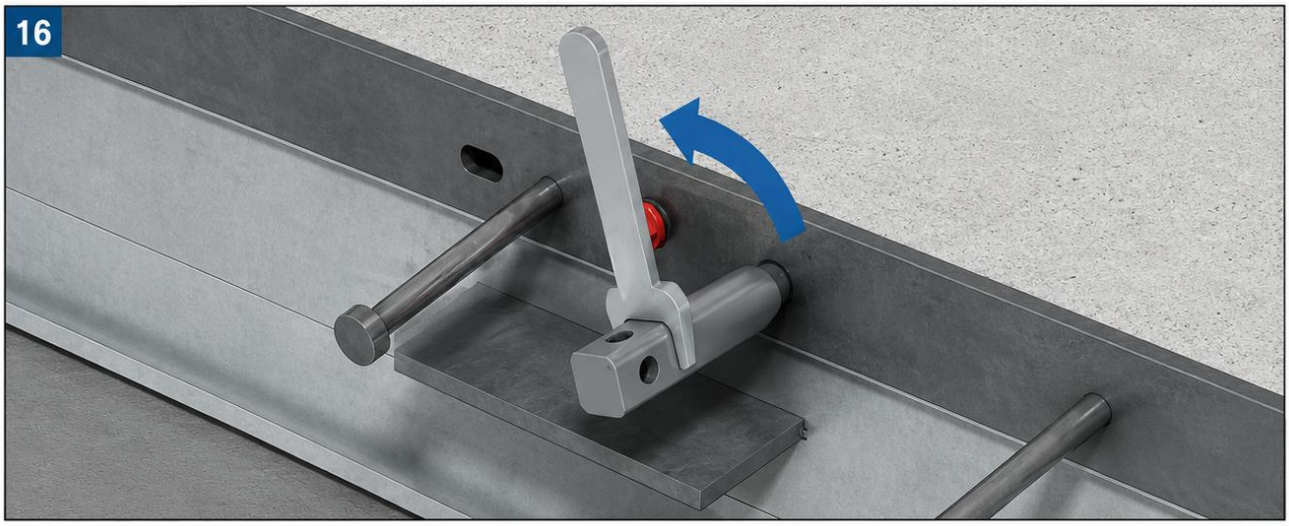
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Pour the concrete while checking the height and position of the joint.



Remove the steel pin, disconnect the bolt and wingnut through the box section and pull the ArmourFox Jack away from the joint.



Pull the ArmourFox Jack lever to release.